UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(D)
OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of Earliest Event Reported): December 10, 2020 (December 10, 2020)

CUMBERLAND PHARMACEUTICALS INC.

(Exact name of registrant as specified in its charter)

Tennessee	001-33637	62-1765329
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

2525 West End Avenue, Suite 950, Nashville, Tennessee 37203
(Address of principal executive offices) (Zip Code)

(615) 255-0068
(Registrant's telephone number, including area code)

Not Applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

Class	Trading Symbol	Name of exchanged on which registered
Common stock, no par value	CPIX	NASDAQ Global Select Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company ☐

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

Item 8.01. Other Events

Cumberland Pharmaceuticals Inc. ("Cumberland", “we”, “our” or "the Company") is a specialty pharmaceutical company focused on the acquisition, development and commercialization of branded prescription products. This Current Report on Form 8-K (“Form 8-K”) is being filed to recast historical financial information, originally included in our Annual Report on Form 10-K for the year ended December 31, 2019 ("2019 Form 10-K") to reflect the presentation of two Products we no longer distribute as discontinued operations. We previously filed the 2019 Form 10-K with the U.S. Securities and Exchange Commission (“SEC”) on March 20, 2020.

During May 2019, Cumberland entered into a Dissolution Agreement ("Dissolution Agreement") with Clinigen Healthcare Limited ("Clinigen") in which the Company returned the exclusive rights to commercialize Ethyol® and Totect® (“the Products”) in the United States to Clinigen. Under the terms of the Dissolution Agreement, Cumberland is no longer involved directly or indirectly with the distribution, marketing and promotion of either Ethyol or Totect or any competing products following December 31, 2019. In exchange for the return of these product license rights and the non-compete provisions of the Dissolution Agreement, Cumberland is receiving $5 million in financial consideration paid in quarterly installments over the two-years following the transition date. The Company's exit from the Products meets the accounting criteria to be reported as discontinued operations and the discontinued operating results have been reclassified in the financial statements and footnotes for all periods presented, as required, to reflect the discontinued status of the Products, beginning in our Quarterly Report on Form 10-Q for the first quarter of 2020. We are issuing this Form 8-K to recast the Products as discontinued operations as of and for each of the periods covered by our 2019 Form 10-K. Accordingly, the Company has retrospectively recast its previously issued annual financial statements for the three years in the period ended December 31, 2019 to present the Products as discontinued operations.

The information included in Exhibit 99.1 to this Current Report on Form 8-K is presented solely in connection with the presentation changes described above and sections included in the 2019 Form 10-K that are not included in this report continue to speak only as of the original filing date. Exhibit 99.1 to this Form 8-K does not reflect events occurring after the Company filed its 2019 Form 10-K, and does not modify or update the disclosures therein in any way, other than to reflect the presentation of the Products as discontinued operations as described above. Therefore, Exhibit 99.1 to this Form 8-K should be read in conjunction with the Company’s other filings made with the SEC, including, and subsequent to the date of, the 2019 Form 10-K. These subsequent SEC filings contain important information regarding events, developments, and updates affecting Cumberland and our expectations that have occurred since the filing of the 2019 Form 10-K.

Exhibit 99.1 of this Form 8-K presents a recast of the following historical financial information, originally included in our 2019 Form 10-K, to reflect the presentation of the Products as discontinued operations:

- Item 6. Selected Financial Data
- Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations
- Item 8. Financial Statements and Supplementary Data

Exhibit 99.1 to this Form 8-K is attached hereto and incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits

(d)

See the Exhibit Index set forth below for a list of exhibits included with this Form 8-K.

Exhibit No.	Description
23.1	Consent of BDO USA, LLP
99.1	Recast of Cumberland Pharmaceuticals Inc. Selected Financial Data, Managements Discussion and Analysis of Financial Condition and Results of Operations, and Financial Statements and Supplementary Data
101.INS*	XBRL INSTANCE DOCUMENT - THE INSTANCE DOCUMENT DOES NOT APPEAR IN THE INTERACTIVE DATA FILE BECAUSE ITS XBRL TAGS ARE EMBEDDED WITHIN THE INLINE XBRL 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.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Cumberland Pharmaceuticals Inc.

December 10, 2020

By: Michael Bonner

Michael Bonner
Chief Financial Officer

Consent of Independent Registered Public Accounting Firm

Cumberland Pharmaceuticals Inc.
Nashville, Tennessee

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-221402) and Form S-8 (No. 333-164376) of Cumberland Pharmaceuticals Inc. of our report dated March 20, 2020 (except for the effects of presenting discontinued operations discussed in Note 20, as to which the date is December 10, 2020), relating to the consolidated financial statements and schedule, which appears in this Current Report on Form 8K.

/s/ BDO USA, LLP
Nashville, Tennessee

December 10, 2020

CUMBERLAND PHARMACEUTICALS INC. AND SUBSIDIARIES

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PART II

Item 6. Selected Financial Data.

The selected consolidated financial data set forth below should be read in conjunction with the audited consolidated financial statements and related notes and Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and other financial information appearing elsewhere herein. The historical results are not necessarily indicative of the results to be expected for any future periods.

Cumberland Pharmaceuticals Inc. ("Cumberland", “we”, “our” or "the Company") is a specialty pharmaceutical company focused on the acquisition, development and commercialization of branded prescription products. This Current Report on Form 8-K (“Form 8-K”) is being filed to recast historical financial information, originally included in our Annual Report on Form 10-K for the year ended December 31, 2019 ("2019 Form 10-K") to reflect the presentation of two Products we no longer distribute as discontinued operations.

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	Years Ended December 31,				
Statement of income data:	**2019**	**2018**	**2017**	**2016**	**2015**
	(in thousands, except per share data)				
Net revenues	$ 34,388	$ 29,345	$ 26,323	$ 32,187	$ 33,519
Costs and expenses	43,676	40,518	35,202	33,753	32,407
Operating income (loss)	(9,288)	(11,173)	(8,879)	(1,566)	1,112
Net income (loss) from continuing operations	(9,212)	(10,821)	(12,847)	(1,137)	731
Net income (loss) from discontinued operations	5,665	3,782	4,798	133	—
Net income (loss) attributable to common shareholders	(3,538)	(6,963)	(7,979)	(945)	731
Earnings (loss) per share:					
Continuing operations - basic	$ (0.60)	$ (0.69)	$ (0.80)	$ (0.07)	$ 0.04
Discontinued operations - basic	0.37	$ 0.24	$ 0.30	$ 0.01	$ —
Earnings (loss) per share – basic	$ (0.23)	$ (0.45)	$ (0.50)	$ (0.06)	$ 0.04
Continuing operations - diluted	$ (0.60)	$ (0.69)	$ (0.80)	$ (0.07)	$ 0.04
Discontinued operations - diluted	0.37	0.24	0.30	0.01	—
Earnings (loss) per share – diluted	$ (0.23)	$ (0.45)	$ (0.50)	$ (0.06)	$ 0.04

Balance sheet data:	As of December 31,				
	2019	2018	2017	2016	2015
	(in thousands)				
Cash and cash equivalents	$ 28,213	$ 27,939	$ 45,413	$ 34,510	$ 38,203
Marketable securities	—	8,291	4,672	15,622	14,561
Working capital	26,013	31,312	50,990	50,753	52,172
Total assets	104,549	112,694	93,232	93,405	91,919
Total long-term debt (including current portion) and other long-term obligations	29,314	29,319	11,616	5,491	2,687
Retained earnings	1,208	4,746	11,709	18,605	19,550
Total equity	51,085	55,571	63,922	73,121	76,820

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following discussion and analysis of our financial position and results of operations should be read together with our audited consolidated financial statements and related notes appearing elsewhere in this Form 8-K. Statements in this Form 8-K that are not historical factual statements are "forward-looking statements." Forward-looking statements include, among other things, statements regarding our intent, belief or expectations, and can be identified by the use of terminology such as "may," "will," "expect," "believe," "intend," "plan," "estimate," "should," "seek," "anticipate" and other comparable terms or the negative thereof. In addition, we, through our senior management, from time to time make forward-looking oral and written public statements concerning our expected future operations and other developments. While forward-looking statements reflect our good-faith beliefs and best judgment based upon current information, they are not guarantees of future performance and are subject to known and unknown risks and uncertainties, including those risk factors contained in our 2019 Form 10-K and other periodic filings with the Securities Exchange Commission. Accordingly, investors are cautioned not to place undue reliance on any forward-looking statements. Actual results may differ materially from the expectations contained in the forward-looking statements as a result of various factors. Such factors include, but are not limited to:

- Impacts on our business as well as national and international markets and economies resulting from the 2020 COVID-19 pandemic;
- The possible or assumed future results of operations, including the accuracy of our estimates regarding expenses, future revenues, capital requirements and needs for additional financing;
- Our competitive position and competitors, including the size and growth potential of the markets for our products and product candidates;
- The success, cost and timing of our product acquisition and development activities and clinical trials; and our ability to successfully commercialize our product candidates;
- Product efficacy or safety concerns, whether or not based on scientific evidence, resulting in product withdrawals, recalls, regulatory action on the part of the Food and Drug Administration (or international counterparts) or declining sales;
- The performance of our third-party suppliers and manufacturers which impacts our supply chain and could create business shutdowns or product shortages; and the retention of key scientific and management personnel;
- Challenges to our patents and the introduction of generic versions of our products and product candidates, which could negatively impact our ability to commercialize and sell our products and product candidates and decrease sales a result of market exclusivity;
- Changes in reimbursement available to us, including changes in Medicare and Medicaid payment levels and availability of third-party insurance coverage and the effects of future legislation or regulations, including changes to regulatory approval of new products, licensing and patent rights, environmental protection and possible drug re-importation legislation; and
- Interruptions and breaches of our computer and communications systems, and those of our vendors, including computer viruses, hacking and cyber-attacks, that could impair our ability to conduct business and communicate internally and with our customers, or result in the theft of trade secrets or other misappropriation of assets, or otherwise compromise privacy of sensitive information belonging to us, our customers or other business partners.

The list above contains many, but not all, of the factors that could impact our ability to achieve results described in any forward-looking statements. Investors should understand that it is not possible to predict or identify all such factors and should not consider this list to be a complete statement of all potential risks and uncertainties. We have identified the factors on this list as permitted by the Private Securities Litigation Reform Act of 1995.

EXECUTIVE SUMMARY

We are a specialty pharmaceutical company focused on the acquisition, development and commercialization of branded prescription products. Our primary target markets are hospital acute care and gastroenterology. These medical specialties are characterized by relatively concentrated prescriber bases that we believe can be penetrated effectively by small, targeted sales forces. Cumberland is dedicated to providing innovative products that improve the quality of care for patients and address unmet or poorly met medical needs. We promote our approved products through our hospital and field sales forces in the United States and are establishing a network of international partners to bring our medicines to patients in their countries.

Our portfolio of FDA approved brands includes:

- **Acetadote®** (*acetylcysteine*) Injection, for the treatment of acetaminophen poisoning;
- **Caldolor®** (*ibuprofen*) Injection, for the treatment of pain and fever;
- **Kristalose®** (*lactulose*) for Oral Solution, a prescription laxative, for the treatment of chronic and acute constipation;
- **Omeclamox®-Pak**, (*omeprazole, clarithromycin, amoxicillin*) for the treatment of Helicobacter pylori (*H. pylori*) infection and related duodenal ulcer disease;
- **Vaprisol®** (*conivaptan*) Injection, to raise serum sodium levels in hospitalized patients with euvolemic and hypervolemic hyponatremia;
- **Vibativ®** (*telavancin*) Injection, for the treatment of certain serious bacterial infections including hospital-acquired and ventilator-associated bacterial pneumonia, as well as complicated skin and skin structure infections; and
- **RediTrex™** (*methotrexate*) Injection, for the treatment of active rheumatoid, juvenile idiopathic and severe psoriatic arthritis, as well as disabling psoriasis.

Additionally, we have Phase II clinical programs underway evaluating our ifetroban product candidates in patients with cardiomyopathy associated with Duchenne Muscular Dystrophy (“DMD”), Systemic Sclerosis (“SSc”), and Aspirin-Exacerbated Respiratory Disease ("AERD"). We have also completed Phase II clinical programs with ifetroban in patients with Hepatorenal Syndrome (“HRS”) and patients with Portal Hypertension (“PH”).

We promote our approved products through our hospital and gastroenterology sales forces in the United States, which together comprised approximately 40 sales representatives and managers as of December 31, 2019.

We have both product development and commercial capabilities and believe we can leverage our existing infrastructure to support our expected growth. Our management team consists of pharmaceutical industry veterans experienced in business development, product development, regulatory, manufacturing, sales marketing and finance. Our business development team identifies, evaluates and negotiates product acquisition, licensing and co-promotion opportunities. Our product development team creates proprietary product formulations, manages our clinical studies, prepares all regulatory submissions and manages our medical call center. Our quality and manufacturing professionals oversee the manufacture, release and shipment of our products. Our marketing and sales professionals are responsible for our commercial activities, and we work closely with our distribution partners to ensure availability and delivery of our products.

The following is a summary of our 2019 highlights and recent developments. For more information, please see Part I, Item I, *Business*, in our 2019 Form 10-K.

- Early in 2019, we announced a strategic review of our brands, capabilities, and international partners. This review followed an accelerated business development initiative, which resulted in a series of transactions. Because of that progress, we felt that it was prudent to take a fresh look at our product portfolio, partners, and organization to ensure proper focus and capabilities.

- We executed a License and Distribution agreement with HongKong WinHealth Pharma Group Co. Limited (“WinHealth”) for our Caldolor and Acetadote brands in China and Hong Kong.
- We also entered into a Strategic Alliance agreement with WinHealth to explore future business opportunities that will further the mission and goals of each organization.
- We completed the assignment and amendment of a Commercialization Agreement with R-Pharma JSC (“R Pharma”) associated with ongoing distribution of Vibativ in Russia and a number of adjacent countries in Eastern Europe.
- We completed the assignment and amendment of a Commercialization Agreement with Hikma Pharmaceuticals LLC (“Hikma”) to register and distribute Vibativ in a number of countries throughout the Middle East.
- We also completed the assignment and amendment of a Commercialization Agreement with Dr. Reddy’s Laboratories Limited (“Dr. Reddy’s”) for the registration and distribution of Vibativ in India.
- We concluded our distribution and support for Ethyol and Totect at the end of 2019 and transitioned the responsibility for these products back to Clinigen.
- Net revenue from sales of each of Caldolor, Omeclamox, Kristalose and Ethyol grew in 2019 compared to 2018.
- In January 2019, the FDA approved the application for our next generation Caldolor product. In April 2019, we began initial shipments of the product to select customers. During the third and fourth quarters of 2019, there was a growing demand for the new product from these select accounts and we began planning for a full-scale launch in 2020.
- In late 2019, we received FDA approval for RediTrex and began planning for a 2020 launch of this product line.
- On September 24, 2019, Cumberland announced U.S. Food and Drug Administration ("FDA") Orphan Drug Grant funding for a new Phase II clinical program. The Company has initiated the clinical development of ifetroban for the treatment of cardiomyopathy associated with Duchenne Muscular Dystrophy (“DMD”). In addition, Cumberland has been awarded just over $1 million in funding from the FDA through their Orphan Drug Grant program to support this Phase II DMD clinical study.
- In October 2019, a new study was published revealing the superiority of Vibativ (telavancin) over vancomycin in select patients with bacterial pneumonia.
- In November 2019, we announced another study, published online in *Drugs - Real World Outcomes*, detailing the positive clinical outcomes that resulted from treating multiple infection types with Vibativ.
- During 2019, Cumberland largely completed the transition of activities to support Vibativ, which Cumberland acquired from Theravance Biopharma during 2018.

