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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 June 30, 2020
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	**46-2956775**
(State or other jurisdiction of incorporation or organization)	(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 August 6, 2020 there were 40,269,721 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 (convertible into 38,382 shares of voting common stock), 5,524,926 shares of Series A redeemable convertible preferred stock, par value $0.0001 per share, outstanding (convertible into 473,565 shares of voting common stock, subject to certain voting restrictions as provided in the Certificate of Designation for the convertible preferred stock), and 7,534 shares of Series B-2 convertible preferred stock, par value $0.0001 per share, outstanding (convertible into 1,431,460 shares of voting common stock, subject to certain 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

(In thousands, except share and per share data)	June 30, 2020	December 31, 2019
Assets	**(unaudited)**	
Current assets:		
Cash	$ 3,015	$ 3,495
Restricted cash	—	388
Accounts receivable	2,212	1,692
Accounts receivable - pledged	1,738	—
Other receivable	5	2
Inventory	2,354	2,129
Operating lease - right-of-use asset	188	553
Prepaid expenses and other current assets	2,094	1,263
Total current assets	11,606	9,522
Property and equipment, net	697	710
Intangible assets, net	25,181	26,024
Other assets	96	154
Total assets	$ 37,580	$ 36,410
Liabilities, convertible preferred stock and stockholders' equity		
Current liabilities:		
Accounts payable	$ 5,240	$ 5,352
Deferred revenue	1,500	—
Accrued liabilities	4,856	2,922
Warrant liability	4,086	3
Operating lease liability	116	337
Notes payable, net of discount	8,960	6,778
Total current liabilities	24,758	15,392
Notes payable long term	400	450
Total liabilities	25,158	15,842
Commitments and contingencies (See Note 6)		
Series A redeemable convertible preferred stock: $0.0001 par value, 5,524,926 shares authorized at June 30, 2020 and December 31, 2019; 5,524,926 shares issued and outstanding at June 30, 2020 and December 31, 2019; (redemption amount of $12,738,822 at June 30, 2020 and December 31, 2019; liquidation preference of $9,199,002 at June 30, 2020 and December 31, 2019)	10,878	9,895
Stockholders' equity		
Series B convertible preferred stock: $0.0001 par value, 11,000 shares authorized at June 30, 2020 and December 31, 2019; no shares and 1,971 shares issued and outstanding at June 30, 2020 and December 31, 2019, respectively	—	476
Series B-2 convertible preferred stock: $0.0001 par value, 10,165 shares authorized at June 30, 2020 and December 31, 2019; 7,534 and 10,165 Series B-2 shares issued and outstanding at June 30, 2020 and December 31, 2019, respectively	916	1,236
Common stock - voting: $0.0001 par value, 150,000,000 shares authorized at June 30, 2020 and December 31, 2019; 32,408,421 and 14,273,061 shares issued and outstanding at June 30, 2020 and December 31, 2019, respectively	3	1
Common stock - non-voting: $0.0001 par value, 50,000,000 shares authorized at June 30, 2020 and December 31, 2019; 40,301,237 shares issued and outstanding at June 30, 2020 and December 31, 2019	4	4
Additional paid-in capital	150,885	142,046
Accumulated deficit	(150,264)	(133,090)
Total stockholders' equity	1,544	10,673
Total liabilities, convertible preferred stock and stockholders' equity	$ 37,580	$ 36,410

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

JAGUAR HEALTH, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited)

(In thousands, except share and per share data)	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Product revenue	$ 3,167	$ 1,706	$ 4,036	$ 3,295
Total revenue	3,167	1,706	4,036	3,295
Operating expenses				
Cost of product revenue	1,031	1,260	1,707	2,125
Research and development	1,405	1,698	2,987	3,119
Sales and marketing	1,730	2,173	3,199	3,738
General and administrative	3,756	3,197	6,905	6,711
Impairment of indefinite-lived intangible assets	—	4,000	—	4,000
Series B convertible preferred stock inducement expense	—	—	1,647	—
Series 3 warrants inducement expense	3,696	—	3,696	—
Total operating expenses	11,618	12,328	20,141	19,693
Loss from operations	(8,451)	(10,622)	(16,105)	(16,398)
Interest expense	(479)	(3,657)	(678)	(4,204)
Other income (expense)	78	14	(4)	21
Change in fair value of financial instruments	(386)	207	(387)	161
Loss on extinguishment of debt	—	(2,663)	—	(4,605)
Net loss	(9,238)	(16,721)	(17,174)	(25,025)
Deemed dividend attributable to accretion of Series A convertible preferred stock	(503)	—	(983)	—
Deemed dividend attributable to Series 1, Series 2 and Bridge warrant holders	(856)	—	(856)	—
Net loss attributable to common shareholders	$ (10,597)	$ (16,721)	$ (19,013)	$ (25,025)
Net loss per share, basic and diluted	$ (0.44)	$ (15.11)	$ (0.97)	$ (31.22)
Weighted-average common shares outstanding, basic and diluted	23,890,931	1,106,374	19,516,419	801,482

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

JAGUAR HEALTH, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES
IN CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)

(Unaudited)

(In thousands, except share data)	Series A Convertible Preferred Stock Shares	Series A Convertible Preferred Stock Amount	Series B Convertible Preferred Stock Shares	Series B Convertible Preferred Stock Amount	Series B-2 Convertible Preferred Stock Shares	Series B-2 Convertible Preferred Stock Amount	Common Stock - voting Shares	Common Stock - voting Amount	Common Stock - non-voting Shares	Common Stock - non-voting Amount	Additional paid-in capital	Accumulated deficit	Total Stockholders' Equity
Balances as of March 31, 2020	5,524,926	$ 10,375	1,971	$ 476	7,534	$ 916	18,286,196	$ 2	40,301,237	$ 4	$ 145,861	$ (141,026)	$ 6,233
Shares issued on exercise of Series 1, Series 2, and 2019 Bridge Note warrants, net of issuance costs of $461; May 2020	—	—	—	—	—	—	8,670,852	1	—	—	3,787	—	3,788
Shares issued on conversion of Series 1, Series 2, and 2019 Bridge Note warrants; June 2020	—	—	—	—	—	—	732,315	—	—	—	359	—	359
Shares issued in Underwriter settlement agreement	—	—	—	—	—	—	100,000	—	—	—	45	—	45
Warrants issued in Underwriter settlement agreement	—	—	—	—	—	—	—	—	—	—	31	—	31
Conversion of Series B convertible preferred stock into common stock	—	—	(1,971)	(476)	—	—	4,423,251	—	—	—	476	—	—
Shares issued to Oasis as consideration under the March 2020 equity purchase agreement	—	—	—	—	—	—	68,807	—	—	—	33	—	33
Shares issued to Oasis under the March 2020 equity purchase agreement, put option exercise, net of issuance costs of $13	—	—	—	—	—	—	52,000	—	—	—	10	—	10
Shares issued to third party for services	—	—	—	—	—	—	75,000	—	—	—	37	—	37
Accretion to redemption value of redeemable preferred stock	—	503	—	—	—	—	—	—	—	—	(503)	—	(503)
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	749	—	749
Net loss	—	—	—	—	—	—	—	—	—	—	—	(9,238)	(9,238)
Balances as of June 30, 2020	5,524,926	$ 10,878	—	$ —	7,534	$ 916	32,408,421	$ 3	40,301,237	$ 4	$ 150,885	$ (150,264)	$ 1,544

(In thousands, except share data)	Series A Convertible Preferred Stock Shares	Series A Convertible Preferred Stock Amount	Series B Convertible Preferred Stock Shares	Series B Convertible Preferred Stock Amount	Series B-2 Convertible Preferred Stock Shares	Series B-2 Convertible Preferred Stock Amount	Common Stock - voting Shares	Common Stock - voting Amount	Common Stock - non-voting Shares	Common Stock - non-voting Amount	Additional paid-in capital	Accumulated deficit	Total Stockholders' Equity
Balances as of March 31, 2019	5,524,926	$ 9,000	—	$ —	—	$ —	848,785	$ 1	40,301,237	$ 4	$ 109,644	$ (102,855)	$ 6,794
Issuance of common stock to Oasis, put exercise	—	—	—	—	—	—	4,843	—	—	—	100	—	100
Issuance of common stock in exchange of CVP debt	—	—	—	—	—	—	127,904	—	—	—	2,151	—	2,151
Issuance of common stock in exchange of CVP Exchange Notes	—	—	—	—	—	—	817,863	—	—	—	5,584	—	5,584
Fractional shares	—	—	—	—	—	—	(14)	—	—	—	—	—	—
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	446	—	446
Net loss	—	—	—	—	—	—	—	—	—	—	—	(16,721)	(16,721)
Balances as of June 30, 2019	5,524,926	$ 9,000	—	$ —	—	$ —	1,799,381	$ 1	40,301,237	$ 4	$ 117,925	$ (119,576)	$ (1,646)

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

JAGUAR HEALTH, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES
IN CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT) (continued)

(Unaudited)

(In thousands, except share data)	Series A Convertible Preferred Stock		Series B Convertible Preferred Stock		Series B-2 Convertible Preferred Stock		Common Stock - voting		Common Stock - non-voting		Additional paid-in capital	Accumulated deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Balances as of January 1, 2020	5,524,926	$ 9,895	1,971	$ 476	10,165	$ 1,236	14,273,061	$ 1	40,301,237	$ 4	$ 142,046	$ (133,090)	$ 10,673
Shares issued on exercise of Series 1, Series 2, and 2019 Bridge Note warrants	—	—	—	—	—	—	548,962	—	—	—	392	—	392
Shares issued on exercise of Series 2 warrants and inducement offer conversion of Series B-1 convertible preferred stock	—	—	—	—	—	—	1,250,000	1	—	—	2,340	—	2,341
Shares issued on exercise of Series 1, Series 2, and 2019 Bridge Note warrants, net of issuance costs of $461; May 2020	—	—	—	—	—	—	8,670,852	1	—	—	3,787	—	3,788
Shares issued on conversion of Series 1, Series 2, and 2019 Bridge Note warrants; June 2020		—	—	—	—	—	732,315	—	—	—	359	—	359
Issuance of common stock in PIPE financing, net of issuance costs of $51	—	—	—	—	—	—	1,714,283	—	—	—	668	—	668
Shares issued in Underwriter settlement agreement	—	—	—	—	—	—	100,000	—	—	—	45	—	45
Warrants issued in Underwriter settlement agreement	—	—	—	—	—	—	—	—	—	—	31	—	31
Underwriter settlement offering cost	—	—	—	—	—	—	—	—	—	—	(185)	—	(185)
Conversion of Series B-2 convertible preferred stock into common stock	—	—	—	—	(2,631)	(320)	499,890	—	—	—	320	—	—
Conversion of Series B convertible preferred stock into common stock	—	—	(1,971)	(476)	—	—	4,423,251	—	—	—	476	—	—
Shares issued to Oasis as consideration under the March 2020 equity purchase agreement	—	—	—	—	—	—	68,807	—	—	—	33	—	33
Shares issued to Oasis under the March 2020 equity purchase agreement, put option exercise, net of issuance costs of $13	—	—	—	—	—	—	52,000	—	—	—	10	—	10
Shares issued to third party for services	—	—	—	—	—	—	75,000	—	—	—	37	—	37
Accretion to redemption value of redeemable preferred stock	—	983	—	—	—	—	—	—	—	—	(983)	—	(983)
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	1,509	—	1,509
Net loss	—	—	—	—	—	—	—	—	—	—	—	(17,174)	(17,174)
Balances as of June 30, 2020	5,524,926	$ 10,878	—	$ —	7,534	$ 916	32,408,421	$ 3	40,301,237	$ 4	$ 150,885	$ (150,264)	$ 1,544

(In thousands, except share data)	Series A Convertible Preferred Stock		Series B Convertible Preferred Stock		Series B-2 Convertible Preferred Stock		Common Stock - voting		Common Stock - non-voting		Additional paid-in capital	Accumulated deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Balances as of January 1, 2019	5,524,926	$ 9,000	—	$ —	—	$ —	351,472	$ —	40,301,237	$ 4	$ 99,930	$ (94,551)	$ 5,383
Issuance of common stock, net of offering costs	—	—	—	—	—	—	195,319	—	—	—	2,602	—	2,602
Issuance of common stock, net of offering costs, March 2019	—	—	—	—	—	—	19,019	—	—	—	266	—	266
Issuance of common stock in exchange of notes payable and accrued interest	—	—	—	—	—	—	395,970	1	—	—	8,223	—	8,224
Issuance of common stock in exchange of accrued interest, January 2019	—	—	—	—	—	—	19,752	—	—	—	447	—	447
Issuance of common stock in exchange of CVP Exchange Notes	—	—	—	—	—	—	817,863	—	—	—	5,584	—	5,584
Fractional shares	—	—	—	—	—	—	(14)	—	—	—	—	—	—
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	873	—	873
Net loss	—	—	—	—	—	—	—	—	—	—	—	(25,025)	(25,025)
Balances as of June 30, 2019	5,524,926	$ 9,000	—	$ —	—	$ —	1,799,381	$ 1	40,301,237	$ 4	$ 117,925	$ (119,576)	$ (1,646)

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

JAGUAR HEALTH, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(Unaudited)

(in thousands)	Six Months Ended June 30, 2020	Six Months Ended June 30, 2019
Cash flows from operating activities		
Net loss	$ (17,174)	$ (25,025)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization expense	863	873
Impairment of indefinite-lived intangible assets	—	4,000
Loss on assignment of receivables	15	—
Loss on extinguishment of debt	—	4,605
Amortization of operating lease right-of-use-assets	365	363
Expense on modification of warrants	86	—
Series B convertible preferred stock inducement expense	1,647	—
Series 3 warrants issued as an inducement to exercise equity-classified Series 1, Series 2 and Bridge warrants	3,696	—
Stock-based compensation	1,509	873
Issuance of common stock in exchange for services	37	—
Issuance of warrants and common stock in Underwriter settlement agreement	76	—
Issuance of common stock as consideration paid under the Oasis Capital Equity Purchase Agreement	33	—
Amortization of debt issuance costs and debt discount	309	3,879
Change in fair value of warrants, conversion option and derivative liability	387	(161)
Changes in assets and liabilities		
Accounts receivable	(2,258)	(1,102)
Other receivable	(3)	(87)
Inventory	(225)	949
Prepaid expenses and other current assets	(831)	248
Other non-current assets	58	—
Operating lease liabilities	(221)	(230)
Deferred revenue	1,500	—
Accounts payable	(76)	976
Accrued expenses	1,909	1,069
Total cash used in operating activities	(8,298)	(8,770)
Cash flows from investing activities		
Purchase of equipment	(7)	(7)
Total cash used in investing activity	(7)	(7)
Cash flows from financing activities		
Proceeds from issuance of notes payable, net of issuance costs and debt discount	350	5,050
Proceeds from insurance premium financing	776	—
Proceeds from sale of receivables, net of debt discount and issuance costs of $331	2,222	—
Repayment of notes payable	(1,515)	(100)
Proceeds from issuance of common stock	—	2,869
Proceeds from issuance of common stock in PIPE financing, net of issuance costs	668	—
Proceeds from shares issued on exercise of 2019 Bridge warrants; February 2020	173	—
Proceeds from shares issued on exercise of Series 1 warrants; February 2020	144	—
Proceeds from shares issued on exercise of Series 2 warrants; March 2020	708	—
Payment of offering costs for July 2019 registered offering	—	(3)
Issuance costs of Ionic Series 2 Warrants; March 24, 2020	(25)	—
Shares issued on exercise of Series 1, Series 2, and 2019 Bridge Note warrants, net of issuance costs of $461; May 2020	3,752	—
Shares issued on conversion of Series 1, Series 2, and 2019 Bridge Note warrants; June 2020	359	—
Issuance costs from shares issued on Underwriter settlement agreement	(185)	—
Proceeds from shares issued on exercise of Oasis Capital an Equity Purchase Agreement put options, net of issuance costs of $13	10	—
Total cash provided by financing activities	7,437	7,816
Net decrease in cash	(868)	(961)
Cash at beginning of period	3,883	2,568
Cash at end of period	$ 3,015	$ 1,607

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

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

(Unaudited)

Supplemental schedule of cash flow information		
Cash paid for interest	$ 181	$ —
Supplemental schedule of non-cash financing and investing activities		
Common stock issued as redemption of notes payable and related interest	$ —	$ 14,256
Issuance of March 2019 letter of credit warrant	$ —	$ 116
Issuance of warrants with Notes Payable	$ —	$ 5,006
Accretion to redemption value of Series A contingently redeemable convertible preferred stock	$ 983	$ —
Offering costs included in accounts payable and accrued expenses	$ 36	$ 333
Conversion of Oasis Series B-2 convertible preferred stock into common stock	$ 320	$ —
Shares issued on exercise of Series B convertible preferred shares	$ 476	$ —

The accompanying notes are an integral part of these unaudited 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 the Company’s 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. Food and Drug Administration (“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.

Nasdaq Communication and Compliance

On December 30, 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 the bid price for the Company’s common stock for the last 30 consecutive business days had closed below the minimum $1.00 per share required for continued listing under Nasdaq Listing Rule 5550(a)(2).

Under Nasdaq Listing Rule 5810(c)(3)(A), the Company has been granted a 180 calendar day grace period, or until June 29, 2020, to regain compliance with the minimum bid price requirement. The continued listing standard will be met if the Company evidences a closing bid price of at least $1.00 per share for a minimum of 10 consecutive business days during the 180 calendar day grace period. In order for Nasdaq to consider granting the Company additional time beyond June 29, 2020, the Company would be required, among other things, to meet the continued listing requirement for market value of publicly held shares as well as all other standards for initial listing on Nasdaq, with the exception of the minimum bid price requirement. In the event the Company does not regain compliance with the $1.00 bid price requirement by June 29, 2020, eligibility for Nasdaq’s consideration of a second 180 day grace period would be determined on the Company’s compliance with the above referenced criteria on June 29, 2020.

On April 17, 2020, the Company received a letter from Nasdaq indicating that given the extraordinary market conditions from COVID19, Nasdaq has determined to toll the compliance periods for bid price and market value of publicly held shares through June 30, 2020. As a result, companies presently in compliance period for any Price-based Requirements will remain at that stage of the process and will not be subject to being delisted for these concerns. Starting on July 1, 2020, companies received the balance of any pending compliance period in effect at the start of the tolling period to regain compliance. Accordingly, since the Company had 72 calendar days remaining in its Bid compliance period as of April 16, 2020, it still has 72 calendar days from July 1, 2020, or until September 10, 2020, to regain compliance.

The Company is diligently working to evidence compliance with the minimum bid price requirement for continued listing on Nasdaq; however, there can be no assurance that the Company will be able to regain compliance or that Nasdaq will grant the Company a further extension of time to regain compliance, if necessary. If the Company fails to regain compliance with the Nasdaq continued listing standards, its common stock will be subject to delisting from Nasdaq.

Liquidity and Going Concern

The accompanying unaudited condensed consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The Company, since its inception, has incurred recurring operating losses and negative cash flows from operations and has an accumulated deficit of $150.3 million as of June 30, 2020. The Company expects to incur substantial losses and negative cash flows 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 of additional financing and generating positive cash flows from operations. There is no assurance that the Company will have adequate cash balances to maintain its operations. In addition, as a result of the recent outbreak of novel COVID-19, the Company may experience disruptions in fiscal year 2020 and beyond that could severely impact its supply chain, ongoing and future clinical trials and commercialization of Mytesi.

Although the Company plans to finance its operations and cash flow needs through equity and/or debt financing, collaboration arrangements with other entities, license royalty agreements, as well as revenue from future product sales, the Company does not believe its current cash balances are sufficient to fund its operating plan through one year from the issuance of these unaudited condensed consolidated financial statements. The Company has an immediate need to raise cash. There can be no assurance that additional funding will be available to the Company on acceptable terms, or on a timely basis, if at all, or that the Company will generate sufficient cash from operations to adequately fund operating needs. If the Company is unable to obtain an adequate level of financing needed for short-term operations and 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; accordingly, there is substantial doubt about the ability of the Company to continue in existence as a going concern. The accompanying unaudited condensed consolidated financial statements do not include any adjustments that might result from the outcome of these uncertainties.

2. Summary of Significant Accounting Policies

Basis of Presentation

The unaudited 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, 2020, 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 the Annual Report on Form 10-K for the year ended December 31, 2019. The unaudited condensed consolidated balance sheet at December 31, 2019 has been derived from the audited consolidated financial statements at that date, but does not include all disclosures, including notes, required by GAAP for complete financial statements.

There has been no material change to the Company's significant accounting policies during the three and six months June 30, 2020, as compared to the significant accounting policies described in Note 2 of the "Notes to Consolidated Financial Statements" in the Company's Annual Report on Form 10-K for the year ended December 31, 2019.

Except as noted above, the unaudited condensed consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and, in the opinion of management, reflect all adjustments of a normal recurring nature considered necessary to present fairly the financial position as of June 30, 2020, results of operations for the six months ended June 30, 2020 and 2019, changes in convertible preferred stock and stockholders' equity for the three and six months ended June 30, 2020 and 2019, and cash flows for the six months ended June 30, 2020 and 2019. The interim results are not necessarily indicative of the results for any future interim periods or for the entire year.

Principles of Consolidation

The unaudited interim condensed consolidated financial statements have been prepared in accordance with U.S. 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 the unaudited condensed 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 unaudited condensed 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, acquired in-process research and development (“IPR&D"), and useful lives assigned to long-lived assets; 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.

The full extent to which the COVID-19 pandemic will directly or indirectly impact the Company’s business, results of operations and financial condition, including sales, expenses, reserves and allowances, manufacturing, research and development costs and employee-related amounts, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19 and the actions taken to contain or treat COVID-19, as well as the economic impact on local, regional, national and international customers, markets and economies.

Cash and Restricted Cash

Our cash on deposit may exceed United States federally insured limits at certain times during the year. We maintain cash accounts with certain major financial institutions in the United States. Restricted cash represents cash not available to us for immediate and general use.

Accounts Receivable

Accounts receivable is recorded net of allowances for chargebacks and discounts for prompt payment and credit losses. The Company estimates an allowance for credit losses by considering factors such as historical experience, credit quality, the age of the accounts receivable balances, and current economic conditions that may affect a customer’s ability to pay. The corresponding expense for the credit loss allowance is reflected in general and administrative expenses. The credit loss allowance was immaterial as of June 30, 2020.

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.

For the three and six months ended June 30, 2020 and 2019, substantially all of the Company's revenue has been derived from the sale of Mytesi. For the three and six months ended June 30, 2020, the Company earned Mytesi revenue primarily from one pharmaceutical distributor in the United States. Revenue earned from each as a percentage of total net revenue is as follows:

	Three Months Ended June 30, (unaudited)		Six Months Ended June 30, (unaudited)	
	2020	2019	2020	2019
Customer 1	100 %	100 %	99 %	89 %

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:

	June 30, 2020 (unaudited)	December 31, 2019
Customer 1	100 %	99 %

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

The Company is subject to concentration risk from its suppliers. The Company sources raw material used to produce the active pharmaceutical ingredient in Mytesi from two suppliers and is dependent on single third-party contract manufacturers, both for the supply of the active pharmaceutical ingredient in Mytesi, as well as for the supply of finished products for commercialization.

Fair Value

The Company's financial instruments include accounts receivable, accounts payable, accrued expenses, warrant liabilities, derivative assets and liabilities, equity-linked financial instruments and debt. 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.

