

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549**

FORM 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period September 30, 2019

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____.

Commission File Number:
001-37348

Corbus Pharmaceuticals Holdings, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

46-4348039
(I.R.S. Employer
Identification Number)

500 River Ridge Drive
Norwood, MA
(Address of principal executive offices)

02062
(Zip code)

(617) 963-0100
(Registrant's telephone number, including area code)

(Former Name, Former Address and Former Fiscal Year if Changed Since Last Report):N/A

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

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, par value \$0.0001 per share	CRBP	Nasdaq Global Market

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, a 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	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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

As of November 1, 2019, 64,672,893 shares of the registrant's common stock, \$0.0001 par value, were issued and outstanding.

CORBUS PHARMACEUTICALS HOLDINGS, INC.

Quarterly Report on Form 10-Q for the Quarter Ended September 30, 2019

TABLE OF CONTENTS

	<u>Page</u>
<u>PART I</u>	
FINANCIAL INFORMATION	
<u>1. Condensed Consolidated Financial Statements</u>	
<u>Condensed Consolidated Balance Sheets as of September 30, 2019 (unaudited) and December 31, 2018</u>	3
<u>Condensed Consolidated Statements of Operations for the Three and Nine Months Ended September 30, 2019 and 2018 (unaudited)</u>	4
<u>Condensed Consolidated Statement of Stockholders' Equity for the Three and Nine Months Ended September 30, 2019 and 2018 (unaudited)</u>	5
<u>Condensed Consolidated Statements of Cash Flows for the Nine Months Ended September 30, 2019 and 2018 (unaudited)</u>	7
<u>Notes to Unaudited Condensed Consolidated Financial Statements</u>	8
<u>2. Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	26
<u>3. Quantitative and Qualitative Disclosures about Market Risk</u>	40
<u>4. Controls and Procedures</u>	40
<u>PART II</u>	
OTHER INFORMATION	
<u>1. Legal Proceedings</u>	41
<u>1A. Risk Factors</u>	41
<u>2. Unregistered Sales of Equity Securities and Use of Proceeds</u>	41
<u>3. Defaults Upon Senior Securities</u>	41
<u>4. Mine Safety Disclosures</u>	42
<u>5. Other Information</u>	42
<u>6. Exhibits</u>	42

PART I — FINANCIAL INFORMATION

Item 1. Financial Statements.

Corbus Pharmaceuticals Holdings, Inc.
Condensed Consolidated Balance Sheets

	September 30, 2019 (Unaudited)	December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 54,849,365	\$ 41,748,468
Prepaid expenses and other current assets	2,685,923	2,491,844
Total current assets	57,535,288	44,240,312
Property and equipment, net	4,891,063	2,705,206
Operating lease right of use assets	5,569,999	—
Other assets	134,034	43,823
Total assets	\$ 68,130,384	\$ 46,989,341
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Notes payable	\$ —	\$ 394,305
Accounts payable	6,193,507	6,345,335
Accrued expenses	23,969,303	9,851,191
Deferred revenue	—	1,462,503
Operating lease liabilities, current	386,618	—
Deferred rent, current	—	35,996
Total current liabilities	30,549,428	18,089,330
Operating lease liabilities, noncurrent	7,940,283	—
Deferred rent, noncurrent	—	1,375,891
Total liabilities	38,489,711	19,465,221
Commitments and Contingencies		
Stockholders' equity		
Preferred stock, \$0.0001 par value; 10,000,000 shares authorized, no shares issued and outstanding at September 30, 2019 and December 31, 2018	—	—
Common stock, \$0.0001 par value; 150,000,000 shares authorized, 64,672,893 and 57,247,496 shares issued and outstanding at September 30, 2019 and December 31, 2018, respectively	6,467	5,725
Additional paid-in capital	195,877,403	148,888,635
Accumulated deficit	(166,243,197)	(121,370,240)
Total stockholders' equity	29,640,673	27,524,120
Total liabilities and stockholders' equity	\$ 68,130,384	\$ 46,989,341

See notes to the unaudited condensed consolidated financial statements.

Corbus Pharmaceuticals Holdings, Inc.
Condensed Consolidated Statements of Operations
(Unaudited)

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2019	2018	2019	2018
Revenue from awards and licenses	\$ 2,589,783	\$ 1,090,878	\$ 33,570,048	\$ 2,894,966
Operating expenses:				
Research and development	22,152,001	12,807,800	66,117,114	32,833,029
General and administrative	5,534,493	3,181,071	17,367,202	9,218,652
Total operating expenses	27,686,494	15,988,871	83,484,316	42,051,681
Operating loss	(25,096,711)	(14,897,993)	(49,914,268)	(39,156,715)
Other income (expense), net:				
Other income	4,109,338	-	4,109,338	-
Interest income, net	292,854	268,335	1,076,166	738,052
Foreign currency exchange gain (loss), net	(96,282)	28,447	(144,193)	52,716
Other income, net	4,305,910	296,782	5,041,311	790,768
Net loss	\$ (20,790,801)	\$ (14,601,211)	\$ (44,872,957)	\$ (38,365,947)
Net loss per share, basic and diluted	\$ (0.32)	\$ (0.26)	\$ (0.71)	\$ (0.67)
Weighted average number of common shares outstanding, basic and diluted	64,660,017	57,218,832	63,638,447	56,917,897

See notes to the unaudited condensed consolidated financial statements.

Corbus Pharmaceuticals Holdings, Inc.
Condensed Consolidated Statement of Stockholders' Equity
(Unaudited)

For the Three Months Ended September 30, 2019

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			
Balance at June 30, 2019	64,644,093	\$ 6,465	\$ 192,819,731	\$ (145,452,396)	\$ 47,373,800
Stock compensation expense	—	—	2,977,574	—	2,977,574
Issuance of common stock upon exercise of stock options	28,800	2	80,098	—	80,100
Net loss	—	—	—	(20,790,801)	(20,790,801)
Balance at September 30, 2019	<u>64,672,893</u>	<u>\$ 6,467</u>	<u>\$ 195,877,403</u>	<u>\$ (166,243,197)</u>	<u>\$ 29,640,673</u>

For the Three Months Ended September 30, 2018

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			
Balance at June 30, 2018	57,192,496	\$ 5,719	\$ 144,942,278	\$ (89,462,837)	\$ 55,485,160
Stock issuance costs	—	—	(11,512)	—	(11,512)
Stock compensation expense	—	—	1,958,917	—	1,958,917
Issuance of common stock upon exercise of warrants	5,000	1	4,999	—	5,000
Issuance of common stock upon exercise of stock options	40,000	4	34,374	—	34,378
Net loss	—	—	—	(14,601,211)	(14,601,211)
Balance at September 30, 2018	<u>57,237,496</u>	<u>\$ 5,724</u>	<u>\$ 146,929,056</u>	<u>\$ (104,064,048)</u>	<u>\$ 42,870,732</u>

See notes to the unaudited condensed consolidated financial statements.

Corbus Pharmaceuticals Holdings, Inc.
Condensed Consolidated Statement of Stockholders' Equity
(Unaudited)

For the Nine Months Ended September 30, 2019

	<u>Common Stock</u>		<u>Additional Paid-in Capital</u>	<u>Accumulated Deficit</u>	<u>Total Stockholders' Equity</u>
	<u>Shares</u>	<u>Amount</u>			
Balance at December 31, 2018 (audited)	57,247,496	\$ 5,725	\$ 148,888,635	\$ (121,370,240)	\$ 27,524,120
Issuance of common stock, net of issuance costs of \$2,571,552	6,198,500	620	37,718,078	—	37,718,698
Stock-based compensation expense	—	—	8,884,001	—	8,884,001
Issuance of common stock upon exercise of warrants	1,119,868	112	(112)	—	—
Issuance of common stock upon exercise of stock options	107,029	10	386,801	—	386,811
Net loss	—	—	—	(44,872,957)	(44,872,957)
Balance at September 30, 2019 (Unaudited)	<u>64,672,893</u>	<u>\$ 6,467</u>	<u>\$ 195,877,403</u>	<u>\$ (166,243,197)</u>	<u>\$ 29,640,673</u>

For the Nine Months Ended September 30, 2018

	<u>Common Stock</u>		<u>Additional Paid-in Capital</u>	<u>Accumulated Deficit</u>	<u>Total Stockholders' Equity</u>
	<u>Shares</u>	<u>Amount</u>			
Balance at December 31, 2017 (audited)	55,603,427	\$ 5,560	\$ 123,476,102	\$ (65,698,101)	\$ 57,783,561
Issuance of common stock, net of issuance costs of \$464,680	1,500,000	150	11,235,170	—	11,235,320
Stock-based compensation expense	—	—	5,659,928	—	5,659,928
Issuance of common stock upon exercise of warrants	5,000	1	4,999	—	5,000
Issuance of common stock upon exercise of stock options	129,069	13	337,632	—	337,645
Fair value of warrant issued in connection with Investment Agreement	—	—	6,215,225	—	6,215,225
Net loss	—	—	—	(38,365,947)	(38,365,947)
Balance at September 30, 2018 (Unaudited)	<u>57,237,496</u>	<u>\$ 5,724</u>	<u>\$ 146,929,056</u>	<u>\$ (104,064,048)</u>	<u>\$ 42,870,732</u>

See notes to the unaudited condensed consolidated financial statements.

Corbus Pharmaceuticals Holdings, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)

	Nine Months Ended	
	September 30,	
	2019	2018
Cash flows from operating activities:		
Net loss	\$ (44,872,957)	\$ (38,365,947)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	8,884,001	5,659,928
Depreciation and amortization	466,104	338,651
Loss on foreign exchange	115,654	36,164
Operating lease right of use asset amortization	358,615	—
Deferred rent	—	392,846
Changes in operating assets and liabilities:		
Decrease in customer receivable	5,000,000	12,500,000
Increase in prepaid expenses	(194,079)	(26,554)
(Increase) decrease in other assets	(90,211)	20,837
Increase (decrease) in accounts payable	(836,296)	3,654,483
Increase in accrued expenses	13,486,408	2,646,852
Decrease in deferred revenue	(6,462,503)	(2,860,191)
Increase in operating lease liabilities	986,401	—
Net cash used in operating activities	<u>(23,158,863)</u>	<u>(16,002,931)</u>
Cash flows from investing activities:		
Purchases of property and equipment	(1,451,069)	(2,050,662)
Net cash used in investing activities	<u>(1,451,069)</u>	<u>(2,050,662)</u>
Cash flows from financing activities:		
Principal payments on notes payable	(394,305)	(332,861)
Proceeds from issuance of common stock	40,677,061	12,042,645
Issuance costs paid for common stock financings	(2,571,552)	(690,181)
Principal payments on capital lease obligation	(375)	(3,150)
Net cash provided by financing activities	<u>37,710,829</u>	<u>11,016,453</u>
Net increase (decrease) in cash and cash equivalents	13,100,897	(7,037,140)
Cash and cash equivalents at beginning of the period	41,748,468	62,696,486
Cash and cash equivalents at end of the period	<u>\$ 54,849,365</u>	<u>\$ 55,659,346</u>
Supplemental disclosure of cash flow information and non-cash transactions:		
Cash paid during the period for interest	\$ 20,629	\$ 8,019
Fair value of warrant issued in connection with Investment Agreement	\$ —	\$ 6,215,225
Purchases of property and equipment included in accounts payable or accrued expenses	<u>1,229,916</u>	<u>92,696</u>
Right of use assets obtained in exchange for lease obligation upon adoption of ASU 2016-02	\$ 2,399,524	\$ —
Right of use assets obtained in exchange for lease obligation upon entry into February 2019 Lease Agreement	<u>\$ 3,529,090</u>	<u>\$ —</u>
Write off of fully amortized leasehold improvements	<u>\$ —</u>	<u>\$ 191,244</u>

See notes to the unaudited condensed consolidated financial statements.

Corbus Pharmaceuticals Holdings, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements
Nine Months Ended September 30, 2019

1. NATURE OF OPERATIONS

Business

Corbus Pharmaceuticals Holdings, Inc. (the "Company") is a clinical stage pharmaceutical company, focused on the development and commercialization of novel therapeutics to treat rare, chronic, and serious inflammatory and fibrotic diseases. Since its inception, the Company has devoted substantially all of its efforts to business planning, research and development, recruiting management and technical staff, acquiring operating assets and raising capital. The Company's business is subject to significant risks and uncertainties and the Company will be dependent on raising substantial additional capital before it becomes profitable and it may never achieve profitability.

The condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All significant intercompany transactions and accounts have been eliminated in consolidation. In the opinion of management of the Company, the accompanying unaudited condensed consolidated interim financial statements reflect all adjustments (which include only normal recurring adjustments) necessary to present fairly, in all material respects, the consolidated financial position of the Company as of September 30, 2019, the results of its operations and changes in stockholders' equity for the three months and nine months ended September 30, 2019 and 2018 and its cash flows for the nine months ended September 30, 2019 and 2018. The December 31, 2018 condensed consolidated balance sheet was derived from audited financial statements. The Company prepared the condensed consolidated financial statements following the requirements of the SEC for interim reporting. Accordingly, certain information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted. It is suggested that these condensed consolidated financial statements be read in conjunction with the financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2018, filed on March 12, 2019. The results of operations for such interim periods are not necessarily indicative of the operating results for the full fiscal year.

2. LIQUIDITY AND GOING CONCERN

The accompanying consolidated financial statements have been prepared assuming the Company will continue as a going concern, which contemplates continuity of operations, realization of assets and the satisfaction of liabilities and commitments in the normal course of business. Although the Company had operating income for the second quarter of 2019, the Company has incurred recurring losses since inception and as of September 30, 2019, had an accumulated deficit of \$166,243,197. The Company anticipates operating losses to continue for the foreseeable future due to, among other things, costs related to research funding, development of its product candidates and its preclinical and clinical programs, strategic alliances and the development of its administrative organization. The Company expects the cash and cash equivalents of \$54,849,365 at September 30, 2019 may not be sufficient to meet its operating and capital requirements at least 12 months from the filing of this 10-Q.