CRITICAL ACCOUNTING POLICIES AND SIGNIFICANT JUDGMENTS AND ESTIMATES

Accounting Estimates and Judgments

The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the period. We base our estimates on past experience and on other factors we deem reasonable given the circumstances. Past results help form the basis of our judgments about the carrying value of assets and liabilities that are not determined from other sources. Actual results could differ from these estimates. These estimates, judgments and assumptions are most critical with respect to our accounting for revenue recognition, marketable securities, inventory, intangible assets, research and development accounting, contingent consideration liability, provision for income taxes and share-based payments.

Revenue Recognition

We recognize revenue in accordance with the Accounting Standards Codification (ASC) Topic 606. Effective January 1, 2018, we adopted the Financial Accounting Standards Board's ("FASB") amended guidance in the form of Accounting Standards Update ("ASU") No. 2014-09, "Revenue from Contracts with Customers," (ASC 606). Results for reporting periods beginning after January 1, 2018 are presented under ASC 606, while prior period amounts were not adjusted and are reported in accordance with ASC 605.

Our revenue is derived primarily from the product sales of our FDA approved pharmaceutical brands. Revenue from sales of products is recognized at the point where the customer obtains control of the goods and we satisfy our performance obligation, which occurs upon either shipment of the product or arrival at its destination, depending upon the shipping terms of the transaction. Payment terms typically range from 30 to 60 days from date of shipment. Our net product revenue reflects the reduction from gross product revenue for estimated allowances for chargebacks, discounts and damaged goods, and reflects sales related accruals for rebates, coupons, product returns, and certain administrative and service fees. Significant judgments must be made in determining the transaction price for our sales of products related to these adjustments. Other revenue, which is a component of net revenues, includes non-refundable upfront payments and milestone payments under licensing agreements along with grant and rental income. Other income was approximately 5.8% percent of net revenues in 2019, 1.8% in 2018, and 2.9% in 2017 respectively.

Our financial statements reflect accounts receivable allowances of $0.8 million and $0.7 million at December 31, 2019 and 2018, respectively, for chargebacks, discounts and allowances for product damaged in shipment.

The following table reflects our sales-related accrual activity for the periods indicated below:

	2019	2018	2017
Balance, January 1	$ 4,961,631	$ 4,140,980	$ 3,988,600
Current provision	13,081,251	11,192,489	10,960,243
Actual product returns and credits issued	(13,449,715)	(10,371,838)	(10,807,863)
Balance, December 31	$ 4,593,167	$ 4,961,631	$ 4,140,980

The allowances for chargebacks, discounts, and damaged products and sales related accruals for rebates and product returns are determined on a product-by-product basis. We establish them using our best estimate at the time of sale based on:

- Each product's historical experience adjusted to reflect known changes in the factors that impact such allowances;
- The contractual terms with direct and indirect customers;

- Analyses of historical levels of chargebacks, discounts and credits claimed for damaged and expired product;
- Communications with customers;
- Purchased information about the rate of prescriptions being written and the level of inventory remaining in the distribution channel, if known; and
- Expectations about the market for each product, including any anticipated introduction of competitive products.

Other organizations, such as managed care providers, pharmacy benefit management companies and government agencies, may receive rebates from us based on either negotiated contracts to carry our products or reimbursements for filled prescriptions. These entities are considered our indirect customers. When recognizing a sale to a wholesaler, sales revenues are reduced and accrued liabilities are increased by our estimate of the rebate that may be claimed.

The allowances for chargebacks and accruals for rebates and product returns are the most significant estimates used in the recognition of our revenue from product sales. Of the accounts receivable allowances and our sales related accruals, our accrual for fee for services and product returns represents the majority of the balance. Sales related accrued liabilities for rebates, product returns, service fees, and administrative fees totaled $4.6 million, $5.0 million and $4.1 million as of December 31, 2019, 2018 and 2017, respectively. Of these amounts, our estimated liability for fee for services represented $1.4 million, $1.8 million and $1.1 million, respectively, while our accrual for product returns totaled $1.9 million, $1.8 million and $1.9 million, respectively. If the actual amount of cash discounts, chargebacks, rebates, and product returns differs from the amounts estimated by management, material differences may result from the amount of our revenue recognized from product sales. A change in our rebate estimate of one percentage point would have impacted net sales by approximately $0.4 million for the year ended December 31, 2019 and $0.3 million for the years ended December 31, 2018 and 2017, respectively. A change in our product return estimate of one percentage point would have impacted net sales by $0.3 million for the years ended December 31, 2019, 2018 and 2017.

Fair Value of Marketable Securities

We have historically invested a portion of our cash reserves in short-term cash investments, U.S. Treasury notes and bonds, corporate bonds and commercial paper in order to maximize our return on cash. We classify these investments as trading securities, and mark the investments to fair value at the end of each reporting period, with the adjustment being recognized in the statement of income as a component of interest income. These investments are generally valued using observable market prices by third-party pricing services, or are derived from such services' pricing models. The level of management judgment required in establishing fair value of financial instruments for which there is a quoted price in an active market is minimal. Similarly, there is little subjectivity or judgment required for instruments valued using valuation models that are standard across the industry and where all parameter inputs are quoted in active markets. Inputs to the models may include, but are not limited to, reported trades, executable bid and ask prices, broker/dealer quotations, prices or yields of securities with similar characteristics, benchmark curves or information pertaining to the issuer, as well as industry and economic events.

Inventories

We record amounts for estimated obsolescence or unmarketable inventory in an amount equal to the difference between the cost of inventory and the net realizable value based upon assumptions about remaining shelf life, future demand and market conditions. The estimated inventory obsolescence amounts are calculated based upon specific review of the inventory expiration dates and the quantity on-hand at December 31, 2019 in comparison to our expected inventory usage. The amount of actual inventory obsolescence and unmarketable inventory could differ (either higher or lower) in the near term from the estimated amounts. Changes in our estimates would be recorded in our statement of operations in the period of the change.

Income Taxes

We provide for deferred taxes using the asset and liability approach. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to operating loss and tax credit carry-forwards and differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Our principal differences are related to the timing of deductibility of certain items such as depreciation, amortization and expense for options issued to nonemployees. Deferred tax assets and liabilities are measured using management's estimate of tax rates expected to apply to taxable income in the years in which management believes those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in our results of operations in the period that includes the enactment date.

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies in making this assessment.

We adopted FASB ASU 2016-09, "Compensation - Stock Compensation: Improvements to Employee Share-Based Payment Accounting" effective January 1, 2017. The impact of adoption on our consolidated financial statements included the recording of $44.1 million in previously unrecognized net operating loss carryforwards, net of valuation allowances, generated from the exercise of nonqualified options during 2009. These net operating loss carryforwards occurred as a result of the actual tax benefit realized upon employee exercise exceeding the cumulative book compensation charge associated with the options.

The adoption resulted in the recording of $1.1 million in net non-current deferred tax assets and retained earnings effective as of January 1, 2017. The $1.1 million in net non-current deferred tax assets was the result of a deferred tax asset of $17.0 million, net of a related valuation allowance of $15.9 million. Under the previous accounting guidance, these benefits had been recognized in the year in which they were able to reduce current income taxes payable and we recorded these benefits directly to equity. As part of our adoption of the FASB guidance and its continued evaluation of our utilization of net operating loss carryforwards and other deferred tax assets, including updates to our forecasts of future taxable income, we also recorded an additional valuation allowance of $1.0 million for our federal Orphan Drug and Research and Development tax credits that expire between 2021 and 2036.

During the second quarter of 2017, as part of our continued evaluation of the utilization of our net operating loss carryforwards we recorded an additional valuation allowance of $3.5 million for our remaining deferred tax assets. All deferred tax assets have a full valuation allowance.

The net operating loss carryforwards generated during 2009 consisted of $44.1 million in federal and $45.4 million in state amounts. Since they were generated, we have utilized these net operating loss carryforwards to pay minimal income taxes. We will continue to experience a reduction in income taxes paid in future years, through the continued utilization of these net operating loss carryforwards, as we are able to achieve taxable income through our operations. The Company's accounting policy with respect to interest and penalties arising from income tax settlements is to recognize them as part of the provision for income taxes.

On December 22, 2017, the Tax Cut and Jobs Act (the "Tax Act") was signed into law. The Tax Act provides for significant changes in the U.S. Internal Revenue Code of 1986, as amended. The Tax Act contains provisions with separate effective dates but is generally effective for taxable years beginning after December 31, 2017. Certain provisions of the Tax Act were effective during our fiscal year ending December 31, 2018 with all provisions of the Tax Act effective as of the beginning of our fiscal year ending December 31, 2019.

Under ASC Topic 740, Income Taxes ("ASC 740"), we are required to revalue any deferred tax assets or liabilities in the period of enactment of change in tax rates. The Tax Act lowers the corporate income tax rate from 35% to 21%. As a result of the Tax Act discussed above, we will experience a positive impact to our future results of operations to the extent we achieve taxable income through our operations.

Share-Based Payments

We recognize compensation expense for all share-based payments based on the fair value of the award on the date of grant. In addition, incremental compensation expense is recognized upon the modification of equity awards.

We issue restricted stock awards at no cost in lieu of stock options to employees, directors and consultants. Compensation expense for restricted stock granted to employees and directors is generally equal to the fair market value of the underlying common stock on the date of grant. If a sufficient disincentive for nonperformance does not exist at the date of grant, the compensation cost is remeasured at each reporting date at the then-current fair market value of the underlying common stock until the award vests.

Research and Development

We accrue for and expense research and development costs based on estimates of work performed, patient enrollment or fixed-fee-for-services. As work is performed and/or invoices are received, we adjust our estimates and accruals. To date, our accruals have not differed materially from our estimates. Total research and development costs are a function of studies being conducted and will increase or decrease based on the level of activity in any particular year.

Intangible Assets and Goodwill

Intangible assets include product rights, license agreements, other identifiable intangible assets and goodwill associated with the Vibativ acquisition. We assess the impairment of goodwill at least annually. We assess the impairment of identifiable intangible assets subject to amortization whenever events or changes in circumstances indicate the carrying value may not be recoverable. In determining the recoverability of our intangible assets, we make assumptions regarding estimated future cash flows and other factors. If the estimated undiscounted future cash flows do not exceed the carrying value of the intangible assets, we must determine the fair value of the intangible assets. If the fair value of the intangible assets is less than the carrying value, an impairment loss will be recognized in an amount equal to the difference. Fair value is determined through various valuation techniques including quoted market prices, third-party independent appraisals and discounted cash flow models, as considered necessary.

RESULTS OF OPERATIONS

Year ended December 31, 2019 compared to year ended December 31, 2018

The following table presents the statements of operations for continuing operations for the years ended December 31, 2019 and 2018:

	Years ended December 31,		
	2019	**2018**	**Change**
Net revenues	$ 34,388,295	$ 29,344,894	$ 5,043,401
Costs and expenses:			
Cost of products sold	7,421,316	6,016,822	1,404,494
Selling and marketing	15,277,740	14,004,933	1,272,807
Research and development	6,868,480	7,575,892	(707,412)
General and administrative	9,974,384	10,150,777	(176,393)
Amortization	4,134,557	2,769,466	1,365,091
Total costs and expenses	43,676,477	40,517,890	3,158,587
Operating income (loss)	(9,288,182)	(11,172,996)	1,884,814
Interest income	243,364	564,484	(321,120)
Interest expense	(246,186)	(195,848)	(50,338)
Income (loss) from continuing operations before income taxes	(9,291,004)	(10,804,360)	1,513,356
Income tax (expense) benefit	79,316	(16,636)	95,952
Net income (loss) from continuing operations	$ (9,211,688)	$ (10,820,996)	$ 1,609,308

The following table summarizes net revenues for the years presented:

	Years ended December 31,		
	2019	**2018**	**Change**
Products:			
Acetadote	$ 3,824,449	$ 4,284,111	$ (459,662)
Omeclamox-Pak	837,829	623,297	214,532
Kristalose	12,895,120	12,055,625	839,495
Vaprisol	936,615	1,763,874	(827,259)
Caldolor	5,222,282	5,001,997	220,285
Vibativ	8,691,550	5,075,057	3,616,493
Other	1,980,450	540,933	1,439,517
Total net revenues	$ 34,388,295	$ 29,344,894	$ 5,043,401

Net revenues. Net revenues for the year ended December 31, 2019 were approximately $34.4 million compared to $29.3 million for the year ended December 31, 2018, representing an increase of $5.0 million or 17.2%. Four of our products, Omeclamox-Pak, Kristalose, Caldolor and Vibativ, experienced an increase in revenue during 2019. The 17.2% improvement was led by our newest product, Vibativ, which delivered an additional $3.6 million during the full year of 2019 compared to a partial year during 2018. These increases were partially offset by decreased net product sales of Acetadote and Vaprisol.

We returned the exclusive rights to commercialize Ethyol and Totect in the United States to Clinigen effective January 1, 2020. As a result, the 2019 and 2018 revenues and expenses associated with the products are combined and reclassified into discontinued operations in our financial statements. In exchange for the return of these product

license rights and associated non-compete provision, Cumberland is receiving $5 million in financial consideration paid over the two-years following the return date. We do not incur expenses associated with these payments from Clinigen.

Kristalose revenue increased by $0.8 million, or 7.0%, compared to December 31, 2018 primarily as a result of increased wholesale prices. The product's net revenue was also positively impacted by lower managed care rebates, resulting in improved net pricing for the product for the year ended December 31, 2019.

Caldolor revenue experienced a 4.4% increase to $5.2 million during the year ended December 31, 2019 compared to $5.0 million in the same period last year. This increase in Caldolor revenue for the year ended December 31, 2019 was the result of an 11% increase in domestic shipments of the product and improved net pricing. The changes were partially offset by a reduction in international shipments of Caldolor in 2019 over 2018.

Omeclamox-Pak revenue increased $0.2 million or 34.4% during the year ended December 31, 2019 compared to the prior year. The increase was largely the result of increased sales volume partially offset by higher expired product sales returns.

Vaprisol revenue decreased $0.8 million during the year ended December 31, 2019 compared to the prior year period due primarily to decreased sales of the product. The prior year period sales were higher as a result of the arrival of a new lot of the product during April 2018 resolving temporary supply issues associated with the product.

Acetadote revenue included net sales of our branded product and our share of net sales from our Authorized Generic. For the year ended December 31, 2019, the Acetadote net revenue decreased $0.5 million or 10.7% compared to the prior year due to a reduction in sales volume as a result of generic competition.

Cost of products sold. Cost of products sold for the year ended December 31, 2019 were $7.4 million, compared to $6.0 million in the prior year. As a percentage of net revenues, cost of products sold were 21.6% compared to 20.5% during the prior year. The change in costs of products sold as a percentage of revenue was attributable to a change in the product sales mix during the period compared to the prior year.

Selling and marketing. Selling and marketing expense for the year ended December 31, 2019 were $15.3 million, which was an increase of $1.3 million compared to the prior year's expense of $14.0 million. This increase was primarily attributable to promotional spending and sales force costs, including salary and benefits for the increased sales force. The increase in the sales force and promotional spending is due largely to the addition of our newest brand, Vibativ, during the fourth quarter of 2018.