Inventory

Inventory is stated at the lower of cost or net realizable value. Cost is initially recorded at invoiced amount of raw materials or active pharmaceutical ingredient, including the sum of qualified expenditures and charges in bringing the inventory to its existing condition and location. 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, net of accumulated depreciation. Equipment begins to be depreciated when it is

placed into service. Depreciation is calculated using the straight-line method over estimated useful lives ranging between 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 condensed consolidated statements of operations.

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 useful lives of intangible assets and are reviewed when appropriate for possible impairment.

Indefinite-lived Intangible Assets

Acquired in-process research and development ("IPR&D") are intangible assets acquired in the July 2017 Napo merger. Under ASC 805, IPR&D are 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. An impairment loss is measured based on the excess of the carrying amount over the asset's fair value. There were no impairment charges recorded in the three and six months ended June 30, 2020. The Company recorded an impairment of $4,000,000 in the three and six months ended June 30, 2019.

Leases

ASC 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 ASC 842 on January 1, 2019 using the optional transition method with no restatements of comparative periods. There was no effect on accumulated deficit at adoption.

The Company elected to adopt 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:

(in thousands)	December 31, 2018	Adoption Impact	January 1, 2019
Operating lease right-of-use assets	$ —	$ 1,111	$ 1,111
Operating leases liabilities, current portion	—	337	337
Operating leases liabilities, long term	—	395	395
Deferred rent	380	(380)	—

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. Because the interest rate implicit in lease contracts is typically not readily determinable, 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 30, 2020. The lease agreement calls for monthly base rents between $38,000 and $41,000 over the term of the lease. The Company has engaged a realtor to assist us in relocating to new office space starting on or near the termination of the current lease with CA-Mission Street Limited Partnership.

Research and Development Expense

Research and development expense consist of expenses incurred in performing research and development activities including related salaries, clinical trials 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”).

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 also elected 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 - Cardinal Health

Effective January 16, 2019, Napo 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, Electronic Data Interchange (“EDI”) and system access support (the “Exclusive Distribution Agreement”) .

In addition to the terms and conditions of the Exclusive Distribution 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 the Company until purchased by Cardinal Health in accordance with the Title Model Addendum. Napo considers Cardinal Health the Company’s exclusive customer for Mytesi products per the 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, 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.

Transaction price

For contracts with Cardinal Health, for both Jaguar and Napo, the transaction price is the amount of consideration to which the Company expects to collect in exchange for transferring the 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 contracts with Cardinal Health, for both Napo and Jaguar, the entire transaction price is allocated to the single performance obligation contained in each contract.

Revenue recognition

For contracts with Cardinal Health, 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 wholesaler. Net revenues from the sale of Mytesi were $3,153,000 and $1,685,000 for the three months ended June 30, 2020 and 2019, respectively. Revenues from the sale of Mytesi were $3,988,000 and $3,228,000 for the six months ended June 30, 2020 and 2019, respectively.

Animal

The Company recognized Neonorm revenues of $14,000 and $21,000 for the three months ended June 30, 2020 and 2019, respectively. Revenues from the sale of Neonorm were $48,000 and $67,000 for the six months ended June 30, 2020 and 2019, 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.

Contracts - Atlas Sciences

Effective April 15, 2020 (the "Effective Date"), the Company entered into a patent purchase agreement with Atlas Sciences, LLC ("Atlas"), pursuant to which Atlas agreed to purchase certain patents and patent applications relating to the Napo's NP-500 drug product candidate (the "Patent Rights") for an upfront cash payment of $1,500,000.

Concurrent with the Patent Rights sale, the Company entered into a license agreement with Atlas (the “License Agreement”), pursuant to which Atlas granted the Company an exclusive 10-year license to use the Patent Rights and improvements thereon to develop and commercialize NP-500 in all territories worldwide except Greater China (i.e., China, Hong Kong, Taiwan and Macau), inclusive of the right to sublicense NP-500 development and commercialization rights (“the License”). Except for the License retained by the Company, Atlas retains all rights, title and interest in and to the Patent Rights, including all improvements and enhancements to the Patent Rights made or created by the Company under the License Agreement or made or created by or on behalf of Atlas during the term of the License Agreement.

Included in the arrangement with Atlas, the Company is obligated to initiate a proof of concept Phase 2 study of NP-500 under an investigational new drug (“IND”) application with the U.S. Food and Drug Administration or an IND-equivalent dossier under appropriate regulatory authorities (the “Phase 2 study”) within nine months of April 15, 2020. If the Company fails to initiate the Phase 2 study by this date, for any reason, including the timely receipt of adequate funding to initiate the Phase 2 study, the Company will incur a trial delay fee equal to $2,515,000 (the “Trial Delay Fee”), which amount is payable beginning on the nine-month anniversary of the Effective Date and continuing until the payment in full of the Trial Delay Fee, in an amount equal to: (a) from the nine- month anniversary of the Effective Date until the fifteenth-month anniversary of the Effective Date, $200,000; and (b) from the fifteenth -month anniversary of the Effective Date until payment in full of the Trial Delay Fee, $350,000. Atlas has the right to terminate the License in the event that the Company (i) fails to complete the Phase 2 study within five years of April 15, 2020 or (ii) has not timely initiated the Phase 2 study and thereafter fails to make three or more consecutive Trial Delay Payments.

Performance obligations

The Patent Rights sale to Atlas and the Phase 2 study to be performed by the Company, identified above, represent a single transaction with two separate performance obligations; with the sale of the Patent Rights, the Company transferred control of the internally generated Patent Rights to Atlas at the date of sale; and with the Phase 2 study, the services will be transferred to Atlas over an estimated 13.2 months.

Transaction price

For the contract with Atlas, the upfront payment of $1,500,000 from Atlas as consideration for the Patent Rights sale and the Phase 2 study, is variable consideration that is fully constrained due to the potential incurrence of a Trial Delay Fee of $2,515,000 if the Phase 2 study had not been initiated by January 15, 2021. The Company’s method was the most likely amount. The Company fully constrained the value of the variable consideration based on inherent uncertainty of timing of clinical trials. In addition, due to the estimated 13.2-month term over which the Company will perform the Phase 2 study, the upfront payment resulted in a significant financing component of $279,000. Accordingly, at inception, the total transaction price of $1,779,000 is deferred and the transaction price is zero.

Allocate transaction price

For the contract with Atlas, the transaction price of $1,779,000 is allocated as follows: (i) $1,196,000 was allocated to the Phase 2 study using the cost-plus margin approach based on the price quoted by a third party contract research organization, and (ii) $583,000 was allocated to the Patent sale using the Residual method.

Revenue recognition

For the contract with Atlas, control of the Patent Rights transferred to Atlas on the date of sale (at a point-in-time); and with the Phase 2 study, the services will be transferred to Atlas over the estimated 13.2 months of the study, which is set to run between October 2020 and November 2021. However, due to the full constraint on the $1,500,000 variable consideration, all revenue was deferred at inception of the transaction and as of June 30, 2020. When the Company is able to conclude that it is probable that it will initiate the Phase 2 study on or before January 15, 2021, the upfront payment of $1,500,000 will no longer be variable, nor constrained, and at which point the Company can

immediately recognize the $583,000 allocated to the Patent Rights and in turn can start to recognize revenue from the Phase 2 services.

Disaggregation of Patent Sales and Clinical Trial Services

Patent Rights Sale

Patent Rights sales are recognized when control of the Patent Rights are transferred to the purchaser (at a point-in-time). Due to the full constraint on the variable consideration of $1,500,000, there was no revenue recognized from the sale of Patent Rights to Atlas for the three and six months ended June 30, 2020 and 2019, respectively.

Clinical Trials

Revenue from clinical trials are recognized over time, as the services are performed, as the Company's performance enhances the Patent Rights asset that Atlas controls. The Phase 2 study to be performed under the Atlas License is expected to begin in October 2020 and run through November 2021. The expected first patient dose in the study is expected to occur in December 2020, at which point revenue from the Phase 2 study can begin to be recognized. Due to the Phase 2 study having not begun and the full constraint on the variable consideration of $1,500,000, for the three and six months ended June 30, 2020 and 2019, there was no revenue recognized from the Phase 2 services.

Collaboration Revenue

On September 24, 2018, the Company entered into a Distribution, License and Supply Agreement (“License Agreement”) with Knight Therapeutics ("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 collaboration revenues for the three and six months ended June 30, 2020 and 2019.

Modifications to equity-classified instruments

In the six months ending June 30, 2020, the Company modified certain equity-classified warrants (see Note 8). It is the Company’s policy to determine the impact of modifications to equity-classified warrants by analogy to the share-based compensation guidance of ASC 718, *Compensation - Stock Compensation* (“ASC 718”). The model for a modified share-based payment award that is classified as equity and remains classified in equity after the modification is addressed in ASC 718-20-35-3. Pursuant to that guidance, the incremental fair value from the modification is recognized as an expense in the statements of operations to the extent the modified instrument has a higher fair value; however, in certain circumstances, such as when an entire class of warrants are modified, the measured increase in fair value may be more appropriately recorded as a deemed dividend, depending upon the nature of the warrant modification.

In the six months ending June 30, 2020, the Company modified the terms of its Series B convertible preferred stock, and Series 1, 2 and Bridge warrants (see Note 9). For amendments to preferred stock, it is the Company’s policy to measure the impact by analogy to ASC 470-50 in determining if such an amendment is an extinguishment or a modification. If the amendment results in an extinguishment, the Company follows the SEC staff guidance in ASC 260-

10-S99-2 and ASC 470-20. If the amendment results in a modification, the Company follows the model in either ASC 718 or ASC 470-50, depending on the nature of the amendment.

Stock-Based Compensation

The Company's 2014 Stock Incentive Plan (see Note 11) provides for the grant of stock options, restricted stock and restricted stock unit awards.

The Company measures stock awards granted to employees, non-employees and directors at fair value on the date of grant and recognizes the corresponding compensation expense of the awards, net of estimated forfeiture over the requisite service periods, which correspond to the vesting periods of the awards. The Company issues stock awards with only service-based vesting conditions, and records compensation expense for these awards using the straight-line method.

The Company uses the grant date fair market value of its common stock to determine the grant date fair value of options granted to employees, non-employees and directors.

Income Taxes

The Company uses the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial reporting and the tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. A valuation allowance is provided when it is more likely than not that some portion or all of a deferred tax asset will not be realized.

Comprehensive Loss

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

Recent Accounting Pronouncements

In August 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement. The primary focus of the standard is to improve the effectiveness of the disclosure requirements for fair value measurements. The changes affect all companies that are required to include fair value measurement disclosures. The standard requires the use of the prospective method of transition for disclosures related to changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop fair value measurements categorized within Level 3 of the fair value hierarchy, and narrative description of measurement uncertainty. All other amendments in the standard are required to be adopted retrospectively. We adopted the standard on January 1, 2020. Adoption of this standard did not have a material effect on the Company’s unaudited condensed consolidated financial statements and related disclosures.

In November 2018, the FASB issued ASU 2018-18, Collaborative Arrangements (Topic 808): Clarifying the Interaction Between Topic 808 and Topic 606. ASU 2018-18 provides guidance on how to assess whether certain transactions between collaborative arrangement participants should be accounted for within the revenue recognition standard. The standard also provides more comparability in the presentation of revenue for certain transactions between collaborative arrangement participants. The standard is to be applied retrospectively to the date of the initial application of Topic 606 which also requires recognition of the cumulative effect of applying the amendments as an adjustment to the opening balance of retained earnings of the later or the earliest annual period presented and the annual period inclusive of the initial application of Topic 606. We adopted the standard on January 1, 2020. Adoption of this standard did not have a material effect on the Company’s unaudited condensed consolidated financial statements and related disclosures.

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740): *Simplifying the Accounting for Income Taxes*, which is intended to simplify various aspects related to accounting for income taxes. The standard also removes certain exceptions to the general principles in Topic 740 and clarifies and amends existing guidance to improve consistent application. The pronouncement is effective for the Company beginning January 1, 2021 with early adoption permitted. The Company is still evaluating the impact of the adoption of this standard.

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 June 30, 2020 and December 31, 2019.

	June 30, 2020 (unaudited)			
(in thousands)	Level 1	Level 2	Level 3	Total
Warrant liability	$ —	$ —	$ 4,086	$ 4,086
Total fair value	$ —	$ —	$ 4,086	$ 4,086

	December 31, 2019			
(in thousands)	Level 1	Level 2	Level 3	Total
Warrant liability	$ —	$ —	$ 3	$ 3
Total fair value	$ —	$ —	$ 3	$ 3

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

(in thousands)	Six Months Ended June 30, 2020 Warrant Liability (unaudited)
Beginning fair value of Level 3 liability	$ 3
Additions	3,696
Change in fair value	387
Ending fair value of Level 3 liability	$ 4,086

Warrant Liability

The warrants associated with the Level 3 warrant liability were the November 2016 Series A warrants, the October 2018 Underwriter warrants and the May 2020 Series 3 warrants, which, at June 30, 2020, were valued at $1, $1,566 and $4,084,478 respectively, in the Company's unaudited condensed consolidated balance sheets. The warrants associated with the Level 3 warrant liability activity for the year ended December 31, 2019 were the November 2016 Series A warrants, the October 2018 Underwriter warrants, the March 2019 LOC warrants and the Bridge warrants, which at December 31, 2019 were valued at $10, $3,482, zero and zero, respectively in the Company's consolidated balance sheets.

The Series A Warrants

The Series A warrant valuation of $1 at June 30, 2020 was computed using the Black-Scholes-Merton pricing model using a stock price of $0.49, a strike price of $787.50 per share, an expected term of 1.90 years, volatility of 141% and a risk-free discount rate of 0.16%. The Series A warrant valuation of $10 at December 31, 2019 was computed using the Black-Scholes-Merton pricing model using a stock price of $0.65, a strike price of $787.50 per share, an expected term of 2.41 years, volatility of 143.41% and a risk-free discount rate of 1.62%. The net decrease in the fair value of the warrants of $2 and $9 for the three and six months ended June 30, 2020, respectively, was recorded as a gain in the change in fair value of financial instruments in the condensed consolidated statements of operations.

The October 2018 Underwriter Warrants

The October 2018 Underwriter Warrants valuation of $1,566 at June 30, 2020 was computed using the Black-Scholes-Merton pricing model using a stock price of $0.49, a strike price of $52.50 per share, an expected term of 3.30 years, volatility of 141% and a risk-free discount rate of 0.18%. The October 2018 Underwriter Warrants valuation of $3,482 at December 31, 2019 was computed using the Black-Scholes-Merton pricing model using a stock price of $0.65, a strike price of $52.50 per share, an expected term of 3.76 years, volatility of 143.41% and a risk-free discount rate of 1.69%. The net decrease in the fair value of the warrants of $530 and $735 for the three and six months ended June 30, 2020, respectively, was recorded as a gain in the change in fair value of financial instruments in the condensed consolidated statements of operations.

The May 2020 Series 3 Warrants

The May 2020 Series 3 Warrants valuation of $4,084,478 at June 30, 2020 was computed using the Black-Scholes-Merton pricing model using a stock price of $0.49, a strike price of $0.05 per share, an expected term of 5.39 years, volatility of 141% and a risk-free discount rate of 0.29%. The May 2020 Series 3 Warrants valuation of $3,695,723 at issuance on May 22, 2020 was computed using the Black-Scholes-Merton pricing model using a stock price of $0.44, a strike price of $0.05 per share, an expected term of 5.50 years, volatility of 143% and a risk-free discount rate of 0.34%. The net increase in the fair value of the warrants of $386,755 for the three and six months ended June 30, 2020 was recorded as a loss in the change in fair value of financial instruments in the condensed consolidated statements of operations.

4. Balance Sheet Components

Inventory

Inventory at June 30, 2020 and December 31, 2019 consisted of the following:

(in thousands)	June 30, 2020 (unaudited)	December 31, 2019
Raw Material	$ 631	$ 457
Work in Process	875	1,211
Finished Goods	848	461
Inventory	$ 2,354	$ 2,129

Property and Equipment

Property and equipment at June 30, 2020 and December 31, 2019 consisted of the following:

(in thousands)	June 30, 2020 (unaudited)	December 31, 2019
Land	$ 396	$ 396
Lab equipment	418	411
Clinical equipment	65	65
Software	63	63
Total property and equipment at cost	942	935
Accumulated depreciation	(245)	(225)
Property and equipment, net	$ 697	$ 710

Depreciation expense was $10,000 and $20,000 in the three and six months ended June 30, 2020. Depreciation expense was $15,000 and $30,000 for the three and six months ended June 30, 2019, respectively.

Intangible Assets

Intangible assets at June 30, 2020 and December 31, 2019 consisted of the following:

(in thousands)	June 30, 2020 (unaudited)	December 31, 2019
Developed technology	$ 25,000	$ 25,000
Accumulated developed technology amortization	(4,861)	(4,028)
Developed technology, net	20,139	20,972
In-process research and development	4,800	8,800
Impairment	—	(4,000)
In process research and development, net	4,800	4,800
Trademarks	300	300
Accumulated trademark amortization	(58)	(48)
Trademarks, net	242	252
Total intangible assets, net	$ 25,181	$ 26,024

In June 2019, the Company determined that in-process research and development was impaired and recorded an impairment loss of $4,000,000 in the statements of operations for the three and six months ended June 30, 2019. Amortization expense was $422,000 and $843,000 for the three and six months ended June 30, 2020 and 2019.

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, L.P. ("Sagard Capital"), the Company entered into a Management Services Agreement with Sagard Capital. Under the agreement, Sagard Capital 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 an annual fee of $450,000, with total fees over the term of the agreement not to exceed $1,350,000. For the six months ended June 30, 2020, total fees incurred were $225,000. As of June 30, 2020, the Company had a balance due of $1,013,000.

Letter of Credit

In August 2018, to satisfy a letter of credit requirement in the Company's office lease agreement (see Note 6), 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. In consideration of the letter of credit, in August 2018, the Company issued to Pacific Capital Management, LLC a warrant (see Note 8) to purchase 9,580 shares of the Company's voting common stock. As additional consideration, a payment of $45,000 was made to Pacific Capital Management, LLC in November 2019.

On March 24, 2020, the Company entered into a letter of credit agreement with Dr. Conte, the brother of Lisa Conte, the Company's President, CEO and member of the Company's board of directors, pursuant to which the Company will, subject to Pacific Capital Management, LLC's consent, replace the existing letter of credit in the amount of $475,000 entered into on August 28, 2018 by the Company with Pacific Capital Management, LLC to satisfy the letter of credit requirement in the Company's office lease agreement with a new letter of credit in the amount of $475,000. In consideration of the new letter of credit, the Company will pay Dr. Conte an amount equal to $10,000 per month and reimburse up to $7,500 for reasonable out-of-pocket expenses incurred. The letter of credit will expire no earlier than December 31, 2020, provided, however that the Company, at no additional cost, may replace it on an earlier date. For the three and six months ended June 30, 2020, total fees incurred were $30,000 and $35,000, respectively. As of June 30, 2020, the Company had no balance due.

2019 Bridge Notes

Between March 18, 2019 and June 26, 2019, three members of the Board of Directors of the Company entered into short-term Promissory Note Purchase Agreements (see Note 7, the "2019 Bridge Notes") with the Company: (i) Lisa Conte, the Company's CEO & President, purchased a short-term Promissory Note of $100,000 which the Company settled in July 2019. In consideration for the short-term financing, the Company issued Ms. Conte a warrant that became exercisable into 37,500 shares of the Company's common stock; (ii) James Bochnowski, purchased a short-term Promissory Note of $350,000 which the Company settled in July 2019. In consideration for the short-term financing, the Company issued Mr. Bochnowski a warrant that became exercisable into 218,750 shares of the Company's common stock; and (iii) Jonathan Siegel DBA JBS Healthcare Ventures, purchased a short-term Promissory Note of $75,000 which the Company settled in July 2019. In consideration for the short-term financing, the Company issued Mr. Siegel a warrant that became exercisable into 34,375 shares of the Company's common stock.

In addition, Sagard Capital purchased a short-term Promissory Note of $500,000, which the Company settled in July 2019. In consideration for the short-term financing, the Company issued Sagard Capital a warrant that became exercisable into 187,500 shares of the Company's common stock; and Jonathan Glaser, an existing shareholder, purchased short-term Promissory Notes of $500,000 which the Company settled in July 2019. In consideration for the short-term financing, the Company issued Mr. Glaser warrants that became exercisable into 250,000 shares of the Company's common stock.

6. Commitments and Contingencies

Commitments

Leases

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: $38,000 for the first twelve months, $40,000 for the subsequent twelve months, and $41,000 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 shareholder a five-year warrant (see Note 8) to purchase 9,580 shares of the Company's voting common stock. The $494,000 fair value of the Warrant was classified in stockholders' equity with an offset to deferred rent. With the Company's adoption of ASC 842 on January 1, 2019, the offset to the deferred balance was classified as a right-of-use asset. Each month, $20,000 of this rent will be recognized as non-cash lease 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 8).

The Company recognizes rent expense on a straight-line basis over the non-cancelable lease period. Rent expense was $191,000 and $382,000 for the three and six months ended June 30, 2020, respectively, and $230,000 and $402,000 for the three and six months ended June 30, 2019, respectively. Rent expense is included in general and administrative expenses in the condensed consolidated statements of operations. Future minimum lease payments under the non-cancelable operating leases as of June 30, 2020, and through to the end of the lease in September 2020 are $119,000.

Angel Pond Agreement

In October 2019, the Company engaged Angel Pond Capital LLC to explore potential licensing agreements and collaborations for Mytesi in China. In consideration of these services, the Company compensated Angel Pond Capital LLC with $140,000, paid via the issuance of 166,667 shares of the Company's common stock, for the initial four-month term of the agreement. The Company had the option to extend the agreement term for two months for $30,000 payable in shares of the Company's common stock. As of June 30, 2020, no qualifying amounts were raised in China and no amounts are owed to Angel Pond as compensation. The Company did not extend the agreement with Angel Pond Capital LLC and it has expired.

Asset transfer and transition commitment

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

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 United Arab Emirates (“UAE”) 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. No payments have been made to date.

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 filed a second 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 court denied the Defendants’ motion to dismiss on June 28, 2019. The Company answered the second amended complaint on August 2, 2019; the answer denied the material allegations of the second amended complaint. The parties are now engaged in discovery. 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 adverse 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.

Settlement of Underwriter Fee

In August 2018, the Company entered into an agreement with an underwriter pursuant to which the underwriter would aid the Company in identifying certain financing transactions, in exchange for a percentage fee of any such financing and warrants. In the first quarter of 2020, the Company and the underwriter agreed on a final settlement for the underwriter services comprised of a cash payment, warrants and common stock. The cash payment amount totaled $386,560, of which $201,650 had been paid in September 2019, and $184,910 was accrued in March 2020 and was paid in April 2020. The total warrant issuance payment consisted of the Company issuing 1,096 equity-classified warrants to the underwriter in August 2018 and, in April 2020, issuing an additional 100,780 equity-classified warrants (see Note 8) to the underwriter to purchase shares of common stock at an exercise price of $2.50 per share. The common stock issuance payment consisted of the Company, in April 2020, issuing 100,000 shares of the Company’s common stock to

the underwriter with a fair value of $44,900. The Company classified the cash payments, warrant and commons stock issuance payments as issuance costs in the unaudited condensed consolidated statements of changes in convertible preferred stock and stockholders' equity.

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

Convertible Debt

December 2017 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 (the "June 2017 Note"). Interest on the outstanding balance will be paid 8% per annum from the purchase price date until the balance is paid in full.

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. At September 30, 2018, the derivatives were determined to have a de-minimis fair value and were written-off.