Should the Company be unable to raise sufficient additional capital, the Company may be required to undertake cost-cutting measures including delaying or discontinuing certain clinical activities. The Company will need to raise significant additional capital to continue to fund the clinical trials for lenabasum and CRB-4001 (see Note 5). The Company may seek to sell common or preferred equity or convertible debt securities, enter into a credit facility or another form of third-party funding, or seek other debt financing. The sale of equity and convertible debt securities may result in dilution to the Company's stockholders and certain of those securities may have rights senior to those of the Company's common shares. If the Company raises additional funds through the issuance of preferred stock, convertible debt securities or other debt financing, these securities or other debt could contain covenants that would restrict the Company's operations. Any other third-party funding arrangement could require the Company to relinquish valuable rights.

The source, timing and availability of any future financing will depend principally upon market conditions, and, more specifically, on the progress of the Company's clinical development programs. Funding may not be available when needed, at all, or on terms acceptable to the Company. Lack of necessary funds may require the Company, among other things, to delay, scale back or eliminate some or all of the Company's planned clinical trials. These factors among others cause management to conclude there is a substantial doubt about the Company's ability to continue as a going concern. There have been no adjustments made to these consolidated financial statements as a result of these uncertainties.

3. SIGNIFICANT ACCOUNTING POLICIES

A summary of the significant accounting policies followed by the Company in the preparation of the financial statements is as follows:

Use of Estimates

The process of preparing financial statements in conformity with accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates and changes in estimates may occur. The most significant estimates are related to stock-based compensation, the accrual of research, product development and clinical obligations, the recognition of revenue under the Investment Agreement (See Note 8), and the valuation of the CFF Warrant (See Note 11).

Cash and Cash Equivalents

The Company considers only those investments which are highly liquid, readily convertible to cash, and that mature within three months from date of purchase to be cash equivalents. Marketable investments are those with original maturities in excess of three months. At September 30, 2019 and December 31, 2018, cash equivalents were comprised of money market funds. The Company had no marketable investments at September 30, 2019 and December 31, 2018.

Cash and cash equivalents consists of the following:

	September 30, 2019	December 31, 2018
Cash	\$ 5,184,555	\$ 808,943
Money market fund	49,664,810	40,939,525
Total cash and cash equivalents	<u>\$ 54,849,365</u>	<u>\$ 41,748,468</u>

As of September 30, 2019, all of the Company's cash and cash equivalents was held in the United States, except for approximately \$4,928,000 of cash which was held principally in our subsidiary in the United Kingdom. As of December 31, 2018, all of the Company's cash was held in the United States, except for approximately \$702,000 of cash which was held in our subsidiary in the United Kingdom.

Financial Instruments

The carrying amounts reported in the consolidated balance sheet for cash and cash equivalents, receivables, accounts payable and accrued expenses approximate their fair value based on the short-term nature of these instruments. The carrying values of the notes payable approximate their fair value due to the fact that they are at market terms.

Property and Equipment

The estimated life for the Company's property and equipment is as follows: three years for computer hardware and software and three to five years for office furniture and equipment. The Company's leasehold improvements and assets under capital lease are amortized over the shorter of their useful lives or the respective leases. See Note 4 for details of property and equipment and Note 5 for operating and capital lease commitments.

Research and Development Expenses

Costs incurred for research and development are expensed as incurred.

Nonrefundable advance payments for goods or services that have the characteristics that will be used or rendered for future research and development activities pursuant to executory contractual arrangements with third party research organizations are deferred and recognized as an expense as the related goods are delivered or the related services are performed.

Accruals for Research and Development Expenses and Clinical Trials

As part of the process of preparing its financial statements, the Company is required to estimate its expenses resulting from its obligations under contracts with vendors, clinical research organizations and consultants and under clinical site agreements in connection with conducting clinical trials. The financial terms of these contracts are subject to negotiations, which vary from contract to contract and may result in payment terms that do not match the periods over which materials or services are provided under such contracts. The Company's objective is to reflect the appropriate expenses in its financial statements by matching those expenses with the period in which services are performed and efforts are expended. The Company accounts for these expenses according to the timing of various aspects of the expenses. The Company determines accrual estimates by taking into account discussion with applicable personnel and outside service providers as to the progress of clinical trials, or the services completed. During the course of a clinical trial, the Company adjusts its clinical expense recognition if actual results differ from its estimates. The Company makes estimates of its accrued expenses as of each balance sheet date based on the facts and circumstances known to it at that time. The Company's clinical trial accruals are dependent upon the timely and accurate reporting of contract research organizations and other third-party vendors. Although the Company does not expect its estimates to be materially different from amounts actually incurred, its understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in it reporting amounts that are too high or too low for any particular period. For the three and nine months ended September 30, 2019 and 2018, there were no material adjustments to the Company's prior period estimates of accrued expenses for clinical trials.

Leases

The Company determines if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use (“ROU”) assets, other current liabilities and operating lease liabilities in the Company’s consolidated balance sheets.

ROU assets represent the Company’s right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease. ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As the Company’s leases do not provide an implicit rate, the Company uses an incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. This is the rate the Company would have to pay if borrowing on a collateralized basis over a similar term to each lease. The ROU asset also includes any lease payments made and excludes lease incentives. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

Concentrations of Credit Risk

The Company has no significant off-balance-sheet concentration of credit risk such as foreign exchange contracts, option contracts or other hedging arrangements. The Company may from time to time have cash in banks in excess of Federal Deposit Insurance Corporation insurance limits. However, the Company believes the risk of loss is minimal as these banks are large financial institutions.

Segment Information

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker, or decision making group, in making decisions regarding resource allocation and assessing performance. To date, the Company has viewed its operations and manages its business as principally one operating segment, which is developing and commercializing therapeutics to treat rare life-threatening, inflammatory fibrotic diseases. As of September 30, 2019, all of the Company’s assets were located in the United States, except for approximately \$4,928,000 of cash, \$1,481,000 of prepaid expenses and other current assets, \$36,000 of other assets, and \$59,000 of property and equipment, net which were held outside of the United States, principally in our subsidiary in the United Kingdom. As of December 31, 2018, all of the Company’s assets were located in the United States, except for approximately \$702,000 of cash, \$1,183,000 of prepaid expenses and other current assets, \$28,000 of other assets, and \$54,000 of property and equipment, net which were held in our subsidiary in the United Kingdom.

Income Taxes

For federal and state income taxes, deferred tax assets and liabilities are recognized based upon temporary differences between the financial statement and the tax basis of assets and liabilities. Deferred income taxes are based upon prescribed rates and enacted laws applicable to periods in which differences are expected to reverse. A valuation allowance is recorded to reduce a net deferred tax benefit when it is not more likely than not that the tax benefit from the deferred tax assets will be realized. Accordingly, given the cumulative losses since inception, the Company has provided a valuation allowance equal to 100% of the deferred tax assets in order to eliminate the deferred tax assets amounts.

Tax positions taken or expected to be taken in the course of preparing the Company’s tax returns are required to be evaluated to determine whether the tax positions are “more-likely-than-not” of being sustained by the applicable tax authority. Tax positions not deemed to meet a more-likely-than-not threshold, as well as accrued interest and penalties, if any, would be recorded as a tax expense in the current year. There were no uncertain tax positions that require accrual or disclosure to the financial statements as of September 30, 2019 or December 31, 2018.

In the three months ended September 30, 2019, the Company received from a foreign taxing authority, an aggregate \$4.1 million of cash payments for refundable research and development tax credits that were earned on certain research and development expenses incurred outside of the United States. The Company recorded the \$4.1 million in other income in the accompanying statements of operations for the three and nine months ended September 30, 2019.

Impairment of Long-lived Assets

The Company continually monitors events and changes in circumstances that could indicate that carrying amounts of long-lived assets may not be recoverable. An impairment loss is recognized when expected undiscounted cash flows of an asset are less than an asset's carrying value. Accordingly, when indicators of impairment are present, the Company evaluates the carrying value of such assets in relation to the operating performance and future undiscounted cash flows of the underlying assets. An impairment loss equal to the excess of the fair value of the asset over its carrying amount, is recorded when it is determined that the carrying value of the asset may not be recoverable. No impairment charges were recorded during the three and nine months ended September 30, 2019 and 2018.

Stock-based Payments

The Company recognizes compensation costs resulting from the issuance of stock-based awards to employees, non-employees and directors as an expense in the statement of operations over the service period based on a measurement of fair value for each stock-based award. The fair value of each option grant is estimated as of the date of grant using the Black-Scholes option-pricing model. The fair value is amortized as compensation cost on a straight-line basis over the requisite service period of the awards, which is generally the vesting period. Prior to the Company's adoption of ASU 2018-07, (see *Recent Accounting Pronouncements* section to follow), stock options granted to non-employee consultants were revalued at the end of each reporting period until vested using the Black-Scholes option-pricing model and the changes in their fair value were recorded as adjustments to expense over the related vesting period.

Foreign Currency

Transaction gains and losses arising from currency exchange rate fluctuations on transactions denominated in a currency other than the U.S. Dollar functional currency are recorded in the Company's statement of operations. Such transaction gains and losses may be realized or unrealized depending upon whether the transaction settled during the period or remains outstanding at the balance sheet date. The functional currency for the Company's foreign affiliates is the U.S. Dollar, therefore no foreign currency translation adjustments have been recorded as other comprehensive income.

Net Loss Per Common Share

Net loss per share was computed as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Basic and diluted net loss per share of common stock:				
Net loss	\$ (20,790,801)	\$ (14,601,211)	\$ (44,872,957)	\$ (38,365,947)
Weighted average shares of common stock outstanding	64,660,017	57,218,832	63,638,447	56,917,897
Net loss per share of common stock-basic and diluted	\$ (0.32)	\$ (0.26)	\$ (0.71)	\$ (0.67)

The impact of the following potentially dilutive securities outstanding as of September 30, 2019 and 2018 have been excluded from the computation of dilutive weighted average shares outstanding as the inclusion would be anti-dilutive.

	September 30,	
	2019	2018
Warrants	1,000,000	2,283,500
Stock options	12,830,887	9,434,241
Total	13,830,887	11,717,741

Recent Accounting Pronouncements

The Company considers applicability and impact of all Accounting Standard Updates (“ASUs”). ASUs not discussed below were assessed and determined to be either not applicable or are expected to have minimal impact on the Company’s balance sheets or statements of operations.

Accounting for Leases

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, as amended (“ASU 2016-02”). Under ASU 2016-02, a lessee is required to recognize assets and liabilities for all leases with lease terms of more than 12 months. ASU 2016-02 requires both financing and operating types of leases to be recognized on the balance sheet. ASU 2016-02 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. ASU 2016-02 required a modified retrospective transition approach, which initially required application of the new guidance for all periods presented in the Company’s financial statements (“comparative method”). In July 2018, the FASB released ASU 2018-11, offering a second option which provides further relief in the transition to ASC 842. Companies are allowed to follow the cumulative-effect adjustment transition approach (“effective date method”), which releases companies from presenting comparative periods and related disclosures according to ASC 842. Instead, companies electing to utilize the effective date method will recognize a one-time adjustment to retained earnings on the transition date without the additional burden of presenting the comparative periods under the new guidance. The Company adopted ASU 2016-02 using the effective date method as of January 1, 2019 and recorded an operating lease liability of approximately \$3.8 million, and an operating lease right-of-use asset of approximately \$2.4 million, with no operations adjustment to the accumulated deficit (See Note 5).

Nonemployee Share-Based Payment Accounting

In June 2018, the FASB issued ASU 2018-07, *Compensation-Stock Compensation (Topic 718), Improvements to Nonemployee Share-Based Payment Accounting* (“ASU 2018-07”). ASU 2018-07 expands the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. Under ASU 2018-07, consistent with the accounting requirement for employee share-based payment awards, nonemployee share-based payment awards within the scope of Topic 718 are to be measured at the grant-date fair value of the equity instruments that an entity is obligated to issue when the good has been delivered or the service has been rendered and any other conditions necessary to earn the right to benefit from the instruments have been satisfied. Equity-classified nonemployee share-based payment awards are to be measured at the grant date. The definition of the term grant date is amended to generally state the date at which a grantor and a grantee reach a mutual understanding of the key terms and conditions of a share-based payment award. ASU 2018-07 specifies that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in its own operations by issuing share-based payment awards. ASU 2018-07 also clarifies that Topic 718 does not apply to share-based payments used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of a contract accounted for under ASC 606. ASU 2018-07 is effective for public business entities for fiscal years beginning after December 15, 2018, including interim periods within that fiscal year. The Company’s adoption of ASU 2018-07 on January 1, 2019 had no impact on the Company’s financial statements and related disclosures.

Collaborative Arrangements

In November 2018, the FASB issued ASU 2018-08, *Collaborative Arrangements (Topic 808): Clarifying the Interaction between Topic 808 and Topic 606* (“ASU 2018-08”). ASU 2018-08 clarifies the interaction between the accounting guidance for collaborative arrangements and revenue from contracts with customers. ASU 2018-08 is effective for public business entities for fiscal years beginning after December 15, 2019, including interim periods within that fiscal year. Early adoption, including adoption in any interim period, is permitted. The Company is currently evaluating the timing of the adoption of ASU 2018-08 and the expected impact it could have on the Company’s financial statements and related disclosures.

4. PROPERTY AND EQUIPMENT

Property and equipment consisted of the following:

	<u>September 30, 2019</u>	<u>December 31, 2018</u>
Computer hardware and software	\$ 634,181	\$ 431,637
Office furniture and equipment	1,338,490	914,742
Leasehold improvements	3,051,598	2,025,410
Construction in progress	999,481	—
Property and equipment, gross	<u>6,023,750</u>	<u>3,371,789</u>
Less: accumulated depreciation	<u>(1,132,687)</u>	<u>(666,583)</u>
Property and equipment, net	<u>\$ 4,891,063</u>	<u>\$ 2,705,206</u>

Depreciation expense was \$157,773 and \$132,337 for the three months ended September 30, 2019 and 2018, respectively and \$466,104 and \$338,651 for the nine months ended September 30, 2019 and 2018, respectively. As of September 30, 2019, the construction in progress costs in the table above are related to the Company’s build out its office space related to the New Premises discussed in Note 5.