Research and development. Research and development costs for the year ended December 31, 2019 were $6.9 million, compared to $7.6 million last year, representing a decrease of $0.7 million. A portion of our research and development costs are variable based on the number of trials, study sites and patients involved in the development of our product candidates. The decrease was primarily the result of the FDA program fee of $1.3 million paid during 2018 associated with the successful RediTrex FDA submission.

General and administrative. General and administrative expense for the year ended December 31, 2019 was $10.0 million for 2019, compared to $10.2 million last year. The $0.2 million or, 1.7%, decrease from the same period for the prior year was primarily driven by a decrease in compensation and benefits, including non-cash stock based compensation and deferred compensation.

Amortization. Amortization expense is the ratable use of our capitalized intangible assets including product and license rights, patents, trademarks and patent defense costs. Amortization for 2019 totaled approximately $4.1 million, which was an increase of $1.4 million over the prior year. The increase in expense was attributable to the amortization of additional product rights and capitalized patents, including those assets associated with the Vibativ acquisition.

Income taxes. Income tax benefit for the year ended December 31, 2019 was $79,316. As a percentage of income (loss) before income taxes, income taxes were a benefit of 0.9% for the year ended December 31, 2019 compared to income tax expense as a percentage of loss before income taxes of 0.2% for the year ended December 31, 2018.

Year ended December 31, 2018 compared to year ended December 31, 2017

The following table presents the statements of operations for continuing operations for the years ended December 31, 2018 and 2017:

	Years ended December 31,		
	2018	2017	Change
Net revenues	$ 29,344,894	$ 26,322,627	$ 3,022,267
Costs and expenses:			
Cost of products sold	6,016,822	5,418,010	598,812
Selling and marketing	14,004,933	13,489,178	515,755
Research and development	7,575,892	4,247,623	3,328,269
General and administrative	10,150,777	9,610,967	539,810
Amortization	2,769,466	2,436,222	333,244
Total costs and expenses	40,517,890	35,202,000	5,315,890
Operating income (loss)	(11,172,996)	(8,879,373)	(2,293,623)
Interest income	564,484	299,326	265,158
Interest expense	(195,848)	(92,904)	(102,944)
Income (loss) from continuing operations before income taxes	(10,804,360)	(8,672,951)	(2,131,409)
Income tax (expense) benefit	(16,636)	(4,174,889)	4,158,253
Net income (loss) from continuing operations	$ (10,820,996)	$ (12,847,840)	$ 2,026,844

	Years ended December 31,		
	2018	2017	Change
Products:			
Acetadote	$ 4,284,111	$ 6,576,720	$ (2,292,609)
Omeclamox-Pak	623,297	1,761,868	(1,138,571)
Kristalose	12,055,625	11,455,805	599,820
Vaprisol	1,763,874	1,576,222	187,652
Caldolor	5,001,997	4,178,443	823,554
Vibativ	5,075,057	—	5,075,057
Other	540,933	773,569	(232,636)
Total net revenues	$ 29,344,894	$ 26,322,627	$ 3,022,267

Net revenues. Net revenues for the year ended December 31, 2018 were approximately $29.3 compared to $26.3 for the year ended December 31, 2017, representing an increase of $3.0 million. This increase in revenue was led by the initial product sales of our newest product, Vibativ, as well as three of our marketed products experiencing increases in net revenue during the period: Kristalose, Vaprisol and Caldolor. Two of our products: Acetadote and Omeclamox-Pak experienced a decrease in revenue during 2018.

We returned the exclusive rights to commercialize Ethyol and Totect in the United States to Clinigen effective January 1, 2020. As a result, the 2018 and 2017 revenues and expenses associated with the products are combined and reclassified into discontinued operations in our financial statements. In exchange for the return of these product license rights and associated non-compete provision, Cumberland is receiving $5 million in financial consideration paid over the two-years following the return date. We do not incur expenses associated with these payments from Clinigen.

Kristalose revenue increased by $0.6 million, or 5.2%, compared to December 31, 2017 primarily as a result of increased sales volume. The product's net revenue was positively impacted by increased sales volumes and lower managed care and Medicare rebates, that resulted in improved net pricing for the product for the year ended December 31, 2018.

Caldolor revenue experienced a 20% increase to $5.0 million during the year ended December 31, 2018 compared to $4.2 million in the same period last year. This increase in Caldolor revenue for the year ended December 31, 2018 was positively impacted by increased domestic and international shipments. Domestic net revenue improved from increased sales volumes and improved pricing.

Vaprisol revenue increased $0.2 million during the year ended December 31, 2018 compared to the prior year period due to increased sales of the product. Sales of Vaprisol surged during the second quarter of 2018 due to shipments of newly arrived inventory following a period of time when there were limited supplies of the product. During April 2018, the Vaprisol supply issue was resolved as we received new shipments from our manufacturer. The 12% net revenue increase was partially offset by an increase in expired product sales returns during the period.

Omeclamox-Pak revenue decreased $1.1 million during the year ended December 31, 2018 compared to the prior year. The decrease was largely the result of lower sales volume and much higher expired product sales returns.

Acetadote revenue included net sales of our branded product and our share of net sales from our Authorized Generic. For the year ended December 31, 2018, the Acetadote net revenue decreased $2.3 million compared to the prior year due to a reduction in sales volume as a result of generic competition.

Cost of products sold. Cost of products sold for the year ended December 31, 2018 were $6.0 million, compared to $5.4 million in the prior year. As a percentage of net revenues, cost of products sold were 20.5% compared to 20.6% during the prior year. The change in costs of products sold as a percentage of revenue was attributable to a change in the product sales mix during the period compared to the prior year.

Selling and marketing. Selling and marketing expense for the year ended December 31, 2018 were $14.0 million, which was an increase of $0.5 million compared to the prior year's expense of $13.5 million. The increase was primarily salary, wages and benefits for the year ended December 31, 2018.

Research and development. Research and development costs for the year ended December 31, 2018 were $7.6 million, compared to $4.2 million last year, which represented an increase of $3.4 million. A portion of our research and development costs are variable based on the number of trials, study sites and patients involved in the development of our product candidates. The increase was partially the result of additional investments in our ongoing clinical initiatives associated with our pipeline products of $1.6 million. There was also an increase in our products FDA program fees including the $1.3 million fee associated with our RediTrex submission. Research and development costs also increased for salary, wages and benefits.

General and administrative. General and administrative expense for the year ended December 31, 2018 was $10.2 million for 2018, compared to $9.6 million last year. The $0.6 million increase from the prior year was primarily driven by an increase in compensation and benefits along with increases in legal and consulting expenses.

Amortization. Amortization expense is the ratable use of our capitalized intangible assets including product and license rights, patents, trademarks and patent defense costs. Amortization for 2018 totaled approximately $2.8 million, which was an increase of $0.3 million over the prior year. The increase in amortization was attributable to additional product and license rights and capitalized patents.

Income tax expense. Income tax expense for the year ended December 31, 2018 was $16,636, compared to approximately $4.2 million in the year ended December 31, 2017. As a percentage of income (loss) before income taxes, income taxes were 0.2% for the year ended December 31, 2018 compared to 48.1% for the year ended December 31, 2017. As discussed in our consolidated financial statements, the effective tax rate for the year ended December 31, 2017 was primarily impacted by recording a valuation allowance of $1.0 million for our federal Orphan Drug and Research and Development tax credits and an additional valuation allowance of $3.5 million for our remaining deferred tax assets. These non-cash valuation allowance adjustments impacted our effective tax rate during the year ended December 31, 2017.

LIQUIDITY AND CAPITAL RESOURCES

Our primary sources of liquidity are cash flows provided by our operations, the amounts borrowed and available under our line of credit and the cash proceeds from our initial public offering of common stock that was completed in August 2009. We believe that our internally generated cash flows, existing working capital and our line of credit, will be adequate to finance internal growth, finance business development initiatives, and fund capital expenditures for the foreseeable future.

We invest a portion of our cash reserves in marketable securities including short-term cash investments, U.S. Treasury notes and bonds, corporate bonds, commercial paper and other marketable securities. At December 31, 2019, all our investments were in commercial paper with maturity dates under thirty days and classified as cash. At December 31, 2018, we had approximately $8.3 million invested in marketable securities.

The following table summarizes our liquidity and working capital as of the years ended December 31:

	2019	2018
Cash and cash equivalents	$ 28,212,635	$ 27,938,960
Marketable securities	—	8,290,679
Total cash, cash equivalents and marketable securities	$ 28,212,635	$ 36,229,639
Working capital (current assets less current liabilities)	$ 26,012,840	$ 31,311,813
Current ratio (multiple of current assets to current liabilities)	2.1	2.1
Revolving line of credit availability	$ 1,500,000	$ —

The following table summarizes our net changes in cash and cash equivalents for the years ended December 31:

	2019	2018	2017
Cash provided by (used in):			
Operating activities	$ 3,056,356	$ 3,112,737	$ (557,714)
Investing activities	2,297,848	(27,724,818)	9,512,577
Financing activities	(5,080,529)	7,138,173	1,947,675
Net (decrease) increase in cash and cash equivalents	$ 273,675	$ (17,473,908)	$ 10,902,538

The net $0.3 million increase in cash and cash equivalents for the year ended December 31, 2019 was attributable to cash provided by operating and investing activities offset by cash used in financing activities. Cash provided by operating activities of $3.1 million included non-cash expense add backs for depreciation and amortization and share-based compensation expense totaling $5.9 million. The cash provided by operating activities included $5.5 million provided by discontinued operations. These increases were partially offset by a net loss for the period of $3.5 million. Changes in our working capital provided net cash of $1.6 million. Cash provided by investing activities of $2.3 million included net sales of marketable securities of $8.3 million, partially offset by the $5 million payment to Theravance as part of the acquisition of Vibativ and the addition to intangibles of $0.8 million. Our financing activities included a net repayment of $1.5 million under our line of credit net and $3.5 million in cash used to repurchase shares of our common stock.

As noted above, we continue to repurchase shares of our common stock, as discussed in Part II, Item 5, "Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities", of our 2019 Form 10-K.

The net $17.5 million decrease in cash and cash equivalents for the year ended December 31, 2018 was attributable to cash used by investing activities offset by cash provided by operating and financing activities. Cash provided by operating activities of $3.1 million was impacted by a net loss for the period of $7.0 million. This use of operating cash was offset by non-cash expenses of depreciation and amortization and share-based compensation expense totaling $4.3 million. Changes in our working capital provided net cash of $5.2 million. The cash provided by operating activities included $4.5 million provided by discontinued operations. Cash used in investing activities included $20 million in cash paid for the acquisition of Vibativ during 2018, the use of cash to complete a net increase in marketable securities of $3.4 million, and the addition to intangibles of $3.8 million. Our financing activities included $10.2 million in net cash provided by borrowings under our line of credit net of $2.9 million in cash used to repurchase shares of our common stock.

The net $10.9 million increase in cash and cash equivalents for the year ended December 31, 2017 was attributable to cash provided by investing and financing activities offset by cash used in operating activities. Cash used in operating activities of $0.6 million was primarily impacted by a net loss for the period of $8.0 million. These uses of operating cash were offset by deferred tax expenses of $4.2 million and non-cash expenses of depreciation and amortization and share-based compensation expense totaling $4.1 million. The cash used by operating activities were partially offset by $4.0 million provided by discontinued operations. Changes in our working capital provided net cash of $0.1 million, including cash provided by accounts payable increases of $0.3 million. Cash provided by investing activities included net proceeds from marketable securities of $11.0 million offset by additions to intangibles of $1.2 million. Our financing activities included $5.7 million in net cash provided by borrowings under our line of credit and $3.7 million in cash used to repurchase shares of our common stock.

Shelf Registration

In November 2017, the Company filed its Shelf Registration on Form S-3 with the SEC associated with the sale of up to $100 million in corporate securities. The Shelf Registration which was declared effective in January 2018. It also included an At the Market ("ATM") feature that allows the Company to sell common shares at market prices, along with an agreement with B. Riley FBR to support such a placement of shares. The Company did not issue any shares under this ATM during the year ended December 31, 2019.

Debt Agreement

On May 10, 2019, we entered into a third amendment ("Third Amendment") to the Revolving Credit Loan Agreement, dated July 28, 2017, with Pinnacle Bank (“Pinnacle Agreement”). The Third Amendment extended the term of the Pinnacle Agreement through July 31, 2021 as well as modified certain definitions and terms of the existing financial covenants. On October 17, 2018, we entered into a second amendment (“Second Amendment”) which increased the maximum aggregate principal available for borrowing under the Pinnacle Agreement to $20.0 million. For a summary of the material terms of the Pinnacle Agreement, as amended, see Note 9 to the accompanying notes to consolidated financial statements.

Under the Pinnacle Agreement, we were initially subject to one financial covenant, the maintenance of a Funded Debt Ratio, as such term is defined in the agreement and determined on a quarterly basis. On August 14, 2018 we amended the Pinnacle Agreement ("First Amendment") to replace the single financial covenant with the maintenance of either the Funded Debt Ratio or a Tangible Capital Ratio, as defined in the First Amendment. The Third Amendment modified the definition of the Funded Debt Ratio and the compliance target of the Tangible Capital Ratio. Both Third Amendment modifications were related to the Vibativ transaction. We were in compliance with the Tangible Capital Ratio financial covenant as of December 31, 2019 and we expect to maintain compliance with the Tangible Capital Ratio financial covenant in future periods.

Minimum Product Purchase Requirements

Our manufacturing and supply agreements do not require minimum annual purchase obligations.

Contractual cash obligations

The following table summarizes our contractual cash obligations as of December 31, 2019:

		Payments Due by Year				
Contractual obligations[1]	**Total**	**2020**	**2021**	**2022**	**2023**	**2023 and thereafter**
Line of credit[2]	$ 18,500,000	$ —	$ 18,500,000	$ —	$ —	$ —
Estimated interest on debt [2]	1,248,750	832,500	416,250	—	—	—
Contingent consideration liability payments [3]	8,633,589	2,114,040	1,139,617	997,491	735,405	3,647,036
Operating leases	3,376,746	1,120,066	1,144,889	1,019,313	92,478	—
Purchase obligations [4]	—	—	—	—	—	—
Total [1]	$ 31,759,085	$ 4,066,606	$ 21,200,756	$ 2,016,804	$ 827,883	$ 3,647,036

1. The sum of the individual amounts may not agree due to rounding.

2. The line of credit payments represent the estimated unused line of credit payments and the amount due at maturity. The estimated interest on debt represents the interest on the principal outstanding on the line of credit. These amounts are based on the $18.5 million line of credit assuming the current $18.5 million balance outstanding on December 31, 2019 is consistently outstanding through maturity of July 2021. Interest and unused line of credit payments are due and payable quarterly in arrears.

3. The contingent consideration liability represents the fair value of the royalty payments of up to 20% of future net sales as part of the Vibativ acquisition.

4. Represents minimum purchase obligations under our manufacturing agreements.

OFF-BALANCE SHEET ARRANGEMENTS

During 2019, 2018 and 2017, we did not engage in any off-balance sheet arrangements.