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 June 2017 N-ote 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 (collectively, the June 2017 CVP Note, The December 2017 CVP Note, the February 2018 Note and the March 2018 Note). 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 June 2017 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 May 2019, the Company and CVP amended the June 2017 Note agreement such that the Company made three separate exchanges of principal and related accrued interest for shares of the Company's common stock. The first two exchanges of principal and accrued interest for common stock were not considered a substantial change to the June 2017 Note and therefore resulted in modification accounting and the determination of a new effective interest rate; the third exchange on May 29, 2019 resulted in the extinguishment of the entire June 2017 Note with a corresponding

extinguishment loss of $7,566. At June 30, 2020 and December 31, 2019, the net carrying value of the June 2017 Note was zero.

Napo Convertible Notes

March 2017 Convertible Debt

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 bore interest at 3% and had an original maturity date of 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 $39.20 per share to $14.00 per share. The Company also issued 166,139 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 3,603 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 $14.70 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 loss from operations in the unaudited condensed consolidated statements of operations.

December 2016 Convertible Debt

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 $64.75 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 4,081 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 4,582 shares of the Company's common stock. In January 2019, $446,729 of accrued interest was paid through the issuance of 19,751 shares of the Company's common stock.

Extinguishment and Exchange of the Napo Convertible Notes

In May 2019, in a restructuring of the Notes, CVP acquired the Napo December 2016 and Napo July 2017 Notes, as well as all rights thereof, and immediately extinguished the two Notes; in their place, the Company issued to CVP a new note ("Exchange Note 1"). The collective carrying amount of the Napo December 2016 and Napo July 2017 Note immediately before the exchange was $10,375,326, or principal of $10,125,339 and unamortized premium of $249,987. The new Exchange Note 1 had an opening principal balance of 10,535,900, consisting of the $10,125,339 principal balance of the extinguished notes plus $410,562 in accrued but unpaid interest from the Napo December 2016 and Napo July 2017 Notes. At June 30, 2020 and December 31, 2019, the balance of the Napo December 2016 and Napo July 2017 Notes was zero.

Concurrent with the restructuring, CVP also entered into security agreements with Jaguar (the "Jaguar Security Agreement") and Napo (the "Napo Security Agreement", and together with the Jaguar Security Agreement, the "Security Agreements"), pursuant to which CVP will receive (i) a security interest in substantially all of the Company's assets as security for the Company's obligations under Exchange Note 2 and (ii) a security interest in substantially all of Napo's assets as security for Napo's obligations under Exchange Note 1 and Exchange Note 2. Notwithstanding the foregoing, (a) the amount owing under Exchange Note 2 will not be considered part of the obligations secured by the Napo Security Agreement until such time as Jaguar receives permission from a third party and (b) the security interest granted under the Jaguar Security Agreement will be automatically terminated and released upon Jaguar's receipt of a waiver from such third party.

Notes Payable

Notes payable at June 30, 2020 and December 31, 2019 consist of the following:

(in thousands)	June 30, 2020 (unaudited)	December 31, 2019
2019 Exchange Note 1	4,381	4,381
2019 Exchange Note 2	2,297	2,297
Insurance Premium Financing	776	—
Tempesta Note Payable	500	550
Royalty Interest	217	—
Oasis Secured Borrowing	1,371	—
	9,542	7,228
Less: unamortized discount and debt issuance costs	(182)	—
Note payable, net of discount	$ 9,360	$ 7,228
Notes payable - non-current, net	$ 400	$ 450
Notes payable - current, net	$ 8,960	$ 6,778

December 2017 Note

On December 8, 2017, the Company entered into a securities purchase agreement with CVP pursuant to which the Company issued a promissory note (the "December 2017 Note") in the aggregate principal amount of $1,588,000 for an aggregate purchase price of $1,100,000. The December 2017 Note carried an original issue discount of $462,500, and the initial principal balance also included $25,000 to cover CVP's transaction expenses. The Company used the proceeds for general corporate purposes. The December 2017 Note bore interest at the rate of 8% per annum and had an original maturity date of 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 was 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 was 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 was included in notes payable in the current liabilities section of the condensed consolidated balance sheets.

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 $499,000 for all four CVP Notes. The standstill fee allocated to the December 2017 Note was $142,000, of which $86,000 increased the principal balance and 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 $811,000 and $179,000, 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 $243,000.

In April 2019, the Company and CVP amended the December 2017 Note agreement such that the Company made two separate exchanges of principal and related accrued interest for shares of the Company’s common stock. The first exchange resulted in changes to cash flows that were considered substantial, resulting in extinguishment accounting with an extinguishment loss of $100,148; the second exchange on April 17, 2019 resulted in the extinguishment of the entire December 2017 Note with a corresponding extinguishment loss of $19,494. At June 30, 2020 and December 31, 2019, the net carrying value of the December 2017 Note was zero.

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 $2,241,000 for an aggregate purchase price of $1,560,000. The Note carried an original issue discount of $656,000, and the initial principal balance also included $25,000 to cover CVP's transaction expenses. The Company used the proceeds for general corporate purposes and working capital. The Note bore interest at the rate of 8% per annum and had an original maturity date of 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 $499,000 for all four CVP Notes. The standstill fee allocated to the February 2018 Note was $199,000, of which $119,000 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 $102,000. 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 $2,045,000 and $204,000, 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 $488,000.

In April 2019, the Company and CVP amended the February 2018 Note agreement such that the Company made a single exchange of principal and related accrued interest for shares of the Company's common stock. The first exchange on April 16, 2019 resulted in the extinguishment of the entire February 2018 Note with a corresponding extinguishment loss of $37,740. At June 30, 2020 and December 31, 2019, the net carrying value of the February 2018 Note was zero.

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 $1,090,000 for an aggregate purchase price of $750,000. The Note carried an original issue discount of $315,000, and the initial principal balance also included $25,000 to cover CVP's transaction expenses. The Company used the proceeds to fully repay certain prior secured and unsecured indebtedness. The Note bore interest at the rate of 8% per annum and had an original maturity date of 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 $499,000 for all four CVP Notes. The standstill fee allocated to the March 2018 Note was $96,000, of which $58,000 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 $224,000. 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 $1,050,000 and $86,000, 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. For the debt extinguishments, the Company recorded an aggregate extinguishment loss of $1,211,000. 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 December 31, 2019, the March 2018 Note had been fully extinguished.

2019 Exchange Notes

In May 2019, the Company and CVP entered into an Exchange Agreement whereby CVP purchased the two outstanding Napo convertible notes and all rights thereof from the current debt holders. Subject to the terms of the Exchange Agreement, CVP and the Company agreed to exchange the two Napo convertible notes for a single CVP Note ("CVP Exchange Note 1"). At the Exchange date, the principal balance of the two Napo convertible notes was $10,125,000, or $10,536,000 inclusive of accrued but unpaid interest of $411,000. The beginning principal balance of CVP Exchange Note 1 was $10,536,000, or equal to the principal balance of the two Napo convertible notes and accrued interest thereon. The maturity date of CVP Exchange Note 1 was December 31, 2020, with an interest rate of 10%. Per the terms of the Exchange Agreement, CVP agreed to extend the maturity date of CVP Exchange Note 1 from December 31, 2019 (the same maturity date carried over from the two Napo convertible notes) to December 31, 2020; in consideration of this extension, the Company issued CVP Exchange Note 2 with a principal balance of $2,297,000. The maturity date of CVP Exchange Note 2 is December 31, 2020, with an interest rate of 10%.

Between May 2019 and July 2019, the Company and CVP entered into note exchange agreements pursuant to which the Company made prepayments of principal and related accrued interest of $6,154,000 and $90,000, respectively, in lieu of making cash payments to CVP on Exchange Note 1, by issuing 1,119,440 shares of the Company's common stock to CVP. At June 30, 2020 and December 31, 2019, the net carrying value of Exchange Note 1 and Exchange Note 2 was $4,381,000 and $2,297,000, respectively, or an aggregate principal balance of $6,678,000.

2019 Tempesta Note

In October 2019, the Company entered into a License Termination and Settlement Agreement with Dr. Michael Tempesta, pursuant to which certain royalty payment disputes between Napo and Tempesta were settled. Per the terms of the Agreement, Tempesta received $50,000 in cash, an unsecured promissory note issued by the Company in the aggregate principal amount of $550,000 and 40,000 shares of the Company's common stock in exchange for the cessation of all royalty payments by Napo to Dr. Tempesta under the License Agreements. The $550,000 promissory note bears interest at the rate of 2.5% per annum and matures on March 1, 2025. The promissory note provides for the Company to make semi-annual payments equal to $50,000 plus accrued interest beginning on March 1, 2020 until the Note is paid in full. At June 30, 2020, the net carrying value of the Tempesta note was $500,000.

Sale of Future Royalty Interest

In March 2020, the Company entered into a royalty interest purchase agreement (the "Purchase Agreement") with Iliad Research and Trading, L.P. ("Iliad"), pursuant to which the Company sold to Iliad a royalty interest entitling Iliad to receive $500,000 of future royalties on sales of Mytesi and certain up-front license fees and milestone payments from licensees and/or distributors (the "Royalty Repayment Amount") for an aggregate purchase price of $350,000.

Until such time as the Royalty Repayment Amount has been paid in full, the Company will pay Iliad ten percent (10%) of the Company's Net Sales on Included Products and ten percent (10%) of worldwide revenues related to upfront licensing fees and milestone payments from licensees and/or distributors, but specifically excluding licensing fees and/or milestone payments that are reimbursements of clinical trial expenses (the "Royalty Payments"). Beginning on the six-month anniversary of the Purchase Price Date and continuing until the 12-month anniversary of the Purchase Price Date, the monthly Royalty Payment shall be the greater of (a) $25,000, and (b) the actual Royalty Payment amount Investor is entitled to for such month. Beginning on the 12-month anniversary of the Purchase Price Date and continuing until the Revenue Repayment Amount has been paid in full, the monthly Royalty Payment shall be the greater of (a) $43,750, and (b) the actual Royalty Payment amount Investor is entitled to for such month.

The Royalty Interest amount of $500,000 (or $350,000 in cash received) is classified as debt, net of a $150,000 discount. Under ASC 470-10-35-3, royalty payments to Iliad will be amortized under the interest method per ASC 835-30. Because there is no set interest rate, and because the royalty payments are variable, the discount rate is variable. After each royalty payment, the Company will use a prospective method to determine a new discount rate based on the revised estimate of remaining cash flows. The new rate is the discount rate that equates the present value of the revised estimate of remaining cash flows with the carrying amount of the debt, and it will be used to recognize interest expense for the remaining periods. At issuance, based on projected cash outflows from future revenue streams, the discount rate was 105%.

Oasis Secured Borrowing

The Purchase Agreement

In May 2020, the Company, entered into a one-year Accounts Receivable Purchase Agreement (the "Purchase Agreement") with Oasis Capital ("Oasis"), pursuant to which Oasis may from time to time at its discretion purchase accounts receivable of the Company on a recourse basis, at a purchase price equal to 37.5% of the face amount of the first purchase, and at a purchase price equal to 42.5% for subsequent purchased accounts ("Purchase Price"). With respect to purchased accounts, in the event that Oasis receives more than an amount equal to the sum of (i) the face amount of such purchased account multiplied by 0.0545 and (ii) the Purchase Price (such amount, the "Threshold Price")

from collection on such purchased accounts, then Oasis will return any such excess overage amount (the "Overage") to the Company, as applicable, within five days after Oasis's receipt thereof.

In the event Oasis does not receive at least the Threshold Price for a purchased account on or before such account becomes due and payable, the Company will, at Oasis's election, be obligated to either (i) pay the difference between the Threshold Price and the amount received by Oasis for such account (the "Shortfall") within 30 days thereof, (ii) assign or transfer to Oasis additional accounts receivable with a Purchase Price equal to (A) the Shortfall plus (B) an amount equal to 25% of the Shortfall (the "Additional Amount").

The initial term of the Purchase Agreement is one year, which will automatically renew for successive one-year periods unless notice of non-renewal is provided by the Company at least 30 days prior to the expiration of a term. Notwithstanding the foregoing, either Oasis or the Company may terminate the Purchase Agreement on 60 days' prior written notice. Under the Purchase Agreement, Oasis is entitled to a transaction fee of $25,000 and may be entitled to additional transaction fees to the extent Oasis acquires additional accounts receivable under the Purchase Agreement, which fees will not exceed $5,000 per transaction.

Per the Purchase Agreement, the Company will service and administer the purchased accounts receivable for Oasis. Oasis appointed the Company to be its agent and servicer for monitoring and collecting the Accounts Receivable subject to the terms of the Purchase Agreement. The Company will perform its duties in a commercially reasonable manner and agrees that Company will not commence any legal action with respect to such servicing and collection efforts and shall not terminate, discharge, discount or write off any accounts receivable without Oasis's prior written consent.

The Company, having determined that it did not meet the criteria per ASC 860-10-40-5 to account for the transactions under the Purchase Agreement as sales, will account for such transactions as secured borrowings in accordance with ASC 860-30, "*Transfers – Secured Borrowings and Collateral*."

May 2020 Oasis Secured Note - Tranche #1

In May 2020, for the first sale under the terms of the Purchase Agreement, the Company received cash proceeds of $1,007,000 from Oasis, or $1,032,000 less a $25,000 transaction fee (the "Tranche #1 Secured Note"). Oasis purchased accounts receivable with a carrying value of $1,673,627, or gross accounts receivable of $2,753,639 net of chargeback and discounts of $1,080,012. The purchase was effectuated pursuant to an Assignment Agreement, dated May 12, 2020, between the Company and Oasis. The Maturity Date, by which date Oasis must collect the $1,182,000 Threshold Price, is on or before July 10, 2020.

The Company recorded the sale as a short-term secured borrowing with a principal amount of $1,007,000, or $1,182,000 net of a $175,000 discount. Though there was no stated interest rate, the effective interest rate was 147.89%. The Tranche #1 Secured Note had a maturity date of July 10, 2020, or earlier if the Threshold amount was received by Oasis prior to that date (payment of the Threshold amount was the maturity date). Accordingly, during the term of the Tranche #1 Secured Note, the effective interest rate was variable, dependent on the amount of any principal payment and payment dates.

On June 30, 2020, the Company made its final required payment to Oasis under the Tranche #1 Secured Note, with total payments equaling the $1,182,000 Threshold amount, and the Tranche #1 Secured Note was extinguished.

June 2020 Oasis Secured Note - Tranche #2

In June 2020, for its second sale under the terms of the Purchase Agreement, the Company received cash proceeds of $1,215,131 from Oasis (the "Tranche #2 Secured Note"). Oasis purchased accounts receivable with a carrying value of $1,737,745, or gross accounts receivable of $2,859,132 net of chargeback and discounts of $1,121,387. The purchase was effectuated pursuant to an amended Assignment Agreement, effective June 26, 2020, between Napo and Oasis. The Maturity Date, by which date Oasis must collect the $1,370,954 Threshold Price, was September 2, 2020.

The Company recorded the sale to Oasis as a short-term secured borrowing with a principal amount of $1,215,131, or $1,370,954 net of a $155,823 discount. Though there was no stated interest rate, the effective interest rate at issuance was 77.73%. The Tranche #2 Secured Note had a maturity date of September 2, 2020, or earlier if the Threshold amount was received by Oasis prior to that date (payment of the Threshold amount is the maturity date). Accordingly, during the term of the Tranche #2 Secured Note, the effective interest rate is variable, dependent on the amount of any principal payment and payment dates.

As of June 30, 2020, the Tranche #2 Secured Note had an outstanding balance of $1,215,131, or $1,370,954 net of a $145,473 discount, in the Company's condensed consolidated balance sheet.

Insurance Premium Financing

In May 2020, the Company entered into a financing agreement for $873,000 for a portion of the Company's annual insurance premiums. The balance is due in monthly installments over 9 months with an annual interest rate of 4.15% and the first installment of $97,000 was paid in June 2020. The financing balance was $776,000 as of June 30, 2020.

8. Warrants

The following table summarizes information about warrants outstanding and exercisable into shares of the Company's common stock for the six months ended June 30, 2020 and for the year ended December 31, 2019:

	June 30, 2020 (unaudited)	December 31, 2019
Warrants outstanding, beginning balance	19,421,892	34,682
Issuances	8,771,632	20,637,761
Exercises	(11,202,129)	(1,250,000)
Expirations and cancelations	—	(551)
Warrants outstanding, ending balance	16,991,395	19,421,892

May 2020 Series 3 Warrants

In May 2020, concurrent with the May 2020 modification of the exercise price of the Series 1, Series 2 and Bridge Warrants and inducement offer, the Company issued unregistered Series 3 warrants to purchase 8,670,852 shares of common stock. The Series 3 Warrants have an exercise price of $0.53 per share and are exercisable beginning the earlier of (i) six months from their May 22, 2020 issuance date and (ii) receipt of the requisite Stockholder Approval (defined below), and expire five years thereafter. In addition to the fixed settlement method at $0.53 per warrant share, the Series 3 Warrants have two contingent settlement methods: (i) if at the time of exercise there is no effective registration statement, then the holders of the 8,670,852 warrants may exercise the warrants in a "cashless exercise," under which the holders will receive the aggregate warrants less the number of warrants equal to the exercise price; or (ii) a cashless exercise feature wherein, regardless if there is an effective registration agreement, following the requisite Stockholder Approval, each such Series 3 Warrant will be exercisable into one share of common stock for no consideration (a one-for-one exchange). See Note 14 for information about subsequent events.

The Series 3 warrants were valued at $3,695,723 using the Black- Scholes option pricing model as follows: probability-weighted exercise price of $0.05 per share, stock price of $0.44 per share, expected life of 5.50 years, volatility of 141%, and a risk-free rate of 0.34%. The Series 3 warrants were classified as liabilities on the Company's condensed consolidated balance sheets.

The April 2020 Underwriter Warrants

In April 2020, in consideration of the settlement of a dispute regarding underwriting fee's (see Note 6), the Company issued warrants to purchase 100,780 shares of common stock at an exercise price of $2.50 per common share. The warrants were valued at $31,363 using the Black- Scholes option pricing model as follows: exercise price of $2.50 per share, stock price of $0.45 per share, expected life of 4.25 years, volatility of 141%, and a risk-free rate of 0.29%. The warrants were equity classified in the condensed consolidated statements of changes in convertible preferred stock and stockholders' equity.

March 2019 Ladenburg Warrants

In March 2019, in consideration of services provided in the Company's March 2019 public offering of 19,019 common shares, the Company issued to Ladenburg Thalmann & Co. warrants to purchase an aggregate of 761 shares of common stock at an exercise price of $17.50 per common share. The warrants were valued at $13,000 using the Black-Scholes option pricing model as follows: exercise price of $17.50 per share, stock price of $18.90 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 Warrant

In March 2019, in consideration of a letter of credit cancelation related to the Company's office lease, the Company issued a warrant to purchase warrant shares equal to a fixed principal amount divided by a variable exercise price. The warrants were initially classified as liabilities pursuant to ASC 480-10 due to their debt-like nature. On July 23, 2019, upon the exercise price of the warrants becoming fixed, the warrants became exercisable into 45,750 shares of the Company's common stock and were reclassified to additional paid-in-capital with a fair value of $71,000.

2019 Bridge Note Warrants

Between March 18, 2019 and June 26, 2019, concurrent to the Company entering into Promissory Notes of $5,050,000, the Company issued twenty-one warrants to purchase warrant shares equal to a fixed principal amount divided by a variable exercise price. The warrants for all twenty-one Bridge Notes were initially liability classified pursuant to ASC 480-10 due to their debt-like nature. On July 23, 2019, upon the exercise price of the warrants becoming fixed, the warrants became exercisable into 2,781,250 shares of the Company's common stock and were reclassified to additional paid-in-capital with a fair value of $4,259,000.

February 2020 Modification of Certain 2019 Bridge Note Warrants

In February 2020, the Company entered into a warrant exercise agreement with a holder of its Bridge warrants, pursuant to which the holder agreed to exercise 250,000 Bridge warrants in consideration of the Company lowering the exercise price of the 250,000 warrants from $2.00 to $0.692. Upon exercise of the warrants, the Company received cash proceeds of $173,000 and in turn issued 250,000 common shares. It is the Company's policy to determine the impact of modifications to equity-classified warrants by analogy to the share-based compensation guidance per ASC 718, *Compensation – Stock Compensation*. Pursuant to that guidance, and due to the modification being applicable only to a single holder of the Bridge warrants, the incremental increase of $9,000 in fair value of the modified warrants was recorded as an expense in the condensed consolidated statements of operations for the six months ended June 30, 2020.

May 2020 Modification of the 2019 Bridge Note Warrants and Inducement Offer

In May 2020, the Company reduced the exercise price of all outstanding 2019 Bridge Warrants from $2.00 per share to $0.49 per share. The Company determined the impact of this modification to be an increase in the fair value of the warrants of $165,716. Because the modification applied to the entire class of Bridge Warrant holders, the increase in fair value represented a deemed dividend to the entire class of Bridge Warrant holders. The modification did not result in the reclassification of the equity-classified Bridge warrants from additional paid-in-capital to liability classification.

In May 2020, concurrent with the reduction of the exercise price of the Bridge Warrant, the Company entered into a warrant exercise inducement offer with certain holders of the Bridge Warrants, pursuant to which such holders agreed to exercise for cash Bridge Warrants to purchase 93,750 shares of common stock, in exchange for the Company's issuing to the exercising holders new unregistered Series 3 warrants to purchase 93,750 shares of common stock.

July 2019 Series 1 Warrants

In July 2019, the Company entered into an underwriting agreement, relating to a public offering, which was comprised of (1) 2,886,500 Class A Units, priced at $2.00 per unit, with each unit consisting of (i) one share of the Company's voting common stock, (ii) one Series 1 warrant to purchase one share of common stock, and (iii) one Series 2 warrant to purchase one share of common stock, and (2) 10,787 Class B Units, priced at a price of $1,000 per unit, with each unit consisting of (i) one share of Series B convertible preferred stock, convertible into 500 shares of common stock, (ii) 500 Series 1 Warrants and (iii) 500 Series 2 Warrants.

The Series 1 Warrants had an exercise price of $2.00 and expire on the earlier of (a) 5 years from the date of issuance and (b) 30 calendar days following the public announcement of Positive Interim Results related to the diarrhea results from the HALT-D investigator initiated trial, if and only if certain trading benchmarks are achieved during such 30 calendar day period.

In the offering, the Company sold (i) 2,886,500 Class A Units, which included Series 1 warrants to purchase 2,886,500 shares of the Company's common stock and (ii) 10,787 Class B Units, which included Series 1 warrants to purchase 5,393,500 shares of the Company's common stock. In total, 8,280,000 Series 1 warrants were issued, with an initial valuation of $5,025,000 computed using the Black-Scholes-Merton pricing model using a stock price of $1.73, a strike price of $2.00, an expected term of 5.0 years, volatility of 109.25% and a risk-free discount rate of 1.83%. Upon issuance, the Series 1 warrants were classified in additional paid-in-capital.

September 2019 Modification of the July 2019 Series 1 Warrants

In September 2019, the Company reduced the exercise price all 8,280,000 Series 1 Warrants from $2.00 to $1.40. The Company determined the impact of this modification to be an increase in the fair value of the warrants of $522,000. Because the modification applied to the entire class of Series 1 Warrant holders, the increase in fair value represented a deemed dividend to the entire class of Series 1 Warrant holders. The modification did not result in the reclassification of the equity-classified Series 1 warrants from additional paid-in-capital to liability classification.