5. COMMITMENTS AND CONTINGENCIES

Operating Lease Commitment

On August 21, 2017, the Company entered into a lease agreement (“August 2017 Lease Agreement”) for commercial lease of office space, pursuant to which the Company agreed to lease 32,733 square feet of office space (“Leased Premises”). The initial term of the August 2017 Lease Agreement was for a period of seven years which began with the Company’s occupancy of the Leased Premises in February 2018. The base rent for the Leased Premises ranged from approximately \$470,000 for the first year to approximately \$908,000 for the seventh year. Per the terms of the August 2017 Lease Agreement, the landlord agreed to reimburse the Company for \$1,080,189 of leasehold improvements. The reimbursements had been deferred and were to be recognized as a reduction of rent expense over the term of the lease. Additionally, the August 2017 Lease Agreement required a standby irrevocable letter of credit of \$400,000, which was to be reduced, if the Company is not in default under the August 2017 Lease Agreement, to \$300,000 and \$200,000 on the third and fourth anniversary of the commencement date, respectively. The Company entered into an unsecured letter of credit for \$400,000 in connection with the August 2017 Lease Agreement for which it incurred interest expense of \$8,987 and \$612 for the three months ended September 30, 2019 and 2018, and \$15,538 and \$4,161 for the nine months ended September 30, 2019 and 2018.

The Company adopted ASU 2016-02 using the effective date method as of January 1, 2019 and recorded a lease liability of approximately \$3.8 million, and a right-of-use asset of approximately \$2.4 million, with no operations adjustment to the accumulated deficit related to the Leased Premises. Operating leases are included in operating lease right-of-use assets, operating lease liabilities, current and operating lease liabilities, noncurrent in the Company’s consolidated balance sheets.

ROU assets represent the Company’s right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease. ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As the Company’s leases do not provide an implicit rate, the Company uses an incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments, which was 9%. This is the rate the Company would have to pay if borrowing on a collateralized basis over a similar term to each lease. The ROU asset also includes any lease payments made and excludes lease incentives. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

On February 26, 2019, the Company amended its lease (“February 2019 Lease Agreement”) pursuant to which an additional 30,023 square feet of office space (“New Premises”) will be leased by the Company in the same building for an aggregate total of 62,756 square feet of leased office space (“Total Premises”). Per ASC 842, the February 2019 Lease Agreement constitutes a modification as it extends the original lease term and increases the scope of the lease (additional space provided under the amendment), which requires evaluation of the remeasurement of the lease liability and corresponding ROU asset. Per ASC 842, an extension of the lease term does not constitute a separate contract. Accordingly, the Company reassessed the classification of the Leased Premises and remeasured the lease liability on the basis of the extended lease term using the 20 additional monthly rent payments and the incremental borrowing rate at the effective date of the modification of 9%. The remeasurement for the modification resulted in an increase to the lease liability and the ROU asset of approximately \$855,000. The Company determined that the New Premises will be treated as a new standalone lease under ASC 842 and recorded a lease liability and a right-of-use asset of approximately \$2.7 million for the modification.

On October 25, 2019, the Company amended its lease (“October 2019 Lease Amendment”) pursuant to which an additional 500 square feet of office space will be leased by the Company in the same building for an aggregate total of 63,256 square feet of leased office space (“Amended Total Premises”). Per ASC 842, the October 2019 Lease Amendment constitutes a modification as it extends the original lease term and increases the scope of the lease (additional space provided under the amendment), which requires evaluation of the remeasurement of the lease liability and corresponding ROU asset. Per ASC 842, an extension of the lease term does not constitute a separate contract. Accordingly, the Company reassessed the classification of the Amended Leased Premises and remeasured the lease liability on the basis of the extended lease term using the additional monthly rent payments and the incremental borrowing rate at the effective date of the modification of 8%. The remeasurement for the modification resulted in an increase to the lease liability and the ROU asset of approximately \$466,000 to be recorded in the fourth quarter of 2019.

Per the terms of the February 2019 Lease Agreement, the landlord agreed to reimburse the Company for \$990,759 of leasehold improvements. The reimbursements have been deferred and will be recognized as a reduction of rent expense over the term of the lease. Additionally, the February 2019 Lease Agreement required a standby irrevocable letter of credit of \$369,900, which may be reduced, if the Company is not in default under the February 2019 Lease Agreement, to \$277,425 and \$184,950 on the third and fourth anniversary of the commencement date, respectively.

The following table summarizes the Company’s maturities of operating lease liabilities as of September 30, 2019:

2019 (remainder of year, net of \$990,759 reimbursement of leasehold improvements)	\$	218,216
2020		1,287,522
2021		1,592,434
2022		1,639,501
2023		1,686,568
Thereafter		5,036,169
Total lease payments	\$	11,460,410
Less: present value discount		(3,133,509)
Total	\$	8,326,901

Total lease expense for the three months ended September 30, 2019 and 2018 was \$307,183 and \$146,229, respectively. Total lease expense for the nine months ended September 30, 2019 and 2018 was \$814,527 and \$440,972, respectively.

Capital Lease Commitment

The lease payments under the capital lease agreement for the copier machine commenced when the machine was placed in service in January 2016. The lease was for a three-year term that concluded in January 2019 and included a bargain purchase option at the end of the term.

Jenrin License Agreement

The Company, entered into a License Agreement (the “Jenrin Agreement”) with Jenrin Discovery, LLC, a privately-held Delaware limited liability company (“Jenrin”), effective September 20, 2018. Pursuant to the Jenrin Agreement, Jenrin granted the Company exclusive worldwide rights to develop and commercialize the Licensed Products (as defined in the Jenrin Agreement) which includes the Jenrin library of over 600 compounds and multiple issued and pending patent filings. The compounds are designed to treat inflammatory and fibrotic diseases by targeting the endocannabinoid system. The lead product candidate is CRB-4001, a peripherally-restricted CB-1 inverse agonist targeting fibrotic liver, lung, heart and kidney diseases. The Company plans to commence a Phase 1 clinical trial of CRB-4001 in 2020.

In consideration of the license and other rights granted by Jenrin, the Company paid Jenrin a \$250,000 upfront cash payment and is obligated to pay potential milestone payments to Jenrin totaling up to \$18.4 million for each compound it elects to develop based upon the achievement of specified development and regulatory milestones. In addition, Corbus is obligated to pay Jenrin royalties in the mid, single digits based on net sales of any Licensed Products, subject to specified reductions. As of September 30, 2019, there have been no milestone or royalty payments made to Jenrin.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business* (“ASU 2017-01”) which clarifies the definition of a business and determines when an integrated set of assets and activities is not a business. ASU 2017-01 requires that if substantially all of the fair value of gross assets acquired or disposed of is concentrated in a single asset or group of similar identifiable assets, the assets would not represent a business. The Company determined that substantially all of the fair value of the Jenrin Agreement was attributable to a single in-process research and development asset, CRB-4001, which did not constitute a business. The Company concluded that it did not have any alternative future use for the acquired in-process research and development asset. Thus, the Company recorded the \$250,000 upfront payment to research and development expenses in the third quarter of 2018. The Company will account for the \$18.4 million of development and regulatory milestone payments in the period that the relevant milestones are achieved as either research and development expense or as an intangible asset as applicable.

6. NOTES PAYABLE

In November 2017, the Company entered into a loan agreement with a financing company for \$415,265 to finance one of the Company’s insurance policies. The terms of the loan stipulate equal monthly payments of principal and interest payments of \$41,975 over a ten-month period. Interest accrued on this loan at an annual rate of 2.35%. This loan was fully repaid in August 2018.

In November 2018, the Company entered into a loan agreement with a financing company for \$491,629 to finance one of the Company’s insurance policies. The terms of the loan stipulate equal monthly payments of principal and interest payments of \$49,857 over a ten-month period. Interest accrued on this loan at an annual rate of 3.07%. This loan was fully repaid in August 2019. Prepaid expenses as of September 30, 2019 and December 31, 2018, included \$35,000 and \$441,875, respectively, related to this insurance policy.

In November 2019, the Company entered into a loan agreement with a financing company for \$963,514 to finance one of the Company’s insurance policies. The terms of the loan stipulate equal monthly payments of principal and interest payments of \$109,413 over a nine-month period. Interest accrues on this loan at an annual rate of 5.25%.

Interest expense for notes payable for the three months ended September 30, 2019 and 2018 totaled \$381 and \$213, respectively. Interest expense for notes payable for the nine months ended September 30, 2019 and 2018 totaled \$3,747 and \$2,777, respectively.

7. ACCRUED EXPENSES

Accrued expenses consisted of the following:

	<u>September 30, 2019</u>	<u>December 31, 2018</u>
Accrued clinical operations and trials costs	\$ 11,810,266	\$ 4,914,881
Accrued product development costs	6,740,406	2,222,093
Accrued compensation	3,891,456	2,253,621
Accrued other	1,527,175	460,596
Total	<u>\$ 23,969,303</u>	<u>\$ 9,851,191</u>

8. DEVELOPMENT AWARDS AND DEFERRED REVENUE

Collaboration with Kaken

On January 3, 2019, Corbus Pharmaceuticals Holdings, Inc. the Company entered into a Collaboration and License Agreement (the "Agreement") with Kaken Pharmaceutical Co., Ltd., a company organized under the laws of Japan ("Kaken"). Pursuant to the Agreement, Corbus granted Kaken an exclusive license to commercialize pharmaceutical preparations containing lenabasum (the "Licensed Products") for the prevention or treatment of dermatomyositis and systemic sclerosis (together, the "Initial Indications") in Japan (the "Territory").

Pursuant to the terms of the Agreement, Corbus will bear the cost of, and be responsible for, among other things, conducting the clinical studies and other developmental activities for the Licensed Products in the Initial Indications in the Territory, and Kaken will bear the cost of, and be responsible for, among other things, preparing and filing applications for regulatory approval in the Territory and for commercializing Licensed Products in the Territory, and will use commercially reasonable efforts to commercialize Licensed Products and obtain pricing approval for Licensed Products in the Territory.

In consideration of the license and other rights granted by Corbus, Kaken paid to Corbus in March 2019 a \$27,000,000 upfront cash payment and is obligated to pay potential milestone payments to Corbus totaling up to approximately \$173,000,000 for the achievement of certain development, sales and regulatory milestones, with part of the milestone payments being calculated in Japanese Yen, and therefore subject to change based on the conversion rate to U.S. Dollars in effect at the time of payment. In addition, during the Royalty Term (as defined below), Kaken is obligated to pay Corbus royalties on sales of Licensed Products in the Territory, under certain conditions, in the double digits, which royalty shall be reduced in certain circumstances. In particular, for so long as Corbus supplies Licensed Products to Kaken pursuant to a supply agreement to be entered into by the parties, royalty payments shall be payable for each unit of Licensed Product that Corbus supplies as a percentage of the Japanese National Health Insurance price of the Licensed Product. During any time in which a supply agreement is not in effect, royalty payments shall be changed to a rate to be agreed upon by the parties in good faith.

The Agreement will remain in effect on a Licensed Product-by-Licensed product basis and will expire upon the expiration of the Royalty Term for the final Licensed Product. The “Royalty Term” means the period beginning on the date of the first commercial sale of the Licensed Product in Japan and ends on the latest of (i) the expiration of the last valid claim of the royalty patents covering such Licensed Product in Japan, (ii) the expiration of regulatory exclusivity for such Licensed Product for such Initial Indication in Japan, or (iii) ten (10) years after the first commercial sale of such Licensed Product for such Initial Indication in Japan. The Agreement may be terminated by either party for material breach, upon a party’s insolvency or bankruptcy or upon a challenge by one party of any patents of the other party, and Kaken may terminate in specified situations, including for a safety concern or clinical failure, or at its convenience following the second anniversary of the first commercial sale of a Licensed Product in either of the Initial Indications in the Territory, with 180 days’ notice.

Pursuant to the Agreement, the parties agreed to develop a joint steering committee to provide strategic oversight of the parties’ activities under the Agreement, as well as a joint development committee to coordinate the development of Licensed Products in Japan. Additionally, the parties will establish a joint commercialization committee to review and confirm commercialization activities with respect to Licensed Products in Japan upon regulatory approval of such Licensed Product.

The Agreement also contains customary representations, warranties and covenants by both parties, as well as customary provisions relating to indemnification, confidentiality and other matters.

The Company assessed this arrangement in accordance with ASC 606 and concluded that the contract counterparty, Kaken, is a customer. The Company identified the following material promises under the arrangement: (1) the exclusive license to commercialize lenabasum; (2) the product’s initial know-how transfer; (3) election to use the product trademarks; (4) the sharing of data gathered through the execution of the Global Development Plan for the Initial Indications; and (5) Japanese Pharmaceuticals and Medical Devices Agency (“PMDA”)-required supplemental studies. The Company identified two performance obligations; (1) the combined performance obligation of the License, initial know-how transfer and license to the Company’s product trademarks; and (2) the sharing of data gathered through the execution of the Global Development Plan (as defined in the Agreement) for the Initial Indications. The Company determined that the license and initial know-how transfer were not distinct from another in the context of the contract, as initial know-how transfer is highly interrelated to the license and Kaken would incur significant costs to re-create the know-how of the Company. The Company determined that the election to use the product trademarks license contributes to the exclusivity of the license and, therefore, is combined with the license. The PMDA-required supplemental study is a contingent promise although not a performance obligation as the promise does not provide Kaken with a material right.

Under the Agreement, in order to evaluate the appropriate transaction price, the Company determined that the upfront amount of \$27,000,000 constituted the entirety of the consideration to be included in the transaction price at the outset of the arrangement, which was allocated to the two performance obligations. The potential milestone payments that the Company is eligible to receive were excluded from the transaction price, as all milestone payments are fully constrained based on the probability of achievement. The Company will reevaluate the transaction price at the end of each reporting period and as uncertain events are resolved or other changes in circumstances occur, and, if necessary, adjust its estimate of the transaction price.

The Company estimated the stand-alone selling price of each performance obligation using a market approach and allocated the transaction price on a relative basis. This allocation resulted in a de minimis value attributable the obligation to sharing of data gathered through the execution of the Global Development Plan for the Initial Indications and effectively all of the value to the combined license, initial know-how transfer and license to product trademarks. Therefore, the full upfront payment of \$27,000,000 is allocated to the combined performance obligation of the license, initial technology transfer and license to the product trademarks.

The Company received the upfront payment of \$27,000,000 in March 2019 and, as the performance obligations were not yet satisfied at that time, the payment was recorded in deferred revenue as of March 31, 2019. The Company satisfied the combined performance obligation by June 30, 2019, upon which the Company recognized the \$27,000,000 upfront payment as revenue in the second quarter of 2019.