RECENT ACCOUNTING PRONOUNCEMENTS

Recent Adopted Accounting Pronouncements

In May 2014, the FASB issued amended guidance in the form of ASU No. 2014-09, “Revenue from Contracts with Customers” (“ASC 606”). The core principle of the new guidance is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. The new guidance defines a five-step process to achieve this core principle and, in doing so, additional judgments and estimates may be required within the revenue recognition process. The new standard replaced most of the existing revenue recognition standards in U.S. GAAP when it became effective. In July 2015, the FASB issued a one-year deferral of the adoption date, which extended the effective date for us to January 1, 2018, at which point Cumberland adopted the standard.

The Company evaluated its revenues and the new guidance had immaterial impacts to recognition practices upon adoption on January 1, 2018. As part of the adoption, the Company elected to apply the new guidance on a modified retrospective basis. We did not record a cumulative effect adjustment to historical retained earnings for initially applying the new guidance as no revenue recognition differences were identified in the timing or amount of revenue.

In February 2016, the Financial Accounting Standards Board ("FASB") issued guidance in the form of a FASB Accounting Standards Update ("ASU") No. 2016-02, “Leases.” The new standard establishes a right-of-use (“ROU”) model that requires a lessee to record an ROU asset and a lease liability on the balance sheet for all leases with terms longer than twelve months. Leases will be classified as either finance (formerly "capital leases") or operating, with classification affecting the pattern of expense recognition in the income statement. The standard provides for a modified retrospective transition approach for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain optional practical expedients. In July 2018, the FASB issued ASU 2018-11, "Leases: Targeted Improvements", allowing for an alternative transition method (the effective date approach). It allows an entity to initially apply the new lease guidance at the adoption date (rather than at the beginning of the earliest period presented). Cumberland adopted the lease guidance effective January 1, 2019 using the package of transition practical expedients. This allowed us to retain the lease classification for any leases existing prior to adoption, in addition to other benefits.

Recent Accounting Pronouncements - Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13, “Financial Instruments-Credit Losses,” which changes the impairment model for most financial assets and certain other instruments. For trade and other receivables, held-to-maturity debt securities, loans and other instruments, companies will be required to use a new forward-looking “expected loss” model that generally will result in the earlier recognition of allowances for losses. Companies will apply the standard’s provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. This standard is effective for Cumberland on January 1, 2020. We continue to evaluate this new standard on our trade and other receivables but do not expect a material impact on our consolidated financial statements.

In May 2019, the FASB issued ASU 2019-05, "Financial Instruments-Credit Losses (Topic 326): Targeted Transition Relief" which provides transition relief for ASU 2016-13 by providing entities with an alternative to irrevocably elect the fair value option for eligible financial assets measured at amortized cost upon adoption of the new credit losses standard. Certain eligibility requirements must be met, the election must be applied on an instrument-by-instrument basis, and the election is not available for either available-for-sale or held-to-maturity debt securities. The effective date is the same as ASU 2016-13, January 1, 2020. We continue to evaluate this new standard on our trade and other receivables but do not expect a material impact on our consolidated financial statements.

In November 2018, the FASB issued ASU No. 2018-18, “Collaboration Arrangements: Clarifying the Interaction between Topic 808 and Topic 606” (ASU 2018-18). The issuance of ASU 2014-09 raised questions about the interaction between the guidance on collaborative arrangements and revenue recognition. ASU 2018-18 addresses this uncertainty by (1) clarifying that certain transactions between collaborative arrangement participants should be accounted for as revenue under ASU 2014-09 when the collaboration arrangement participant is a customer, (2) adding unit of account guidance to assess whether the collaboration arrangement or a part of the arrangement is with a customer and (3) precluding a company from presenting transactions with collaboration arrangement participants that are not directly related to sales to third parties together with revenue from contracts with customers. The new standard will be effective for Cumberland on January 1, 2020. We continue to evaluate this new standard on our trade and other receivables but do not expect a material impact on our consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04, “Simplifying the Test for Goodwill Impairment” (ASU 2017-04). The guidance removes Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. As a result of the revised guidance, a goodwill impairment will be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. The new standard will be effective for Cumberland on January 1, 2020. We continue to evaluate this new standard but do not expect a material impact on our consolidated financial statements and related disclosures.

Item 8. Financial Statements and Supplementary Data.

See consolidated financial statements, including the reports of the independent registered public accounting firm, starting on page F-1.

Report of Independent Registered Public Accounting Firm

Shareholders and Board of Directors
Cumberland Pharmaceuticals Inc.
Nashville, Tennessee

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Cumberland Pharmaceuticals Inc. (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of operations and comprehensive income (loss), equity, and cash flows for each of the three years in the period ended December 31, 2019 and the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019**,** in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ BDO USA, LLP

We have served as the Company's auditor since 2017.

Nashville, Tennessee
March 20, 2020, except for the effects of presenting discontinued operations as discussed in Note 20, as to which the date is December 10, 2020

CUMBERLAND PHARMACEUTICALS INC. AND SUBSIDIARIES

Consolidated Balance Sheets

December 31, 2019 and 2018

	2019	2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 28,212,635	$ 27,938,960
Marketable securities	—	8,290,679
Accounts receivable, net	7,859,006	6,459,995
Inventories, net	8,871,254	9,783,421
Prepaid and other current assets	2,757,456	2,936,085
Current assets associated with discontinued operations	2,462,724	3,706,897
Total current assets	50,163,075	59,116,037
Non-current inventories	15,554,992	15,749,000
Property and equipment, net	747,796	771,213
Intangible assets, net	30,920,324	33,655,099
Goodwill	882,000	784,000
Deferred tax assets, net	21,802	87,210
Operating lease right-of-use assets	2,960,569	—
Other assets	3,298,725	2,531,309
Total assets	$ 104,549,283	$ 112,693,868
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$ 9,993,578	$ 8,210,641
Operating lease current liabilities	920,431	—
Other current liabilities	11,084,869	16,044,470
Current liabilities associated with discontinued operations	2,151,357	3,549,113
Total current liabilities	24,150,235	27,804,224
Revolving line of credit	18,500,000	20,000,000
Operating lease noncurrent liabilities	2,076,472	—
Other long-term liabilities	8,737,323	9,319,143
Total liabilities	53,464,030	57,123,367
Commitments and contingencies		
Equity:		
Shareholders' equity:		
Common stock – no par value; 100,000,000 shares authorized; 15,263,555 and 15,481,497 shares issued and outstanding as of December 31, 2019 and 2018, respectively	49,914,478	51,098,613
Retained earnings	1,208,395	4,746,154
Total shareholders' equity	51,122,873	55,844,767
Noncontrolling interests	(37,620)	(274,266)
Total equity	51,085,253	55,570,501
Total liabilities and equity	$ 104,549,283	$ 112,693,868

See accompanying notes to consolidated financial statements.

CUMBERLAND PHARMACEUTICALS INC. AND SUBSIDIARIES

Consolidated Statements of Operations and Comprehensive Income (Loss)

Years ended December 31, 2019, 2018 and 2017

	2019	2018	2017
Revenues:			
Net product revenue	$ 32,407,245	$ 28,803,961	$ 25,549,059
Other revenue	1,981,050	540,933	773,568
Net revenues	34,388,295	29,344,894	26,322,627
Costs and expenses:			
Cost of products sold	7,421,316	6,016,822	5,418,010
Selling and marketing	15,277,740	14,004,933	13,489,178
Research and development	6,868,480	7,575,892	4,247,623
General and administrative	9,974,384	10,150,777	9,610,967
Amortization	4,134,557	2,769,466	2,436,222
Total costs and expenses	43,676,477	40,517,890	35,202,000
Operating income (loss)	(9,288,182)	(11,172,996)	(8,879,373)
Interest income	243,364	564,484	299,326
Interest expense	(246,186)	(195,848)	(92,904)
Income (loss) before income taxes	(9,291,004)	(10,804,360)	(8,672,951)
Income tax (expense) benefit	79,316	(16,636)	(4,174,889)
Net income (loss) from continuing operations	(9,211,688)	(10,820,996)	(12,847,840)
Discontinued operations net of tax	5,665,177	3,782,224	4,798,025
Net income (loss)	(3,546,511)	(7,038,772)	(8,049,815)
Net loss at subsidiary attributable to noncontrolling interests	8,752	75,704	71,182
Net income (loss) attributable to common shareholders	$ (3,537,759)	$ (6,963,068)	$ (7,978,633)
Earnings (loss) per share attributable to common shareholders:			
-Continuing operations-basic	$ (0.60)	$ (0.70)	$ (0.80)
-Discontinued operations-basic	0.37	0.25	0.30
	$ (0.23)	$ (0.45)	$ (0.50)
-Continuing operations-diluted	$ (0.60)	$ (0.70)	$ (0.80)
-Discontinued operations-diluted	0.37	0.25	0.30
	$ (0.23)	$ (0.45)	$ (0.50)
Weighted-average common shares outstanding:			
Basic	15,396,098	15,614,052	15,911,577
Diluted	15,396,098	15,614,052	15,911,577
Comprehensive income (loss) attributable to common shareholders	$ (3,537,759)	$ (6,963,068)	$ (7,978,633)
Net loss at subsidiary attributable to noncontrolling interests	8,752	75,704	71,182
Total comprehensive income (loss)	$ (3,546,511)	$ (7,038,772)	$ (8,049,815)

See accompanying notes to consolidated financial statements.

CUMBERLAND PHARMACEUTICALS INC. AND SUBSIDIARIES

Consolidated Statements of Cash Flows

Years ended December 31, 2019, 2018 and 2017

	2019	2018	2017
Cash flows from operating activities:			
Net income (loss)	$ (3,546,511)	$ (7,038,772)	$ (8,049,815)
Discontinued operations	5,665,177	3,782,224	4,798,025
Net income (loss) from continuing operations	(9,211,688)	(10,820,996)	(12,847,840)
Adjustments to reconcile net income (loss) to net cash flows provided by (used in) operating activities:			
Depreciation and amortization expense	4,404,175	2,982,703	2,647,753
Deferred tax expense	65,408	81,886	4,206,753
Share-based compensation	1,485,898	1,364,698	1,115,063
Share-based compensation (foundation contribution)	—	—	372,500
Excess tax (benefit) expense derived from exercise of stock options	—	(81,886)	(91,109)
Decrease in non-cash contingent consideration	(804,167)	—	—
Noncash interest expense	47,525	99,883	77,911
Noncash investment gains	(26,315)	(168,440)	(52,012)
Net changes in assets and liabilities affecting operating activities:			
Accounts receivable	(1,399,012)	(47,288)	753,521
Inventories	1,106,175	528,153	(292,710)
Other current assets and other assets	(615,199)	676,750	(1,155,630)
Accounts payable and other current liabilities	3,221,780	4,153,287	339,751
Other long-term liabilities	(729,820)	(159,558)	413,097
Net cash (used in) operating activities from continuing operations	(2,455,240)	(1,390,808)	(4,512,952)
Discontinued operations	5,511,596	4,503,545	3,955,238
Net cash provided by (used in) operating activities	3,056,356	3,112,737	(557,714)
Cash flows from investing activities:			
Additions to property and equipment	(246,202)	(455,569)	(275,960)
Additions to intangible assets	(772,944)	(3,819,486)	(1,213,110)
Cash paid for acquisition	(5,000,000)	(20,000,000)	—
Proceeds from sale of marketable securities	20,062,132	16,122,376	13,381,061
Purchases of marketable securities	(11,745,138)	(19,572,139)	(2,379,414)
Net cash provided by (used in) investing activities	2,297,848	(27,724,818)	9,512,577

See accompanying notes to consolidated financial statements

Cash flows from financing activities:			
Borrowings on line of credit	76,000,000	56,000,000	24,500,000
Repayments on line of credit	(77,500,000)	(45,800,000)	(18,800,000)
Repurchase of common shares	(3,494,921)	(2,879,426)	(3,724,375)
Payments of deferred equity offering costs	—	(383,310)	(27,950)
Sales of shares of common stock, net of offering costs	—	200,909	—
Payments of financing costs	(52,500)	—	—
Cash payments of contingent consideration	(1,033,108)	—	—
Sale of subsidiary shares to noncontrolling interest	1,000,000	—	—
Net cash provided by (used in) financing activities	(5,080,529)	7,138,173	1,947,675
Net increase (decrease) in cash and cash equivalents	273,675	(17,473,908)	10,902,538
Cash and cash equivalents, beginning of year	27,938,960	45,412,868	34,510,330
Cash and cash equivalents, end of year	$ 28,212,635	$ 27,938,960	$ 45,412,868

Supplemental disclosure of cash flow information:			
Net cash paid (refunded) during the year for:			
Interest	$ 198,661	$ 95,965	$ 14,993
Income taxes	16,694	15,441	18,000
Noncash investing and financing activities:			
Change in unpaid invoices for purchases of intangibles	$ (576,837)	$ (539,467)	$ (513,481)
Deferred offering costs included in accounts payable and other accrued expenses	—	—	97,254
Non cash increase in liabilities related to acquisition (see Note 3)	—	14,034,000	—
Recognition of operating lease assets and liabilities through adoption of ASC 842	3,629,320	—	—
Vesting of shares related to RediTrex approval	862,200	—	—
Repurchase of subsidiary shares from noncontrolling interests	(800,000)	—	—
Additions to intangible assets from final purchase price allocation	148,000	—	—

See accompanying notes to consolidated financial statements

CUMBERLAND PHARMACEUTICALS INC. AND SUBSIDIARIES

Consolidated Statements of Equity

Years ended December 31, 2019, 2018 and 2017

	Cumberland Pharmaceuticals Inc. Shareholders				
	Common stock				
	Shares	Amount	Retained earnings	Non-controlling interest	Total equity
Balance, December 31, 2016	16,074,176	$ 54,643,268	$ 18,604,931	$ (127,380)	$ 73,120,819
Net income (loss)	—	—	(7,978,633)	(71,182)	(8,049,815)
Cumulative effect from change in accounting principle	—	—	1,082,924	—	1,082,924
Share-based compensation	146,275	1,115,063	—	—	1,115,063
Exercise of options and related tax benefit	50,000	372,500	—	—	372,500
Repurchase of common shares	(547,376)	(3,719,890)	—	—	(3,719,890)
Balance, December 31, 2017	15,723,075	52,410,941	11,709,222	(198,562)	63,921,601
Net income (loss)	—	—	(6,963,068)	(75,704)	(7,038,772)
Share-based compensation	170,759	1,364,698	—	—	1,364,698
Proceeds from sale of common stock, net of offering costs	30,704	200,909	—	—	200,909
Repurchase of common shares	(443,041)	(2,877,935)	—	—	(2,877,935)
Balance, December 31, 2018	15,481,497	51,098,613	4,746,154	(274,266)	55,570,501
Net income (loss)	—	—	(3,537,759)	(8,752)	(3,546,511)
Repurchase of subsidiary shares to noncontrolling interest	—	(685,805)	—	(114,195)	(800,000)
Sale of subsidiary shares to noncontrolling interest	—	640,407	—	359,593	1,000,000
Vesting of common stock	180,000	862,200	—	—	862,200
Share-based compensation	225,536	1,485,898	—	—	1,485,898
Repurchase of common shares	(623,478)	(3,486,835)	—	—	(3,486,835)
Balance, December 31, 2019	15,263,555	$ 49,914,478	$ 1,208,395	$ (37,620)	$ 51,085,253

See accompanying notes to consolidated financial statements

(1) Organization

Cumberland Pharmaceuticals Inc. (“Cumberland,” the “Company,” or as used in the context of “we,” “us,” or “our”) is a specialty pharmaceutical company focused on the acquisition, development and commercialization of branded prescription products. The Company's primary target markets are hospital acute care and gastroenterology. These medical specialties are characterized by relatively concentrated prescriber bases that the Company believes can be penetrated effectively by small, targeted sales forces. Cumberland is dedicated to providing innovative products that improve quality of care for patients and address unmet or poorly met medical needs. The Company promotes its approved products through its hospital and field sales forces in the United States and is establishing a network of international partners to bring its medicines to patients in their countries.