February 2020 Modification of the July 2019 Series 1 Warrants

In February 2020, the Company entered into a warrant exercise agreement with a holder of its Series 1 Warrants, pursuant to which the holder agreed to exercise 208,022 Series 1 Warrants in consideration of the Company lowering the exercise price of the 208,022 warrants from $2.00 to $0.6920. Upon exercise of the warrants, the Company received cash proceeds of $144,000 and in turn issued 208,022 common shares. It is the Company's policy to determine the impact of modifications to equity-classified warrants by analogy to share-based compensation guidance per ASC 718, *Compensation – Stock Compensation*. Pursuant to that guidance, and due to the modification being applicable only to a single holder of the Series 1 Warrants, the incremental increase of $6,413 in fair value of the modified warrants was recorded as an expense in the condensed consolidated statements of operations for the three months ended March 31, 2020.

May 2020 Modification of the July 2019 Series 1 Warrants and Inducement Offer

In May 2020, the Company reduced the exercise price of all outstanding Series 1 Warrants from $1.40 per share to $0.49 per share. The Company determined the impact of this modification to be an increase in the fair value of the warrants of $284,338. Because the modification applied to the entire class of Series 1 Warrant holders, the increase in fair value represented a deemed dividend to the entire class of Series 1 Warrant holders. The modification did not result in the reclassification of the equity-classified Series 1 Warrants from additional paid-in-capital to liability classification.

In May 2020, concurrent with the reduction of the exercise price of the Series 1 Warrants, the Company entered into a warrant exercise inducement offer with certain holders of the Series 1 Warrants, pursuant to which such holders agreed to exercise for cash Series 1 Warrants to purchase 4,572,040 shares of common stock, in exchange for the Company's issuing to the exercising holders new unregistered Series 3 warrants to purchase 4,572,040 shares of common stock.

July 2019 Series 2 Warrants

The Series 2 Warrants have an exercise price of $2.00 and expire on the first date on the earlier of (a) 5 years from the date of issuance and (b) 30 calendar days following the public announcement by the Company that a pivotal phase 3 clinical trial using crofelemer (Mytesi, or the same or similar product with a different name) for the treatment of cancer therapy-related diarrhea in humans has met its primary endpoint in accordance with the protocol, if and only if certain trading benchmarks are achieved during such 30 calendar day period. In addition, each Series 2 Warrant has an embedded call option that allows the Company to redeem any unexercised warrants if certain contingencies are met.

In the July 2019 offering, the Company sold (i) 2,886,500 Class A Units, which included Series 2 warrants to purchase 2,886,500 shares of the Company's common stock and (ii) 10,787 Class B Units, which included Series 2 warrants to purchase 5,393,500 shares of the Company's common stock. In total, 8,280,000 Series 2 warrants were issued, with an initial valuation of $5,026,000 computed using the Black-Scholes-Merton pricing model using a stock price of $1.73, a strike price of $2.00, an expected term of 5.0 years, volatility of 109.25% and a risk-free discount rate of 1.83%. Upon issuance, the Series 2 Warrants were classified in additional paid-in-capital.

March 5, 2020 Modification of the July 2019 Series 2 Warrants

On March 5, 2020, the Company entered into a warrant exercise agreement with a holder of its Series 2 Warrants, pursuant to which the holder agreed to exercise 90,940 Series 2 Warrants in consideration of the Company lowering the exercise price of the 90,940 warrants from $2.00 to $0.6050. Upon exercise of the warrants, the Company received cash proceeds of $55,000 and in turn issued 90,940 common shares. It is the Company's policy to determine the impact of modifications to equity-classified warrants by analogy to share-based compensation guidance per ASC 718, *Compensation – Stock Compensation*. Pursuant to that guidance, and due to the modification being applicable only to a single holder of the Series 2 Warrants, the incremental increase of $6,000 in fair value of the modified warrants was recorded as an expense in the condensed consolidated statements of operations for the six months ended June 30, 2020.

March 23, 2020 Modification of the July 2019 Series 2 Warrants

On March 23, 2020, the Company entered into a Warrant Exercise and Preferred Stock Amendment Agreement (see Note 9) with a holder of its Series 2 Warrants, pursuant to which the holder agreed to exercise in cash its Series 2 Warrants to purchase an aggregate of 1,250,000 shares of common stock, in consideration of the Company reducing the Series 2 Warrant exercise price from $2.00 to $0.5227 per share, for gross proceeds to the Company of approximately $653,000, or $628,000 net of $25,000 of issuance costs. The Company determined the impact of this modification to be an increase in the fair value of the warrants of $65,000. Because the modification applied to a sole holder of Series 2 Warrants, the $65,000 increase in fair value was recorded as an expense in the condensed consolidated statements of operations for the six months ended June 30, 2020. The modification did not result in the reclassification of the equity-classified Series 1 Warrants from additional paid-in-capital to liability classification, and as of March 31, 2020, all 8,280,000 Series 2 Warrants have been exercised.

May 2020 Modification of the July 2019 Series 2 Warrants and Inducement Offer

In May 2020, the Company reduced the exercise price of all outstanding Series 2 Warrants from $2.00 per share to $0.49 per share. The Company determined the impact of this modification to be an increase in the fair value of the warrants of $406,002. Because the modification applied to the entire class of Series 2 Warrant holders, the increase in fair value represented a deemed dividend to the entire class of Series 2 Warrant holders. The modification did not result in the reclassification of the equity-classified Series 2 Warrants from additional paid-in-capital to liability classification.

In May 2020, concurrent with the reduction of the exercise price of the Series 2 Warrants, the Company entered into a warrant exercise inducement offer with certain holders of the Series 2 Warrants, pursuant to which such holders agreed to exercise for cash Series 2 Warrants to purchase 4,005,062 shares of common stock, in exchange for the Company's issuing to the exercising holders new unregistered Series 3 warrants to purchase 4,005,062 shares of common stock.

December 2019 PIPE Financing Warrants

In December 2019, the Company entered into a securities purchase agreement with certain investors pursuant to which the Company, in a Private Placement, sold (i) an aggregate of 2,500,000 unregistered shares of the Company's common stock, and (ii) Warrants to purchase up to an aggregate of approximately 1,250,000 shares of common stock, for an aggregate purchase price of $1,500,000 (see Note 10). The warrants have an exercise price of $0.78 per share and became exercisable on June 24, 2020 (6 months after their issuance date) and have a five-year term.

The warrants were valued at $686,000 using the Black-Scholes option pricing model as follows: exercise price of $0.78 per share, stock price of $0.62 per share, expected life of five years, volatility of 143%, and a risk-free rate of 2.42%. As the common stock and warrants were issued in a unit structure, the aggregate proceeds of $1,500,000 were allocated to the two securities using the relative fair value method, resulting with the common stock and warrants being allocated $1,035,000 and $465,000, respectively. The warrants were classified in stockholders' equity.

9. Convertible Preferred Stock

At June 30, 2020, convertible preferred stock consisted of the following:

(in thousands, except share data) Series	Shares Authorized	Issued and Outstanding	Carrying Value	Liquidation Preference per Share
A	5,524,926	5,524,926	$ 10,878	$ 1.665
B	11,000	—	—	—
B-1	63	—	—	—
B-2	10,165	7,534	916	—
Non-designated	4,453,846	—	—	—
Total	10,000,000	5,532,460	$ 11,794	

At December 31, 2019, convertible preferred stock consisted of the following:

(in thousands, except share data) Series	Shares Authorized	Issued and Outstanding	Carrying Value	Liquidation Preference per Share
A	5,524,926	5,524,926	$ 9,895	$ 1.665
B	11,000	1,971	476	—
B-1	63	—	—	—
B-2	10,165	10,165	1,236	—
Non designated	4,453,846	—	—	—
Total	10,000,000	5,537,062	$ 11,607	

Series A Redeemable Convertible Preferred Stock

In March 2018, the Company entered into a stock purchase agreement with Sagard Capital pursuant to which the Company, in a private placement, agreed to issue and sell to Sagard Capital 5,524,926 shares of the Company's Series A convertible participating preferred stock, $0.0001 par value per share, for gross proceeds of $9,199,000, or $9,000,000 net of issuance costs. The preferred stock is convertible into approximately 473,565 shares of common stock at the option of the holder at an effective conversion price of $19.425 per share. Subject to certain limited exceptions, the shares of Preferred Stock could not be offered, pledged or sold by Sagard Capital 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 shares of common stock 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 Series A convertible preferred shares are redeemable by Sagard Capital upon a Redemption Event that is not solely within the control of the Company. If a Redemption Event were to occur 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 convertible preferred stock then outstanding may require the Company to redeem all Series A shares for cash at a per share purchase price equal to $2.3057. Any one of the following conditions can result in a Redemption Event: (i) revenue attributable to the Mytesi product for the six-month period ended March 31, 2021 is less than $22.0 million; (ii) the daily volume weighted average price (“VWAP”) of the Company's common stock on Nasdaq for the 30 days prior to a Measurement Date is less than $105.00; (iii) the Company fails to file with the SEC on or before June 30, 2021, its Form 10-Q for the three months ending March 31, 2021.

During the three months ended December 31, 2019, the Company determined that a Redemption Event was probable as of July 1, 2019. The Company is accreting the carrying value to the redemption amount of $12,738,822.

The redemption amount of the Series A convertible preferred stock is $12,738,822 as of June 30, 2020 and December 31, 2019. The carrying value of the Series A convertible preferred stock was $10,878,000 and $9,895,000 as of June 30, 2020 and December 31, 2019, respectively.

In March 2019, the Company and Sagard Capital amended certain terms of the agreement, such that the effective conversion price was adjusted to $19.425 per share.

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

Series B Convertible Preferred Stock

In July 2019, the Company entered into an underwriting agreement relating to the public offering comprised of (1) 2,886,500 Class A Units, priced at a public offering price of $2.00 per unit, with each unit consisting of (i) one share of the Company’s voting common stock, (ii) one Series 1 warrant to purchase one share of common stock and (2) 10,787 Class B Units, priced at a public offering price of $1,000 per unit, with each Class B unit consisting of (i) one share of

Series B convertible preferred stock with a stated value of $1,000 and convertible into 500 shares of common stock, (ii) 500 Series 1 Warrants and (iii) 500 Series 2 Warrants, at a public offering price of $1,000 per Class B Unit.

The Company sold 10,787 Class B Units, comprised of 10,787 shares of Series B convertible preferred stock, Series 1 warrants to purchase 5,393,500 shares of common stock and Series 2 warrants to purchase 5,393,500 shares of common stock. The total gross proceeds to the Company from the offering of the Class B Units were $10,787,000, of which $4,240,000 was allocated to the Series B convertible preferred stock, $3,274,000 to the Series 1 Warrants and $3,274,000 to the Series 2 Warrants. Issuance costs of $1,635,000 were allocated to the Class B Units.

Holders of the Series B shares are entitled to participate equally and ratably with the holders of shares of common stock 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 B then outstanding were converted into shares of common stock. With certain exceptions, the shares of Series B Convertible Preferred Stock have no voting rights. However, as long as any shares of Series B Convertible Preferred Stock remain outstanding, the Company shall not, without the affirmative vote of holders of a majority of the then outstanding shares of Series B Convertible Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the Series B Convertible Preferred Stock or alter or amend the Series B Certificate of Designation or (b) enter into any agreement with respect to any of the foregoing. Each share of Series B Convertible Preferred Stock is convertible at any time at the holder’s option into 500 shares of common stock, which conversion ratio will be subject to adjustment for stock splits, stock dividends, distributions, subdivisions and combinations and other similar transactions.

On the July 23, 2019 issuance date, the effective conversion price per share was less than the fair value of the underlying common stock. As a result, the Company determined that there was a Beneficial Conversion Feature of $4,240,000.

Because the Company's Series B Convertible Preferred Stock does not have a stated conversion date and was immediately convertible at the issuance date, the Company recorded a deemed dividend charge of $4,240,000 for the accretion of the discount on the Series B Convertible Preferred Stock.

The preferred stock has been classified in stockholders' equity in accordance with authoritative guidance.

During July and August 2019, certain investors converted 8,816 Series B convertible preferred shares into 4,408,000 shares of the Company’s common stock at the stated conversion ratio. There were zero and 1,971 shares of Series B Convertible Preferred Stock outstanding as of June 30, 2020 and December 31, 2019, respectively.

In March 2020, the Company entered into a Warrant Exercise and Preferred Stock Amendment Agreement (“Amendment Agreement”) with a holder of its Series 2 Warrants, pursuant to which the holder agreed to exercise in cash its Series 2 Warrants to purchase an aggregate of 1,250,000 shares of common stock, in consideration of the Company reducing the warrant exercise price from $2.00 to $0.5227 per share, for gross proceeds to the Company of approximately $653,000 (see Note 8). As a further inducement to enter into the Amendment Agreement, the Company agreed to reduce the conversion price of the Company’s Series B convertible preferred stock from $2.00 to $0.4456, resulting in the application of accounting per ASC 260-10-S99-2. Because the reduction to the conversion price was an inducement, the Company applied the guidance in ASC 470-20, resulting in the recording of an inducement charge of $1,647,000 in the unaudited condensed consolidated statements of operations for the six months ended June 30, 2020.

Series B-1 Convertible Preferred Stock

In October 2019, the Company entered into a Warrant Exercise Agreement with the sole remaining holder of the Series B Convertible Preferred Stock (the “Exercising Holder”), who owned Series 1 Warrants exercisable for 1,250,000 shares of common stock. Pursuant to the terms of the Warrant Exercise Agreement, the Company had the right (a purchased put option) to require the Exercising Holder to exercise all or a portion of its Series 1 Warrants in accordance with the existing terms of the Series 1 Warrants, in exchange for the Company’s agreement to issue to the Exercising Holder a number of shares of the Company’s Series B-1 Convertible Preferred Stock, with a stated value of $12,000, in an amount equal to one Series B-1 Preferred Share for every 19,841 Series 1 Warrant Shares issued by the

Company to the Exercising Holder. The purpose of the Company entering into the agreement was to enable the Company to monetize the remaining Series 1 Warrants. To the extent that all Series 1 Warrants held by the Exercising Holder were exercised at their $1.40 exercise price, the Company would receive aggregate gross proceeds of approximately $1,750,000 and, in turn, have issued 63 shares of Series B-1 Preferred Stock to the Exercising Holder.

On October 3 and October 9, 2019, in two separate transactions, the Company exercised its purchased put option (see Note 3) to require the Exercising Holder to exercise all of its 1,250,000 Series 1 warrants (see Note 8), upon which the Company issued 1,250,000 common shares to the Exercising Holder in return for aggregate gross proceeds of $1,750,000. In consideration (the strike price) of the exercising the warrants, the Company issued 63 shares of Series B-1 Convertible Preferred Stock to the Exercising Holder.

On the October 3, 2019 issuance date, the effective conversion price was less than the fair value of the underlying common stock. As a result, the Company determined that there was a Beneficial Conversion Feature of $146,000. Because the Company's Series B-1 Convertible Preferred Stock does not have a stated conversion date and was immediately convertible at the issuance date, the Company recorded a deemed dividend charge of $146,000 for the accretion of the discount on the Series B-1 Convertible Preferred Stock.

On the October 9, 2019 issuance date, the effective conversion price was less than the fair value of the underlying common stock. As a result, the Company determined that there was a Beneficial Conversion Feature of $385,000. Because the Company's Series B-1 Preferred Stock does not have a stated conversion date and was immediately convertible at the issuance date, the Company recorded a deemed dividend charge of $385,000 for the accretion of the discount on the Series B-1 Preferred Stock.

The Series B-1 Preferred Stock was classified in stockholders' equity in accordance with authoritative guidance.

In December 2019, the sole investor in the Series B-1 Preferred Stock converted its entire holding of 63 shares of the Series B-1 Preferred Stock into 630,063 shares of the Company’s common shares at the stated conversion ratio. As of December 31, 2019, there were no shares of the Series B-1 Preferred Stock outstanding.

Series B-2 Convertible Preferred Stock

In December 2019, the Company entered into an exchange agreement with Oasis Capital, LLC (“Oasis Capital”), pursuant to which Oasis Capital gave up (i) its remaining unexercised Prepaid Forward contracts (see Note 10) exercisable for 1,236,223 shares of the Company’s common stock and (ii) 695,127 common shares held as an investment by Oasis Capital, in exchange for 10,165 shares of the Company’s newly authorized Series B-2 Convertible Preferred Stock.

The holders of the Series B-2 Convertible Preferred Stock are entitled to receive dividends on shares of Series B-2 Convertible Preferred Stock equal (on an as-if-converted-to-Common-Stock basis) to and in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of the common stock. No other dividends shall be paid on shares of the Series B-2 Convertible Preferred Stock.

The shares of Series B-2 Convertible Preferred Stock have no voting rights. However, as long as any shares of Series B-2 Convertible Preferred Stock remain outstanding, the Company shall not, without the affirmative vote of holders of a majority of the then outstanding shares of Series B-2 Convertible Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the Series B-2 Convertible Preferred Stock or alter or amend the Series B-2 Certificate of Designation or (b) enter into any agreement with respect to any of the foregoing.

Upon any liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary, the holders of the Series B-2 Convertible Preferred Stock are entitled to receive out of the assets, whether capital or surplus, of the Company the same amount that a holder of common stock would receive if the Series B-2 Convertible Preferred Stock were fully converted to common stock which amounts shall be paid *pari passu* with all holders of common stock.

Each share of Series B-2 Convertible Preferred Stock is convertible at any time at the holder's option into 190 shares of common stock, as determined by dividing the $153.90 stated value of each Series B-2 Convertible Preferred Share by the $0.81 conversion price ($153.90 divided by 0.81 = 190 conversion ratio), and which conversion ratio is subject to adjustment for stock splits, stock dividends, distributions, subdivisions and combinations and other similar transactions as specified in the Series B-2 Certificate of Designation.

The Series B-2 Convertible Preferred Stock was classified in stockholders' equity in accordance with authoritative guidance.

In January 2020, a holder of the Series B-2 convertible preferred stock converted 2,631 preferred shares into 499,890 shares of common stock.

10. Stockholders' Equity

Common Stock

As of June 30, 2020 and December 31, 2019, the Company had reserved shares of common stock for issuance as follows:

	June 30, 2020 (unaudited)	December 31, 2019
Options issued and outstanding	4,455,101	3,902,675
Inducement options issued and outstanding	3,392	74
Options available for grant under stock option plans	710,299	479,829
Restricted stock unit awards issued and outstanding	5,613	5,613
Warrants issued and outstanding	16,991,395	19,421,892
Series A convertible preferred stock	473,565	473,565
Series B convertible preferred stock	—	985,500
Series B-2 convertible preferred stock	1,431,460	1,931,350
Total	24,070,825	27,200,498

The holders of common stock are entitled to one vote for each share of common stock held. The common stockholders are also entitled to receive dividends whenever funds and assets are legally available and when declared by the Board of directors.

The holders of non-voting common stock are not entitled to vote, except on an as converted basis with respect to any change of control of the Company that is submitted to the stockholders of the Company for approval. Shares of the Company's non-voting common stock have the same rights to dividends and other distributions and are convertible into shares of the Company's common stock on a 1,050-for-one basis upon transfers to non-affiliates of Nantucket ("former creditor of Napo"), upon the release from escrow of certain non-voting shares held by the former creditors of Napo to the legacy stockholders of Napo under specified conditions and at any time on or after April 1, 2018 at the option of the respective holders thereof.

The Company is authorized to issue a total number of 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 are preferred stock.

Reverse stock-splits

On June 3, 2019, the Company filed the Certificate of Fifth Amendment to its Third Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware to effect a 1-for-70 reverse stock split of the Company's issued and outstanding shares of voting common stock, effective June 7, 2019. The reverse split has been retroactively reflected in all voting common stock, warrants, and common stock option shares disclosed in these

unaudited condensed consolidated financial statements. The non-voting common stock and the convertible preferred stock were excluded from the reverse split.

Transactions with Oasis Capital

January 2019 SPA

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 76,190 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 76,190 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 $52.50 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 114,286 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 76,190 shares of common stock of the equity line and all 114,286 shares of common stock from the option to Oasis Capital, or a total of 190,476 shares.

March 2019 SPA

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 19,019 shares of common stock at an offering price of $14.00 for gross proceeds of approximately $266,000. Between March 24, 2019, the date of the March CSPA, and March 31, 2020, the Company sold an aggregate of 19,019 shares of common stock pursuant to the CSPA for aggregate gross proceeds of approximately $266,000.

March 2020 ELOC (Equity Line of Credit)

In March 2020, the Company entered into an equity purchase agreement (the “March 2020 ELOC”) with Oasis Capital, which provides that Oasis Capital is committed to purchase up to an aggregate of $2.0 million shares of the Company’s common stock over the 36-month term of the March 2020 ELOC.

Pursuant to the terms and conditions of the March 2020 ELOC, on any trading day selected by the Company (such date the “Put Date”), after the SEC has declared effective the registration statement registering the sale of the shares of common stock that may be issued to Oasis Capital under the March 2020 ELOC, the Company has the right, in its sole discretion, to present to Oasis Capital with a purchase notice (each a “Put Notice”), directing Oasis Capital to purchase up to the lesser of (i) 200,000 shares of common stock or (ii) 20% of the average trading volume of common stock in the 10 trading days immediately preceding the date of such Put Notice, at a per share price equal to $0.436 (each an “Option 1 Put”), provided that the aggregate of all Option 1 Puts and Option 2 Puts (described below) does not exceed $2.0 million.

In addition, on any date on which Oasis Capital receives shares of common stock in connection with a Put Notice (the “Clearing Date”), the Company also has the right, in its sole discretion, to present to Oasis Capital with a Put Notice (each an “Option 2 Put”) directing Oasis Capital to purchase an amount of common stock equal to the lesser of (i) such amount that equals 10% of the daily trading volume of the common stock on the date of such Put Notice and (ii) $200,000, provided that the aggregate amount of the Option 1 Put and Option 2 Put on any Put Date or Clearing Date does not exceed $500,000 and the aggregate amount of all Option 1 Puts and Option 2 Puts does not exceed $2.0 million. The purchase price per share pursuant to such Option 2 Put is equal to $0.436. The Threshold Price (defined later) and the Purchase Price will be adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring during the period used to compute the Threshold Price or the Purchase Price.

On April 15, 2020, the SEC declared effective the registration statement registering the sale of the shares of common stock issued to Oasis Capital under the March 2020 ELOC. The Company will control the timing and amount

of sales of common stock to Oasis Capital. Oasis Capital has no right to require any sales by the Company but is obligated to make purchases from the Company as directed by the Company in accordance with the March 2020 ELOC.

In connection with the equity line, the Company agreed to pay Oasis Capital a commitment fee and in April 2020, in settlement of the commitment fee, the Company issued to Oasis Capital 68,807 shares of common stock. At issuance, the 68,807 shares of common stock had a fair value of $33,027, and were expensed as an issuance cost in the Company's condensed consolidated statements of operations.

Per the terms of the equity purchase agreement, the Option Put 1 and Option Put 2 may be exercised only at a price that is always above the trading price of the underlying common stock at the exercise date, thereby rendering any exercise by the Company being out-of-the-money. At inception of the equity line on March 24, 2020, the Put Options were classified as derivative assets with a fair value of zero, and upon an effective registration statement on April 15, 2020, were reclassified to stockholders' equity with a fair value of zero.

In April 2020, the Company exercised a single Put Option Put 1 under which the Company sold 52,000 common shares to Oasis for gross proceeds of $22,627. As of June 30, 2020, the Company had not exercised any further put options to require Oasis Capital to purchase common stock under the equity purchase agreement.