The Company was required to make a \$2,700,000 royalty payment to CFF within 60 days of receipt of the upfront cash payment from Kaken pursuant to the 2018 CFF Award. This obligation was paid by the Company to CFF in May 2019.

2018 CFF Award

On January 26, 2018, the Company entered into the Cystic Fibrosis Program Related Investment Agreement with the CFF (“Investment Agreement”), a non-profit drug discovery and development corporation, pursuant to which the Company received an award for up to \$25 million in funding (the “2018 CFF Award”) to support a Phase 2b Clinical Trial (the “Phase 2b Clinical Trial”) of lenabasum in patients with cystic fibrosis, of which the Company has received \$17.5 million in the aggregate through June 30, 2019 upon the Company’s achievement of milestones related to the progress of the Phase 2b Clinical Trial, as set forth in the Investment Agreement. In April 2019, the Company became entitled to receive \$5 million upon its achievement of a milestone related to the progress of the Phase 2b Clinical Trial, as set forth in the Investment Agreement. The Company received payment from the CFF for this milestone achievement in May 2019. The Company expects that the remainder of the 2018 CFF Award will be paid incrementally upon the Company’s achievement of the remaining milestones related to the progress of the Phase 2b Clinical Trial, as set forth in the Investment Agreement.

Pursuant to the terms of the Investment Agreement, the Company is obligated to make certain royalty payments to CFF, including a royalty payment of one and one-half times the amount of the 2018 CFF Award, payable in cash within sixty days upon the first receipt of approval of lenabasum in the United States and a second royalty payment of one and one-half times the amount of the 2018 CFF Award upon approval in another major market, as set forth in the Investment Agreement (the “Approval Royalty”). At the Company’s election, the Company may satisfy the first of the two Approval Royalties in registered shares of the Company’s common stock.

Additionally, the Company is obligated to make (i) royalty payments to CFF of two and one-half percent of net sales from lenabasum due within sixty days after any quarter in which such net sales occur in the Field, as defined in the Investment Agreement, (ii) royalty payments to CFF of one percent of net sales of Non-Field Products, as defined in the Investment Agreement due within sixty days after any quarter in which such net sales occur, and (iii) royalty payments to CFF of ten percent of any amount the Company and its stockholders receive in connection with the license, sale, or other transfer to a third party of lenabasum, if indicated for the treatment or prevention of CF, or a change of control transaction, except that such payment shall not exceed five times the amount of the 2018 CFF Award, with such payments to be credited against any other net sales royalty payments due. Accordingly, the Company will owe to CFF a royalty payment equal to 10% of any amounts the Company receives as payment under the collaboration agreement with Kaken, provided that the total royalties that the Company will be required to pay under the Investment Agreement resulting from income from licenses or sales subject to the Investment Agreement are capped at five times the total amount of the 2018 CFF Award, and the Company may credit such royalties against any royalties on net sales otherwise owed to CFF under the Investment Agreement. Accordingly, the Company was required to pay CFF \$2,700,000 in May 2019 as a result of its receipt of the \$27,000,000 upfront cash payment from Kaken.

Either CFF or the Company may terminate the Investment Agreement for cause, which includes the Company’s material failure to achieve certain commercialization and development milestones. The Company’s payment obligations survive the termination of the Investment Agreement.

Pursuant to the terms of the Investment Agreement, the Company issued a warrant to CFF to purchase an aggregate of 1,000,000 shares of the Company's common stock (the "CFF Warrant"). The CFF Warrant is exercisable at a price equal to \$13.20 per share and is immediately exercisable for 500,000 shares of the Company's common stock. Upon completion of the final milestone set forth in the Investment Agreement and receipt of the final payment from CFF to the Company pursuant to the Investment Agreement, the CFF Warrant will be exercisable for the remaining 500,000 shares of the Company's common stock. The CFF Warrant expires on January 26, 2025. Any shares of the Company's common stock issued upon exercise of the CFF Warrant will be unregistered and subject to a one-year lock-up.

Under the Investment Agreement, the Company recorded \$2,589,783 and \$1,090,878 of revenue during the three months ended September 30, 2019 and 2018 and \$6,570,048 and \$2,894,966 of revenue during the nine months ended September 30, 2019 and 2018. The Company assessed the 2018 CFF Award for accounting under ASC 606, which it adopted in the first quarter of 2018 (Note 3). To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation.

The Company assessed this arrangement in accordance with ASC 606 and concluded that the contract counterparty, CFF, is a customer. The Company identified the following material promise under the arrangement: research and development activities and related services under the Phase 2b Clinical Trial. Based on these assessments, the Company identified one performance obligation at the outset of the Investment Agreement, which consists of: Phase 2b Clinical Trial research and development activities and related services.

To determine the transaction price, the Company included the total aggregate payments under the Investment Agreement which amount to \$25 million and reduced the revenue to be recognized by the payment to the customer of \$6,215,225 in the form of the CFF Warrant representing its fair value, leaving the remaining \$18,784,775 as the transaction price as of the outset of the arrangement, which will be recognized as revenue over the performance period as discussed below. The \$6,215,225 fair value of the warrant was also recorded as an increase to additional paid in capital. The Company billed and collected \$17,500,000 in milestone payments during the year ended December 31, 2018 which was recorded as an increase to deferred revenue. A roll forward of deferred revenue related to the Investment Agreement for the nine months ended September 30, 2019 is presented below.

	<u>September 30, 2019</u>
Beginning balance, December 31, 2018	\$ 1,462,503
Billing to CFF upon achievement of milestones	5,000,000
Recognition of revenue	(6,570,048)
Reclassification to contract asset	107,545
Ending balance, September 30, 2019	<u>\$ —</u>

The CFF Warrant is accounted for as a payment to the customer under ASC 606. See Note 11 for further information related to the CFF Warrant. The Company notes that the Investment Agreement contains an initial payment that was received upon contract execution and subsequent milestone payments, which are a form of variable consideration that require evaluation for constraint considerations. The Company concluded that the related performance milestones are generally within the Company's control and as result are considered probable. Revenue associated with the performance obligation is being recognized as revenue as the research and development services are provided using an input method, according to the costs incurred as related to the research and development activities on each program and the costs expected to be incurred in the future to satisfy the performance obligation. The transfer of control occurs over this time period and, in management's judgment, is the best measure of progress towards satisfying the performance obligation. The research and development services related to this performance obligation are expected to be performed over approximately 2.75 years and is expected to be completed in the third quarter of 2020. The amounts received that have not yet been recognized as revenue are recorded in deferred revenue and the amounts recognized as revenue, but not yet received or invoiced are generally recognized as contract assets on the Company's condensed consolidated balance sheet.

2015 CFFT Award

On April 20, 2015, the Company entered into an award agreement (the "2015 CFFT Award Agreement") with the Cystic Fibrosis Foundation Therapeutics, Inc ("CFFT"), a non-profit drug discovery and development affiliate of the Cystic Fibrosis Foundation ("CFF") pursuant to which the Company received a development award (the "2015 CFFT Award") for up to \$5 million in funding. The funding from the 2015 CFFT Award supported a first-in-patient Phase 2 clinical trial of the Company's oral anti-inflammatory drug lenabasum in adults with cystic fibrosis ("CF"). The Company received \$5.0 million in payments under the 2015 CFFT Award. The payments received under the 2015 CFFT Award were recorded as deferred revenue when the triggering event to receive those amounts had occurred and were amortized on a straight-line basis over the expected duration of the remaining performance period under the 2015 CFFT Award which concluded in the third quarter of 2017.

In accordance with ASC 605, the Company recorded \$2,440,195 of revenue during the year ended December 31, 2017 under the 2015 CFFT Award Agreement. No revenue was recorded under the 2015 CFFT Award Agreement during the year ended December 31, 2018 as the final performance period concluded in the third quarter of 2017. Under ASC 605, milestone payments were initially recognized only in the period that the payment-triggering event occurred or was achieved. Effective January 1, 2018, ASC 605 was superseded by *Accounting Standards Codification 606 Revenue Recognition — Revenue from Contracts with Customers* ("ASC 606"). The Company adopted ASC 606 in the first quarter of 2018 using the modified retrospective method according to which the cumulative effect of initially applying ASC 606 is recognized at the date of initial application. Since the Company concluded its performance obligations and completed recognizing revenue under the 2015 CFFT Award Agreement in the third quarter of 2017, there was no cumulative effect to record at the date of the Company's adoption of ASC 606.

Pursuant to the terms of the 2015 CFFT Award Agreement, the Company is obligated to make royalty payments to CFFT contingent upon commercialization of lenabasum in the Field of Use (as defined in the 2015 CFFT Award Agreement) as follows: (i) a royalty payment equal to five times the amount the Company receives under the 2015 CFFT Award Agreement, up to \$25 million, payable in three equal annual installments following the first commercial sale of lenabasum, the first of which is due within 90 days following the first commercial sale of lenabasum, (ii) a royalty payment to CFFT equal to the amount the Company receives under the 2015 CFFT Award Agreement, up to \$5 million, due in the first calendar year in which the aggregate cumulative net sales of lenabasum in the Field of Use exceed \$500 million, and (iii) royalty payment(s) to CFFT of up to approximately \$15 million if the Company transfers, sells or licenses lenabasum in the Field of Use other than for certain clinical or development purposes, or if the Company enters into a change of control transaction, with such payment(s) to be credited against the royalty payments due upon commercialization. The Field of Use is defined in the 2015 CFFT Award as the treatment in humans of CF, asbestosis, bronchiectasis, byssinosis, chronic bronchitis/COPD hypersensitivity pneumonitis, pneumoconiosis, primary ciliary dyskinesia, sarcoidosis and silicosis.

Either CFFT or the Company may terminate the agreement for cause, which includes the Company's material failure to achieve certain commercialization and development milestones. The Company's payment obligations, if any, would survive the termination of the 2015 CFFT Award Agreement.

9. COMMON STOCK

On January 5, 2018, the Company entered into a sales agreement with Cantor Fitzgerald under which the Company had the ability to direct Cantor Fitzgerald as its sales agent to sell common stock up to an aggregate offering of up to \$50 million under an "At the Market Offering" ("January 2018 Sales Agreement"). Sales of common stock under the January 2018 Sales Agreement were made pursuant to an effective registration statement for an aggregate offering of up to \$50 million. During the first quarter of 2018, the Company sold 1,500,000 shares of its common stock to an institutional investor under the January 2018 Sales Agreement for which the Company received net proceeds of approximately \$11.2 million. The Company did not sell any shares under the January 2018 Sales Agreement in the remainder of 2018 and through February 8, 2019, the effective date of the Company's termination of the January 2018 Sales Agreement.

On January 30, 2019, the Company consummated an underwritten public offering of shares of its common stock pursuant to which the Company sold an aggregate of 6,198,500 shares of its common stock, including 808,500 shares sold pursuant to the full exercise of the underwriters' option to purchase additional shares, at a purchase price of \$6.50 per share with gross proceeds to the Company totaling approximately \$40.3 million, less issuance costs incurred of approximately \$2.6 million.

During the three and nine months ended September 30, 2019, the Company issued 28,800 and 107,029 shares of common stock upon the exercise of stock options to purchase common stock and the Company received proceeds of \$80,100 and \$386,811 from these exercises, respectively. During the three and nine months ended September 30, 2018, the Company issued 40,000 and 129,069 shares of common stock upon the exercise of stock options to purchase common stock and the Company received proceeds of \$34,378 and \$337,645 from these exercises, respectively.

During the nine months ended September 30, 2019, warrants to purchase 1,283,500 shares of common stock were exercised on a cashless basis resulting in the issuance of 1,119,868 shares of common stock. No warrants were exercised during the three months ended September 30, 2019. During the three and nine months ended September 30, 2018, warrants to purchase 5,000 shares were exercised for proceeds of \$5,000.

10. STOCK OPTIONS

In April 2014, the Company adopted the Corbus Pharmaceuticals Holdings, Inc. 2014 Equity Incentive Plan (the “2014 Plan”). Pursuant to the 2014 Plan, the Company’s Board of Directors may grant incentive and nonqualified stock options and restricted stock to employees, officers, directors, consultants and advisors. Options issued under the 2014 Plan generally vest over 4 years from the date of grant in multiple tranches and are exercisable for up to 10 years from the date of issuance.

Pursuant to the terms of an annual evergreen provision in the 2014 Plan, the number of shares of common stock available for issuance under the 2014 Plan shall automatically increase on January 1 of each year by at least seven percent (7%) of the total number of shares of common stock outstanding on December 31st of the preceding calendar year, or, pursuant to the terms of the 2014 Plan, in any year, the Board of Directors may determine that such increase will provide for a lesser number of shares.

In accordance with the terms of the 2014 Plan, effective as of January 1, 2018, the number of shares of common stock available for issuance under the 2014 Plan increased by 2,500,000 shares, such amount being less than seven percent (7%) of the outstanding shares of common stock on December 31, 2017. As of December 31, 2018, the 2014 Plan had a total reserve of 15,543,739 shares and there were 5,072,241 shares available for future grants.

In accordance with the terms of the 2014 Plan, effective as of January 1, 2019, the number of shares of common stock available for issuance under the 2014 Plan increased by 3,000,000 shares, which was less than seven percent (7%) of the outstanding shares of common stock on December 31, 2018. As of January 1, 2019, the 2014 Plan had a total reserve of 18,543,739 shares and there were 8,072,241 shares available for future grants. As of September 30, 2019, there were 4,728,315 shares available for future grants.

Stock-based Compensation

For stock options issued and outstanding for the three months ended September 30, 2019 and 2018, respectively, the Company recorded non-cash, stock-based compensation expense of \$2,977,574 and \$1,958,917, net of estimated forfeitures. For stock options issued and outstanding for the nine months ended September 30, 2019 and 2018, respectively, the Company recorded non-cash, stock-based compensation expense of \$8,884,001 and \$5,659,928, respectively, net of estimated forfeitures.

The fair value of each option award for employees is estimated on the date of grant using the Black-Scholes option pricing model that uses the assumptions noted in the following table. Due to its limited operating history, the Company estimates its volatility including the volatility of comparable public companies and its own common stock, taking into account the expected life of the option. The Company uses historical data, as well as subsequent events occurring prior to the issuance of the financial statements, to estimate option exercises and employee terminations in order to estimate its forfeiture rate. The expected term of options granted under the 2014 Plan, all of which qualify as “plain vanilla” per SEC Staff Accounting Bulletin 107, is determined based on the simplified method due to the Company’s limited operating history, and is 6.25 years based on the average between the vesting period and the contractual life of the option. For non-employee options, the expected term is the contractual term. The risk-free rate is based on the yield of a U.S. Treasury security with a term consistent with the option.