Cumberland focuses its resources on maximizing the commercial potential of its products, as well as developing new product candidates, and has both internal development and commercial capabilities. The Company’s products are manufactured by third parties, which are overseen by Cumberland’s quality and manufacturing professionals. The Company works closely with its third-party distribution partners to make its products available in the United States.

In order to build a pipeline of early-stage product candidates, the Company formed a subsidiary, Cumberland Emerging Technologies, Inc. ("CET"), which teams with universities and other research organizations to help advance scientific discoveries from the laboratory to the marketplace. In 2014, the Company organized equity financing to recapitalize and strengthen the financial position of CET including an investment of approximately $1.0 million from Gloria Pharmaceuticals Co., Ltd. (“Gloria”). As a result, Gloria received shares in CET and joined the CET ownership group.

In April, 2019, CET entered into an agreement with HongKong WinHealth Pharma Group Co. Limited (WinHealth) whereby WinHealth made a $1.0 million investment through the purchase of shares of CET stock. As part of the agreement, WinHealth obtained a Board position at CET and the first opportunity to license CET products for the Chinese market. In connection with WinHealth's investment in CET, Cumberland also made an additional $1.0 million investment in CET. Cumberland purchased additional CET shares through contribution of $0.3 million in cash and a conversion of $0.7 million in intercompany loans payable. Upon completion of the additional investment by WinHealth and Cumberland, Gloria Pharmaceuticals agreed to return its shares in CET in exchange for consideration of $0.8 million.

The Company's ownership in CET is now 85%. As noted above, the ownership interests of CET includes WinHealth and Cumberland, while the remaining interest is owned by Vanderbilt University and the Tennessee Technology Development Corporation. The operating results of CET allocated to noncontrolling interests in the consolidated statements of operations were $8,752, $75,704 and $71,182 for the years ended December 31, 2019, 2018 and 2017, respectively.

Effective January 1, 2007, the Company formed a wholly-owned subsidiary, Cumberland Pharma Sales Corp. ("CPSC"). CPSC is the subsidiary that employs the Company's hospital and field sales force personnel.

(2) Significant Accounting Policies

Principles of Consolidation

The consolidated financial statements of the Company are stated in U.S. dollars and are prepared using U.S. generally accepted accounting principles. These financial statements include the accounts of the Company and its wholly and majority-owned subsidiaries. All significant intercompany transactions and accounts have been eliminated in consolidation.

Use of Estimates

The preparation of the consolidated financial statements in conformity with U.S. generally accepted accounting principles requires management of the Company to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the period. Actual results could differ from those estimates under different assumptions and conditions. The Company's most significant estimates include: (1) its allowances for chargebacks and accruals for rebates and product returns (2) the allowances for obsolescent or unmarketable inventory (3) assumptions used in estimating acquisition date fair value of assets acquired in business combinations and (4) valuation of contingent consideration liability associated with business combinations.

Segment Reporting

The Company has one operating segment which is specialty pharmaceutical products. Management has chosen to organize the Company based on the type of products sold. Operating segments are identified as components of an enterprise about which separate discrete financial information is evaluated by the chief operating decision maker, or decision-making group, in making decisions regarding resource allocation and assessing performance. The Company, which uses consolidated financial information in determining how to allocate resources and assess performance, evaluated that our specialty pharmaceutical products compete in similar economic markets and similar circumstances. Substantially all of the Company’s assets are located in the United States. Total revenues are primarily attributable to U.S. customers. Net revenues from customers outside the United States were approximately $1.5 million, $2.1 million and $1.6 million for the years ended December 31, 2019, 2018 and 2017, respectively.

Fair Value of Financial Instruments

Fair value of financial assets and liabilities is the price the Company would receive to sell an asset or pay to transfer a liability in an orderly transaction with a market participant at the measurement date. The Company's fair value measurements follow the appropriate rules as well as the fair value hierarchy that prioritizes the information used to develop the measurements. It applies whenever other guidance requires (or permits) assets or liabilities to be measured at fair value and gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements).

A summary of the fair value hierarchy that prioritizes observable and unobservable inputs used to measure fair value into three broad levels is described below:

Level 1 - Quoted prices for identical instruments in active markets.

Level 2 - Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations whose inputs are observable or whose significant value drivers are observable.

Level 3 - Significant inputs to the valuation model are unobservable.

We maintain policies and procedures to value instruments using the best and most relevant data available. The following section describes the valuation methodologies we use to measure different financial instruments at fair value on a recurring basis.

The Company's financial instruments include cash and cash equivalents, marketable securities, accounts receivable, accounts payable, accrued liabilities, contingent consideration liability and a revolving line of credit. The carrying values for cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximate their fair values due to their short-term nature. The revolving line of credit has a variable interest rate, which approximates the current market rate.

The Company's fair values of marketable securities are determined based on valuations provided by a third-party pricing service, as derived from such services' pricing models, and are considered either Level 1 or Level 2 measurements, depending on the nature of the investment. The Company has no marketable securities in which the fair value is determined based on Level 3. The level of management judgment required in evaluating fair value for Level 1 investments is minimal. Similarly, there is little subjectivity or judgment required for Level 2 investments valued using valuation models that are standard across the industry and whose parameter inputs are quoted in active markets. Inputs to the models may include, but are not limited to, reported trades, executable bid and ask prices, broker/dealer quotations, prices or yields of securities with similar characteristics, benchmark curves or information pertaining to the issuer, as well as industry and economic events. The Company believes that the valuations provided by the third-party pricing service, as derived from such services' pricing models, represent prices that would be received to sell the assets at the measurement date (exit prices).

The Company's contingent consideration liability is a Level 3 fair value measurement that is updated on a recurring basis at each reporting period using a valuation model. Consistent with Level 3 fair value measurements, there are significant inputs to the valuation model that are unobservable.

Cash and Cash Equivalents

Cash and cash equivalents include highly liquid investments with original maturities of three months or less. As of December 31, 2019 and 2018, cash equivalents consist primarily of money market funds as well as trading securities with original maturities of less than ninety days.

Marketable Securities

The Company invests in marketable debt securities in order to maximize its return on cash. Marketable securities consist of short-term cash investments, U.S. Treasury notes and bonds, corporate bonds, and commercial paper. At the time of purchase, the Company classifies marketable securities as either trading securities or available-for-sale securities, depending on the intent at that time. As of December 31, 2019 and 2018, marketable securities were comprised solely of trading securities. Trading securities are carried at fair value with unrealized gains and losses recognized as a component of interest income in the consolidated statements of operations. As of December 31, 2019, all the trading securities were commercial paper with original maturities of less than ninety days and as a result, were classified as cash equivalents.

Accounts Receivable

Trade accounts receivable are recorded at the invoiced amount. The Company records allowances for amounts that could become uncollectible in the future based on historical experience, including amounts related to chargebacks, cash discounts and credits for damaged product. The Company reviews each customer balance to assess collection status.

The majority of the Company's products are distributed through independent pharmaceutical wholesalers. The allowances against accounts receivable for chargebacks and discounts are determined on a product-by-product basis, and established by management as the Company's best estimate at the time of sale based on each product's historical experience adjusted to reflect known changes in the factors that impact such allowances. These allowances are established based on the contractual terms with direct and indirect customers and analyses of historical levels of chargebacks, discounts and credits claimed for damaged and expired product. The allowances in accounts receivable for chargebacks, cash discounts and damaged goods were $0.8 million at December 31, 2019 and $0.7 million at December 31, 2018.

Other organizations, such as managed care providers, pharmacy benefit management companies and government agencies, may receive rebates from the Company based on either negotiated contracts to carry the Company's products or reimbursements for filled prescriptions. These entities are considered indirect customers of the Company. In conjunction with recognizing a sale to a wholesaler, revenues are reduced and accrued liabilities are increased by the Company's estimate of the rebate that may be claimed as well as the reserves for expired and damaged goods.

Cash discounts are reductions to invoiced amounts offered to customers for payment within a specified period of time from the date of the invoice.

Inventories

The Company works closely with third parties to manufacture and package finished goods for sale. Based on the customer relationship with the manufacturer or packager, the Company will either take title to finished goods at the time of shipment or at the time of arrival from the manufacturer. The Company then warehouses such goods until distribution and sale. As discussed below, effective January 1, 2017, inventories are stated at the lower of cost or net realizable value with cost determined using the first-in, first-out method.

The Company continually evaluates inventories for potential losses due to expired, short-dated or slow-moving inventory by comparing sales history and sales projections to the inventory on hand. When evidence indicates the carrying value of a product may not be recoverable, a charge is recorded to reduce the inventory to its current net realizable value. The Company classifies the Vibativ inventories that it does not expect to sell within one year as non-current inventories.

Prepaid and Other Current Assets

Prepaid and other current assets consist of deferred offering costs, prepaid insurance premiums, prepaid consulting services, deposits and annual fees paid to the U.S. Food and Drug Administration ("FDA"). The Company expenses all prepaid and other current asset amounts as used or over the period of benefit primarily on a straight-line basis, as applicable.

Deferred offering costs are expenses directly related to the Form S-3 or Shelf Registration filed with the SEC on November 11, 2017 and declared effective on January 16, 2018. These costs consist of legal, accounting, printing, and filing fees that the Company has capitalized. Deferred costs associated with the Shelf Registration will be reclassified to additional paid in capital on a pro-rata basis as the Company completes sales of shares under the Shelf Registration, with any remaining deferred offering costs to be charged to the results of operations at the end of the three-year life of the Shelf Registration. During the year ended December 31, 2019, the Company has not expensed any deferred offering costs associated with the Shelf Registration.

Property and Equipment

Property and equipment, including leasehold improvements, are stated at cost. Depreciation is recognized using the straight-line method over the estimated useful lives of the assets. Leasehold improvements are amortized over the shorter of the initial lease term plus renewal options, if reasonably assured, or the remaining useful life of the asset. Upon retirement or disposal of assets, any gain or loss is reflected as a component of operating income (loss) in the consolidated statement of operations. Improvements that extend an asset's useful life are capitalized. Repairs and maintenance costs are expensed as incurred.

Intangible Assets and Goodwill

The Company's intangible assets and goodwill consist of capitalized costs related to product and license rights, patents, trademarks and goodwill obtained in the Vibativ acquisition. Goodwill is not amortized for financial reporting purposes, but is subject to impairment analysis at least annually.

The cost of acquiring product and license rights are capitalized at fair value at the date of acquisition for products that are approved by the FDA for commercial use. These costs are amortized ratably over the estimated economic life of the product. The economic life is estimated based upon several factors. This includes the term of the license agreement, the patent life or market exclusivity of the product and as well as management's expectations of continued involvement with the product and the assessment of future sales, the future periods under which the product will be sold and the profitability of the product. This estimate is evaluated on a regular basis during the amortization period and adjusted if appropriate. If there are any changes made to the useful life of the product and license rights, the costs associated with such a change, if any, will be capitalized and amortized over the revised useful life.

Capitalized patent costs consist of outside legal costs associated with obtaining and protecting patents on products that have been approved for marketing by the FDA. If it becomes probable that a patent will not be issued or a patent has been declared invalid, related costs associated with the patent application are expensed at the time such determination is made. All costs associated with obtaining patents for products that have not been approved for marketing by the FDA are expensed as incurred.

Amortization expense is recognized ratably over the following periods:

Product rights	Estimated economic life
License rights	Term of license agreement
Patents	Life of patent

Impairment of Long-Lived Assets

Long-lived assets, such as property and equipment, operating lease right-of-use assets and intangible assets subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. If events or circumstances arise that require a long-lived asset to be tested for potential impairment, the Company first compares undiscounted cash flows expected to be generated by the asset to its carrying value. If the carrying amount of the long-lived asset is not recoverable on an undiscounted cash flow basis, an impairment charge is recognized to the extent that the carrying value exceeds the fair value. Fair value is determined through various valuation techniques including quoted market prices, third-party independent appraisals and discounted cash flow models.

Goodwill and other indefinite lived intangible assets that are not subject to amortization are tested at least annually for impairment. The impairment analysis for goodwill requires a comparison of fair value to the carrying value of the reporting unit. The Company's goodwill was acquired in November 2018 with the Vibativ acquisition. As a result, the Vibativ component of the Company is the reporting unit evaluated for goodwill impairment. Cumberland determined the fair value of the reporting unit through current and future estimated revenue and profitability of the product. The Company recorded no impairment charges during 2019, 2018 and 2017.

Revenue Recognition

Effective January 1, 2018, the Company adopted the Financial Accounting Standards Board’s (“FASB”) amended guidance in the form of Accounting Standards Update (“ASU”) No. 2014-09, "Revenue from Contracts with Customers," (ASC 606). Results for reporting periods beginning after January 1, 2018 are presented under ASC 606, while prior period amounts were not adjusted and are reported in accordance with ASC 605.

Net Product Revenue

Revenues from product sales are recognized in the amount that reflects the consideration that we expect to receive for these goods. Depending upon the shipping terms of the transaction, the revenue is recognized.at the point where the customer obtains control of the goods and we satisfy our performance obligation. This occurs upon either shipment of the product or arrival at its ship to destination. Payment terms typically range from 30 to 60 days from date of shipment. The Company’s net product revenue reflects the reduction from gross product revenue for

estimated allowances for chargebacks, discounts and damaged goods, and reflects sales related accruals for rebates, coupons, product returns, and certain administrative and service fees. Significant judgments must be made in determining the transaction price for our sales of products related to these adjustments.

Sales Rebates and Discounts

The allowances against accounts receivable for chargebacks, discounts, expired and damaged goods are determined on a product-by-product basis, and established by management as the Company's best estimate at the time of sale based on each product's historical experience adjusted to reflect known changes in the factors that impact such allowances. These allowances are established based on the contractual terms with direct and indirect customers and analyses of historical levels of chargebacks, discounts and credits claimed for damaged and expired product.

Other organizations, such as managed care providers, pharmacy benefit management companies and government agencies, may receive rebates from the Company based on either negotiated contracts to carry the Company's products or reimbursements for filled prescriptions. These entities are considered indirect customers of the Company. In conjunction with recognizing a sale to a wholesaler, sales revenues are reduced and accrued liabilities are increased by the Company's estimate of the rebate that may be claimed.

Sales Returns

Consistent with industry practice, the Company maintains a return policy that allows customers to return product within a specified period prior to and subsequent to the expiration date. The Company's estimate of the provision for returns is based upon historical experience, expiration date by product as well as any other factor expected to impact future returns. Any changes in the assumptions used to estimate the provision for returns are recognized in the period those assumptions are changed.

Other Revenues

Other revenues primarily consist of income from grant funding programs, licensing agreements, leases and contract services. Revenue related to grants is recognized when all conditions related to such grants have been met. All other revenue is recognized when earned.

Cost of Products Sold

Cost of products sold consists principally of the cost to acquire each unit of product sold, including in-bound freight expense as well as any adjustment in the net realizable value of inventory acquired in acquisitions. Cost of products sold also includes expenses associated with the reduction in the net realizable value of slow-moving or expired product.