March 2020 PIPE Financing

In March 2020, Company entered into a securities purchase agreement (the "PIPE Purchase Agreement") with certain investors, pursuant to which the Company agreed to issue and sell to the Investors in a private placement an aggregate of 1,714,283 shares of the Company's common stock, for an aggregate purchase price of approximately $720,000, or $668,578 net of $51,422 of issuance costs.

11. 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 June 30, 2020, there were 384 options outstanding.

2014 Stock Incentive Plan

Effective May 12, 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 that 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, canceled or expired.

As of June 30, 2020, there were 4,455,101 options outstanding and 213,617 options available for grant.

2020 New Employee Inducement Award Plan

Effective June 16, 2020, the Company adopted the Jaguar Health, Inc. New Employee Inducement Award Plan ("2020 Inducement Award Plan") and, subject to the adjustment provisions of the Inducement Award Plan, reserved 500,000 shares of the Company's common stock for issuance pursuant to equity awards granted under the Inducement

Award Plan. The 2020 Inducement Award Plan provides for the grant of nonstatutory stock options, restricted stock units, restricted stock, and performance shares. The 2020 Inducement Award Plan was adopted without stockholder approval pursuant to Rule 5635(c)(4) of the Nasdaq Listing Rules. The terms and conditions of the 2020 Inducement Award Plan are substantially similar to the Company's 2014 Stock Incentive Plan, but with such other terms and conditions intended to comply with the Nasdaq inducement award rules. In accordance with Rule 5635(c)(4) of the Nasdaq Listing Rules, the only persons eligible to receive grants of equity awards under the Inducement Award Plan are individuals who were not previously an employee or director of the Company, or following a bona fide period of non-employment, as an inducement material to such persons entering into employment with the Company.

As of June 30, 2020, there were 3,318 options outstanding and 496,682 options available for grant.

Stock Options and Restricted Stock Units ("RSUs")

The following table summarizes incentive plan activity for the six months ended June 30, 2020 (*unaudited*):

(in thousands, except share and per share data)	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, 2019	479,829	3,902,675	5,613	$ 5.20	9.56	$ —
Additional shares authorized	786,229	—	—	—	—	—
Options granted	(853,318)	853,318	—	0.45	—	—
Options canceled	297,559	(297,559)	—	3.75	—	—
Options canceled not rolled back into the 2013 Plan	—	(15)	—	—	—	—
Outstanding at June 30, 2020	710,299	4,458,419	5,613	$ 4.39	9.12	$ 31
Exercisable at June 30, 2020		1,549,977		$ 9.31	8.85	$ —
Vested and expected to vest at June 30, 2020		4,030,402		$ 4.71	9.10	$ 28

* Fair market value of JAGX common stock on June 30, 2020 was $0.485 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.

No options were exercised in the six months ended June 30, 2020.

The weighted average grant date fair value of stock options granted was $0.41 and $17.05 per share during the six months ended June 30, 2020 and 2019, respectively.

The number of options that vested in the six months ended June 30, 2020 and 2019 was 702,364 and 10,598, respectively. The grant date weighted average fair value of options that vested in the six months ended June 30, 2020 and 2019 was $2.21 and $132.26, respectively.

Stock-Based Compensation

The following table summarizes stock-based compensation expense related to stock options, inducement stock options and RSUs for the three and six months ended June 30, 2020 and 2019, and are included in the condensed consolidated statements of operations as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
(in thousands)	(unaudited)		(unaudited)	
Research and development expense	$ 203	$ 149	$ 405	$ 216
Sales and marketing expense	57	12	113	46
General and administrative expense	489	285	991	611
Total	$ 749	$ 446	$ 1,509	$ 873

As of June 30, 2020, the Company had $3,693,000 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 1.64 years.

The estimated grant-date fair value of stock option grants for the six months ended June 30, 2020 and 2019 was calculated using the Black-Scholes - Merton option-pricing model using the following weighted-average assumptions:

	Six Months Ended June 30,	
	2020	2019
	(unaudited)	
Weighted-average volatility	150.1 - 172.4 %	108.3 - 108.5 %
Weighted-average expected term (years)	5.0	5.8
Risk-free interest rate	0.3 - 0.5 %	2.5 - 2.6 %
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 June 30, 2020.

12. Net Loss Per Share

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

	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
(In thousands, except share and per share data)	(unaudited)		(unaudited)	
Net loss attributable to common shareholders (basic and diluted)	$ (10,597)	$ (16,721)	$ (19,013)	$ (25,025)
Shares used to compute net loss per common share, basic and diluted	23,890,931	1,106,374	19,516,419	801,482
Net loss per share attributable to common shareholders, basic and diluted	$ (0.44)	$ (15.11)	$ (0.97)	$ (31.22)

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 and six months ended June 30, 2020 and 2019 because their inclusion would be anti-dilutive.

	June 30,	
	2020	2019
	(unaudited)	
Options issued and outstanding	4,455,101	39,481
Inducement options issued and outstanding	3,392	906
Restricted stock units issued and outstanding	5,613	5,613
Warrants issued and outstanding	16,991,395	1,237,871
Series A convertible preferred stock	473,565	473,565
Series B convertible preferred stock	—	—
Series B-2 convertible preferred stock	1,431,460	—
Total	23,360,526	1,757,436

13. Segment Information

The Company has two reportable segments-human health and animal health. The animal health segment is focused on developing and commercializing prescription and non-prescription products for companion and production animals. The human health segment is focused on developing and commercializing of human products and the ongoing commercialization of Mytesi, which is approved by the U.S. FDA for the symptomatic relief of non-infectious diarrhea in adults with HIV/AIDS on antiretroviral therapy.

The Company's reportable segments net revenues and net loss for the three and six months ended June 30, 2020 and 2019 consisted of:

(in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
	(unaudited)		(unaudited)	
Revenue from external customers				
Human Health	$ 3,153	$ 1,685	$ 3,988	$ 3,228
Animal Health	14	21	48	67
Consolidated Totals	$ 3,167	$ 1,706	$ 4,036	$ 3,295
Segment net loss				
Human Health	$ (1,609)	$ (9,838)	$ (4,809)	$ (12,631)
Animal Health	(7,629)	(6,883)	(12,365)	(12,394)
Consolidated Totals	$ (9,238)	$ (16,721)	$ (17,174)	$ (25,025)

The Company's reportable segments assets consisted of the following:

(in thousands)	June 30, 2020	December 31, 2019
	(unaudited)	
Segment assets		
Human Health	$ 33,973	$ 32,432
Animal Health	71,301	68,169
Total	$ 105,274	$ 100,601

The reconciliation of segments assets to the consolidated assets is as follows:

(in thousands)	June 30, 2020	December 31, 2019
	(unaudited)	
Total assets for reportable segments	$ 105,274	$ 100,601
Less: Investment in subsidiary	(29,241)	(29,241)
Less: Intercompany loan	(38,453)	(34,950)
Consolidated Totals	$ 37,580	$ 36,410

14. Subsequent Events

Iliad Royalty Interest Purchase Agreement Amendment

On July 10, 2020, the Company entered into an amendment to the Royalty Interest Purchase Agreement with Iliad pursuant to which the Company and Iliad agreed that no royalty payments or other payment will be due prior to December 10, 2020. In consideration for Iliad's agreement to enter into the amendment, the balance of the Royalty Repayment Amount as of July 10, 2020 was increased by 10%. All other terms of the Royalty Interest Documents remain unchanged.

Series 3 Warrant Holders Issued Cashless Exercise Settlement Method

A Special Meeting of Stockholders was held on July 21, 2020, whereupon a proposal to approve the "Alternate Cashless Exercise" settlement method for the Series 3 warrants was approved. The Series 3 warrants and their underlying common shares were registered per the registration statement on Form S-3 on June 5, 2020.

Amendment to the Company's Third Amended and Restated Certificate of Incorporation

A Special Meeting of Stockholders was held on July 21, 2020, whereupon the proposal to approve an amendment to the Company's Third Amended and Restated Certificate of Incorporation, as amended, to decrease the number of authorized shares of common stock to 130,000,000 shares, was approved by the stockholders.

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, 2019.

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 or other means of accelerating the payment of accounts receivable, 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 our 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 these 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 for the symptomatic relief of noninfectious diarrhea in adults with HIV/AIDS on antiretroviral therapy.

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. Most of the activities of the Company are now focused on the commercialization of Mytesi and development of follow-on indications for crofelemer and a second-generation anti-secretory product, lechlemer. In the field of animal health, we have limited activities which are focused on developing and commercializing first-in-class gastrointestinal products for dogs, dairy calves, foals, and high value horses.

We believe Jaguar is poised to realize a number of synergistic, value adding benefits—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 holds extensive global rights for Mytesi, 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 what we believe are strong Phase 2 and proof of concept evidence from completed human clinical 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 for idiopathic/functional diarrhea. In addition, a second-generation anti-secretory agent, lechlemer, is in development for cholera. Mytesi previously 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 $17.2 million and $25.0 million for the six months ended June 31, 2020 and 2019, respectively. As of June 30, 2020, we had a total stockholders' equity of $1.5 million, an accumulated deficit of $150.3 million, and cash of $3.0 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.

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.

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 at an outsourced API provider in Italy. It also includes expenses with a third-party provider for the transfer of the Mytesi manufacturing process, and the related feasibility and validation activities.

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 and we track 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 due to the start-up costs associated with our clinical trials for other indications and when we start the Phase 2 study under the Patent Rights agreement.

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. We do not currently have any marketing or promotional expenses related to Neonorm Calf or Neonorm Foal in the six months ended June 30, 2020.

We expect sales and marketing expense to increase going forward as we focus on expanding our market access activities and commercial partnerships for the development of follow-on indications of Mytesi and Crofelemer.

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.

In the near term, we expect general and administrative expense to decrease as we focus on our pipeline development and market access expansion. This will include efforts to grow the business without adding headcount or increasing 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, 2019.

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 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 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 - Cardinal Health

Effective January 16, 2019, Napo 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, Electronic Data Interchange ("EDI") and system access support (the "Exclusive Distribution Agreement") .

In addition to the terms and conditions of the Exclusive Distribution 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 the Company until purchased by Cardinal Health in accordance with the Title Model Addendum. Napo considers Cardinal Health the Company's exclusive customer for Mytesi products per the 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, 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.

Transaction price

For contracts with Cardinal Health, for both Jaguar and Napo, the transaction price is the amount of consideration to which the Company expects to collect in exchange for transferring the 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 contracts with Cardinal Health, for both Napo and Jaguar, the entire transaction price is allocated to the single performance obligation contained in each contract.

Revenue recognition

For contracts with Cardinal Health, 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 wholesaler. Net revenues from the sale of Mytesi were $3.2 million and $1.7 million for the three months ended June 30, 2020 and 2019, respectively. Revenues from the sale of Mytesi were $4.0 million and $3.2 million for the six months ended June 30, 2020 and 2019, respectively.

Animal

The Company recognized Neonorm revenues of $14,000 and $21,000 for the three months ended June 30, 2020 and 2019, respectively. Revenues from the sale of Neonorm were $48,000 and $67,000 for the six months ended June 30, 2020 and 2019, 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.

Contracts - Atlas Sciences

Effective April 15, 2020 (the "Effective Date"), the Company entered into a patent purchase agreement with Atlas Sciences, LLC ("Atlas"), pursuant to which Atlas agreed to purchase certain patents and patent applications relating to the Napo's NP-500 drug product candidate (the "Patent Rights") for an upfront cash payment of $1,500,000.

Concurrent with the Patent Rights sale, the Company entered into a license agreement with Atlas (the "License Agreement"), pursuant to which Atlas granted the Company an exclusive 10-year license to use the Patent Rights and improvements thereon to develop and commercialize NP-500 in all territories worldwide except Greater China (i.e., China, Hong Kong, Taiwan and Macau), inclusive of the right to sublicense NP-500 development and commercialization rights ("the License"). Except for the License retained by the Company, Atlas retains all rights, title and interest in and to the Patent Rights, including all improvements and enhancements to the Patent Rights made or created by the Company under the License Agreement or made or created by or on behalf of Atlas during the term of the License Agreement.

As consideration for the License, the Company is obligated to initiate a proof of concept Phase 2 study of NP-500 under an investigational new drug ("IND") application with the U.S. Food and Drug Administration or an IND-equivalent dossier under appropriate regulatory authorities (the "Phase 2 study") within nine months of April 15, 2020. If the Company fails to initiate the Phase 2 study by this date, for any reason, including the timely receipt of adequate funding to initiate the Phase 2 study, the Company will incur a trial delay fee equal to $2,515,000 (the "Trial Delay Fee"), which amount is payable beginning on the nine-month anniversary of the Effective Date and continuing until the payment in full of the Trial Delay Fee, in an amount equal to: (a) from the nine- month anniversary of the Effective Date

until the fifteenth-month anniversary of the Effective Date, Two Hundred Thousand Dollars ($200,000); and (b) from the fifteenth -month anniversary of the Effective Date until payment in full of the Trial Delay Fee, Three Hundred Fifty Thousand Dollars ($350,000). Atlas has the right to terminate the License in the event that the Company (i) fails to complete the Phase 2 study within five years of April 15, 2020 or (ii) has not timely initiated the Phase 2 study and thereafter fails to make three or more consecutive Trial Delay Payments.

Performance obligations

The Patent Rights sale to Atlas and the Phase 2 study to be performed by the Company, identified above, represent a single transaction with two separate performance obligations; with the sale of the Patent Rights, the Company transferred control of the internally generated Patent Rights to Atlas at the date of sale; and with the Phase 2 study, the services will be transferred to Atlas over an estimated 13.2 months.

Transaction price

For the contract with Atlas, the upfront payment of $1,500,000 from Atlas as consideration for the Patent Rights sale and the Phase 2 study, is variable consideration that is fully constrained due to the potential incurrence of a Trial Delay Fee of $2,515,000 if the Phase 2 study had not been initiated by January 15, 2021. In addition, due to the estimated 13.2-month term over which the Company will perform the Phase 2 study, the upfront payment resulted in a significant financing component of $279,000. Accordingly, at inception, the total transaction price of $1,779,000 is deferred and the transaction price is zero.

Allocate transaction price

For the contract with Atlas, the transaction price of $1,779,000 is allocated as follows: (i) $1,196,000 was allocated to the Phase 2 study using the cost-plus margin approach, and (ii) $583,000 was allocated to the Patent sale using the Residual method.

Revenue recognition

For the contract with Atlas, control of the Patent Rights transferred to Atlas on the date of sale (at a point-in-time); and with the Phase 2 study, the services will be transferred to Atlas over the estimated 13.2 months of the study, which is set to run between October 2020 and November 2021. However, due to the full constraint on the $1,500,000 variable consideration, all revenue was deferred at inception of the transaction and as of June 30, 2020. So long as the Company initiates the Phase 2 study on or before January 15, 2021, the upfront payment of $1,500,000 will no longer be variable, nor constrained, and at which point the Company can immediately recognize the $583,000 allocated to the Patent Rights and in turn can start to recognize revenue from the Phase 2 services.

Disaggregation of Patent Sales and Clinical Trial Services

Patent Rights Sale

Patent Rights sales are recognized when control of the Patent Rights are transferred to the purchaser (at a point-in-time). Due to the full constraint on the variable consideration of $1,500,000, there was no revenue recognized from the sale of Patent Rights to Atlas or the three and six months ended June 30, 2020 and 2019, respectively.

Clinical Trials

Revenue from clinical trials are recognized over time as the services are performed. The Phase 2 study to be performed under the Atlas License is expected to begin in October 2020 and run through November 2021. The expected first patient dose in the study is expected to occur in December 2020, at which point revenue from the Phase 2 study can begin to be recognized. Due to the Phase 2 study having not begun and the full constraint on the variable consideration of $1,500,000, for the three and six months ended June 30, 2020 and 2019, there was no revenue recognized from the Phase 2 services.

Indefinite-lived Intangible Assets

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 unaudited condensed consolidated balance sheets. 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. Fair value determinations require considerable judgement and are sensitive to changes in underlying assumptions, estimates regarding our future plans, as well as industry and economic conditions. These assumptions and estimates include projected revenues and income growth rates, terminal growth rates, competitive and consumer trends, market-based discount rates, and other factors. If current expectations of growth rates are not met or market factors outside of our control, such as discount rates, change significantly, this may lead to a further impairment in the future. We recorded no impairment in the three and six months ended June 30, 2020 and 2019. The impairment loss is measured based on the excess of the carrying amount over the asset's fair value. Definite-lived intangible assets are amortized on a straight-line basis over the estimated periods benefited and are reviewed when appropriate for possible impairment.

Accrued Research and Development Expenses

As part of the process of preparing our unaudited 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. Clinical and contract manufacturing expense consists primarily of costs to conduct stability, safety and efficacy studies, and manufacturing startup at an outsourced API provider in Italy. It also includes expenses with a third-party provider for the transfer of the Mytesi manufacturing process, and the related feasibility and validation activities.

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 Six Months Ended June 30, 2020 and 2019

The following table summarizes the Company's results of operations with respect to the items set forth in such table for the six months ended June 30, 2020 and 2019 together with the change in such items in dollars and as a percentage.

	Six Months Ended June 30,			
(in thousands)	2020	2019	Variance	Variance %
Product revenue	$ 4,036	$ 3,295	$ 741	22.5 %
Total revenue	4,036	3,295	741	22.5 %
Operating Expenses				
Cost of product revenue	1,707	2,125	(418)	(19.7)%
Research and development	2,987	3,119	(132)	(4.2)%
Sales and marketing	3,199	3,738	(539)	(14.4)%
General and administrative	6,905	6,711	194	2.9 %
Impairment of indefinite-lived intangible assets	—	4,000	(4,000)	(100.0)%
Series B convertible preferred stock inducement expense	1,647	—	1,647	100.0 %
Series 3 warrants inducement expense	3,696	—	3,696	100.0 %
Total operating expenses	20,141	19,693	448	2.3 %
Loss from operations	(16,105)	(16,398)	293	(1.8)%
Interest expense	(678)	(4,204)	3,526	(83.9)%
Other income (expense)	(4)	21	(25)	(119.0)%
Change in fair value of financial instruments	(387)	161	(548)	(340.4)%
Loss on extinguishment of debt	—	(4,605)	4,605	(100.0)%
Net loss	(17,174)	(25,025)	7,851	(31.4)%
Deemed dividend attributable to accretion of Series A convertible preferred stock	(983)	—	(983)	100 %
Deemed dividend attributable to Series 1, Series 2 and Bridge warrant holders	(856)	—	(856)	100 %
Net loss attributable to common shareholders	$ (19,013)	$ (25,025)	$ 6,012	(24.0)%

Revenue

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 six months ended June 30, 2020 and 2019 were as follows:

(in thousands)	Six Months Ended June 30, 2020	2019	Variance	Variance %
Gross product sales				
Mytesi	$ 7,592	$ 4,494	$ 3,098	68.9 %
Neonorm	48	67	(19)	(28.4)%
Total gross product sales	7,640	4,561	3,079	67.5 %
Medicare rebates	(660)	(269)	(391)	145.4 %
Sales discounts	(2,089)	(737)	(1,352)	183.4 %
Sales returns	(96)	(58)	(38)	65.5 %
Wholesaler fee	(759)	(202)	(557)	275.7 %
Net product sales	$ 4,036	$ 3,295	$ 741	22.5 %

Product Revenue

Our gross product revenues were $7.6 million and $4.6 million for the six months ended June 30, 2020 and 2019, respectively. These periods reflect 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 $7,592,000 and $4,494,000 in the six months ended June 30, 2020 and 2019, respectively. The increase in sales of Mytesi is due to an increase in the wholesaler demand, mostly due to the list price adjustment of Mytesi that occurred in April 2020.

Sales discounts were $2,089,000 and $737,000 for the six months ended June 30, 2020 and 2019, respectively, an increase of $1,352,000. Sales discounts include discounts for prompt payments from customers and an estimated allowance for chargebacks on sales. Of the total sales discounts, allowances for chargebacks were $1,923,000 and $679,000 for the six months ended June 30, 2020 and 2019, respectively. These allowances for chargebacks were approximately 25% and 15% on Mytesi gross product sales for the six months ended June 30, 2020 and 2019, respectively. The increase in allowance is mostly due to the increase in list price of Mystesi.

Animal

Our Neonorm product revenues were $48,000 and $67,000 for the six months ended June 30, 2020 and 2019, respectively. Focus on sales and marketing for Neonorm products had decreased during 2020.

Cost of Product Revenue

(in thousands)	Six Months Ended June 30, 2020	2019	Variance	Variance %
Cost of Product Revenue				
Material cost	$ 1,010	$ 1,049	$ (39)	(3.7)%
Direct labor	347	296	51	17.2 %
Distribution fees	138	155	(17)	(11.0)%
Royalties	27	104	(77)	(74.0)%
Other	185	521	(336)	(64.5)%
Total	$ 1,707	$ 2,125	$ (418)	(19.7)%

Cost of product revenue decreased $418,000 from $2,125,000 in the six months ended June 30, 2019 to $1,707,000 for the same period in 2020. The decrease in cost of product revenue period over period was due to non-recurring write-off of non-conforming inventory and equipment maintenance in the six months ended June 30, 2019.

Research and Development

The following table presents the components of research and development expense for the six months ended June 30, 2020 and 2019 together with the change in such components in dollars and as a percentage:

(in thousands)	Six Months Ended June 30, 2020	2019	Variance	Variance %
Research and Development:				
Personnel and related benefits	$ 812	$ 971	$ (159)	(16.4)%
Materials expense and tree planting	47	62	(15)	(24.2)%
Travel, other expenses	41	90	(49)	(54.4)%
Clinical and contract manufacturing	604	1,379	(775)	(56.2)%
Stock-based compensation	405	216	189	87.5 %
Other	1,078	401	677	168.8 %
Total	$ 2,987	$ 3,119	$ (132)	(4.2)%

Research and development expense decreased $132,000 from $3,119,000 in the six months ended June 30, 2019 to $2,987,000 for the six months ended June 30, 2020 due primarily to:

- Clinical and contract manufacturing expense decreased $775,000 from $1,379,000 in the six months ended June 30, 2019 to $604,000 in the same period in 2020 primarily due to a decrease in contract manufacturing costs for enhanced manufacturing process improvements.

- Personnel and related benefits decreased $159,000 from $971,000 in the six months ended June 30, 2019 to $812,000 in the same period in 2020 due to changes in headcount and related salaries.

- Other expenses, consisting primarily of consulting, formulation and regulatory fees, increased $677,000 from $401,000 in the six months ended June 30, 2019 to $1,078,000 in the same period in 2020. Consulting expenses increased by $216,000 due to an increase in clinical trial consultants, which is consistent with the increased activity in development of multiple follow-on indications for Mytesi. Direct R&D testing costs increased $341,000 due to an increase in R&D work. Regulatory expenses increased by $62,000.

We expect research and development expense to increase due to the start-up costs associated with our clinical trials for other indications and when we start the Phase 2 study under the Patent Rights agreement.

Sales and Marketing

The following table presents the components of sales and marketing (S&M) expense for the six months ended June 30, 2020 and 2019 together with the change in such components in dollars and as a percentage:

	Six Months Ended June 30,			
(in thousands)	2020	2019	Variance	Variance %
Sales and Marketing:				
Personnel and related benefits	$ 1,673	$ 2,512	$ (839)	(33.4)%
Stock-based compensation	113	46	67	145.7 %
Direct marketing fees and expense	955	939	16	1.7 %
Other	458	241	217	90.0 %
Total	$ 3,199	$ 3,738	$ (539)	(14.4)%

Sales and marketing expense decreased $539,000 from $3,738,000 in the six months ended June 30, 2019 to $3,199,000 for the six months ended June 30, 2020. The following table presents the components of S&M expense for the years ended:

- Personnel and related benefits decreased $839,000 from $2,512,000 in the six months ended June 30, 2019 to $1,673,000 in the same period in 2020 due to sales force reduction.