The weighted average assumptions used principally in determining the fair value of options granted to employees were as follows:

	Nine Months Ended September 30,	
	2019	2018
Risk free interest rate	2.41%	2.48%
Expected dividend yield	0%	0%
Expected term in years	6.25	6.25
Expected volatility	87.3%	87.6%

A summary of option activity for the nine months ended September 30, 2019 and is presented below:

Options	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term in Years	Aggregate Intrinsic Value
Outstanding at December 31, 2018	9,593,990	\$ 4.51		
Granted	3,640,800	7.15		
Exercised	(107,029)	3.61		
Forfeited	(296,874)	7.38		
Outstanding at September 30, 2019	<u>12,830,887</u>	<u>\$ 5.20</u>	<u>7.17</u>	<u>\$ 17,431,614</u>
Vested and expected to vest at September 30, 2019	<u>7,421,312</u>	<u>\$ 3.68</u>	<u>5.94</u>	<u>\$ 17,048,757</u>

The weighted average grant-date fair value of options granted during the nine months ended September 30, 2019 and 2018 was \$5.21 and \$5.67 per share, respectively. The aggregate intrinsic value of options exercised during the nine months ended September 30, 2019 and 2018 was approximately \$324,567 and \$494,360, respectively. The total fair value of options that were vested as of September 30, 2019 and 2018 was \$21,108,706 and \$12,359,043, respectively. As of September 30, 2019, there was approximately \$23,563,971 of total unrecognized compensation expense, related to non-vested share-based option compensation arrangements. The unrecognized compensation expense is estimated to be recognized over a period of 2.69 years as of September 30, 2019.

11. WARRANTS

During the nine months ended September 30, 2019, warrants to purchase 1,283,500 shares of common stock were exercised on a cashless basis resulting in the issuance of 1,119,868 shares of common stock. No warrants were exercised during the three months ended September 30, 2019. During the three and nine months ended September 30, 2018, warrants to purchase 5,000 shares were exercised for proceeds of \$5,000.

At September 30, 2019, there were warrants outstanding to purchase 1,000,000 shares of common stock with a weighted average exercise price of \$13.20 and a weighted average remaining life of 5.33 years, related only to the warrant issued to CFF pursuant to the terms of the Investment Agreement (Note 8). The Company issued a warrant to CFF to purchase an aggregate of 1,000,000 shares of the Company's common stock (the "CFF Warrant"). The CFF Warrant is exercisable at a price equal to \$13.20 per share and is immediately exercisable for 500,000 shares of the Company's common stock. Upon completion of the final milestone set forth in the Investment Agreement and receipt of the final payment from CFF to the Company pursuant to the Investment Agreement, the CFF Warrant will be exercisable for the remaining 500,000 shares of the Company's common stock. The CFF Warrant expires on January 26, 2025. Any shares of the Company's common stock issued upon exercise of the CFF Warrant will be unregistered and subject to a one-year lock-up. The CFF Warrant is classified as equity as it meets all the conditions under GAAP for equity classification. In accordance with GAAP, the Company has calculated the fair value of the warrant for initial measurement and will reassess whether equity classification for the warrant is appropriate upon any changes to the warrants or capital structure, at each balance sheet date. The weighted average assumptions used in determining the \$6,215,225 fair value of the CFF Warrant were as follows:

Risk free interest rate	2.60%
Expected dividend yield	0%
Expected term in years	7.00
Expected volatility	83.5%

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

The following discussion and analysis of our financial condition and results of operations should be read together with our financial statements and the related notes and the other financial information included elsewhere in this Quarterly Report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those discussed below and elsewhere in this Quarterly Report, particularly those under "Risk Factors."

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report on Form 10-Q contains forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 under Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include statements with respect to our beliefs, plans, objectives, goals, expectations, anticipations, assumptions, estimates, intentions and future performance, and involve known and unknown risks, uncertainties and other factors, which may be beyond our control, and which may cause our actual results, performance or achievements to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. All statements other than statements of historical fact are statements that could be forward-looking statements. You can identify these forward-looking statements through our use of words such as "may," "can," "anticipate," "assume," "should," "indicate," "would," "believe," "contemplate," "expect," "seek," "estimate," "continue," "plan," "point to," "project," "predict," "could," "intend," "target," "potential" and other similar words and expressions of the future.

There are a number of important factors that could cause the actual results to differ materially from those expressed in any forward-looking statement made by us. These factors include, but are not limited to:

- our lack of operating history and history of operating losses;
- our current and future capital requirements and our ability to satisfy our capital needs;
- our ability to complete required clinical trials of our product and obtain approval from the FDA or other regulatory agents in different jurisdictions;
- our ability to maintain or protect the validity of our patents and other intellectual property;
- our ability to retain key executive members;
- our ability to internally develop new inventions and intellectual property;
- interpretations of current laws and the passages of future laws;
- acceptance of our business model by investors;
- the accuracy of our estimates regarding expenses and capital requirements; and
- our ability to adequately support growth.

The foregoing does not represent an exhaustive list of matters that may be covered by the forward-looking statements contained herein or risk factors that we are faced with that may cause our actual results to differ from those anticipate in our forward-looking statements. Please see "Risk Factors" for additional risks which could adversely impact our business and financial performance.

All forward-looking statements are expressly qualified in their entirety by this cautionary notice. You are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of this report or the date of the document incorporated by reference into this report. We have no obligation, and expressly disclaim any obligation, to update, revise or correct any of the forward-looking statements, whether as a result of new information, future events or otherwise. We have expressed our expectations, beliefs and projections in good faith and we believe they have a reasonable basis. However, we cannot assure you that our expectations, beliefs or projections will result or be achieved or accomplished.

Overview

We are a Phase 3, clinical stage pharmaceutical company, focused on the development and commercialization of novel therapeutics to treat rare, chronic and serious inflammatory and fibrotic diseases with clear unmet medical needs. Our product lenabasum is a novel synthetic, oral, endocannabinoid drug designed to resolve chronic inflammation and fibrotic processes. We are currently developing lenabasum to treat four life-threatening diseases: systemic sclerosis (SSc), cystic fibrosis (CF), dermatomyositis (DM) and systemic lupus erythematosus (SLE).

Lenabasum is a synthetic, rationally-designed oral small-molecule drug that selectively binds to the cannabinoid receptor type 2, or CB2, found on activated immune cells, fibroblasts and other cell types including muscle and bone cells. Lenabasum stimulates the production of Specialized Pro-Resolving Lipid Mediators (SPMs) that act to resolve inflammation and halt fibrosis by activating endogenous pathways. These pathways are activated in healthy individuals during the course of normal immune responses but are dysfunctional in patients with chronic inflammatory and fibrotic diseases. By its binding to CB2, lenabasum drives innate immune responses from the activation phase into the resolution phase. CB2 plays a central role in modulating and resolving inflammation by, in effect, turning heightened inflammation “off” and restoring homeostasis. This has been demonstrated in animal models lacking CB2 as well as humans with genetic polymorphism in the CB2 gene, as these exhibit excessive inflammation and fibrosis in response to activators of the innate immune system.

Lenabasum has generated positive clinical data in three consecutive Phase 2 studies in diffuse cutaneous SSc, CF and skin-predominant DM. Lenabasum is currently being evaluated in a Phase 3 SSc study that has enrolled 365 patients, a Phase 2b CF study that is expected to enroll 415 patients (that is being supported by a development award for up to \$25 million (the “2018 CFF Award”) from the Cystic Fibrosis Foundation (“CFF”)), and a Phase 2 SLE study that is expected to enroll 100 patients and is being funded by a grant through the National Institutes of Health (“NIH”). In DM, we received guidance from the FDA on the protocol design for the next clinical study, and announced the commencement of an international Phase 3 study on December 17, 2018. This trial is a 1-year, double-blind, randomized, placebo-controlled study testing efficacy and safety of lenabasum in approximately 150 adults with DM. Subjects are randomized to receive lenabasum 20 mg twice per day, lenabasum 5 mg twice per day, or placebo twice per day in a 2:1:2 ratio. The primary efficacy outcome is American College of Rheumatology/European League Against Rheumatism 2016 Total Improvement Score (“TIS”) in adult dermatomyositis and polymyositis, a composite measure of improvement from baseline in six endpoints: Physician Global Assessment of Disease Activity, Physician Global Assessment of Extramuscular Disease Activity, Patient Global Assessment of Disease Activity, Health Assessment Questionnaire (patient-reported disability), Manual Muscle Testing, and muscle enzymes. Change in the Cutaneous Dermatomyositis Activity and Severity Index (“CDASI”) activity score is a secondary efficacy outcome. Open-label extension studies are ongoing in SSc and DM following the completion of the Phase 2 studies in these indications.

The U.S. Food and Drug Administration, or the FDA, has granted lenabasum Orphan Designation as well as Fast Track Status for SSc and CF, and Orphan Drug Designation for DM. The European Medicines Authority, or the EMA, has granted lenabasum Orphan Designation for SSc, CF and DM.

Since our inception, we have devoted substantially all of our efforts to business planning, research and development, recruiting management and technical staff, acquiring operating assets and raising capital. Our research and development activities have included conducting pre-clinical studies, developing manufacturing methods and the manufacturing of our drug lenabasum for clinical trials and conducting clinical studies in patients. Two of the four clinical programs for lenabasum are being supported by non-dilutive awards and grants. The National Institutes of Health, or NIH, has funded the majority of the clinical development costs for the DM Phase 2 clinical trial and is funding the SLE Phase 2 clinical trials. In cystic fibrosis, the Phase 2b clinical trial is being supported by the 2018 CFF Award and the Phase 2 clinical trial was partially funded by a \$5 million award (the "2015 CFFT Award Agreement") from the Cystic Fibrosis Foundation Therapeutics, Inc., or CFFT, a non-profit drug discovery and development affiliate of the Cystic Fibrosis Foundation.

In September 2018, we acquired an exclusive worldwide license (the "Jenrin Agreement") to develop, manufacture and market drug candidates from more than 600 compounds targeting the endocannabinoid system from Jenrin Discovery LLC ("Jenrin"). The pipeline includes CRB-4001, Jenrin's 2nd generation, peripherally-restricted, CB1 inverse agonist targeting liver, lung, heart and kidney fibrotic diseases. The current portfolio for CRB-4001 includes multiple issued and pending patent applications. CRB-4001 was developed in collaboration with and with financial support from the NIH. CRB-4001 was specifically designed to eliminate blood-brain barrier penetration and brain CB1 receptor occupancy that mediate the neuropsychiatric issues associated with first-generation CB1 inverse agonists such as rimonabant. Potential indications for CRB-4001 include NASH, primary biliary cholangitis, idiopathic pulmonary fibrosis, radiation-induced pulmonary fibrosis, myocardial fibrosis after myocardial infarction, and acute interstitial nephritis, among others.

On January 3, 2019, we entered into a strategic collaboration with Kaken Pharmaceutical Co., Ltd. ("Kaken") for the development and commercialization in Japan of our investigational drug lenabasum for the treatment of systemic sclerosis ("SSc") and dermatomyositis ("DM"), two rare and serious autoimmune diseases. Under the terms of the agreement, Kaken receives an exclusive license to commercialize and market lenabasum in Japan for SSc and DM. In March 2019, Kaken made an upfront payment to us of \$27 million. We will be eligible to receive in addition up to \$173 million upon achievement of certain regulatory, development and sales milestones as well as double-digit royalties.

On January 30, 2019, we consummated an underwritten public offering of shares of our common stock pursuant to which we sold an aggregate of 6,198,500 shares of our common stock at a purchase price of \$6.50 per share with gross proceeds to us totaling approximately \$40.3 million, less estimated issuance costs incurred of approximately \$2.6 million.

Financial Operations Overview

We are a clinical stage pharmaceutical company and have not generated any revenues from the sale of products and at September 30, 2019, we had an accumulated deficit of approximately \$166,243,000. Although we had net income of approximately \$2,153,000 for the second quarter of 2019, we historically have incurred net losses. Our net loss for the three months ended September 30, 2019 and 2018 were approximately \$20,791,000 and \$14,601,000, respectively. For the nine months ended September 30, 2019 and 2018 our net losses were approximately \$44,873,000 and \$38,366,000, respectively. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. We expect our expenses to increase significantly in connection with our ongoing activities to develop, seek regulatory approval of and commercialize lenabasum. Accordingly, we will need additional financing to support our continuing operations. We will seek to fund our operations through public or private equity or debt financings or other sources, which may include government grants and collaborations with third parties. Adequate additional financing may not be available to us on acceptable terms, or at all. Our failure to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. We will need to generate significant revenues to achieve profitability, and we may never do so.

We expect to continue to incur significant expenses and increasing operating losses for at least the next several years. We expect our expenses will increase substantially in 2019 and in the future in connection with our ongoing activities, as we:

- conduct clinical trials for our product candidates in scleroderma, cystic fibrosis, DM, systemic lupus erythematosus and other indications;
- continue our research and development efforts;
- manufacture clinical study materials and develop commercial scale manufacturing capabilities;
- seek regulatory approval for our product candidates;
- add personnel to support development of our product candidates; and
- operate as a public company

Critical Accounting Policies and Estimates

Our condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period.

On an ongoing basis, we evaluate our estimates and judgments for all assets and liabilities, including those related to stock-based compensation expense, accrued research and development expense, and operating lease right of use assets and liabilities. We base our estimates and judgments on historical experience, current economic and industry conditions and on various other factors that are believed to be reasonable under the circumstances. This forms the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We believe that full consideration has been given to all relevant circumstances that we may be subject to, and the consolidated financial statements accurately reflect our best estimate of the results of operations, financial position and cash flows for the periods presented.

Stock-Based Compensation

Stock options are granted with an exercise price at no less than fair market value at the date of the grant. The stock options normally expire ten years from the date of grant. Stock option awards vest upon terms determined by our board of directors.