Selling and Marketing Expense

Selling and marketing expense consists primarily of expenses relating to the advertising, promotion, distribution and sale of products, including royalty expense, salaries and related costs.

Distribution Costs

Distribution costs are expensed as incurred and are included as a component of selling and marketing expenses in the consolidated statements of operations. Distribution costs were as follows for the years ended December 31:

	2019	2018	2017
Distribution costs	$ 613,637	$ 457,814	$ 487,669

Advertising Costs

Advertising costs are expensed as incurred and are included as a component of selling and marketing expenses in the consolidated statements of operations. Advertising costs were as follows for the years ended December 31:

	2019	2018	2017
Advertising costs	$ 2,594,630	$ 2,005,113	$ 2,377,338

Research and Development

Research and development costs are expensed in the period incurred. Research and development costs are comprised mainly of clinical trial expenses, salaries, wages and other related costs such as materials and supplies. Research and development expense includes activities performed by third-party providers participating in the Company's clinical studies. The Company accounts for these costs based on estimates of work performed, patients enrolled or fixed fees for services over the period of time the clinical trials are performed.

Income Taxes

The Company provides for deferred taxes using the asset and liability approach. Under this method, deferred tax assets and liabilities are recognized for future tax consequences attributable to operating loss and tax credit carryforwards, as well as differences between the carrying amounts of existing assets and liabilities and their respective tax bases. The Company's principal differences are related to the timing of deductibility of certain items, such as inventory, depreciation, amortization and share-based compensation. Deferred tax assets and liabilities are measured using enacted statutory tax rates that are expected to apply to taxable income in the years such temporary differences are anticipated to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period of enactment. The Company only recognizes income tax benefits associated with an income tax position in which it is "more likely than not" that the position would be sustained upon examination by the taxing authorities.

In assessing the realizability of deferred tax assets, management considers whether some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of existing temporary differences, projected future taxable income and tax planning strategies in making this assessment.

The Company's accounting policy with respect to interest and penalties arising from income tax settlements is to recognize them as part of the provision for income taxes.

Comprehensive Income (Loss)

Total comprehensive income (loss) was comprised solely of net income (loss) for all periods presented.

Earnings (Loss) per Share

Basic earnings (loss) per share is calculated by dividing net income (loss) attributable to common shareholders by the weighted-average number of shares outstanding. Except where the result would be antidilutive to income from continuing operations, diluted earnings (loss) per share is calculated by assuming the vesting of unvested restricted stock and the exercise of stock options and warrants and unrecognized compensation costs.

Share-Based Payments

The Company recognizes compensation cost for all share-based payments issued, modified, repurchased or canceled. Depending on the nature of the vesting provisions, restricted stock awards are measured using either the fair value on the grant date or the fair value of common stock on the date the vesting provisions lapse. Prior to the lapse for those equity grants not valued on the grant date, the fair value is measured on the last day of the reporting period.

Collaborative Agreements

The Company is a party to several collaborative arrangements with certain research institutions to identify and pursue promising preclinical pharmaceutical product candidates. The Company has determined these collaborative agreements do not meet the criteria for accounting under Accounting Standards Codification 808, Collaborative Agreements. The agreements do not specifically designate each party's rights and obligations to each other under the collaborative arrangements. Except for patent defense costs, expenses incurred by one party are not required to be reimbursed by the other party. The funding for these programs is generally provided through private sector investments or federal Small Business Administration ("SBIR/STTR") grant programs. Expenses incurred under these collaborative agreements are included in research and development expenses in the consolidated statements of operations. Funding received from private sector investments and grants are recorded as net revenues in the consolidated statements of operations.

Reclassification of prior period amounts

The Company has made certain reclassifications to prior period amounts to conform to the current-year presentation of the reporting of research and development expense and general and administrative expense on the consolidated statements of operations. Certain costs and expenses related to research and development were previously reported as general and administrative expenses on the consolidated statements of operations. These reclassifications have no effect on the reported operating loss or equity for the years ended December 31, 2018 and 2017.

Recent Accounting Guidance

Recent Adopted Accounting Pronouncements

In May 2014, the FASB issued amended guidance in the form of ASU No. 2014-09, “Revenue from Contracts with Customers” (“ASC 606”). The core principle of the new guidance is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. The new guidance defines a five-step process to achieve this core principle and, in doing so, additional judgments and estimates may be required within the revenue recognition process. The new standard replaced most of the existing revenue recognition standards in U.S. GAAP when it became effective. In July 2015, the FASB issued a one-year deferral of the adoption date, which extended the effective date for us to January 1, 2018, at which point Cumberland adopted the standard.

The Company evaluated its revenues and the new guidance had immaterial impacts to recognition practices upon adoption on January 1, 2018. As part of the adoption, the Company elected to apply the new guidance on a modified retrospective basis. The Company did not record a cumulative effect adjustment to historical retained earnings for initially applying the new guidance as no revenue recognition differences were identified in the timing or amount of revenue.

In February 2016, the Financial Accounting Standards Board ("FASB") issued guidance in the form of a FASB Accounting Standards Update ("ASU") No. 2016-02, “Leases.” The new standard establishes a right-of-use (“ROU”) model that requires a lessee to record an ROU asset and a lease liability on the balance sheet for all leases with terms longer than twelve months. Leases will be classified as either finance (formerly "capital leases") or

operating, with classification affecting the pattern of expense recognition in the income statement. The standard provides for a modified retrospective transition approach for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain optional practical expedients. In July 2018, the FASB issued ASU 2018-11, "Leases: Targeted Improvements", allowing for an alternative transition method (the effective date approach). It allows an entity to initially apply the new lease guidance at the adoption date (rather than at the beginning of the earliest period presented). Cumberland adopted the lease guidance effective January 1, 2019 using the package of transition practical expedients. This allowed the Company to retain the lease classification for any leases existing prior to adoption, in addition to other benefits. See additional discussion of the impact of adopting the lease accounting guidance in Note 15.

Recent Accounting Pronouncements - Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13, “Financial Instruments-Credit Losses,” which changes the impairment model for most financial assets and certain other instruments. For trade and other receivables, held-to-maturity debt securities, loans and other instruments, companies will be required to use a new forward-looking “expected loss” model that generally will result in the earlier recognition of allowances for losses. For available-for-sale debt securities with unrealized losses, companies will measure credit losses in a manner similar to what they do today, except that the losses will be recognized as allowances rather than as reductions in the amortized cost of the securities. Companies will have to disclose more information, including the information they use to track credit quality by year of origination for most financing receivables. Companies will apply the standard’s provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. This standard is effective for the Company on January 1, 2020. The Company continues to evaluate this new standard on its trade and other receivables but does not expect a material impact on its consolidated financial statements.

In May 2019, the FASB issued ASU 2019-05, "Financial Instruments-Credit Losses (Topic 326): Targeted Transition Relief" which provides transition relief for ASU 2016-13 by providing entities with an alternative to irrevocably elect the fair value option for eligible financial assets measured at amortized cost upon adoption of the new credit losses standard. Certain eligibility requirements must be met, the election must be applied on an instrument-by-instrument basis, and the election is not available for either available-for-sale or held-to-maturity debt securities. The effective date is the same as ASU 2016-13, January 1, 2020. The Company continues to evaluate this new standard but does not expect a material impact on its consolidated financial statements.

In November 2018, the FASB issued ASU No. 2018-18, “Collaboration Arrangements: Clarifying the Interaction between Topic 808 and Topic 606” (ASU 2018-18). The issuance of ASU 2014-09 raised questions about the interaction between the guidance on collaborative arrangements and revenue recognition. ASU 2018-18 addresses this uncertainty by (1) clarifying that certain transactions between collaborative arrangement participants should be accounted for as revenue under ASU 2014-09 when the collaboration arrangement participant is a customer, (2) adding unit of account guidance to assess whether the collaboration arrangement or a part of the arrangement is with a customer and (3) precluding a company from presenting transactions with collaboration arrangement participants that are not directly related to sales to third parties together with revenue from contracts with customers. The new standard will be effective for the Company on January 1, 2020. The Company continues to evaluate this new standard but does not expect a material impact on its consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04, “Simplifying the Test for Goodwill Impairment” (ASU 2017-04). The guidance removes Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. As a result of the revised guidance, a goodwill impairment will be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. The new standard will be effective for the Company on January 1, 2020. The Company continues to evaluate this new standard but does not expect a material impact on its consolidated financial statements and related disclosures.

(3) Omeclamox®-Pak, RediTrex® and Vibativ®

Omeclamox-Pak

In December 2018, Cumberland completed an agreement with Gasto-enterlogics Inc. ("GEL") to acquire the remaining product rights associated with Omeclamox-Pak including the product's FDA-approved New Drug Application and the domestic and international trademarks. As part of the transaction, which was accounted for as an asset acquisition, Cumberland paid $2.3 million during 2018 and ended Cumberland's payments of royalties and manufacturing fees to GEL. The Company has now assumed responsibility for the maintenance of the product's FDA approval and for the oversight of the product's manufacturing and packaging.

This agreement follows the November 2015 agreement between Cumberland and GEL to assume the remaining commercial rights to Omeclamox-Pak for the United States. The Company had previously signed an agreement with Pernix Therapeutics ("Pernix") to jointly commercialize the product in the United States in October 2013. As part of the November 2015 GEL Agreement, Cumberland and Pernix terminated their arrangements.

The $4.0 million upfront payment that the Company paid in October 2013 to Pernix along with the payments made to GEL during 2018 are included in product and license rights and are being amortized over the remaining expected useful life of the acquired asset. The Company evaluated the remaining expected useful life and maintained the existing estimated life of the product, June 2032. Omeclamox-Pak contributed $0.8 million, $0.6 million, and $1.8 million in net revenues during 2019, 2018, and 2017, respectively.

RediTrex

In November 2016, the Company announced an Agreement to acquire the exclusive U.S. rights to Nordic Group B.V.'s ("Nordic") injectable methotrexate product line as an asset purchase. The products are designed for the treatment of active rheumatoid arthritis, juvenile idiopathic arthritis, severe psoriatic arthritis, and severe disabling psoriasis.

Under the terms of the Agreement, Cumberland is responsible for the products' FDA submission and registration. As consideration for the license, at closing, Cumberland paid a deposit of $100,000. The Company also recorded a liability of $0.9 million that will be settled through 180,000 unvested restricted shares of Cumberland common stock that vest upon the FDA approval of the first Nordic product. Cumberland also agreed to provide Nordic a series of payments tied to the products' FDA approval, launch and achievement of certain sales milestones. Nordic is responsible for manufacturing and supply of the products.

On November 27, 2019, Cumberland received FDA approval of the pre-filled syringe. The 180,000 shares of restricted Cumberland common stock vested and were valued at $0.9 million on the vesting date. In addition, the FDA approval resulted in an additional $1.0 million liability to Nordic that will be paid during 2020. The value of the then unvested restricted Cumberland common stock shares was a liability of $1.1 million at December 31, 2018.

Vibativ

During November 2018, the Company closed on an agreement with Theravance Biopharma ("Theravance") to acquire the global responsibility for Vibativ including the marketing, distribution, manufacturing and regulatory activities associated with the brand. Vibativ is a patented, FDA approved injectable anti-infective for the treatment of certain serious bacterial infections including hospital-acquired and ventilator-associated bacterial pneumonia and complicated skin and skin structure infections. It addresses a range of Gram-positive bacterial pathogens, including those that are considered difficult-to-treat and multidrug-resistant. Cumberland acquired Vibativ to further add to its product offerings, increase its net revenue and positively contribute to the Company's operating results. Cumberland expects to deduct the goodwill acquired in the acquisition for tax purposes.

Cumberland has accounted for the transaction as a business combination in accordance with ASC 805 and the product sales are included in the results of operations subsequent to the acquisition date. The Company paid an upfront payment of $20.0 million at closing and a $5.0 million cash payment during early 2019. In addition, Cumberland agreed to pay a royalty of up to 20% on future net sales of the product. The future royalty payments were required to be recognized at their acquisition-date fair value as part of the contingent consideration transferred in the business combination.

The following table summarizes the initial payments and consideration for the business combination:

Consideration:		
Cash paid at closing	$	20,000,000
Cash payment during early 2019		5,000,000
Fair value of contingent consideration - net sales royalty		9,182,000
Total consideration	$	34,182,000

The contingent consideration liability represents the future net sales royalty payments discussed above. Cumberland prepared the valuations of the contingent consideration liability and the intangible assets utilizing significant unobservable inputs. As a result, the valuations are classified as Level 3 fair value measurements. The Company will continue to evaluate the assets acquired and liabilities assumed during the measurement period.

The following table presents the changes in the Company's Level 3 contingent consideration liability that is measured at fair value on a recurring basis. The current and long-term portions of this liability are disclosed in Note 8. The contingent consideration earned and accrued in operating expenses is paid to the seller quarterly.

		Contingent consideration liability
Balance at November 12, 2018	$	9,034,000
Change in fair value of contingent consideration included in operating expenses		(40,000)
Contingent consideration earned and accrued in operating expenses		508,000
Balance at December 31, 2018		9,502,000
Adjustment to initial fair value of the contingent consideration liability		148,000
Cash payment of royalty during the period		(1,033,108)
Change in fair value of contingent consideration included in operating expenses		(804,167)
Contingent consideration earned and accrued in operating expenses		820,864
Balance at December 31, 2019	$	8,633,589

The following table summarizes the allocation of the fair values of the assets acquired as of the acquisition date for Vibativ:

Finished goods inventory	$	6,624,000
Work in process - unlabeled vials		3,970,000
Work in process - validation vials		1,827,000
Raw materials		9,129,000
Total inventory	$	21,550,000
Intellectual property amortizable intangible assets	$	11,750,000
Goodwill		882,000
Total intangibles and goodwill	$	12,632,000
Total assets acquired	$	34,182,000

The Company's contingent consideration liability is a Level 3 fair value measurement that is updated on a recurring basis at each reporting period using a valuation model. Consistent with Level 3 fair value measurements, there are significant inputs to the valuation model that are unobservable. The current portion of the contingent consideration liability is $2.4 million and the non-current portion is $6.3 million, as of December 31, 2019.

(4) Revenues

Product Revenues

The Company’s net product revenues consisted of the following for the years ended December 31:

	2019	2018	2017
Products:			
Acetadote	$ 3,824,449	$ 4,284,111	$ 6,576,720
Omeclamox-Pak	837,829	623,297	1,761,868
Kristalose	12,895,120	12,055,625	11,455,805
Vaprisol	936,615	1,763,874	1,576,222
Caldolor	5,222,282	5,001,997	4,178,443
Vibativ	8,691,550	5,075,057	—
Total net product revenues	$ 32,407,845	$ 28,803,961	$ 25,549,058

Other Revenues

During 2019, Cumberland executed a License and Distribution agreement with HongKong WinHealth Pharma Group Co. Limited (“WinHealth”) for our Caldolor and Acetadote brands in China and Hong Kong. In conjunction with these new arrangements, the Company terminated a previous License and Distribution agreement with Gloria Pharmaceuticals Co ("Gloria Pharmaceuticals") for the two brands. In addition, we also signed a new License and Distribution agreement with DB Pharm Korea Co., Ltd. (“DB Pharm”) for Vibativ in South Korea. As a result of these agreements, Cumberland recognized approximately $0.3 million of non-refundable up-front payments as other revenue in the consolidated statement of operations during 2019.