- Other expenses increased $217,000 from $241,000 in the six months ended June 30, 2019 to $458,000 in the same period in 2020 largely due to additional marketing consulting costs of $118,000.

General and Administrative

	Six Months Ended June 30,			
(in thousands)	2020	2019	Variance	Variance %
General and Administrative:				
Personnel and related benefits	$ 914	$ 898	$ 16	1.8 %
Audit, tax and accounting services	272	361	(89)	(24.7)%
Third-party consulting services	576	1,264	(688)	(54.4)%
Legal services	1,385	1,114	271	24.3 %
Travel, other expenses	26	99	(73)	(73.7)%
Stock-based compensation	991	611	380	62.2 %
Rent and lease expense	412	418	(6)	(1.4)%
Public company expense	419	430	(11)	(2.6)%
Other	1,910	1,516	394	26.0 %
Total	$ 6,905	$ 6,711	$ 194	2.9 %

General and administrative expenses increased $194,000 from $6,711,000 in the six months ended June 30, 2019 to $6,905,000 for the same period in 2020 primarily due to increases in stock-based compensation, legal services,

and other expenses, partially offset by a decrease in consultant fees, travel expenses, and audit, tax and accounting services:

- Stock-based compensation expense increased $380,000 from $611,000 in the six months ended June 30, 2019 to $991,000 in the same period in 2020 due to an increase in the volume of option grants to new and existing employees.

- Legal services increased $271,000 from $1,114,000 in the six months ended June 30, 2019 to $1,385,000 in the same period in 2020 primarily due to $275,000 increase in fees related to legal proceedings, $150,000 increase in fees related to addressing a congressional inquiry, and $50,000 increase in promotional material compliance review to support increase in marketing programs for Mytesi, partially offset by $211,000 decrease in public company and financing related legal services.

- Other general and administrative expenses increased $394,000 from $1,516,000 for the six months ended June 30, 2019 to $1,910,000 in the same period in 2020 largely due to $98,000 increase of Delaware state taxes, $103,000 increase of IT and software costs, and $163,000 increase of D&O liability insurance.

- Consulting fees decreased $688,000 from $1,264,000 in the six months ended June 30, 2019 to $576,000 in the same period in 2020, due to the switch to fulltime employees instead of consultants in the Finance department.

- Accounting fees decreased $89,000 from $361,000 in the six months ended June 30, 2019 to $272,000 in the same period in 2020, mostly due to change in the timing of billing of fees.

- Travel expenses decreased $73,000 from $99,000 in the six months ended June 30, 2019 to $26,000 in the same period in 2020 as a result of the COVID-19 pandemic.

In the near term, we expect general and administrative expense to remain the same as we focus on other areas of operations. This will include efforts to grow the business without adding headcount or increasing facilities.

Series B Convertible Preferred Stock Inducement Expense

On March 24, 2020, the Company entered into a Warrant Exercise and Preferred Stock Amendment Agreement with a holder of its Series 2 warrants previously issued in the Company's registered public offering on July 23, 2019, pursuant to which the holder agreed to exercise in cash its warrants to purchase an aggregate of 1,250,000 shares of common stock, at a reduced exercise price of $0.5227 per share for gross proceeds to the Company of approximately $653,000. As further inducement to enter into the Amendment Agreement, the Company agreed to reduce the conversion price of the Company's Series B convertible preferred stock from $2.00 to $0.4456, which is equal to the Minimum Price plus $0.01. The modification of the conversion price of the Series B convertible preferred shares were qualitatively considered an extinguishment and the Company followed guidance in ASC 260-10-S99-2 and recorded an expense of $1,647,000 and derecognizing the Series B convertible preferred shares.

Series 3 warrants Inducement Expense

In May 2020, concurrent with the May 2020 modification of the exercise price of the Series 1, Series 2 and Bridge Warrants and inducement offer, the Company issued unregistered Series 3 warrants to purchase 8,670,852 shares of common stock. The Series 3 Warrants have an exercise price of $0.53 per share and are exercisable beginning the earlier of (i) six months from their May 22, 2020 issuance date and (ii) receipt of the requisite Stockholder Approval (defined below), and expire five years thereafter. In addition to the fixed settlement method at $0.53 per warrant share, the Series 3 Warrants have two contingent settlement methods: (i) if at the time of exercise there is no effective registration statement, then the holders of the 8,670,852 warrants may exercise the warrants in a "cashless exercise," under which the holders will receive the aggregate warrants less the number of warrants equal to the exercise price; or (ii) a cashless exercise feature wherein, regardless if there is an effective registration agreement, following the requisite

Stockholder Approval, each such Series 3 Warrant will be exercisable into one share of common stock for no consideration (a one-for-one exchange). See Note 14 for information about subsequent events.

The Series 3 warrants were valued at $3,695,723 using the Black- Scholes option pricing model as follows: probability-weighted exercise price of $0.05 per share, stock price of $0.44 per share, expected life of 5.50 years, volatility of 141%, and a risk-free rate of 0.34%. The Series 3 warrants were classified as liabilities on the Company's condensed consolidated balance sheets.

Impairment of 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. We recorded an impairment of $4,000,000 in the three months ended June 30, 2019. There were no impairment charges recorded in the three and six months ended June 30, 2020. The impairment loss is measured based on the excess of the carrying amount over the asset's fair value.

Comparison of the Three Months Ended June 30, 2020 and 2019

The following table summarizes the Company's results of operations with respect to the items set forth in such table for the three months ended June 30, 2020 and 2019 together with the change in such items in dollars and as a percentage.

	Three Months Ended June 30,			
	2020	2019	Variance	Variance %
(in thousands)				
Product revenue	$ 3,167	$ 1,706	$ 1,461	85.6 %
Total revenue	3,167	1,706	1,461	85.6 %
Operating expenses				
Cost of product revenue	1,031	1,260	(229)	(18.2)%
Research and development	1,405	1,698	(293)	(17.3)%
Sales and marketing	1,730	2,173	(443)	(20.4)%
General and administrative	3,756	3,197	559	17.5 %
Impairment of indefinite-lived intangible assets	—	4,000	(4,000)	(100.0)%
Series 3 warrants inducement expense	3,696	—	3,696	100.0 %
Total operating expenses	11,618	12,328	(710)	(5.8)%
Loss from operations	(8,451)	(10,622)	2,171	(20.4)%
Interest expense	(479)	(3,657)	3,178	(86.9)%
Other (expense) income	78	14	64	457.1 %
Change in fair value of financial instruments	(386)	207	(593)	(286.5)%
Loss on extinguishment of debt	—	(2,663)	2,663	(100.0)%
Loss before income tax expense	(9,238)	(16,721)	7,483	(44.8)%
Income tax expense	—	—	—	100 %
Net loss	(9,238)	(16,721)	7,483	(44.8)%
Deemed dividend attributable to accretion of Series A convertible preferred stock	(503)	—	(503)	100 %
Deemed dividend attributable to Series 1, Series 2 and Bridge warrant holders	(856)	—	(856)	100 %
Net loss attributable to common shareholders	$ (10,597)	$ (16,721)	6,124	(36.6)%

Revenue

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 June 30, 2020 and 2019 were as follows:

	Three Months Ended June 30,			
(in thousands)	2020	2019	Variance	Variance %
Gross product sales				
Mytesi	$ 6,288	$ 2,350	$ 3,938	167.6 %
Neonorm	14	21	(7)	(33.3)%
Total gross product sales	6,302	2,371	3,931	165.8 %
Medicare rebates	(592)	(153)	(439)	286.9 %
Sales discounts	(1,828)	(389)	(1,439)	369.9 %
Sales returns	(78)	(26)	(52)	200.0 %
Wholesaler fees	(637)	(97)	(540)	556.7 %
Net product sales	$ 3,167	$ 1,706	$ 1,461	85.6 %

Product Revenue

Our gross product revenues were $6.3 million and $2.4 million for the three months ended June 30, 2020 and 2019, respectively. These periods reflect 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 $6,288,000 and $2,350,000 in the three months ended June 30, 2020 and 2019, respectively. The increase in sales of Mytesi is due to an increase in the wholesaler demand, mostly due to the list price adjustment of Mytesi that occurred in April 2020.

Animal

Our Neonorm product revenues were $14,000 and $21,000 for the three months ended June 30, 2020 and 2019, respectively. Focus on sales and marketing for Neonorm products had decreased during 2020.

Cost of Product Revenue

	Three Months Ended June 30,			
(in thousands)	2020	2019	Variance	Variance %
Cost of Product Revenue				
Material cost	$ 678	$ 537	$ 141	26.3 %
Direct labor	198	173	25	14.5 %
Distribution fees	94	66	28	42.4 %
Royalties	22	48	(26)	(54.2)%
Other	39	436	(397)	(91.1)%
Total	$ 1,031	$ 1,260	$ (229)	(18.2)%

Cost of product revenue decreased $229,000 from $1,260,000 in the three months ended June 30, 2019 to $1,031,000 for the same period in 2020. The decrease in cost of product revenue period over period was due to non-recurring write-off of non-conforming inventory and equipment maintenance in the three months ended June 30, 2019.

Research and Development

The following table presents the components of research and development expense for the three months ended June 30, 2020 and 2019 together with the change in such components in dollars and as a percentage:

(in thousands)	Three Months Ended June 30, 2020	2019	Variance	Variance %
Research and Development:				
Personnel and related benefits	$ 436	$ 417	$ 19	4.6 %
Materials expense and tree planting	10	35	(25)	(71.4)%
Travel, other expenses	41	72	(31)	(43.1)%
Clinical and contract manufacturing	198	778	(580)	(74.6)%
Stock-based compensation	203	149	54	36.2 %
Other	517	247	270	109.3 %
Total	$ 1,405	$ 1,698	$ (293)	(17.3)%

Research and development expense decreased $293,000 from $1,698,000 in the three months ended June 30, 2019 to $1,405,000 for the three months ended June 30, 2020 due primarily to:

- Clinical and contract manufacturing expense decreased $580,000 from $778,000 in the three months ended June 30, 2019 to $198,000 in the same period in 2020 primarily due to a decrease in contract manufacturing costs for enhanced manufacturing process improvements.

- Other expenses, consisting primarily of consulting, formulation and regulatory fees, increased $270,000 from $247,000 in the three months ended June 30, 2019 to $517,000 in the same period in 2020. Consulting expenses increased by $171,000 due to an increase in clinical trial consultants, which is consistent with the increased activity in development of multiple follow-on indications for Mytesi. Direct R&D testing costs increased $67,000 due to an increase in R&D work. Regulatory expenses increased by $35,000.

We expect research and development expense to increase due to the start-up costs associated with our clinical trials for other indications and when we start the Phase 2 study under the Patent Rights agreement.

Sales and Marketing

The following table presents the components of sales and marketing (S&M) expense for the three months ended June 30, 2020 and 2019 together with the change in such components in dollars and as a percentage:

(in thousands)	Three Months Ended June 30, 2020	2019	Variance	Variance %
Sales and Marketing:				
Personnel and related benefits	$ 878	$ 1,471	$ (593)	(40.3)%
Stock-based compensation	57	12	45	375.0 %
Direct marketing fees and expense	577	583	(6)	(1.0)%
Other	218	107	111	103.7 %
Total	$ 1,730	$ 2,173	$ (443)	(20.4)%

Sales and marketing expense decreased $443,000 from $2,173,000 in the three months ended June 30, 2019 to $1,730,000 for the three months ended June 30, 2020. The components of S&M expense for the years ended are:

- Personnel and related benefits decreased $593,000 from $1,471,000 in the three months ended June 30, 2019 to $878,000 in the same period in 2020 due to sales force reduction.

- Other expenses increased $111,000 from $107,000 in the three months ended June 30, 2019 to $218,000 in the same period in 2020 largely due to additional marketing consulting costs.

General and Administrative

(in thousands)	Three Months Ended June 30, 2020	2019	Variance	Variance %
General and Administrative:				
Personnel and related benefits	$ 453	$ 450	$ 3	0.7 %
Audit, tax and accounting services	214	91	123	135.2 %
Third-party consulting services	280	693	(413)	(59.6)%
Legal services	612	355	257	72.4 %
Travel, other expenses	—	46	(46)	(100.0)%
Stock-based compensation	489	285	204	71.6 %
Rent and lease expense	209	230	(21)	(9.1)%
Public company expense	377	243	134	55.1 %
Other	1,122	804	318	39.6 %
Total	$ 3,756	$ 3,197	$ 559	17.5 %

General and administrative expenses increased $559,000 from $3,197,000 in the three months ended June 30, 2019 to $3,756,000 for the same period in 2020 primarily due to increases in stock-based compensation, legal services, audit, tax and accounting services, and other expenses, partially offset by a decrease in consultant fees:

- Stock-based compensation expense increased $204,000 from $285,000 in the three months ended June 30, 2019 to $489,000 in the same period in 2020 due to an increase in the volume of option grants to new and existing employees.

- Legal services increased $257,000 from $355,000 in the three months ended June 30, 2019 to $612,000 in the same period in 2020 primarily due to $150,000 increase in fees related to addressing a congressional inquiry, partially, $46,000 increase in fees related to timing of patent license fees, $97,000 increase in public company and financing related legal services.

- Accounting fees increased $123,000 from $91,000 in the three months ended June 30, 2019 to $214,000 in the same period in 2020, mostly due to change in the timing of billing of fees.

- Other general and administrative expenses increased $318,000 from $804,000 for the three months ended June 30, 2019 to $1,122,000 in the same period in 2020 largely due to $93,000 increase of Delaware state taxes, $61,000 increase of IT and software costs, and $104,000 increase of D&O liability insurance.

- Consulting fees decreased $413,000 from $693,000 in the three months ended June 30, 2019 to $280,000 in the same period in 2020, due to the switch to fulltime employees instead of consultants in the Finance department.

In the near term, we expect general and administrative expense to remain the same as we focus on other areas of operations. This will include efforts to grow the business without adding headcount or increasing facilities.

Series 3 warrants inducement expense

In May 2020, concurrent with the May 2020 modification of the exercise price of the Series 1, Series 2 and Bridge Warrants and inducement offer, the Company issued unregistered Series 3 warrants to purchase 8,670,852 shares of common stock. The Series 3 Warrants have an exercise price of $0.53 per share and are exercisable beginning the earlier of (i) six months from their May 22, 2020 issuance date and (ii) receipt of the requisite Stockholder Approval (defined below), and expire five years thereafter. In addition to the fixed settlement method at $0.53 per warrant share, the Series 3 Warrants have two contingent settlement methods: (i) if at the time of exercise there is no effective registration statement, then the holders of the 8,670,852 warrants may exercise the warrants in a "cashless exercise," under which the holders will receive the aggregate warrants less the number of warrants equal to the exercise price; or (ii) a cashless exercise feature wherein, regardless if there is an effective registration agreement, following the requisite Stockholder Approval, each such Series 3 Warrant will be exercisable into one share of common stock for no consideration (a one-for-one exchange). See Note 14 for information about subsequent events.

The Series 3 warrants were valued at $3,695,723 using the Black- Scholes option pricing model as follows: probability-weighted exercise price of $0.05 per share, stock price of $0.44 per share, expected life of 5.50 years, volatility of 141%, and a risk-free rate of 0.34%. The Series 3 warrants were classified as liabilities on the Company's condensed consolidated balance sheets.

Liquidity and Capital Resources

Sources of Liquidity

We have incurred net losses since our inception. For the six months ended June 30, 2020 and 2019, we had net losses of $17.2 million and $25.0 million, respectively. We expect to incur additional losses in the near-term future. At June 30, 2020, we had an accumulated deficit of $150.3 million. To date, we have generated only limited revenue, and we may never achieve revenue sufficient to offset our expenses.

We had cash of $3.0 million as of June 30, 2020. We do not believe our current capital is sufficient to fund our operating plan through one year from the issuance of these unaudited condensed consolidated financial statements. 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 year ended December 31, 2019 regarding our assessment of substantial doubt about our ability to continue as a going concern. Our unaudited 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 six months ended June 30, 2020 were as follows:

- On February 24, 2020, the Company entered into a warrant exercise agreement with a holder of Series 1 Warrants previously issued in the Company's registered public offering on July 23, 2019 and its warrants previously issued in private placements in March through June of 2019 ("Bridge Warrants"), pursuant to which the Holder agreed to exercise in cash its warrants to purchase an aggregate of 458,022 shares of the Company's common stock, par value $0.0001 per share, at a reduced exercise price of $0.692 per share, which is the Minimum Price (as defined under Nasdaq Listing Rule 5635(d)) as of the date of such Exercise Agreement, for gross proceeds to the Company of approximately $317,000.
- On March 4, 2020, entered into a royalty interest purchase agreement with Iliad Research and Trading, L.P., a Utah limited partnership affiliated with Chicago Venture Partners, L.P., pursuant to which the Company sold a royalty interest entitling Purchaser to receive $500,000 of future royalties on sales of Mytesi and certain up-front license fees and milestone payments from licensees and/or distributors for an aggregate purchase price of $350,000.

- On March 5, 2020, the Company entered into a warrant exercise agreement with a holder of Series 2 Warrants previously issued in registered public offering on July 23, 2019, pursuant to which the Holder agreed to exercise in cash its warrants to purchase an aggregate of 90,940 shares of the Company's common stock, par value $0.0001 per share, at a reduced exercise price of $0.605 per share, which is the Minimum Price (as defined under Nasdaq Listing Rule 5635(d)) as of the date of such Exercise Agreement, for gross proceeds to the Company of approximately $55,000.

- On March 23, 2020, the Company entered into a Private Investment in Public Equity ("PIPE") with certain investors, pursuant to which the Company agreed to issue and sell to the Investors in a private placement an aggregate of 1,714,283 unregistered shares for an aggregate purchase price of approximately $719,000.

- On March 24, 2020, Jaguar and Ionic Ventures LLC ("Ionic") entered into a Warrant Exercise and Preferred Stock Amendment Agreement with a holder of Series 2 Warrants previously issued in the Company's registered public offering on July 23, 2019, pursuant to which the Holder agreed to exercise in cash its warrants to purchase an aggregate of 1,250,000 shares of common stock, at a reduced exercise price of $0.5227 per share, which is a 20% premium to the Minimum Price (as defined under Nasdaq Listing Rule 5635(d)) as of the date of such Amendment Agreement, for gross proceeds of approximately $653,400. As further inducement to enter into the Amendment Agreement, the Company agreed to reduce the conversion price of the Company's Series B convertible preferred stock from $2.00 to $0.4456, which is equal to the Minimum Price plus $0.01.

- On April 15, 2020, the Company entered into a patent purchase agreement ("Purchase Agreement") with Atlas Sciences, LLC ("Atlas"), pursuant to which the Atlas agreed to purchase certain patents and patent applications relating to the Company's NP-500 drug product candidate for an upfront cash payment of $1,500,000. The Purchase Agreement includes representations, warranties, and covenants customary for a transaction of this type.

- On May 12, 2020, the Company entered into an accounts receivable purchase agreement ("Purchase Agreement") with Oasis Capital, pursuant to which Oasis Capital may from time to time in its discretion purchase accounts receivable of the Company on a recourse basis at a purchase price equal to 37.5% of the face amount of each of the purchased accounts. Under the terms of the Purchase Agreement, Oasis Capital initially purchased certain accounts receivable with a face amount of $2,753,639 for a purchase price of $1,032,000.

- On May 22, 2020, the Company entered into warrant exercise inducement offer letters with certain holders of Series 1 Warrants, Series 2 Warrants, and Bridge Warrants ("Exercising Holders") pursuant to which such holders agreed to exercise for cash Series 1 Warrants to purchase 4,572,040 shares of common Stock, Series 2 Warrants to purchase 4,005,062 shares of common stock, and Bridge Warrants to purchase 93,750 shares of common stock in exchange for the Company's agreement to issue new Series 3 warrants to purchase up to 8,670,852 shares of common stock ("Series 3 Warrants") to such holders as an inducement for the exercise of the Series 1 Warrants, Series 2 Warrants and Bridge Warrants by such holders ("Warrant Exercise Transaction") . The Company received aggregate gross proceeds of $4.25 million from the exercise of the Original Warrants and the Bridge Warrants by such holders.

- On June 29, 2020, the Company entered into an amendment to the accounts receivable purchase agreement with Oasis Capital pursuant to which Oasis Capital purchased certain accounts receivable with a face amount of $2,859,132 for a purchase price of $1,215,131.

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 one year from the issuance of these unaudited condensed consolidated financial statements. 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 unaudited condensed consolidated financial statements.

Cash Flows for the Six Months Ended June 30, 2020 Compared to the Six Months Ended June 30, 2019

The following table shows a summary of cash flows for the six months ended June 30, 2020 and 2019:

	Six Months Ended June 30,	
(in thousands)	2020	2019
Total cash used in operating activities	$ (8,298)	$ (8,770)
Total cash used in investing activities	(7)	(7)
Total cash provided by financing activities	7,437	7,816
Net decrease in cash	$ (868)	$ (961)

Cash Used in Operating Activities

During the six months ended June 30, 2020, net cash used in operating activities of $8,298,000 resulted from our net loss of $17,174,000 adjusted by an increase in fair value of warrants, conversion option and derivative liability of $387,000, amortized expense on modifications of warrants of $86,000, depreciation and amortization expenses of $863,000, amortization of debt discounts and debt issuance costs of $309,000, stock-based compensation of $1,509,000, other stock payments of $146,000, amortization of operating lease right-of-use assets of $365,000, inducement charge of $1,647,000 on the modification of Series B convertible preferred shares, $3,696,000 charge for Series 3 warrants issued as an inducement to exercise equity-classified Series 1, Series 2 and Bridge warrants, loss on assignment of receivables of $15,000, and changes in operating assets and liabilities of $147,000.

During the six months ended June 30, 2019, net cash used in operating activities of $8,770,000 resulted from our net loss of $25,025,000 adjusted for an impairment charge of $4,000,000 associated with our indefinite-lived intangible assets, a reduction in the fair value of warrant liabilities of $161,000, debt discounts and debt issuance costs of $3,879,000, stock-based compensation of $873,000, depreciation and amortization expenses of $873,000, amortization of operating lease right-of-use assets of $363,000, loss on the extinguishment of debt of $4,605,000 and of changes in operating assets and liabilities of $1,823,000.

Cash Used in Investing Activities

During the six months ended June 30, 2020 and 2019, cash used in investing activities was $7,000 and consisted of cash used to purchase equipment.

Cash Provided by Financing Activities

During the six months ended June 30, 2020, net cash provided by financing activities of $7,437,000 consisted of $668,000 in net proceeds received from 1,714,283 shares of common stock issued via a PIPE financing, $350,000 in net proceeds received from issuance of a note payable, $776,000 in insurance premium financings, $2,222,000 received from borrowings secured by the Company’s trade receivables, $1,000,000 in net proceeds received from exercises of

warrants to purchase a total of 1,798,962 shares of common stock, $4,111,000 in net proceeds received from 9,403,167 shares of common stock issued on exercise of Series 1, Series 2, and 2019 Bridge Note warrants, and $10,000 in net proceeds received from issuance of other shares of common stock, offset by $1,515,000 in principal payments of the note payable and secured borrowings and $185,000 in issuance costs from shares issued as part of the underwriter settlement agreement.

During the six months ended June 30, 2019, net cash provided by financing activities of $7,816,000 consisted of $5,050,000 in proceeds from the issuance of short-term Bridge Notes and $2,869,000 in net proceeds received from the issuance of common stock, offset by $100,000 in repayments of notes payable and $3,000 in payments for deferred offering costs.