We recognize compensation costs resulting from the issuance of stock-based awards to employees, members of our Board of directors and consultants. The fair value of each option grant was estimated as of the date of grant using the Black-Scholes option-pricing model. The fair value is amortized as compensation cost on a straight-line basis over the requisite service period of the awards, which is generally the vesting period. Due to our limited operating history, we estimated our volatility in consideration of a number of factors, including the volatility of comparable public companies and, commencing in 2015, we also included the volatility of our own common stock. We use historical data, as well as subsequent events occurring prior to the issuance of the consolidated financial statements, to estimate option exercise and employee forfeitures within the valuation model. The expected term of options granted to employees under our stock plans is based on the average of the contractual term (generally 10 years) and the vesting period (generally 48 months). The expected term of options granted under the 2014 Plan, all of which qualify as “plain vanilla” per SEC Staff Accounting Bulletin 107, is based on the average of the 6.25 years. For non-employee options, the expected term is the contractual term. The risk-free rate is based on the yield of a U.S. Treasury security with a term consistent with the option. We estimate the forfeiture rate at the time of grant and revise it, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Forfeitures were estimated based on management’s expectation through industry knowledge and historical data. We have never paid dividends on our common stock and do not anticipate paying dividends on our common stock in the foreseeable future. Accordingly, we have assumed no dividend yield for purposes of estimating the fair value of our share-based compensation.

Accrued Research and Development Expenses

As part of the process of preparing financial statements, we are required to estimate and accrue expenses, the largest of which are research and development expenses. This process involves: communicating with our applicable personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost; estimating and accruing expenses in our financial statements as of each balance sheet date based on facts and circumstances known to us at the time; and periodically confirming the accuracy of our estimates with selected service providers and making adjustments, if necessary.

Examples of estimated research and development expenses that we accrue include:

- fees paid to CROs in connection with nonclinical studies;
- fees paid to contract manufacturers in connection with the production of lenabasum for clinical trials;
- fees paid to CRO and research institutions in connection with conducting of clinical studies; and
- professional service fees for consulting and related services.

We base our expense accruals related to clinical studies on our estimates of the services performed pursuant to contracts with multiple research institutions and clinical research organizations that conduct and manage clinical studies on our behalf. The financial terms of these agreements 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 patients and the completion of clinical study milestones. Our service providers invoice us monthly in arrears for services performed. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If we do not identify costs that we have begun to incur 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 experienced significant changes in our estimates of accrued research and development expenses following each applicable reporting period. However, due to the nature of estimates, we cannot assure you that we will not make changes to our estimates in the future as we become aware of additional information regarding the status or conduct of our clinical studies and other research activities.

Leases

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, as amended (“ASU 2016-02”). Under ASU 2016-02, a lessee is required to recognize assets and liabilities for all leases with lease terms of more than 12 months. ASU 2016-02 requires both financing and operating types of leases to be recognized on the balance sheet. ASU 2016-02 is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. ASU 2016-02 required a modified retrospective transition approach, which initially required application of the new guidance for all periods presented in a Company’s financial statements (“comparative method”). In July 2018, the FASB released ASU 2018-11, offering a second option which provides further relief in the transition to ASC 842. Companies were allowed to follow the cumulative-effect adjustment transition approach (“effective date method”), which releases companies from presenting comparative periods and related disclosures according to ASC 842. Instead, companies electing to utilize the effective date method will recognize a one-time adjustment to retained earnings on the transition date without the additional burden of presenting the comparative periods under the new guidance. We adopted ASU 2016-02 using the effective date method as of January 1, 2019 and recorded an operating lease liability of approximately \$3.8 million, and an operating lease right-of-use asset of approximately \$2.4 million, with no operations adjustment to the accumulated deficit. Our adoption of ASU 2016-02 did not have a material impact on our consolidated statement of operations or statement of cash flows.

We lease our office space. We determine if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use (“ROU”) assets, other current liabilities and operating lease liabilities in our consolidated balance sheets.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As our leases do not provide an implicit rate, we use an incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. This is the rate we would have to pay if borrowing on a collateralized basis over a similar term to each lease. The ROU asset also includes any lease payments made and excludes lease incentives. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

Revenue Recognition

In May 2014, the FASB issued guidance codified in *Accounting Standards Codification (ASC) 606, Revenue Recognition — Revenue from Contracts with Customers* (“ASC 606”) which amends the guidance in former *ASC 605, Revenue Recognition* (“ASC 605”), and is effective for public companies for annual and interim periods beginning after December 15, 2017. Specifically, the new standard differs from ASC 605 in many respects, such as in the accounting for variable consideration received, including milestone payments or contingent payments. Under our accounting policy prior to the adoption of ASC 606 in the first quarter of 2018, milestone payments were initially recognized only in the period that the payment-triggering event occurred or was achieved. ASC 606, however, may require a company to recognize such payments before the payment-triggering event is completely achieved based on the company’s estimate of the amount of consideration to which it will be entitled in exchange for transferring the services, subject to management’s assessment of whether it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

We adopted ASC 606 in the first quarter of 2018 using the modified retrospective method according to which the cumulative effect of initially applying ASC 606 is recognized at the date of initial application, and elected to utilize a practical expedient and did not restate contracts that were completed as of the date of adoption. Since we have concluded our performance obligations and have completed recognizing revenue under the 2015 CFFT Award discussed in the third quarter of 2017, there was no cumulative effect to record at the date of our adoption of ASC 606 and no revenue to recognize for the first quarter of 2018 related to the 2015 CFFT Award.

Revenue from awards for the three and nine months ended September 30, 2019 was \$2,589,783 and \$6,570,048, respectively, recognized in accordance with ASC 606 and pertains only to the 2018 CFF Award. Revenue from licenses for the nine months ended September 30, 2019 included the recognition of the \$27,000,000 upfront payment received from Kaken in March 2019 for which we satisfied the combined performance obligation by June 30, 2019, upon which we recognized the \$27,000,000 as revenue in the second quarter of 2019. No revenue from licenses was recognized for the three months ended September 30, 2019.

We will assess any new agreements we enter into under ASC 606, including whether such agreements fall under the scope of such standard. This standard applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, collaboration arrangements and financial instruments. Under ASC 606, an entity recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The five-step model is applied to contracts when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, we assess the goods or services promised within each contract and determine those that are performance obligations, and assess whether each promised good or service is distinct. We then recognize as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied.

Revenue associated with the performance obligation is being recognized as revenue as the research and development services are provided using an input method, according to the costs incurred as related to the research and development activities and the costs expected to be incurred in the future to satisfy the performance obligation. The transfer of control occurs over this time period and, in management's judgment, is the best measure of progress towards satisfying the performance obligation. The research and development services related to this performance obligation are expected to be performed over approximately 2.75 years and is expected to be completed in the third quarter of 2020. Amounts received prior to revenue recognition are recorded as deferred revenue. Amounts expected to be recognized as revenue within the 12 months following the balance sheet date are classified as current portion of deferred revenue in the accompanying consolidated balance sheets. Amounts not expected to be recognized as revenue within the 12 months following the balance sheet date are classified as deferred revenue, net of current portion. Amounts recognized as revenue, but not yet received or invoiced are generally recognized as contract assets.

We believe that full consideration has been given to all relevant circumstances that we may be subject to, and the consolidated financial statements accurately reflect our best estimate of the results of operations, financial position and cash flows for the periods presented.

Results of Operations

Comparison of Three Months Ended September 30, 2019 and 2018

Revenue

To date, we have not generated any revenues from the sales of products. We do not expect to generate revenue from product sales unless and until we successfully complete development and obtain regulatory approval for the marketing of lenabasum, which we expect will take a number of years and is subject to significant uncertainty.

We have recognized \$2,589,783 and \$1,090,878 of revenue in the three months ended September 30, 2019 and 2018, respectively.

Amounts recognized in revenue for the three months ended September 30, 2019 and 2018 were in connection with our entry on January 26, 2018 into the Cystic Fibrosis Program Related Investment Agreement (“Investment Agreement”) with the Cystic Fibrosis Foundation (“CFF”), a non-profit drug discovery and development corporation, pursuant to which we received a development award for up to \$25 million in funding (the “2018 CFF Award”) to support a Phase 2b Clinical Trial (the “Phase 2b Clinical Trial”) of lenabasum in patients with cystic fibrosis of which we received \$6.25 million in the first quarter of 2018 and an additional \$6.25 million in the second quarter of 2018. In April 2019 we became entitled to receive an additional \$5 million upon our achievement of a milestone related to the progress of the Phase 2b Clinical Trial, as set forth in the Investment Agreement. We received payment from the CFF for this milestone achievement in May 2019. The \$7.5 million remainder of the 2018 CFF Award is payable to us incrementally upon the achievement of the remaining milestones related to the progress of the Phase 2b Clinical Trial, as set forth in the Investment Agreement.

Research and Development Expenses

Research and development expenses are incurred for the development of lenabasum and consist primarily of payroll and payments to contract research and development companies. To date, these costs are related to generating pre-clinical data and the cost of manufacturing lenabasum for clinical trials and conducting clinical trials. These costs are expected to increase significantly in the future as lenabasum is continued to be evaluated in additional later stage clinical trials.

Research and development expenses for the three months ended September 30, 2019 totaled approximately \$22,152,000, an increase of approximately \$9,344,000 over the \$12,808,000 recorded for the three months ended September 30, 2018. The increase was primarily attributable to increases of \$6,667,000 in clinical trial costs, \$2,111,000 in compensation costs, and \$566,000 in stock-based compensation expense.

Approximately 43% of research and development expenses recorded for the three months ended September 30, 2019 was recorded in our subsidiaries in the United Kingdom and Australia.

General and Administrative Expenses

General and administrative expenses consist primarily of payroll, rent and professional services such as accounting and legal services. We anticipate that our general and administrative expenses will increase significantly during 2019 and in the future as we increase our headcount to support our continued research and development and the potential commercialization of our product candidates. We also anticipate increased expenses related to audit, legal, and tax-related services associated with maintaining compliance with NASDAQ exchange listing and SEC requirements, director and officer insurance, and investor relations costs associated with being a public company.

General and administrative expense for the three months ended September 30, 2019 totaled approximately \$5,534,000, an increase of approximately \$2,353,000 over the \$3,181,000 recorded for the three months ended September 30, 2018. The increase was primarily attributable approximately \$1,283,000 in compensation costs, \$453,000 in stock-based compensation expense, \$182,000 in consulting expense, \$167,000 in temporary help and recruiting costs, \$127,000 in facility and insurance costs, \$125,000 in software as a service costs, and an aggregate net increase of approximately \$16,000 for other general and administrative expenses.

Other Income, Net

Other income, net for the three months ended September 30, 2019 totaled approximately \$4,306,000, an increase of approximately \$4,009,000 over the \$297,000 recorded for the three months ended September 30, 2018, and was primarily attributable to approximately \$4,109,000 of cash paid to us in the third quarter of 2019 from a foreign taxing authority for refundable research and development tax credits that were earned on certain research and development expenses we incurred outside of the United States. Other income, net also consists of interest income we earn on interest-bearing accounts, interest expense incurred on our outstanding debt, and realized and unrealized foreign currency exchange gains and losses. In the three months ended September 30, 2019 as compared to the three months ended September 30, 2018, we had an increase in net interest income of approximately \$25,000, partially offset by decreases in foreign currency exchange gains of approximately \$125,000.

Comparison of Nine Months Ended September 30, 2019 and 2018

Revenue

We have recognized \$33,570,048 and \$2,894,966 of revenue in the nine months ended September 30, 2019 and 2018, respectively.

Amounts recognized in revenue for the nine months ended September 30, 2019 were in connection with the 2018 CFF Award of which we received \$6.25 million in the first quarter of 2018 and an additional \$6.25 million in the second quarter of 2018. In April 2019 we became entitled to receive an additional \$5 million upon our achievement of a milestone related to the progress of the Phase 2b Clinical Trial, as set forth in the Investment Agreement. We received payment from the CFF for this milestone achievement in May 2019. The remainder of the 2018 CFF Award is payable to us incrementally upon the achievement of the remaining milestones related to the progress of the Phase 2b Clinical Trial, as set forth in the Investment Agreement. We recorded \$6,570,048 and \$2,894,966 of revenue related to the 2018 CFF Award during the nine months ended September 30, 2019 and 2018, respectively.

Revenue for the nine months ended September 30, 2019 also included the recognition of the \$27,000,000 upfront payment received from Kaken in March 2019 for which we satisfied the combined performance obligation by June 30, 2019, upon which we recognized the \$27,000,000 as revenue in the second quarter of 2019.

We assessed the 2018 CFF Award and the Kaken collaboration agreement for accounting under ASC 606. To determine revenue recognition for arrangements that we determine are within the scope of ASC 606, we perform the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation.

Research and Development Expenses

Research and development expenses for the nine months ended September 30, 2019 totaled approximately \$66,117,000, an increase of approximately \$33,284,000 over the \$32,833,000 recorded for the nine months ended September 30, 2018. The increase was primarily attributable to increases of \$26,540,000 in clinical trial costs, \$4,803,000 in compensation costs, and \$1,941,000 in stock-based compensation expense. Approximately 45% of research and development expenses recorded for the nine months ended September 30, 2019 was recorded in our subsidiaries in the United Kingdom and Australia.

General and Administrative Expenses

General and administrative expense for the nine months ended September 30, 2019 totaled approximately \$17,367,000, an increase of approximately \$8,148,000 over the \$9,219,000 recorded for the nine months ended September 30, 2018. The increase was primarily attributable to the \$2,700,000 we recorded in the first quarter of 2019 related to the amount we owed to CFF as a royalty payment equal to 10% of any amounts we received as payment under the collaboration agreement with Kaken. Additional increases include approximately \$2,711,000 in compensation costs, \$1,283,000 in stock-based compensation expense, \$488,000 in temporary help and recruiting costs, \$309,000 in facility and insurance costs, \$240,000 in software as a service costs, \$155,000 in consulting costs and an aggregate net increase of approximately \$262,000 for other general and administrative expenses.

Other Income, Net

Other income, net for the nine months ended September 30, 2019 totaled approximately \$5,041,000, an increase of approximately \$4,250,000 over the \$791,000 recorded for the nine months ended September 30, 2018, and was primarily attributable to approximately \$4,109,000 of cash paid to us in the third quarter of 2019 from a foreign taxing authority for refundable research and development tax credits that were earned on certain research and development expenses we incurred outside of the United States. Other income, net also consists of interest income we earn on interest-bearing accounts, interest expense incurred on our outstanding debt, and realized and unrealized foreign currency exchange gains and losses. In the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018, we had an increase in net interest income of approximately \$338,000 due to increased cash balances in the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018, offset partially by decreases in foreign currency exchange gains of approximately \$197,000.