The Company has entered into agreements, beginning in 2012, with international partners for commercialization of the Company's products. The international agreements provide that each of the partners are responsible for seeking regulatory approvals for the products, and following approvals, each partner will handle ongoing

distribution and sales in the respective international territories. The Company maintains responsibility for the intellectual property and product formulations. Under the international agreements, the Company is entitled to receive non-refundable up-front payments at the time the agreements are entered into and payments upon the partners' achievement of defined regulatory approvals and sales milestones. The Company will recognize revenue for these achievements once it is probable that these consideration amounts are no longer constrained. The Company is also entitled to receive royalties on future sales of the products under the agreements. The international agreements provide for $1.0 million in non-refundable up-front payments, milestone payments of up to $2.2 million related to regulatory approvals and up to $4.8 million in payments related to product sales. From 2012 through December 31, 2019, the Company has recognized a cumulative $1.2 million in upfront payments as other revenue and has recognized $0.1 million in revenue related to the milestone payments associated with these international agreements.

Other revenues during 2019, 2018 and 2017 also includes revenue generated by CET through grant funding from federal Small Business grant programs, and lease income generated by CET's Life Sciences Center and contract services. The Life Sciences Center is a research center that provides scientists with access to flexible lab space and other resources to develop biomedical products. Grant revenue from SBIR/STTR programs totaled approximately $1.3 million, $0.1 million, and $0.2 million for the years ending December 31, 2019, 2018 and 2017, respectively.

(5) Inventories

The Company's net inventories consisted of the following as of December 31:

	2019	2018
Raw materials and work in process	$ 19,345,723	$ 18,378,450
Consigned inventory	416,468	937,006
Finished goods, net of reserve	4,664,055	6,216,965
Total inventories	24,426,246	25,532,421
less non-current inventories	(15,554,992)	(15,749,000)
Total inventories classified as current	$ 8,871,254	$ 9,783,421

The Company continually evaluates inventories for potential losses due to expired, short-dated or slow-moving inventory by comparing sales history and sales projections to the inventory on hand. When evidence indicates the carrying value of a product may not be recoverable, a charge is recorded to reduce the inventory to its current net realizable value. At December 31, 2019 and 2018, the Company had recognized and maintained cumulative charges for potential obsolescence and discontinuance losses of approximately $0.1 million and $0.3 million, respectively. At December 31, 2019 there were no cumulative obsolescence or discontinuance losses necessary.

In connection with the acquisition of certain product rights related to the Kristalose brand, the Company is responsible for the purchase of the active pharmaceutical ingredient ("API") for Kristalose and maintains the inventory at the third-party packagers. As the API is consumed in production, the value of the API is transferred from raw materials to finished goods. API for the Company's Vaprisol brand is also included in the raw materials inventory total at December 31, 2019 and 2018. Consigned inventory represents Authorized Generic inventory stored with Perrigo until shipment.

As part of the Vibativ acquisition, Cumberland acquired API and work in process inventories of $15.7 million that are classified as non-current inventories at December 31, 2018. At December 31, 2019, the Vibativ non-current inventory was $15.3 million. Although the Company did not have any finished goods included in the non-current inventories at December 31, 2019, we had $0.8 million in Vibativ finished goods included at December 31, 2018. During 2019, Cumberland also obtained $0.3 million in non-current inventory for API related to its ifetroban clinical initiatives.

(6) Property and Equipment

Property and equipment consisted of the following at December 31:

	Range of useful lives	2019	2018
Computer equipment	3 – 5 years	$ 1,260,630	$ 1,148,140
Office equipment	3 – 15 years	878,350	809,153
Furniture and fixtures	5 – 15 years	646,505	639,267
Leasehold improvements	3 – 15 years, or remaining lease term	1,356,640	1,299,363
Total property and equipment, gross		4,142,125	3,895,923
Less: accumulated depreciation and amortization		(3,394,329)	(3,124,710)
Total property and equipment, net		$ 747,796	$ 771,213

Depreciation expense, including amortization expense related to leasehold improvements, is included in general and administrative expense in the consolidated statements of operations. Depreciation expense was as follows for the years ended December 31:

	2019	2018	2017
Depreciation expense	$ 269,619	$ 213,237	$ 211,532

(7) Intangible Assets and Goodwill

Intangible assets and Goodwill consisted of the following at December 31:

	2019	2018
Product and license rights	$ 37,400,742	$ 36,573,941
Less: accumulated amortization	(11,499,141)	(8,405,188)
Total product and license rights	25,901,601	28,168,753
Patents	9,882,511	9,428,266
Less: accumulated amortization	(5,127,878)	(4,087,273)
Total patents	4,754,633	5,340,993
Trademarks	273,110	154,373
Less: accumulated amortization	(9,020)	(9,020)
Total trademarks	264,090	145,353
Total intangible assets	$ 30,920,324	$ 33,655,099
Goodwill	$ 882,000	$ 784,000

During 2013, the Company entered into an agreement with Pernix to distribute and promote the branded prescription product Omeclamox-Pak. The $4.0 million upfront payment the Company paid to Pernix during October 2013 and the $2.3 million payments made to GEL during 2018 (discussed more fully in Note 3) are included in product and license rights and are being amortized through June 2032, the remaining expected useful life of the acquired asset.

During 2014, the Company acquired the rights of the branded prescription product Vaprisol from Astellas. The intangible asset value is $3.0 million and is included in product and license rights. The asset is being amortized through February 2022, the remaining expected useful life of the acquired asset, which coincides with the life of the primary intellectual property asset.

As discussed in Note 3, in November 2016, the Company acquired the U.S. rights to Nordic Group B.V.'s injectable methotrexate product line as an asset purchase. The agreement requires the Company to provide unvested restricted shares of Cumberland common stock and make a series of payments tied to the products' FDA approval, launch and achievement of certain sales milestones. The payments are being treated as consideration for the assets acquired and are being capitalized and amortized over the expected useful life of the acquired asset. To date, the intangible assets related to the product include the $100,000 deposit paid at closing, the 180,000 restricted shares valued at $0.9 million that vested upon the November 2019 FDA approval and the additional $1.0 million owed to Nordic during 2020, also based on the FDA approval.

As discussed in Note 3, during November 2018, the Company acquired Vibativ from Theravance. This resulted in amortizable intangible assets related to the product rights of $11.8 million and goodwill of $0.9 million. The intangible assets are being amortized through November 2028, the expected useful life of the acquired asset. The $0.1 million increase in goodwill during 2019 was a result of changes in the purchase price allocation during the measurement period.

During 2019 and 2018, the Company recorded an additional $0.7 million and $0.4 million, respectively, in intangible assets for patents, trademarks and capitalized patent costs, including amounts incurred in the protection of the Company's intellectual property. These costs will be amortized over the remaining expected useful life of the associated patents.

Amortization expense related to product and license rights, trademarks and patents were as follows for the years ended December 31:

	2019	2018	2017
Amortization expense	$ 4,134,557	$ 2,769,466	$ 2,436,222

The expected amortization expense for the Company's current balance of intangible assets are as follows:

Year ending December 31:	
2020	$ 4,286,336
2021	4,084,702
2022	3,530,879
2023	3,743,526
2024 and thereafter	15,274,881
	$ 30,920,324

(8) Other Current and Other Long-term Liabilities

Other current liabilities consisted of the following at December 31:

Other current liabilities	2019	2018
Rebates, product returns, administrative fees and service fees	$ 4,593,167	$ 4,969,515
Employee wages and benefits	1,295,905	1,263,426
Stock payable	—	1,085,400
Current portion of accrued contingent consideration	2,374,776	2,290,000
Deferred acquisition liability	—	5,000,000
Accrued inventory purchases	829,047	434,405
Accrued payment for asset purchase	1,000,000	—
Other	991,974	1,001,724
Total other current liabilities	$ 11,084,869	$ 16,044,470

Other long-term liabilities	2019	2018
Noncurrent portion of accrued contingent consideration	$ 6,258,813	$ 7,212,000
Deferred compensation	2,278,164	1,588,123
Other	200,346	519,020
Total other long-term liabilities	$ 8,737,323	$ 9,319,143

(9) Debt

On May 10, 2019, the Company entered into a third amendment ("Third Amendment") to the Revolving Credit Loan Agreement, dated July 28, 2017, with Pinnacle Bank ("Pinnacle Agreement"). The Third Amendment extended the term of the Pinnacle Agreement through July 31, 2021 as well as modified certain definitions and terms of the existing financial covenants, including the definition of the Funded Debt Ratio and the compliance target of the Tangible Capital Ratio. Both Third Amendment modifications were related to the Vibativ transaction. Under the Pinnacle Agreement, Cumberland was initially subject to one financial covenant, the maintenance of a Funded Debt Ratio, as such term is defined in the agreement and determined on a quarterly basis. On August 14, 2018, the Company amended the Pinnacle Agreement ("First Amendment") to replace the single financial covenant with the maintenance of either the Funded Debt Ratio or a Tangible Capital Ratio, as defined in the First Amendment. The Company achieved compliance with the Tangible Capital Ratio financial covenant as of December 31, 2019.

The initial revolving line of credit under the Pinnacle Agreement was for up to an aggregate principal amount of $12.0 million with the ability to increase the principal amount available for borrowing up to $20.0 million, upon the satisfaction of certain conditions. On October 17, 2018, the Company entered into a second amendment ("Second Amendment") which increased the maximum aggregate principal available for borrowing under the Pinnacle Agreement to $20.0 million.

The Company had $18.5 million in borrowings under the Pinnacle Agreement at December 31, 2019 and $20.0 million at December 31, 2018.

The interest rate on the Pinnacle Agreement is based on LIBOR plus an interest rate spread. There is no LIBOR minimum and the LIBOR pricing provides for an interest rate spread of 1.75% to 2.75% (representing an interest rate of 4.5% at December 31, 2019). In addition, a fee of 0.25% per year is charged on the unused line of credit. Interest and the unused line fee are payable quarterly. Borrowings under the line of credit are collateralized by substantially all of our assets.

(10) Shareholders' Equity

(a) Initial Public Offering

On August 10, 2009, the Company completed its initial public offering of 5,000,000 shares of common stock at a price of $17.00 per share, raising gross proceeds of $85.0 million. After deducting underwriting discounts of approximately $6.0 million and offering costs incurred of approximately $4.2 million, the net proceeds to the Company were approximately $74.8 million. Contemporaneously with the offering, each outstanding share of preferred stock was automatically converted into two million shares of common stock.

(b) Preferred Stock

The Company is authorized to issue 20,000,000 shares of preferred stock. The Board of Directors is authorized to divide these shares into classes or series, and to fix and determine the relative rights, preferences, qualifications and limitations of the shares of any class or series so established. At December 31, 2019 and 2018, there was no preferred stock outstanding.

(c) Common Stock

During 2019, 2018 and 2017, the Company issued 225,536 shares, 170,759 shares, and 146,275 shares of common stock, respectively, as a result of restricted shares vesting as well as other common share issuances. Cumberland issued 3,409 common shares under option exercise transactions during 2016. There were no option exercise transactions during 2019, 2018 and 2017.

In January 2018, the Company's Form S-3 or Shelf Registration associated with the sale of up to $100 million in corporate securities was declared effective. The Shelf Registration also included an At-the-Market ("ATM") feature enabling the Company to sell common shares at market prices, along with an agreement with B. Riley FBR to support such a placement of shares.

(d) Warrants

In 2006, the Company signed a new line of credit agreement along with a term loan agreement with a financial institution. In conjunction with these agreements, the Company issued warrants to purchase up to 3,958 shares of common stock at $9.00 per share within 10 years of issuance. All of these warrants expired during 2017.

In connection with the amendment to the debt agreements in 2009, the Company issued warrants to purchase up to 7,500 shares of common stock at $17.00 per share that expired in July 2019. As of December 31, 2019, there were no outstanding warrants.

(e) Share Repurchases

The Company currently has a share repurchase program to repurchase up to $10 million of its common stock pursuant to Rule 10b-18 of the Securities Act. In January 2019, the Company's Board of Directors established the current $10 million repurchase program to replace the prior authorizations. The Company repurchased 623,478 shares, 443,041 shares and 547,376 shares of common stock for approximately $3.5 million, $2.9 million, and $3.7 million during the years ended December 31, 2019, 2018 and 2017, respectively. There remains $8.0 million available under the current repurchase program available for share repurchases at December 31, 2019.

(f) Cumberland Emerging Technologies

In April 2019, Cumberland Emerging Technologies ("CET"), our majority-owned subsidiary, entered into an agreement with WinHealth whereby WinHealth made a $1 million investment through the purchase of shares of CET stock. As part of the agreement, WinHealth obtained a Board position at CET and the first opportunity to license CET products for the Chinese market. In connection with WinHealth’s investment in CET, the Company also made an additional $1 million investment in CET. Cumberland purchased additional CET shares through contribution of $0.3 million in cash and a conversion of $0.7 million in intercompany loans payable. Upon completion of the additional investment by WinHealth and Cumberland, Gloria Pharmaceuticals agreed to return its shares in CET in exchange for consideration of $0.8 million. After the additional investment, the Company’s ownership in CET is 85%. As CET is a consolidated subsidiary, the Company reports the operating results of CET and allocates the noncontrolling interests to the non-majority partners.

(g) Cumberland Foundation

In December 2017, the Company formed the Cumberland Pharma Foundation (the "Foundation") to serve as a vehicle to facilitate the ongoing philanthropic endeavors of Cumberland Pharmaceuticals Inc.

The Foundation was formed as a nonprofit corporation designed to qualify as a tax-exempt organization pursuant to Section 501(a) of the Internal Revenue Code. The Foundation’s Board of Directors is comprised of Cumberland Pharmaceuticals executives who are responsible for overseeing the Foundation’s ongoing activities including charitable contributions.

In 2018, Cumberland provided a grant of 50,000 shares of the Company's common stock to the Foundation. The shares will address the ongoing financial needs of the organization, with most of the shares expected to be held for the opportunity to realize long term appreciation to support the Foundation’s future. The Foundation maintains separate financial statements and its ongoing operations will not impact the financial statements of Cumberland Pharmaceuticals. Initial annual grants by the Foundation have been and are expected to remain consistent with the historic level of contributions made by Cumberland Pharmaceuticals. During 2019, Cumberland Pharmaceuticals committed approximately $50,000 in cash contributions to be paid to the Foundation during 2020.

(h) ***Nordic Group B.V.***

On November 27, 2019, Cumberland received approval from the FDA for the pre-filled syringe of the Methotrexate product. With this approval, Nordic's 180,000 shares of Cumberland's common stock became vested. The value of these shares at the date of approval was $0.9 million.