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 Principal Financial and Accounting Officer, evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2020. 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 Principal Financial and Accounting Officer, as appropriate, to allow timely decisions regarding required disclosure. Based on this evaluation, our Chief Executive Officer and Principal Financial and Accounting Officer concluded that our disclosure controls and procedures were not effective at the reasonable assurance level as of June 30, 2020. This conclusion was based on the material weaknesses in our internal control over financial reporting as further described below.

Material Weaknesses

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 the preparation of our annual financial statements for the year ended December 31, 2019, 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. 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 did not have adequate policies and procedures in place to ensure the timely, effective review of assumptions used in measuring the fair value of certain financial instruments. We did not have adequate policies and procedures in place to ensure the timely, effective review of compliance with contractual covenants in certain financial instruments. This material weakness has not been remediated as of June 30, 2020.

In connection with preparation of our interim financial statements for the three months ended June 30, 2020, we identified a material weakness in our internal control over financial reporting related to our financial statement preparation and review process. The primary factors contributing to the material weaknesses were as follows:

- We did not have adequate policies and procedures in place to ensure the timely and effective preparation and review of the financial statements.

- We did not have sufficient resources with appropriate knowledge, experience and/or training commensurate with our financial reporting requirements to assist us in our timely and efficient preparation and review over our financial reporting.

Remediation Efforts to Address Material Weaknesses

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

- Reassessing the design and operation of internal controls over financial reporting and review procedures over the preparation of our financial statements:
- Hiring and training of permanent accounting personnel or using consultants to provide support during our quarterly and annual preparation, review, and reporting of our financial statements.
- 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.

We cannot assure you that the measures we may take in response to these material weaknesses will be sufficient to remediate such material weaknesses 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 Principal Financial and Accounting Officer have concluded that, as of such date, our disclosure controls and procedures were not effective due to the existence of material weaknesses in the design of our internal controls over financial reporting relating (i) to staff turnover in our accounting department, and (ii) to inadequate policies and procedures in place to ensure the timely and effective preparation and review of the financial statements.

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 on 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 weaknesses 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 weaknesses 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

July 2017 Complaint Relating to the Merger

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 filed a second 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 court denied the Defendants' motion to dismiss on June 28, 2019. The Company answered the second amended complaint on August 2, 2019; the answer denied the material allegations of the second amended complaint. The parties are now engaged in discovery. 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 adverse 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.

On May 4, 2020, Jaguar Health, Inc. received a letter from the Committee on Oversight and Reform of the U.S. House of Representatives (the "Committee") regarding the list price adjustment of Mytesi. Among other things, the Committee expressed an interest in understanding whether the price adjustment was connected to the Company's expectation that it could market crofelemer to treat coronavirus patients given the Company's submission of a request to the U.S. Food and Drug Administration for Emergency Use Authorization ("EUA") for crofelemer for the symptomatic relief of diarrhea and other gastrointestinal symptoms in patients with COVID-19 and for patients with COVID-19 who have diarrhea associated with certain antiviral treatments, which submission was denied by the FDA on April 7 as previously disclosed.

The Company intends to cooperate with the Committee's inquiry and has prepared a public statement regarding the price adjustment, which is available on the Company's website at https://jaguarhealth.gcs-web.com/company-statement. In its statement, the Company explains that the decision to adjust the price for crofelemer was made in December 2019 as part of expanding the Company's comprehensive patient access program, and had the Company received EUA, it would have deferred the price adjustment until after the emergency use period ended.

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 1A. Risk Factors

The following discussion of risk factors contains forward-looking statements. These risk factors may be important to understanding other statements in this Quarterly Report on Form 10-Q, including “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our unaudited condensed consolidated financial statements and related notes, before making a decision to invest in our common stock. The risks and uncertainties described below are not the only ones we face. Additional risk and uncertainties not presently known to us or that we presently deem less significant may also impair our business operations. If any of the events or circumstances described in the following risk factors actually occur, our business, operating results, financial condition, cash flows, and prospects could be materially and adversely affected. In that event, the market price of our common stock could decline, and you could lose part or all of your investment.

The business, financial condition and operating results of the Company can be affected by a number of factors, whether currently known or unknown, including but not limited to those described below, any one or more of which could, directly or indirectly, cause the Company’s actual financial condition and operating results to vary materially from past, or from anticipated future, financial condition and operating results. Any of these factors, in whole or in part, could materially and adversely affect the Company’s business, financial condition, operating results, and stock price.

Because of the following factors, as well as other factors affecting the Company’s financial condition and operating results, past financial performance should not be considered to be a reliable indicator of future performance, and investors should not use historical trends to anticipate results or trends in future periods.

Business update regarding COVID-19

We are subject to risks and uncertainties as a result of the current COVID-19 pandemic. The COVID-19 pandemic has presented a substantial public health and economic challenge around the world and is affecting our employees, communities and business operations, as well as the U.S. economy and other economies worldwide. The full extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations and financial condition will depend on future developments that are highly uncertain and cannot be accurately predicted, including the duration and severity of the pandemic and the extent and severity of the impact on our customers, new information that may emerge concerning COVID-19, the actions taken to contain it or treat its impact and the economic impact on local, regional, national and international markets.

To date, we have been able to continue the supply of Mytesi to our customer. However, we are dependent on our manufacturing and logistics partners and consequently, disruptions in operations of our partners and customer may affect our ability to supply Mytesi. Furthermore, our ability and that of our third party contract research organizations (“CRO”) to provide future research and development ("R&D") services will continue to be disrupted as a result of local shelter-in-place orders and any disruptions or delays in operations with whom we collaborate. We are unable to fully determine and quantify the extent to which delays in our R&D projects will be affected by the COVID-19 pandemic. We are continuing to assess the potential impact of the COVID-19 pandemic on our business and operations, including our product sales, expenses, and manufacturing.

In the U.S., the impact of COVID-19, including governmental orders governing the operation of non-essential businesses during the pandemic, has caused the temporary closure of our office and halted visits of our salesforce to clinics and healthcare providers. Our employees have been working from home since mid-March 2020, while ensuring essential staffing levels in our operations remain in place.

Our future results of operations and liquidity could be adversely impacted by delays in supply chain disruptions and uncertain demand, and the impact of any initiatives or programs that we may undertake to address financial and operations challenges faced by our customer. As of the date of issuance of these condensed consolidated financial statements, the extent to which the COVID-19 pandemic may materially impact our financial condition, liquidity, or results of operations is uncertain.

Our internal computer systems, or those used by our CROs or other contractors or consultants, may fail or suffer security breaches

Similar to other companies in our industry, we face substantial cybersecurity risk. Despite the implementation of security measures, our internal computer systems and those of our current and future CROs and other contractors, collaborators and consultants may fail and are vulnerable to damage from computer viruses and unauthorized access. While we have not, to our knowledge, experienced any such material system failure or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on third parties for the manufacture of our product candidates, to analyze clinical trial samples and to conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business.

Substantially all of our revenue for recent periods has been received from a single customer

Substantially all of our revenue has been derived from one customer. Except for the shelter-in-place mandate, we have not been made aware by our customer if they have experienced other issues arising due to COVID-19 that may materially impact our financial condition, liquidity or results of operations. We will continue to have dialogues with our customers.

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

Other than the issuance of warrants to purchase up to 9,077,102 shares of common stock issued to certain institutional investors and accredited investors, as disclosed on our Current Report on Form 8-K filed with the SEC on May 22, 2020, there were no unregistered sales of equity securities during the period.

Item 3. Defaults upon senior securities

None.

Item 4. Mine safety disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit No.	Description
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 Designation of Preferences, Rights, and Limitations of Series B Preferred Stock (incorporated by reference to Exhibit 3.1 to the Form 8-K of Jaguar Health, Inc. filed July 23, 2019, File No. 001-36714).
3.5	Certificate of Designation of Preferences, Rights, and Limitations of Series B-1 Preferred Stock (incorporated by reference to Exhibit 3.1 to the Form 8-K of Jaguar Health, Inc. filed October 3, 2019, File No. 001-36714).
3.6	Certificate of Designation of Preferences, Rights, and Limitations of Series B-2 Preferred Stock (incorporated by reference to Exhibit 3.1 to the Form 8-K of Jaguar Health, Inc. filed December 26, 2019, File No. 001-36714).
3.7	Certificate of Amendment to the Certificate of Designation of Series B Preferred Stock (incorporated by reference to Exhibit 3.1 to the Form 8-K of Jaguar Health, Inc. filed March 26, 2020, File No. 001-36714).
4.1	Form of Series 3 Warrant (incorporated by reference to Exhibit 4.1 to the Form 8-K of Jaguar Health filed May 22, 2020, File No. 001-36714).
10.1	Jaguar Health, Inc. 2014 Stock Incentive Plan as Amended and Restated Effective October 1, 2019 (incorporated by reference to Exhibit 10.100 to the Form 10-K of Jaguar Health, Inc. filed April 3, 2020, File No. 001-36714).
10.2	Purchase Agreement, dated April 15, 2020, by and between Napo Pharmaceuticals, Inc. and Atlas Sciences, LLC (incorporated by reference to Exhibit 10.1 to the Form 8-K of Jaguar Health, Inc. filed April 16, 2020, File No. 001-36714).
10.3	License Agreement, dated April 15, 2020, by and between Jaguar Health, Inc. and Atlas Sciences, LLC (incorporated by reference to Exhibit 10.2 to the Form 8-K of Jaguar Health, Inc. filed April 16, 2020, File No. 001-36714).
10.4	Purchase Agreement, dated May 12, 2020, by and among Jaguar Health, Inc., Napo Pharmaceuticals, Inc. and Oasis Capital, LLC (incorporated by reference to Exhibit 10.1 to the Form 8-K of Jaguar Health, Inc. filed May 21, 2020, File No. 001-36714).
10.5	Assignment Agreement, dated May 12, 2020, by and between Napo Pharmaceuticals, Inc. and Oasis Capital, LLC (incorporated by reference to Exhibit 10.2 to the Form 8-K of Jaguar Health, Inc. filed May 21, 2020, File No. 001-36714).
10.6	Form of Inducement Letter for Original Warrants (incorporated by reference to Exhibit 10.1 to the Form 8-K of Jaguar Health, Inc. filed May 22, 2020, File No. 001-36714).
10.7	Form of Inducement Letter for Bridge Warrants (incorporated by reference to Exhibit 10.2 to the Form 8-K of Jaguar Health, Inc. filed May 22, 2020, File No. 001-36714).
10.8	Jaguar Health, Inc. New Employee Inducement Award Plan (incorporated by reference to Exhibit 10.1 to the Form 8-K of Jaguar Health, Inc. filed June 19, 2020, File No. 001-36714).
10.9	Form of Notice of Grant of Stock Option and Stock Option Agreement under the Jaguar Health, Inc. New Employee Inducement Award Plan (incorporated by reference to Exhibit 10.2 to the Form 8-K of Jaguar Health, Inc. filed June 19, 2020, File No. 001-36714).
10.10	Form of Notice of Grant of Restricted Stock Units and Restricted Stock Unit Agreement under the Jaguar Health, Inc. New Employee Inducement Award Plan (incorporated by reference to Exhibit 10.3 to the Form 8-K of Jaguar Health, Inc. filed June 19, 2020, File No. 001-36714).
10.11*	Form of Severance and Change of Control Agreement.

10.12*	First Amendment to Purchase Agreement, dated June 26, 2020, by and among Jaguar Health, Inc., Napo Pharmaceuticals, Inc. and Oasis Capital, LLC.
10.13*	First Amendment to Assignment Agreement, dated June 26, 2020, by and between Napo Pharmaceuticals, Inc. and Oasis Capital, LLC.
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: August 13, 2020

JAGUAR HEALTH, INC.

By: /s/ Carol R. Lizak
Principal Financial and Accounting Officer

JAGUAR HEALTH, INC.
SEVERANCE AND CHANGE OF CONTROL AGREEMENT

This Severance and Change of Control Agreement (the "Agreement") is made and entered into by and between _____ (the "Executive") and Jaguar Health, Inc., a Delaware Corporation (the "Company"), effective as of June 23, 2020 (the "Effective Date"). Certain capitalized terms used in this Agreement are defined in Exhibit A attached hereto

1. Purpose.

A. The Company has determined that it is in the best interests of the Company and its shareholders to assure that the Company will have the continued dedication of the Executive, notwithstanding the possibility of her or his termination of employment with the Company or of a Change of Control of the Company.

B. To incentivize Executive to continue performing Executive's duties in an exemplary manner, the Company wishes to offer severance payments and benefits to Executive upon certain terminations of employment prior to or following a Change of Control.

2. At-Will Employment. The Company and the Executive acknowledge that the Executive's employment is and shall continue to be at-will, as defined under applicable law, except as may otherwise be specifically provided under the terms of any written formal employment agreement or offer letter between the Company and the Executive (an "Employment Agreement").

3. Entitlement to Severance Payments and Benefits.

A. Subject to Section 3.C., the Executive shall be entitled to the payments and benefits provided in this Agreement in the event the Executive's employment with the Company or its affiliates is terminated under the following circumstances (each a "Date of Termination"):

(i) By the Company or its affiliates without Cause; or

(ii) In the event of a Change of Control, the successor company does not offer the Executive a position with the successor company or its affiliates that has substantially similar authority, duties, or responsibilities and aggregate annual compensation (including base salary and bonuses) that were in effect immediately prior to the Change of Control; or

(iii) By the Executive's resignation for Good Reason within three (3) months following the effective date of a Change of Control.

B. The Executive shall have no rights to any payments or benefits under this Agreement in the event the Executive's employment with the Company and its affiliates is terminated (i) as a result of death or Disability, or (ii) by the Company or its affiliates for Cause.

C. The Executive's entitlement to any severance payments and benefits pursuant to this Agreement are expressly conditioned upon the Executive's execution of a release and waiver agreement in the form attached hereto as Exhibit B (the "General Release and Waiver") prior to the Company's obligation to provide payment of any amounts due or any benefits hereunder. To be effective, the executed General Release and Waiver must be delivered by Executive to the Company no later than the fiftieth (50^{th}) day following the Date of Termination, and must not be revoked during the seven (7) days following such

delivery (“Effective Release”). The severance payments and benefits shall commence as of the Date of Termination, but shall be forfeited as of the sixtieth (60th) day following the Date of Termination if the Company has not been provided with an Effective Release by such date.

4. Form of Severance Payments and Benefits.

A. Severance Payments. The Executive shall be entitled to receive in a lump-sum or in equal installments over a twelve (12) month period, consistent with the Company’s normal payroll practices, severance payment (less applicable withholding taxes) equal to twelve (12) months of Executive’s base salary as of the Date of Termination.

B. Stock Award Vesting Acceleration. One hundred percent (100%) of Executive’s then unvested outstanding stock options and restricted stock units (the “Stock Awards”) shall immediately vest and became exercisable (and any rights of repurchase by the Company or restriction on sale shall lapse). The Stock Awards shall thereafter remain exercisable following the Executive’s Date of Termination for a period of twelve (12) months or until the expiration date of the Stock Award, whichever is the shorter period.

C. Continued Benefits Payments. The Company shall pay to or reimburse Executive for the monthly COBRA premiums incurred by the Executive for Executive and their eligible dependents for the twelve (12) month period following the Date of Termination ("Benefit Continuation"). Notwithstanding the foregoing, if the Company's providing Benefit Continuation under this Section 4.C. would violate the nondiscrimination rules applicable to non-grandfathered plans, or would result in the imposition of penalties under the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, and the related regulations and guidance promulgated thereunder (the "ACA"), the Company shall reform this Section 4.C. in a manner as is necessary to comply with the ACA. Benefit Continuation reimbursement shall be paid to the Executive on the 1st of the month immediately following the month in which the Executive remits the COBRA premium payment.

5. Section 409A.

A. Notwithstanding anything to the contrary in this Agreement, if Executive is a “specified Executive” within the meaning of Section 409A at the time of Executive’s termination (other than due to death) or resignation, then the severance payable to Executive, if any, pursuant to this Agreement, when considered together with any other severance payments or benefits that are considered deferred compensation under Section 409A (together, the “Deferred Compensation Severance Benefits”) that are payable within the first six (6) months following Executive’s termination of employment, will become payable on the first payroll date that occurs on or after the date six (6) months and one (1) day following the date of Executive’s Date of Termination. All subsequent Deferred Compensation Severance Benefits, if any, will be payable in accordance with the payment schedule applicable to each payment or benefit. Notwithstanding anything herein to the contrary, if Executive dies following her of his termination but prior to the six (6) month anniversary of his termination, then any severance payments delayed in accordance with this paragraph will be payable in a lump sum as soon as administratively practicable after the date of Executive’s death and all other Deferred Compensation Severance Benefits will be payable in accordance with the payment schedule applicable to each payment or benefit. Each severance payment and benefit payable under this Agreement is intended to constitute separate payments for purposes of Section 1.409A-2(b)(2) of the Treasury Regulations.

B. Any amount paid under this Agreement that satisfies the requirements of the “short-term deferral” rule set forth in Section 1.409A-1(b)(4) of the Treasury Regulations shall not constitute Deferred Compensation Severance for purposes of Section 6.A. above.

C. Any amount paid under this Agreement that qualifies as a payment made as a result of an involuntary separation from service pursuant to Section 1.409A-1(b)(9)(iii) of the Treasury Regulations that do not exceed the Section 409A Limit shall not constitute Deferred Compensation Severance Benefits for purposes of Section 5.A. above. "Section 409A Limit" will mean the lesser of two (2) times: (i) Executive's annualized compensation based upon the annual rate of pay paid to Executive during the Executive's taxable year preceding the Executive's taxable year of Executive's termination of employment as determined under, and with such adjustments as are set forth in, Treasury Regulation 1.409A-1(b)(9)(iii)(A)(1) and any Internal Revenue Service guidance issued with respect thereto; or (ii) the maximum amount that may be taken into account under a qualified plan pursuant to Section 401(a)(17) of the Code for the year in which Executive's employment is terminated.

D. The foregoing provisions are intended to comply with the requirements of Section 409A so that none of the severance payments and benefits to be provided hereunder will be subject to the additional tax imposed under Section 409A, and any ambiguities herein will be interpreted to so comply. The Company and Executive agree to work together in good faith to consider amendments to this Agreement and to take such reasonable actions, which are necessary, appropriate or desirable to avoid imposition of any additional tax or income recognition prior to actual payment to Executive under Section 409A.

6. Golden Parachute Excise Tax. In the event that the severance and other benefits provided for in this Agreement or otherwise payable to Executive (a) constitute "parachute payments" within the meaning of Section 280G of the Code and (b) would be subject to the excise tax imposed by Section 4999 of the Code, then such benefits shall be either be:

A. delivered in full, or

B. delivered as to such lesser extent which would result in no portion of such severance benefits being subject to excise tax under Section 4999 of the Code, whichever of the foregoing amounts, taking into account the applicable federal, state and local income and employment taxes and the excise tax imposed by Section 4999, results in the receipt by Executive, on an after-tax basis, of the greatest amount of benefits, notwithstanding that all or some portion of such benefits may be taxable under Section 4999 of the Code. Unless the Company and Executive otherwise agree in writing, any determination required under this Section 6 will be made in writing by an accounting firm selected by the Company or such other person or entity to which the parties mutually agree (the "Accountants"), whose determination will be conclusive and binding upon Executive and the Company for all purposes. For purposes of making the calculations required by this Section 6, the Accountants may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code. The Company and the Executive shall furnish to the Accountants such information and documents as the Accountants may reasonably request in order to make a determination under this Section 6. The Company shall bear all costs the Accountants may reasonably incur in connection with any calculations contemplated by this Section 6. Any reduction in payments and/or benefits required by this Section 6 shall occur in the following order: (A) cash payments shall be reduced first and in reverse chronological order such that the cash payment owed on the latest date following the occurrence of the event triggering such excise tax will be the first cash payment to be reduced; and (B) accelerated vesting of stock awards shall be cancelled/reduced next and in the reverse order of the date of grant for such stock awards (*i.e.*, the vesting of the most recently granted stock awards will be reduced first), with full-value awards reversed before any stock options are reduced.

7. Successors.

A. The Company's Successors. Any successor to the Company (whether direct or indirect and whether by purchase, merger, consolidation, liquidation or otherwise) to all or substantially all of the Company's

business and/or assets shall assume the obligations under this Agreement and agree expressly to perform the obligations under this Agreement in the same manner and to the same extent as the Company would be required to perform such obligations in the absence of a succession. For all purposes under this Agreement, the term "Company" shall include any successor to the Company's business and/or assets which executes and delivers the assumption agreement described in this Section 7.A. or which becomes bound by the terms of this Agreement by operation of law.

B. The Executive's Successors. The terms of this Agreement and all rights of the Executive hereunder shall inure to the benefit of, and be enforceable by, the Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

8. Notice.

A. General. All notices and other communications required or permitted hereunder shall be in writing, shall be effective when given, and shall in any event be deemed to be given upon receipt or, if earlier, (i) five (5) days after deposit with the U.S. Postal Service or other applicable postal service, if delivered by first class mail, postage prepaid, (ii) upon delivery, if delivered by hand, or (iii) one (1) business day after the business day of deposit with Federal Express or similar overnight courier, freight prepaid;, and shall be addressed (x) if to Executive, at their last known residential address and (y) if to the Company, at the address of its principal corporate offices (attention: Secretary), or in any such case at such other address as a party may designate by ten (10) days' advance written notice to the other party pursuant to the provisions above.

B. Notice of Termination. Any termination by the Company for Cause, resignation by the Executive for Good Reason, Disability, or as a result of a voluntary resignation shall be communicated by a notice of termination to the other party hereto given in accordance with Section 8.A. of this Agreement. Such notice shall indicate the specific termination provision in this Agreement relied upon, shall set forth in reasonable detail the facts and circumstances claimed to provide a basis for termination under the provision so indicated, and shall specify the Date of Termination (which shall be not more than thirty (30) days after the giving of such notice). The failure by the Executive to include in the notice any fact or circumstance which contributes to a showing of Good Reason or Disability shall not waive any right of the Executive hereunder or preclude the Executive from asserting such fact or circumstance in enforcing their rights hereunder.

9. Miscellaneous Provisions.

A. No Mitigation. In no event shall the Executive be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under any of the provisions of this Agreement, nor shall the amount of any payment hereunder be reduced by any compensation earned by the Executive as result of employment by another employer.

B. Amendment and Waiver. This Agreement shall not be altered, amended, extended or modified except by written instrument executed by the Company and the Executive. A waiver of any term, covenant, agreement, or condition contained in this Agreement shall not be deemed a waiver of any other term, covenant, agreement, or condition, and any waiver of any default in any such term, covenant, agreement, or condition shall not be deemed a waiver of any later default thereof or of any other term, covenant, agreement or condition.

C. Headings. All captions and section headings used in this Agreement are for convenient reference only and do not form a part of this Agreement.

D. Entire Agreement. This Agreement constitutes the entire agreement of the parties hereto and supersedes in their entirety all prior representations, understandings, undertakings or agreements (whether oral or written and whether expressed or implied) of the parties with respect to the subject matter hereof (including, for the avoidance of doubt, any severance and change of control agreement entered into by the parties hereto prior to the effective date of this Agreement).

E. Choice of Law. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the State of California. The Superior Court of San Francisco County and/or the United States District Court for the Northern District of California shall have exclusive jurisdiction and venue over all controversies in connection with this Agreement.

F. Withholding. The Company may withhold from any amounts payable under this Agreement such federal, state or local taxes as the Company determines are required to be withheld pursuant to any applicable law or regulation.