Liquidity and Capital Resources

Since inception, we have experienced negative cash flows from operations. We have financed our operations primarily through sales of equity-related securities. In addition, the majority of the costs of the Phase 2 DM and SLE clinical trials have been or are expected to be funded by NIH grants, and our Phase 2 cystic fibrosis clinical trial was partially funded by the 2015 CFFT Award. Our Phase 2b cystic fibrosis trial is being supported by the 2018 CFF Award. At September 30, 2019, our accumulated deficit since inception was approximately \$166,243,000.

At September 30, 2019, we had total current assets of approximately \$57,535,000 and total current liabilities of approximately \$30,549,000, resulting in working capital of approximately \$26,986,000. Of our total cash and cash equivalents of approximately \$54.8 million at September 30, 2019, approximately \$49.9 million was held within the United States.

Net cash used in operating activities for the nine months ended September 30, 2019 was approximately \$23,159,000, which includes a net loss of approximately \$44,873,000, adjusted for non-cash expenses of approximately \$9,824,000 largely related to stock-based compensation expense, and approximately \$11,890,000 of cash provided by net working capital items principally due to increases in accrued expenses.

Cash used in investing activities for the nine months ended September 30, 2019 totaled approximately \$1,451,000, which was largely related to construction costs in the second and third quarter of 2019 to build out our office space that we began to occupy a portion of at the end of the third quarter of 2019.

Cash provided by financing activities for the nine months ended September 30, 2019 totaled approximately \$37,711,000. On January 30, 2019, we consummated an underwritten public offering of shares of our common stock pursuant to which we sold an aggregate of 6,198,500 shares of our common stock, including 808,500 shares sold pursuant to the full exercise of the underwriters' option to purchase additional shares, at a purchase price of \$6.50 per share with gross proceeds to us totaling approximately \$40.3 million, less issuance costs paid of approximately \$2.6 million.

During the nine months ended September 30, 2019, the Company issued 107,029 shares of common stock upon the exercise of stock options to purchase common stock and the Company received proceeds of \$386,811 from these exercises. Cash provided by financing activities for the nine months ended September 30, 2019 included principal payments on notes payable of approximately \$394,000 in connection with our loan agreement with a financing company. The terms of the loan that we entered into in November 2018 stipulated equal monthly payments of principal and interest payments of \$49,857 over a ten-month period. Interest accrued on this loan at an annual rate of 3.07% and the loan was paid in full in August 2019. In November 2019, we entered into a loan agreement with a financing company for \$963,514 to finance one of our insurance policies. The terms of the loan stipulate equal monthly payments of principal and interest payments of \$109,413 over a nine-month period. Interest accrues on this loan at an annual rate of 5.25%.

We expect our cash and cash equivalents of approximately \$54.8 million at September 30, 2019 and the up to \$25 million of proceeds that we expect to receive under the 2018 CFF Award, of which we have received an aggregate of \$17.5 million through September 30, 2019, to be sufficient to meet our operating and capital requirements into the third quarter of 2020, based on current planned expenditures. The remainder of the up to \$25 million 2018 CFF Award is payable to us incrementally upon the achievement of the remaining milestones related to the progress of the Phase 2b Clinical Trial, as set forth in the Investment Agreement.

We will need to raise significant additional capital to continue to fund operations and the clinical trials for lenabasum. Should we be unable to raise sufficient additional capital, we may be required to undertake cost-cutting measures including delaying or discontinuing certain clinical activities. We will need to raise significant additional capital to continue to fund the clinical trials for lenabasum and CRB-4001. We may seek to sell common stock, preferred stock or convertible debt securities, enter into a credit facility or another form of third-party funding or seek other debt financing. In addition, we may seek to raise cash through collaborative agreements or from government grants. The sale of equity and convertible debt securities may result in dilution to our stockholders and certain of those securities may have rights senior to those of our common shares. If we raise additional funds through the issuance of preferred stock, convertible debt securities or other debt financing, these securities or other debt could contain covenants that would restrict our operations. Any other third-party funding arrangement could require us to relinquish valuable rights.

The source, timing and availability of any future financing will depend principally upon market conditions, and, more specifically, on the progress of our clinical development programs. Funding may not be available when needed, at all, or on terms acceptable to us. Lack of necessary funds may require us, among other things, to delay, scale back or eliminate expenses including some or all of our planned clinical trials.

Contractual Obligations and Commitments

The following table presents information about our known contractual obligations as of September 30, 2019. It does not reflect contractual obligations that may have arisen or may arise after that date. Except for historical facts, the information in this section is forward-looking information.

On August 21, 2017, we entered into a lease agreement (“August 2017 Lease Agreement”) for commercial lease of office space, pursuant to which we agreed to lease 32,733 square feet of office space (“Leased Premises”). The initial term of the August 2017 Lease Agreement was for a period of seven years which began with our occupancy of the Leased Premises in February 2018. The base rent for the Leased Premises ranged from approximately \$470,000 for the first year to approximately \$908,000 for the seventh year. Per the terms of the August 2017 Lease Agreement, the landlord agreed to reimburse us for \$1,080,189 of leasehold improvements. The reimbursements had been deferred and were to be recognized as a reduction of rent expense over the term of the lease. Additionally, the August 2017 Lease Agreement required a standby irrevocable letter of credit of \$400,000, which was to be reduced, if we were not in default under the August 2017 Lease Agreement, to \$300,000 and \$200,000 on the third and fourth anniversary of the commencement date, respectively.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, as amended (“ASU 2016-02”). Under ASU 2016-02, a lessee is required to recognize assets and liabilities for all leases with lease terms of more than 12 months. ASU 2016-02 requires both financing and operating types of leases to be recognized on the balance sheet. We adopted ASU 2016-02 using the effective date method as of January 1, 2019 and recorded an operating lease liability of approximately \$3.8 million, and an operating lease right-of-use (“ROU”) asset of approximately \$2.4 million related to the Leased Premises, with no operations adjustment to the accumulated deficit. Our adoption of ASU 2016-02 did not have a material impact on our consolidated statement of operations or statement of cash flows.

On February 26, 2019 we amended our lease (“February 2019 Lease Agreement”) pursuant to which an additional 30,023 square feet of office space (“New Premises”) will be leased by us in the same building for an aggregate total of 62,756 square feet of leased office space (“Total Premises”). The commencement date for the New Premises is expected to occur no later than August 1, 2019 and the lease term for the Total Premises is until October 31, 2026. Per ASC 842, the February 2019 Lease Agreement constitutes a modification as it extends the original lease term and increases the scope of the lease (additional space provided under the amendment), which requires evaluation of the remeasurement of the lease liability and corresponding ROU asset. Per ASC 842, an extension of the lease term does not constitute a separate contract. Accordingly, we reassessed the classification of the Leased Premises and remeasured the lease liability on the basis of the extended lease term using the 20 additional monthly rent payments and the incremental borrowing rate at the effective date of the modification of 9%. The remeasurement for the modification resulted in an increase to the lease liability and the ROU asset of approximately \$855,000. We determined that the New Premises will be treated as a new standalone lease under ASC 842 and recorded a lease liability and a right-of-use asset of approximately \$2.7 million for the modification.

Per the terms of the February 2019 Lease Agreement, the landlord agreed to reimburse us for \$990,759 of leasehold improvements. The reimbursements have been deferred and will be recognized as a reduction of rent expense over the term of the lease. Additionally, the February 2019 Lease Agreement required a standby irrevocable letter of credit of \$369,900, which may be reduced, if we are not in default under the February 2019 Lease Agreement, to \$277,425 and \$184,950 on the third and fourth anniversary of the commencement date, respectively.

On October 25, 2019, the Company amended its lease (“October 2019 Lease Amendment”) pursuant to which an additional 500 square feet of office space will be leased by the Company in the same building for an aggregate total of 63,256 square feet of leased office space (“Amended Total Premises”). Per ASC 842, the October 2019 Lease Amendment constitutes a modification as it extends the original lease term and increases the scope of the lease (additional space provided under the amendment), which requires evaluation of the remeasurement of the lease liability and corresponding ROU asset. Per ASC 842, an extension of the lease term does not constitute a separate contract. Accordingly, the Company reassessed the classification of the Amended Leased Premises and remeasured the lease liability on the basis of the extended lease term using the additional monthly rent payments and the incremental borrowing rate at the effective date of the modification of 8%. The remeasurement for the modification resulted in an increase to the lease liabilities and the ROU assets of approximately \$466,000 to be recorded in the fourth quarter of 2019.

The maturities of operating lease liabilities for the Total Premises are as follows as of September 30, 2019:

2019 (remainder of year, net of \$990,759 reimbursement of leasehold improvements)	\$ 218,218
2020	1,287,522
2021	1,592,434
2022	1,639,501
2023	1,686,568
Thereafter	5,036,169
Total lease payments	\$ 11,460,410
Less: present value discount	(3,133,509)
Total	\$ 8,326,901

We may enter into contracts in the normal course of business with clinical research organizations for clinical trials and clinical supply manufacturing and with vendors for pre-clinical research studies, research supplies and other services and products for operating purposes. These contracts generally provide for termination on notice, and therefore, we believe that our non-cancelable obligations under these agreements are not material. As of September 30, 2019, other than the items in the table above, we had no material contractual obligations or commitments that will affect our future liquidity.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors, other than future royalty payments under development award agreements discussed as follows:

Collaboration Agreement with Kaken

Pursuant to the terms of the Kaken Agreement, we will bear the cost of, and be responsible for, among other things, conducting the clinical studies and other developmental activities for the Licensed Products in the Initial Indications in the Territory, and Kaken will bear the cost of, and be responsible for, among other things, preparing and filing applications for regulatory approval in the Territory and for commercializing Licensed Products in the Territory, and will use commercially reasonable efforts to commercialize Licensed Products and obtain pricing approval for Licensed Products in the Territory.

In consideration of the license and other rights granted by us, Kaken paid us a \$27,000,000 upfront cash payment in March 2019 and is obligated to pay potential milestone payments to us totaling up to approximately \$173,000,000 for the achievement of certain development, sales and regulatory milestones. In addition, during the Royalty Term (as defined below), Kaken is obligated to pay us royalties on sales of Licensed Products in the Territory, under certain conditions, in the double digits, which royalty shall be reduced in certain circumstances. In particular, for so long as we supply Licensed Products to Kaken pursuant to a supply agreement to be entered into by the parties, royalty payments shall be payable for each unit of Licensed Product that we supply as a percentage of the Japanese National Health Insurance price of the Licensed Product. During any time in which a supply agreement is not in effect, royalty payments shall be changed to a rate to be agreed upon by the parties in good faith.

The Agreement will remain in effect on a Licensed Product-by-Licensed product basis and will expire upon the expiration of the Royalty Term for the final Licensed Product. The "Royalty Term" means the period beginning on the date of the first commercial sale of the Licensed Product in Japan and ends on the latest of (i) the expiration of the last valid claim of the royalty patents covering such Licensed Product in Japan, (ii) the expiration of regulatory exclusivity for such Licensed Product for such Initial Indication in Japan, or (iii) ten (10) years after the first commercial sale of such Licensed Product for such Initial Indication in Japan. The Agreement may be terminated by either party for material breach, upon a party's insolvency or bankruptcy or upon a challenge by one party of any patents of the other party, and Kaken may terminate in specified situations, including for a safety concern or clinical failure, or at its convenience following the second anniversary of the first commercial sale of a Licensed Product in either of the Initial Indications in the Territory, with 180 days' notice.

License Agreement with Jenrin

Pursuant to the terms of the Jenrin Agreement, we are obligated to pay potential milestone payments to Jenrin totaling up to \$18.4 million for each compound we elect to develop based upon the achievement of specified development and regulatory milestones. In addition, we are obligated to pay Jenrin royalties in the mid, single digits based on net sales of any Licensed Products, as defined in the Jenrin Agreement, subject to specified reductions.

The Jenrin Agreement terminates on a country-by-country basis and product-by-product basis upon the expiration of the royalty term for such product in such country. Each royalty term begins on the date of the first commercial sale of the licensed product in the applicable country and ends on the later of seven years from such first commercial sale or the expiration of the last to expire of the applicable patents in that country. The Jenrin Agreement may be terminated earlier in specified situations, including termination for uncured material breach of the Jenrin Agreement by either party, termination by Jenrin in specified circumstances, termination by Corbus with advance notice and termination upon a party's insolvency or bankruptcy.

2018 CFF Award

Pursuant to the terms of the Investment Agreement, we are obligated to make certain royalty payments to CFF, including a royalty payment of one and one-half times the amount of the 2018 CFF Award, payable in cash within sixty days upon the first receipt of approval of lenabasum in the United States and a second royalty payment of one and one-half times the amount of the 2018 CFF Award upon approval in another major market, as set forth in the Investment Agreement (the "Approval Royalty"). At our election, we may satisfy the first of the two Approval Royalties in registered shares of our common stock. Additionally, we will owe to CFF a royalty payment equal to 10% of any amounts we receive as payment under the collaboration agreement with Kaken, provided that the total royalties that we will be required to pay under the Investment Agreement resulting from income from licenses or sales subject to the Investment Agreement are capped at five times the total amount of the 2018 CFF Award, and we may credit such royalties against any royalties on net sales otherwise owed to CFF under the Investment Agreement. Accordingly, we were required to pay CFF \$2,700,000 in May 2019, which is within 60 days of our receipt of the \$27,000,000 upfront cash payment from Kaken described below.

Additionally, we are obligated to make (i) royalty payments to CFF of two and one-half percent of net sales from lenabasum due within sixty days after any quarter in which such net sales occur in the Field, as defined in the Investment Agreement, (ii) royalty payments to CFF of one percent of net sales of Non-Field Products, as defined in the Investment Agreement due within sixty days after any quarter in which such net sales occur, and (iii) royalty payments to CFF of ten percent of any amount that we and our stockholders receive in connection with the license, sale, or other transfer to a third party of lenabasum, if indicated for the treatment or prevention of CF, or a change of control transaction, except that such payment shall not exceed five times the amount of the 2018 CFF Award, with such payments to be credited against any other net sales royalty payments due. Either CFF or we may terminate the Investment Agreement for cause, which includes our material failure to achieve certain commercialization and development milestones. Our payment obligations survive the termination of the Investment Agreement.

2015 CFFT Award

Pursuant to the terms of the 2015 CFFT Award agreement, we are obligated to make royalty payments to CFFT contingent upon commercialization of lenabasum in the Field of Use (as defined in the 2015 CFFT Award Agreement) as follows: (i) a royalty payment equal to five times the amount we receive under the 2015 CFFT Award Agreement, up to \$25 million, payable in three equal annual installments following the first commercial sale of lenabasum, the first of which is due within 90 days following the first commercial sale of lenabasum, (ii) a royalty payment to CFFT equal to the amount we receive under the 2015 CFFT Award Agreement, up to \$5 million, due in the first calendar year in which the aggregate cumulative net sales of lenabasum in the Field of Use exceed \$500 million, and (iii) royalty payment(s) to CFFT of up to approximately \$15 million if we transfer, sell or license lenabasum in the Field of Use other than for certain clinical or development purposes, or if we enter into a change of control transaction, with such payment(s) to be credited against the royalty payments due upon commercialization. The Field of Use is defined in the CFFT Award Agreement as the treatment in humans of CF, asbestosis, bronchiectasis, byssinosis, chronic bronchitis/COPD hypersensitivity pneumonitis, pneumoconiosis, primary ciliary dyskinesia, sarcoidosis and silicosis. Either CFFT or we may terminate the 2015 CFFT Award Agreement for cause, which includes our material failure to achieve certain commercialization and development milestones. Our payment obligations, if any, would survive the termination of the 2015 CFFT Award Agreement.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Our exposure to market risk is limited to our cash and cash equivalents, all of which have maturities of three months or less. The primary objectives of our investment activities are to preserve principal, provide liquidity and maximize income without significantly increasing risk. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. However, because of the short-term nature of the instruments in our portfolio, a sudden change in market interest rates would not be expected to have a material impact on our financial condition and/or results of operation. We do not have other derivative financial instruments.

Foreign Exchange Risk

The majority of our operations are based in the United States and, accordingly our transactions are denominated in U.S. Dollars. However, we have foreign currency exposures related to our cash valued in the United Kingdom in British Pounds and Euros and our cash valued in Australia in Australian Dollars because our functional currency is the U.S. Dollar in our foreign-based subsidiaries. Our foreign denominated assets and liabilities are remeasured each reporting period with any exchange gains and losses recorded in our consolidated statements of operations.

Item 4. Controls and Procedures.**Disclosure Controls and Procedures***Evaluation of Our Disclosure Controls*

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act, as amended) as of the end of the period covered by this report. Based on that evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures as of the end of the period covered by this report were effective in ensuring that information required to be disclosed by us in 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 and that the information required to be disclosed by us in such reports is accumulated and communicated to our management, including our Chief Executive Officer and our Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Evaluation of Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) that occurred during the period to which this report relates that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. From time to time, we make changes to our internal control over financial reporting that are intended to enhance its effectiveness and which do not have a material effect on our overall internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings.

None.

Item 1A. Risk Factors.

Except as set forth below, there have been no material changes in risk factors from what was reported in our Annual Report on Form 10-K for the year ended December 31, 2018.

Our recurring losses from operations have raised substantial doubt regarding our ability to continue as a going concern.

Although we had operating income for the second quarter of 2019, we have incurred recurring losses since inception and as of September 30, 2019, had an accumulated deficit of \$166,302,397. We anticipate operating losses to continue for the foreseeable future due to, among other things, costs related to research funding, development of our product candidates and preclinical and clinical programs, strategic alliances and the development of our administrative organization. We expect the cash and cash equivalents of \$54.8 million at September 30, 2019 together with the \$7.5 million remainder of the expected milestone payments from the up to \$25 million Development Award from the Cystic Fibrosis Foundation to fund operations into the third quarter of 2020. Our forecast of the period of time through which our current financial resources will be adequate to support our operations and the costs to support our general and administrative, sales and marketing and research and development activities are forward-looking statements and involve risks and uncertainties. The consolidated financial statements do not include any adjustments that might be necessary should we be unable to continue as a going concern.

Our ability to continue as a going concern is dependent on our ability to raise additional equity or debt capital or spin-off non-core assets to raise additional cash, and to receive payments, if any, under the Agreement with Kaken. Should we be unable to raise sufficient additional capital, we may be required to undertake cost-cutting measures including delaying or discontinuing certain clinical activities. We will need to raise significant additional capital to continue to fund the clinical trials for lenabasum and CRB-4001. We may seek to sell common or preferred equity or convertible debt securities, enter into a credit facility or another form of third-party funding, or seek other debt financing. The sale of equity and convertible debt securities may result in dilution to our stockholders and certain of those securities may have rights senior to those of our common stock. If we raise additional funds through the issuance of preferred stock, convertible debt securities or other debt financing, these securities or other debt could contain covenants that would restrict our operations. Any other third-party funding arrangement could require us to relinquish valuable rights.

The source, timing and availability of any future financing will depend principally upon market conditions, and, more specifically, on the progress of our clinical development programs. Funding may not be available when needed, at all, or on terms acceptable to us. Lack of necessary funds may require us, among other things, to delay, scale back or eliminate some or all of our planned clinical trials. These factors among others create a substantial doubt about our ability to continue as a going concern.

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

None.

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
10.1	<u>Lease Amendment No. 2 dated as of October 25, 2019, among River Ridge Limited Partnership, Corbus Pharmaceuticals, Inc. and Corbus Pharmaceuticals Holdings, Inc.*</u>
31.1	<u>Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a).*</u>
31.2	<u>Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a).*</u>
32.1	<u>Certification of Chief Executive Officer pursuant to Rule 13a-14(b) or Rule 15d-14(b).**</u>
32.2	<u>Certification of Chief Financial Officer pursuant to Rule 13a-14(b) or Rule 15d-14(b).**</u>
101.INS	XBRL Instance Document.*
101.SCH	XBRL Taxonomy Extension Schema Document.*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.*
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.*

* Filed herewith.

** Furnished, not filed.

EXHIBIT INDEX

Exhibit No.	Description
10.1	<u>Lease Amendment No. 2 dated as of October 25, 2019, among River Ridge Limited Partnership, Corbus Pharmaceuticals, Inc. and Corbus Pharmaceuticals Holdings, Inc.*</u>
31.1	<u>Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a).*</u>
31.2	<u>Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a).*</u>
32.1	<u>Certification of Chief Executive Officer pursuant to Rule 13a-14(b) or Rule 15d-14(b).**</u>
32.2	<u>Certification of Chief Financial Officer pursuant to Rule 13a-14(b) or Rule 15d-14(b).**</u>
101.INS	XBRL Instance Document.*
101.SCH	XBRL Taxonomy Extension Schema Document.*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.*
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.*

* Filed herewith.

** Furnished, not filed.

SIGNATURES

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

Corbus Pharmaceuticals Holdings, Inc.

Date: November 7, 2019

By: /s/ Yuval Cohen
Name: Yuval Cohen
Title: *Chief Executive Officer*
(Principal Executive Officer)

Date: November 7, 2019

By: /s/ Sean Moran
Name: Sean Moran
Title: *Chief Financial Officer*
(Principal Financial Officer and Chief Accounting Officer)

LEASE AMENDMENT NO. 2

AGREEMENT made as of this day of 8th day of October 2019 by and among RIVER RIDGE LIMITED PARTNERSHIP ("Landlord"), CORBUS PHARMACEUTICALS, INC. ("Tenant"), and CORBUS PHARMACEUTICALS HOLDINGS, INC. ("Guarantor").

WITNESSETH THAT:

WHEREAS, Landlord is the landlord and Tenant is the tenant under a certain lease dated March 21, 2017 as amended by Lease Amendment No. 1 dated February 26, 2019 (collectively, the "Lease") with respect to certain premises in Norwood, Massachusetts; and

WHEREAS, Guarantor is the guarantor of the Tenant's obligations under the Lease under a Guarantee dated August 21, 2017 (the "Guarantee"), and Guarantor wishes to consent to this Amendment.

NOW, THEREFORE, for and in consideration of the premises and the mutual covenants herein contained, the parties hereto hereby agree as follows:

1. Initially capitalized terms used herein and not otherwise defined shall have the meaning set forth in the Lease.

2. Notwithstanding anything contained in the contrary in the Lease, the New Commencement Date shall be September 1, 2019 and the term of the Lease is extended to end on November 30, 2026.

3. As of the New Premises Commencement Date, the New Premises shall consist of approximately 30,523 rentable square feet of floor area located on the first floor of the Building and the Original Premises contains approximately 32,733 rentable square feet of floor area (being the entire second floor of the Building). The total rentable square feet of the demised premises is 63,256 rentable square feet of floor area.

4. As of the New Premises Commencement Date, Tenant's Percentage shall be increased to 62.6%. Tenant's Percentage shall remain 32.65% through August 31, 2019.

5. Notwithstanding anything contained in the Lease to the contrary, the Base Rent from September 1, 2019 through November 30, 2019 for both the New Premises and Original Premises is 54,652.50 per month. Commencing on December 1, 2019 Base Rent due under the Lease for the 1st and 2nd floor which includes the New Premises and Original Premises shall be as follows:

For and with respect to the period December 1, 2019 through February 29, 2020, the amount of \$82,838.00 per month.

For and with respect to the period March 1, 2020 through August 31, 2020, the amount of \$96,370.31

For and with respect to the period September 1, 2020 through February 28, 2021, the amount of \$130,465.50 per month.

For and with respect to the period March 1, 2021 through February 28, 2022, the amount of \$134,419.01 per month.

For and with respect to the period March 1, 2022 through February 28, 2023, the amount of \$138,372.50 per month.

For and with respect to the period March 1, 2023 through February 29, 2024, the amount of \$142,326.01 per month.

For and with respect to the period March 1, 2024 through February 28, 2025, the amount of \$146,279.50 per month.

For and with respect to the period March 1, 2025 through February 28, 2026, the amount of \$150,233.01 per month.

For and with respect to the period March 1, 2026 through November 30, 2026 (being a partial year), the amount of \$154,186.50 per month.

6. Guarantor hereby consents to this Amendment to the Lease and agrees that the Guarantee shall remain in full force and effect with respect to the Lease as amended hereby.

7. As amended hereby, the Lease is hereby ratified, confirmed and approved and except as amended hereby, the Lease shall remain in full force and effect in accordance with its original terms.

8. Tenant hereby confirms that as of the date hereof, there is no default of Landlord under the Lease or any event which with notice or the passage of time or both would constitute a default of Landlord under the Lease.

9. Each of Landlord and Tenant hereby represents and warrants to the other that it has not had any dealings with any broker in connection with the consummation of this Amendment for whose fee Landlord shall be responsible] and, in the event of any other brokerage claims against a party (the "Innocent Party") predicated upon prior dealings with the other party named herein, such other party agrees to defend the same and indemnify the Innocent Party against any such claim,

10. The parties acknowledge and agree that, notwithstanding any law or presumption to the contrary, this Amendment may be executed by electronic signature, which shall be considered as an original signature for all purposes and shall have the same force and effect as an original signature. Without limitation "electronic signature" shall include a faxed version of an original signature or an electronically scanned and transmitted version (e.g., via pdf) of an original signature.

WITNESS THE EXECUTION HEREOF, under seal, as of the day and year first above written.

LANDLORD:

RIVER RIDGE LIMITED PARTNERSHIP

By: Cornerstone Corporation,
its managing agent

By: /s/ Paul J. Tryder
Paul J. Tryder, President

TENANT:

CORBUS PHARMACEUTICALS, INC.

By: /s/ Sean Moran
Name: Sean Moran
Its: Chief Financial Officer
Hereunto Duly Authorized

GUARANTOR:

CORBUS PHARMACEUTICALS HOLDINGS, INC.

By: /s/ Sean Moran
Title: Chief Financial Officer
Hereunto Duly Authorized

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT
TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Yuval Cohen, certify that:

1. I have reviewed this quarterly report on Form 10-Q for the period ended September 30, 2019 of Corbus Pharmaceuticals Holdings, Inc.;
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 financing 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: November 7, 2019

/s/ Yuval Cohen

Yuval Cohen
Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT
TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Sean M. Moran, certify that:

1. I have reviewed this quarterly report on Form 10-Q for the period ended September 30, 2019 of Corbus Pharmaceuticals Holdings, Inc.;
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 financing 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: November 7, 2019

/s/ Sean Moran

Sean Moran

Chief Financial Officer

(Principal Financial Officer and Chief Accounting Officer)

**Certification of Chief Executive Officer Pursuant to
18 U.S.C. Section 1350,
as Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

This Certification is being filed pursuant to 18 U.S.C. Section 1350, as adopted by Section 906 of the Sarbanes-Oxley Act of 2002. This Certification is included solely for the purposes of complying with the provisions of Section 906 of the Sarbanes-Oxley Act and is not intended to be used for any other purpose. In connection with the accompanying Quarterly Report on Form 10-Q of Corbus Pharmaceuticals Holdings, Inc. for the quarter ended September 30, 2019, each of the undersigned hereby certifies in his capacity as an officer of Corbus Pharmaceuticals Holdings, Inc. that to such officer's knowledge:

- (1) The Quarterly 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 Quarterly Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 7, 2019

By: /s/ Yuval Cohen
Yuval Cohen
Chief Executive Officer
(Principal Executive Officer)

**Certification of Chief Financial Officer Pursuant to
18 U.S.C. Section 1350,
as Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002**

This Certification is being filed pursuant to 18 U.S.C. Section 1350, as adopted by Section 906 of the Sarbanes-Oxley Act of 2002. This Certification is included solely for the purposes of complying with the provisions of Section 906 of the Sarbanes-Oxley Act and is not intended to be used for any other purpose. In connection with the accompanying Quarterly Report on Form 10-Q of Corbus Pharmaceuticals Holdings, Inc. for the quarter ended September 30, 2019, each of the undersigned hereby certifies in his capacity as an officer of Corbus Pharmaceuticals Holdings, Inc. that to such officer's knowledge:

- (1) The Quarterly 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 Quarterly Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 7, 2019

By: */s/ Sean Moran*

Sean Moran
Chief Financial Officer
(Principal Financial Officer and Chief Accounting Officer)