G. Severability. If all or any part of this Agreement is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity shall not serve to invalidate any portion of this Agreement not declared to be unlawful or invalid. Any paragraph or part of a paragraph so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such paragraph or part of a paragraph to the fullest extent possible while remaining lawful and valid.

H. Counterpart Originals. This Agreement may be executed in several counterparts, each of which shall be deemed an original but all of which together will constitute the same instrument.

I. Nonalienation of Benefits. Benefits payable under this Agreement shall not be subject in any manner to anticipation, alienation, sale, transfer, assignment, pledge, encumbrance, charge, garnishment, execution or levy of any kind, either voluntary or involuntary, prior to actually being received by the Executive, and any such attempt to dispose of any right to benefits payable hereunder shall be void.

[*Remainder of Page Intentionally Blank*]

IN WITNESS WHEREOF, each of the parties has executed this Agreement, in the case of the Company by its duly authorized officer, as of the day and year set forth below.

COMPANY

JAGUAR HEALTH, INC.

By: _____

Name: _____

Title: _____

Date: _____

EXECUTIVE

Name: _____

Date: _____

EXHIBIT A

DEFINITION OF TERMS

The following terms referred to in this Agreement shall have the following meanings:

"Board" means the Company's Board of Directors.

"Cause" shall have the same meaning as such term in any effective individual employment agreement that the Executive has entered into with the Company; *provided, however*, that in the event that the Executive does not have such an employment agreement or such an employment agreement does not define the term "Cause," then "Cause" shall mean the Executive's (A) engagement in any act of gross negligence, recklessness, or willful misconduct on a matter that is not inconsequential, as reasonably determined by the Board in good faith or material violation of any duty of loyalty to the Company or its affiliates, (A) conviction by, or a plea of guilty or *nolo contendere* in, a court of competent and final jurisdiction for (1) any felony, or (2) any crime of moral turpitude, or (C) commission of an act of fraud, embezzlement or dishonesty. For purposes hereof, no act or failure to act, on the Employee's part, shall be deemed "Cause" if the Employee reasonably believed such acts or omissions were in the best interests of the Company.

"Change of Control" means the occurrence of any of the following events:

A. A change of the ownership of the Company which occurs on the date that any one person, or more than one person acting as a group, ("Person") acquires ownership of the stock of the Company that, together with the stock held by such Person, constitutes more than 50% of the total voting power of the stock of the Company; provided, however, that for purposes of this subsection A., the acquisition of additional stock by any one Person, who is considered to own more than 50% of the total voting power of the stock of the Company will not be considered a Change of Control; or

B. A change in the effective control of the Company which occurs on the date that a majority of members of the Board is replaced during any twelve (12) month period by directors whose appointment or election is not endorsed by a majority of the members of the Board prior to the date of the appointment or election. For purposes of this clause (ii), if any Person is considered to effectively control the Company, the acquisition of additional control of the Company by the same Person will not be considered a Change of Control; or

C. A change in the ownership of a substantial portion of the Company's assets which occurs on the date that any Person acquires (or has acquired during the twelve (12) month period ending on the date of the most recent acquisition by such Person or Persons) assets from the Company that have a total gross fair market value equal to or more than 50% of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions; provided, however, that for purposes of this subsection C, the following will not constitute a change in the ownership of a substantial portion of the Company's assets: (1) a transfer to an entity that is controlled by the Company's stockholders immediately after the transfer, or (2) a transfer of assets by the Company to: (a) a stockholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company's stock, (b) an entity, 50% or more of the total value or voting power of which is owned, directly or indirectly, by the Company, (c) a Person, that owns, directly or indirectly, 50% or more of the total value or voting power of all the outstanding stock of the Company, or (d) an entity, at least 50% of the total value or voting power of which is owned, directly or indirectly, by a person. For purposes of this subsection C, gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets.

For purposes of this definition of "Change of Control", Persons will be considered to be acting as a group if they are owners of a corporation that enters into a merger, consolidation, purchase or acquisition of stock, or similar business transaction with the Company.

Notwithstanding the foregoing, a transaction shall not be deemed a Change of Control unless the transaction qualifies as a change in the ownership of the Company, change in the effective control of the Company or a change in the ownership of a substantial portion of the Company's assets, each within the meaning of Section 409A.

"Code" means the Internal Revenue Code of 1986, as amended. Any reference to a section of the Code shall be deemed to include a reference to any regulations promulgated thereunder.

"Disability" shall have the same meaning as such term in any effective individual employment agreement that the Executive has entered into with the Company; *provided*, *however*, that in the event that the Executive does not have such an employment agreement or such an employment agreement does not define the term "Disability", then "Disability" shall mean an inability to perform the Executive's material services for the Company for a period of ninety (90) consecutive days or a total of one hundred eighty (180) days, during any three hundred sixty five (365) day period, in either case as a result of incapacity due to mental or physical illness, which is determined to be total and permanent. A determination of Disability shall be made by a physician reasonably satisfactory to both the Executive (or his guardian) and the Company, provided that the Executive (or his guardian) and the Company do not agree on a physician, the Executive and the Company shall each select a physician and these two together shall select a third physician, whose determination as to Disability shall be final, binding and conclusive with respect to all parties. Notwithstanding the above, eligibility for disability benefits under any policy for long-term disability benefits provided to the Executive by the Company shall conclusively establish the Executive's Disability.

"Good Reason" means Executive's resignation of employment following the expiration of any cure period (discussed below) due to the occurrence, without Executive's express written consent, of one or more of the following:

A. a material diminution in the Executive's authority, duties, or responsibilities (or of those of whom the Executive reports) that are in effect immediately prior to the Change of Control;

B. a material reduction (ten percent (10%) or more) in Executive's aggregate annual compensation (including base salary and bonuses) as in effect immediately prior to such reduction;

C. Executive is required to work at a location more than thirty (30) miles from the location of the Company's office immediately prior to a Change of Control and is not more convenient to commute from the Executive's place of residence; or

D. the Company fails to obtain an agreement from any successor entity(ies) to assume and agree to perform the obligations set forth in this Agreement.

To terminate for Good Reason, the Executive must provide written notice of the existence of Good Reason within three (3) months of such event, and such notice must specify the event(s) constituting Good Reason, and the Company shall not have cured such event within thirty (30) days from receipt of the written notice. An Executive's termination of employment for Good Reason shall be effective no later than ninety (90) days from the date of the notice.

"Section 409A" shall mean Section 409A of the Code.

EXHIBIT B
JAGUAR HEALTH, INC.
GENERAL RELEASE AND WAIVER

This General Release and Waiver ("Agreement") is made by and between Jaguar Health, Inc. (the "Company") and _____ ("Executive").

WHEREAS, Executive has agreed to enter into a release of claims in favor of the Company upon certain events specified in the change of control agreement by and between Company and Executive (the "Change of Control Agreement").

NOW THEREFORE, in consideration of the mutual promises made in this Agreement, the parties hereby agree as follows:

1. Termination. Executive's employment from the Company terminated on _____ (the "Termination Date").

2. Confidential Information. Executive shall continue to maintain the confidentiality of all confidential and proprietary information of the Company, and shall return all the Company property and confidential and proprietary information in Executive's possession to the Company on the Effective Date of this Agreement. Executive's obligation to protect Company confidential and proprietary information shall be ongoing, and shall continue even after Executive's employment with the Company ends, provided, however, that it shall not preclude Executive from providing documents or information to (i) a court of law where Executive is mandated to do so by court order, or (ii) a Government Agency (as defined in Section 4 below) in connection with an ongoing investigation or proceeding. With regard to disclosures made under subsection (i), Executive is required to provide the Company with immediate written notice of the court order, so as to allow the Company and opportunity to pursue a protective order if it elects to do so.

3. Payment of Salary. Executive acknowledges and represents that the Company has paid all salary, wages, bonuses, accrued vacation, commissions and any and all other benefits due to Executive.

4. Release of Claims. Executive agrees that the foregoing consideration represents settlement in full of all outstanding obligations owed to Executive by the Company. Executive, on behalf of Executive, and Executive's respective heirs, family members, executors and assigns, hereby fully and forever releases the Company and its past, present and future officers, agents, directors, Executives, investors, shareholders, administrators, affiliates, divisions, subsidiaries, parents, predecessor and successor corporations, and assigns, from, and agrees not to sue or otherwise institute or cause to be instituted any legal or administrative proceedings concerning any claim, duty, obligation or cause of action relating to any matters of any kind, whether presently known or unknown, suspected or unsuspected, that Executive may possess arising from any omissions, acts or facts that have occurred up until and including the Effective Date of this Agreement including, without limitation,

(a) any and all claims relating to or arising from Executive's employment relationship with the Company and the termination of that relationship;

(b) any and all claims relating to, or arising from, Executive's right to purchase, or actual purchase of shares of stock of the Company, including, without limitation, any claims for fraud, misrepresentation, breach of fiduciary duty, breach of duty under applicable state corporate law, and securities fraud under any state or federal law;

(c) any and all claims for wrongful discharge of employment; termination in violation of public policy; discrimination; breach of contract, both express and implied; breach of a covenant of good faith and fair dealing, both express and implied; promissory estoppel; negligent or intentional infliction of emotional distress; negligent or intentional misrepresentation; negligent or intentional interference with contract or prospective economic advantage; unfair business practices; defamation; libel; slander; negligence; personal injury; assault; battery; invasion of privacy; false imprisonment; and conversion;

(d) any and all claims for violation of any federal, state or municipal statute, including, but not limited to, Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, the Age Discrimination in Employment Act of 1967, the Americans with Disabilities Act of 1990, the Fair Labor Standards Act, the Executive Retirement Income Security Act of 1974, The Worker Adjustment and Retraining Notification Act, the California Fair Employment and Housing Act, and Labor Code section 201, *et seq*. and section 970, *et seq*. and all amendments to each such Act as well as the regulations issued under each such Act;

(e) any and all claims for violation of the federal, or any state, constitution;

(f) any and all claims arising out of any other laws and regulations relating to employment or employment discrimination; and

(g) any and all claims for attorneys' fees and costs.

Executive agrees that the release set forth in this section shall be enforceable to the fullest extent permissible by law, and shall remain in effect in all respects as a complete general release as to the matters released. This release does not extend to any severance obligations due Executive under the Change of Control Agreement. Furthermore, nothing in this Agreement: (i) waives Executive's rights to indemnification or any payments under any fiduciary insurance policy, if any, provided by any act or agreement of the Company, state or federal law or policy of insurance, or (ii) limits Executive's ability to file a charge or complaint with the Equal Employment Opportunity Commission, the National Labor Relations Board, the Occupational Safety and Health Administration, the Securities and Exchange Commission, or any other federal, state or local governmental agency ("Government Agencies"), or otherwise participate in any investigation or proceeding conducted by a Government Agency.

5. Acknowledgment of Waiver of Claims under ADEA. Executive acknowledges that Executive is waiving and releasing any rights Executive may have under the Age Discrimination in Employment Act of 1967 ("ADEA") and that this waiver and release is knowing and voluntary. Executive and the Company agree that this waiver and release does not apply to any rights or claims that may arise under the ADEA after the Effective Date of this Agreement. Executive acknowledges that the consideration given for this waiver and release Agreement is in addition to anything of value to which Executive was already entitled. Executive further acknowledges that Executive has been advised by this writing that (a) Executive should consult with an attorney prior to executing this Agreement; (b) Executive has at least twenty-one (21) days within which to consider this Agreement; (c) Executive has seven (7) days following the execution of this Agreement by the parties to revoke the Agreement; (d) this Agreement shall not be effective until the revocation period has expired; and (e) nothing in this Agreement prevents or precludes Executive from challenging or seeking a determination in good faith of the validity of this waiver under the ADEA, nor does it impose any condition precedent, penalties or costs for doing so, unless specifically authorized by federal law. Any revocation should be in writing and delivered to the Vice-President of Human Resources at the Company by close of business on the seventh day from the date that Executive signs this Agreement.

6. Civil Code Section 1542. Executive represents that Executive is not aware of any claims against the Company other than the claims that are released by this Agreement. Executive acknowledges that

Executive has been advised by legal counsel and is familiar with the provisions of California Civil Code 1542, below, which provides as follows:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN THEIR FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED THEIR SETTLEMENT WITH THE DEBTOR.

Executive, being aware of said code section, agrees to expressly waive any rights Executive may have under such code section, as well as under any statute or common law principles of similar effect.

7. No Pending or Future Lawsuits. Executive represents that Executive has no lawsuits, claims, or actions pending in Executive's name, or on behalf of any other person or entity, against the Company or any other person or entity referred to in this Agreement. Executive also represents that Executive does not intend to bring any claims on Executive's own behalf or on behalf of any other person or entity against the Company or any other person or entity referred to herein.

8. Application for Employment. Executive understands and agrees that, as a condition of this Agreement, Executive shall not be entitled to any employment with the Company, its subsidiaries, or any successor, and Executive hereby waives any right, or alleged right, of employment or re-employment with the Company.

9. No Cooperation. Executive agrees that Executive will not counsel or assist any attorneys or their clients in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints by any third party against the Company and/or any officer, director, Executive, agent, representative, shareholder or attorney of the Company, unless under a subpoena or other court order to do so.

10. No Admission of Liability. Executive understands and acknowledges that this Agreement constitutes a compromise and settlement of disputed claims. No action taken by the Company, either previously or in connection with this Agreement shall be deemed or construed to be (a) an admission of the truth or falsity of any claims heretofore made or (b) an acknowledgment or admission by the Company of any fault or liability whatsoever to the Executive or to any third party.

11. Costs. The parties shall each bear their own costs, expert fees, attorneys' fees and other fees incurred in connection with this Agreement.

12. Authority. Executive represents and warrants that Executive has the capacity to act on Executive's own behalf and on behalf of all who might claim through Executive to bind them to the terms and conditions of this Agreement.

13. No Representations. Executive represents that Executive has had the opportunity to consult with an attorney, and has carefully read and understands the scope and effect of the provisions of this Agreement. Neither party has relied upon any representations or statements made by the other party which are not specifically set forth in this Agreement.

14. Severability. In the event that any provision hereof becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement shall continue in full force and effect without said provision.

15. Entire Agreement. This Agreement, along with the Executive's written equity compensation agreements with the Company, represents the entire agreement and understanding between the Company and Executive concerning Executive's separation from the Company.

16. No Oral Modification. This Agreement may only be amended in writing signed by Executive and the Chairman of the Board of Directors of the Company.

17. Governing Law. This Agreement shall be governed by the internal substantive laws, but not the choice of law rules, of the State of California.

18. Effective Date. This Agreement is effective eight (8) days after it has been signed by both parties.

19. Counterparts. This Agreement may be executed in counterparts, and each counterpart shall have the same force and effect as an original and shall constitute an effective, binding agreement on the part of each of the undersigned.

20. Voluntary Execution of Agreement. This Agreement is executed voluntarily and without any duress or undue influence on the part or behalf of the parties to this Agreement, with the full intent of releasing all claims. The parties acknowledge that:

(a) They have read this Agreement;

(b) They have been represented in the preparation, negotiation, and execution of this Agreement by legal counsel of their own choice or that they have voluntarily declined to seek such counsel;

(c) They understand the terms and consequences of this Agreement and of the releases it contains;

(d) They are fully aware of the legal and binding effect of this Agreement.

[*Remainder of Page Intentionally Blank*]

IN WITNESS WHEREOF, the parties have executed this Agreement on the respective dates set forth below.

Jaguar Health, Inc.

Dated: _____, 20__

By _____
Name:
Title:

_____,
an individual

Dated: _____, 20__

_____

Exhibit 10.12

FIRST AMENDMENT TO
ACCOUNTS RECEIVABLE PURCHASE AGREEMENT

THIS FIRST AMENDMENT TO ACCOUNTS RECEIVABLE PURCHASE AGREEMENT (this "**Amendment**"), dated as of June 26, 2020, is entered into between JAGUAR HEALTH, INC., a Delaware corporation, NAPO PHARMACEUTICALS, INC., a Delaware corporation (collectively, jointly and severally, "**Company**"), and OASIS CAPITAL, LLC, a Puerto Rico limited liability company ("**Purchaser**").

RECITALS

WHEREAS, Company and Purchaser are parties to that certain Accounts Receivable Purchase Agreement dated as of May 12, 2020 (the "**Agreement**"); and

WHEREAS, Company and Purchaser desire to amend the Agreement as hereinafter set forth.

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. **Recitals.** The foregoing recitals are true and correct and are incorporated herein. Capitalized terms that are not otherwise defined in this Amendment will have the same meaning as given to them in the Agreement.

2. **Approved Receivables.** Company agrees to assign and sell to Purchaser as absolute owner the Approved Receivables that are more particularly described on attached **Schedule 1** (the "**Second Tranche**"). The Customer with respect to the Approved Receivables is Cardinal Health 105, Inc. The term "Accounts Receivable" as used in the Agreement shall, as applicable, include the Approved Receivables.

3. **Purchaser's Payment for Approved Receivables; True Up; Overage.**

a. The Purchase Price for the Approved Receivables is $1,215,130.90, which amount is derived by adding the gross amount of the invoices evidencing the Approved Receivables and multiplying such amount by 0.425 (i.e., providing for a 57.50% discount in the face value of such Approved Receivables). With respect to the Second Tranche, reference in the Agreement to "0.375" is revised to be "0.425"; and reference to "62.5%" is revised to be "57.50%".

b. The Threshold Price with respect to the Approved Receivables is $1,370,953.50, as calculated in accordance with the terms of the Agreement. In the event Purchaser does not receive the Threshold Price for the Approved Receivables on or before 70 days after the date of the invoice for the Second Tranche Approved Receivables (i.e., the Maturity Date for each of the respective Approved Receivables), Company, upon Purchaser's election, will be obligated to comply with Purchaser's request pursuant to Section 4.(c) of the Agreement. The

procedures for calculation of True Up and Overage with respect to the Approved Receivables shall be as set forth in the Agreement, as amended by this Amendment.

4. **Transaction Fee.** Company agrees to pay to Purchaser $10,000.00 as the transaction fee for the Approved Receivables, as further detailed in Section 5 of the Agreement.

5. **Ratification and Confirmation.** Company hereby ratifies and confirms the representations, warranties, covenants and other terms and provisions of the Agreement as being true and correct as of the date of this Amendment and as of the date of assignment and sale of the Approved Receivables.

6. **Amendment.** Except as amended hereby, the terms and provisions of the Agreement shall remain unmodified and in full force and effect.

7. **Counterparts; Integration.** This Amendment and any amendments, waivers, consents, or supplements hereto may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. This Amendment constitutes the entire contract between the parties with respect to the subject matter hereof and supersedes all previous agreements and understandings, oral or written, with respect to the subject matter hereof.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed as of the date first written above by their respective officers thereunto duly authorized.

COMPANY:

Signed, sealed and delivered
in the presence of:

JAGUAR HEALTH, INC.,
a Delaware corporation

By: _____
Name: Lisa A. Conte
Title: President and CEO

_____
(Print Name: _____)

_____
(Print Name: _____)

NAPO PHARMACEUTICALS, INC.,
a Delaware corporation

By: _____
Name: Lisa A. Conte
Title: President and CEO

_____
(Print Name: _____)

_____
(Print Name: _____)

PURCHASER:

OASIS CAPITAL, LLC,
a Puerto Rico limited liability company

By: _____
Name: Adam R. Long
Title: Managing Member

_____
(Print Name: _____)

_____
(Print Name: _____)

SCHEDULE 1

APPROVED RECEIVABLES

Exhibit 10.13

ASSIGNMENT AGREEMENT
To
FIRST AMENDMENT

THIS ASSIGNMENT AGREEMENT TO FIRST AMENDMENT (this "**Agreement**"), effective as of June 26, 2020, is entered into by and between NAPO PHARMACEUTICALS, INC., a Delaware corporation ("**Assignor**"), and OASIS CAPITAL, LLC, a Puerto Rico limited liability company ("**Assignee**"). Capitalized terms used herein but not otherwise defined shall have the meanings ascribed to them in the Purchase Agreement (as defined below).

WHEREAS, pursuant to the terms of that certain Accounts Receivable Purchase Agreement, made effective as of May 12, 2020, as amended by the First Amendment thereto dated as of June 26, 2020 (collectively, the "**Purchase Agreement**"), by and among the Assignee, the Assignor and Jaguar Health, Inc., the parties herein have agreed, among other things, that the Assignor will sell, transfer and convey to the Assignee the Second Tranche, in accordance with the terms of the Purchase Agreement.

NOW, THEREFORE, in consideration of the promises and of the respective agreements and conditions contained herein, the Assignor and the Assignee, intending to be legally bound, hereby agree as follows:

1. The Assignor does hereby grant, convey, transfer and assign to the Assignee, and its successors and assigns, effective as of the date hereof, all of the Assignor's rights, titles and interests in and to the Second Tranche that are detailed on attached Exhibit A, free and clear of all liens, security interests, encumbrances and other matters as more particularly detailed in the Purchase Agreement.

2. The Assignee hereby accepts the assignment of the Second Tranche as contemplated by this Agreement and in accordance with the terms of the Purchase Agreement.

3. Nothing herein expressed or implied is intended to confer upon any person or party, other than the Assignee and the Assignor and their respective successors and assigns, any rights, remedies, obligations or liabilities.

4. This Agreement may not be amended or modified in any respect, except by a written instrument signed by the parties hereto making specific reference to this Agreement. This Agreement shall inure to the benefit of and be binding upon the parties and their respective successors and assigns.

5. This Agreement may be executed in one or more counterparts, each of which will be deemed to be an original but all of which together will constitute one and the same document. Any signature to this Agreement delivered via facsimile, PDF format or other electronic means shall be deemed an original for all purposes.

6. This Agreement is governed by and construed in accordance with the internal laws of the State of New York, without regard to conflict of laws principles.

7. If any term, provision or clause hereof, or of any other agreement or document which is required by this Agreement, is held to be invalid, such invalidity shall not affect or render invalid any other provision or clause hereof or thereof, all of which shall remain in full force and effect. If any provision of this Agreement is so broad as to be unenforceable, such provision shall be interpreted to be only as broad as is enforceable under applicable law.

8. Notwithstanding anything herein to the contrary, the provisions of this Agreement shall be subject to the provisions of the Purchase Agreement, and, if and to the extent the provisions of this Agreement are inconsistent in any way with the provisions of the Purchase Agreement, the provisions of the Purchase Agreement shall be controlling. Nothing contained herein shall be deemed to alter, modify, expand or diminish the terms and provisions set forth in the Purchase Agreement.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed as of the date first written above by their respective officers thereunto duly authorized.

ASSIGNOR:

NAPO PHARMACEUTICALS, INC.,
a Delaware corporation

By: _____
Name: Lisa A. Conte
Title: President and CEO

ASSIGNOR:
OASIS CAPITAL, LLC,
a Puerto Rico limited liability company

By: _____
Name: Adam R. Long
Title: Managing Member

Exhibit 31.1

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 June 30, 2020;

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: August 13, 2020

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

Exhibit 31.2

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

I, Carol Lizak, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Jaguar Health, Inc. for the quarter ended June 30, 2020;

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: August 13, 2020

/s/ Carol Lizak
Carol Lizak
Principal Financial and Accounting Officer

Exhibit 32.1

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

In connection with the Quarterly Report of Jaguar Health, Inc. (the "Company") on Form 10-Q for the quarter ended June 30, 2020, 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: August 13, 2020

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

Exhibit 32.2

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 June 30, 2020, 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: August 13, 2020

/s/ Carol Lizak
Carol Lizak
Principal Financial and Accounting Officer