(11) Earnings (Loss) Per Share

The following table shows the computation of the numerator and the denominator used to calculate diluted earnings (loss) per share for the years ended December 31:

	2019	2018	2017
Numerator:			
Net income (loss) from continuing operations	$ (9,211,688)	$ (10,820,996)	$ (12,847,840)
Discontinued operations	5,665,177	3,782,224	4,798,025
Net income (loss)	(3,546,511)	(7,038,772)	(8,049,815)
Net loss at subsidiary attributable to noncontrolling interests	8,752	75,704	71,182
Net income (loss) attributable to common shareholders	$ (3,537,759)	$ (6,963,068)	$ (7,978,633)
Denominator:			
Weighted-average shares outstanding – basic	15,396,098	15,614,052	15,911,577
Dilutive effect of restricted stock and stock options	—	—	—
Weighted-average shares outstanding – diluted	15,396,098	15,614,052	15,911,577

The Company's anti-dilutive restricted shares and stock options outstanding were as follows for the years ended December 31:

	2019	2018	2017
Anti-dilutive shares and options	4,000	41,650	18,325

(12) Income Taxes

The components of the Company's net deferred tax assets at December 31 are as follows:

	2019	2018
Deferred Tax Assets		
Net operating loss and tax credits	$ 16,964,685	$ 16,410,403
Property and equipment and intangibles	227,072	236,318
Allowance for accounts receivable	257,564	251,068
Reserve for expired product	469,466	558,484
Inventory	35,227	193,150
Deferred charges	845,765	910,577
Cumulative compensation costs incurred on deductible equity awards	1,047,149	884,049
Total deferred tax assets	19,846,928	19,444,049
Deferred Tax Liabilities		
Intangible assets	(1,313,965)	(1,974,787)
Net deferred tax assets, before valuation allowance	18,532,963	17,469,262
Less: deferred tax asset valuation allowance	(18,511,161)	(17,382,052)
Net deferred tax assets	$ 21,802	$ 87,210

The following table summarizes the amount and year of expiration of the Company's federal and state net operating loss carryforwards as of December 31, 2019:

Years of expiration	Federal	State
2020	$ —	$ 13,115
2021 - 2029	—	49,392,824
2030	44,153,819	461,280
2031 - 2039	7,534,351	9,947,070
Indefinite Period	5,493,258	383,869
Total federal and state net operating loss carryforwards	$ 57,181,428	$ 60,198,158

Income tax (expense) benefit includes the following components for the years ended December 31:

	2019	2018	2017
Current:			
Federal	$ 65,408	$ —	$ —
State and other	79,316	(16,636)	(59,243)
Total current income tax (expense) benefit	144,724	(16,636)	(59,243)
Deferred:			
Federal	(65,408)	—	(3,682,772)
State	—	—	(432,874)
Total deferred income tax (expense) benefit	(65,408)	—	(4,115,646)
Total income tax (expense) benefit	$ 79,316	$ (16,636)	$ (4,174,889)

The Company's effective income tax rate for 2019, 2018 and 2017 reconciles with the federal statutory tax rate as follows:

	2019	2018	2017
Federal tax expense at statutory rate	21 %	21 %	34 %
State income tax expense (net of federal income tax benefit)	4 %	4 %	4 %
Permanent differences associated with general business credits	7 %	1 %	1 %
Change in valuation allowance	(31)%	(25)%	(148)%
Change in tax rate	— %	— %	2 %
Other permanent differences	1 %	(1)%	1 %
Other	— %	— %	(2)%
Net income tax expense	2 %	— %	(108)%

In 2017, the Company determined that it was not more likely than not that its net deferred tax assets would be realized. As such, the Company's income tax provision for the year ended December 31, 2017 reflected a full valuation allowance against net deferred tax assets with the exception of the deferred tax asset for alternative minimum tax ("AMT") credit carryforwards discussed further below. The Company's position is unchanged as of both December 31, 2018 and December 31, 2019.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act ("the Tax Act"). The Tax Act makes broad and complex changes to the U.S. tax code, including, but not limited to, (1) reducing the U.S. federal corporate tax rate to 21%; (2) eliminating the corporate alternative minimum tax ("AMT") and changing how AMT credits can be realized; (3) capital expensing; and (4) creating new limitations on deductible interest expense and executive compensation.

In connection with our analysis of the impact of the Tax Act, we recorded a net tax benefit of $0.1 million in the period ended December 31, 2017. This net tax benefit consisted entirely of the release of the valuation allowance against AMT credits that will be realizable under the Tax Act in future periods.

The Company expects it will continue to pay minimal taxes in future periods through the continued utilization of net operating loss carryforwards, as it is able to achieve taxable income through its operations.

The Company is no longer subject to U.S. federal tax examinations for tax years before 2016, and with few exceptions, the Company is not subject to examination by state tax authorities for tax years which ended before 2016. Loss carryforwards and credit carryforwards generated or utilized in years earlier than 2016 remain subject to examination and adjustment. During 2012, the 2009 federal tax return was examined by the Internal Revenue Service with no significant findings or adjustments. The Company has no unrecognized tax benefits in 2019, 2018 and 2017.

(13) Stock-Based Compensation Plans

The Company has grants outstanding under three equity compensation plans, with two of the plans available for future grants of equity compensation awards to employees, consultants and directors. All of the equity plans were approved by shareholders. The 2007 Long-Term Incentive Compensation Plan (the "2007 Plan") and the 2007 Directors' Incentive Plan (the "Directors' Plan") superseded the 1999 Stock Option Plan. The 2007 Plan and the Directors' Plan provide for the issuance of stock options, stock appreciation rights and restricted stock. Vesting is determined on a grant-by-grant basis in accordance with the terms of the plans and the related grant agreements. The Company has reserved 2.4 million shares of common stock for issuance under the 2007 Plan and 250,000 shares for issuance under the Directors' Plan.

The exercise price of stock options is generally 100% of the fair market value of the underlying common stock on the grant date. The maximum contractual term of stock options is ten years from the date of grant, except for incentive stock options granted to 10% shareholders, which is five years.

During 2011, the Company began issuing shares of restricted stock with no exercise price to employees and directors. Restricted stock issued to employees generally cliff-vests on the fourth anniversary of the date of grant. Restricted stock issued to directors vests on the one year anniversary of the date of grant.

Stock compensation expense is presented as a component of general and administrative expense in the consolidated statements of operations. Stock compensation expense consisted of the following for the years ended December 31:

	2019	2018	2017
Share-based compensation - employees	$ 1,481,016	$ 1,244,606	$ 1,032,094
Share-based compensation - nonemployees	4,882	120,092	82,969
Share-based compensation - foundation contribution	—	$ —	372,500
Total share-based compensation	$ 1,485,898	$ 1,364,698	$ 1,487,563

At December 31, 2019, there was approximately $2.1 million of unrecognized compensation cost related to share-based payments, which is expected to be recognized over a weighted-average period of 2.5 years. This amount relates primarily to unrecognized compensation cost for employee restricted stock awards.

Stock Options

Stock option activity for 2019 and 2018 was as follows:

	Number of shares	Weighted-average exercise price per share	Weighted-average remaining contractual term (years)	Aggregate intrinsic value
Outstanding, December 31, 2017	5,800	$ 13.00	1.9	$ —
Options granted	—	—		
Options exercised	—	—		
Options forfeited or expired	—	—		
Outstanding, December 31, 2018	5,800	13.00	0.9	—
Options granted	—	—		
Options exercised	—	—		
Options forfeited or expired	(5,800)	13.00		
Outstanding, December 31, 2019	—	—	0	—
Exercisable at December 31, 2019	—	$ —	0	$ —

The Company did not grant any stock options and there were no options exercised during 2019, 2018 and 2017. Information related to the stock option plans during 2019, 2018 and 2017 was as follows:

	2019	2018	2017
Intrinsic value of options exercised	$ —	$ —	$ —
Weighted-average fair value of options exercised	$ —	$ —	$ —

Restricted Stock Awards

Restricted stock activity was as follows:

	Number of shares	Weighted-average grant-date fair value
Nonvested, December 31, 2017	767,845	$ 5.61
Shares granted	261,680	6.66
Shares vested	(170,759)	4.79
Shares forfeited	(25,025)	6.19
Nonvested, December 31, 2018	833,741	6.09
Shares granted	229,669	5.95
Shares vested	(225,536)	6.71
Shares forfeited	(22,925)	6.20
Nonvested, December 31, 2019	814,949	$ 5.88

The fair value of restricted stock granted was based on the closing market price of the Company's common stock on the date of grant. The restricted stock grants are included in the diluted weighted shares outstanding computation until they cliff-vest. Once vested they are included in the basic weighted shares outstanding computation.

(14) Employee Benefit Plans

The Company sponsors an employee benefit plan that was established on January 1, 2006, the Cumberland Pharmaceuticals 401(k) Plan (the "Plan"), under Section 401(k) of the Internal Revenue Code of 1986, as amended, for the benefit of all employees over the age of 21, having been employed by the Company for at least six months. The Plan provides that participants may contribute up to the maximum amount of their compensation as set forth by the Internal Revenue Service each year. Employee contributions are invested in various investment funds based upon elections made by the employees. During 2019, 2018 and 2017, the Company contributed approximately $50,000 in each year to the Plan as an employer match of participant contributions.

In 2012 and 2013, the Company established non-qualified unfunded deferred compensation plans that allow participants to defer receipt of a portion of their compensation. The liability under the plans, reflected in other long term liabilities in the consolidated balance sheet, was $2.3 million and $1.6 million as of December 31, 2019 and 2018, respectively. The Company had assets consisting of company-owned life insurance contracts generally designated to pay benefits of the deferred compensation plans reflected in other assets in the consolidated balance sheet of $3.1 million and $2.3 million as of December 31, 2019 and 2018, respectively.

(15) Leases

The Company is obligated under long-term real estate leases for corporate office space that was extended during the third quarter of 2015. Prior to this extension, the lease would have expired in October 2016, the lease is now set to expire in October 2022. In addition, the research lab space at CET, under an agreement amended in July 2012, is leased through April 2023, with an option to extend the lease through April 2028. The Company also subleases a portion of the space under these leases.

Rent expense is recognized over the expected term of the lease, including renewal option periods, if applicable, on a straight-line basis as a component of general and administrative expense. Rent expense and sublease income as follows for the years ended December 31:

	2019	2018	2017
Rent expense	$ 1,246,143	$ 1,136,610	$ 1,074,437
Sublease income	$ 688,020	$ 662,358	$ 573,494

In March 2016, the FASB issued ASU 2016-02. ASU 2016-02's core principle is to increase transparency and comparability among organizations by recognizing lease assets and liabilities on the balance sheet and disclosing key information. The Company adopted ASU 2016-02 under the alternative transition method (the effective date approach). It allowed the Company to initially apply the new lease guidance at the adoption date (rather than at the beginning of the earliest period presented). Prior periods have not been adjusted.

The primary effect of adopting ASU 2016-02 to the Company was to record right-of-use assets and obligations for the leases currently classified as operating leases. The Company's significant operating leases include the lease of approximately 25,500 square feet of office space in Nashville, Tennessee for its corporate headquarters. This lease currently expires in October 2022. The operating leases also include the lease of approximately 14,200 square feet of wet laboratory and office space in Nashville, Tennessee by Cumberland Emerging Technologies ("CET"),

our majority-owned subsidiary, where it operates the CET Life Sciences Center. This lease currently expires in April 2023. The Company did not have any leases classified as finance leases at January 1, 2019 or December 31, 2019. The new lease accounting standard did not have a significant impact on the Company's Condensed Consolidated Statements of Operations and Comprehensive Income (Loss) for any period presented.

The Company elected the package of practical expedients offered in the transition guidance which allows management not to reassess lease identification, lease classification and initial direct costs at the adoption date.

These operating leases resulted in initial ROU assets of $3.6 million and lease liabilities of $3.8 million as of January 1, 2019 for non-cancelable operating leases with original lease terms in excess of one year.

Operating lease liabilities were recorded as the present value of remaining lease payments not yet paid for the lease term discounted using the incremental borrowing rate associated with each lease. Operating lease right-of-use assets represent operating lease liabilities adjusted for lease incentives and initial direct costs. As the Company’s leases do not contain implicit borrowing rates, the incremental borrowing rates were calculated based on information available at January 1, 2019. Incremental borrowing rates reflect the Company’s estimated interest rates for collateralized borrowings over similar lease terms. The weighted-average remaining lease term is 3.4 years and the weighted-average incremental borrowing rate used to discount the present value of the remaining lease payments is 7.42%.

Lease Position

At December 31, 2019, the Company recorded the following on the Condensed Consolidated Balance Sheet:

Right-of-Use Assets	Balance Sheet Classification	December 31, 2019
Operating lease right-of-use assets	Other noncurrent assets	$ 2,960,569
Total		$ 2,960,569

Lease Liabilities	Balance Sheet Classification	December 31, 2019
Current:		
Operating lease liabilities	Other current liabilities	$ 920,431
Noncurrent:		
Operating lease liabilities	Other noncurrent liabilities	2,076,472
Total		$ 2,996,903

Cumulative future minimum sublease income under non-cancelable operating subleases totals approximately $0.7 million and will be paid through the leases ending in October 2022 and April 2023. Future minimum lease payments under non-cancelable operating leases (with initial or remaining lease terms in excess of one year) are as follows:

As of December 31, 2019:		
2020	$	1,120,066
2021		1,144,889
2022		1,019,313
2023		92,478
After 2023		—
Total future minimum lease payments		3,376,746
Less Interest		(379,843)
Present value of lease liabilities	$	2,996,903

The Company's future minimum lease commitments, under Topic 840, predecessor to Topic 842, are as follows:

As of December 31, 2018:		
2019	$	959,902
2020		980,720
2021		1,001,603
2022		871,969
2023		44,508
After 2023		—
Total future minimum lease payments	$	3,858,702

(16) Fair Value of Financial Instruments

The Company owns marketable securities that are solely classified as trading securities as of December 31, 2019. All of these securities had a maturity date of less than ninety days and classified as cash and cash equivalents at December 31, 2019. There were no transfers of assets between levels within the fair value hierarchy. The following table summarizes the fair value of these marketable securities by level within the fair value hierarchy:

	December 31, 2019			December 31, 2018		
	Level 1	Level 2	Total	Level 1	Level 2	Total
U.S. Treasury notes and bonds	$ —	$ —	$ —	$ 5,034,955	$ —	$ 5,034,955
SBA loan pools - variable rate	—	—	—	—	2,504,551	2,504,551
Short-term cash investments	—	—	—	—	751,173	751,173
Commercial Paper	—	2,119,607	2,119,607	—	—	—
Total fair value of marketable securities	$ —	$ 2,119,607	$ 2,119,607	$ 5,034,955	$ 3,255,724	$ 8,290,679

The fair values of all other financial instruments outstanding as of December 31, 2019 and 2018 approximate their carrying values. There were no changes to the valuation techniques for the Level 2 marketable securities during 2019 or 2018.

(17) Market Concentrations

The Company is focused on the acquisition, development and commercialization of branded prescription products. The Company's principal financial instruments subject to potential concentration of credit risk are accounts receivable, which are unsecured, and cash equivalents. The Company's cash equivalents consist primarily of money market funds. Certain bank deposits may be in excess of the insurance limits provided by the Federal Deposit Insurance Corporation.

The Company's primary customers are wholesale pharmaceutical distributors in the U.S. Total revenues by customer for each customer representing 10% or more of consolidated revenues are summarized below for the years ended December 31:

	2019	2018	2017
Customer 1	31%	28%	28%
Customer 2	28%	25%	29%
Customer 3	17%	26%	21%

**: less than 10% of total*

The Company's accounts receivable, net of allowances, due from the customers representing 10% or more of consolidated revenue was 59% and 72% at December 31, 2019 and 2018, respectively.

(18) Manufacturing and Supply Agreements

The Company utilizes one or two primary suppliers to manufacture each of its products and product candidates. Although there are a limited number of manufacturers of pharmaceutical products, the Company believes it could utilize other suppliers to manufacture its prescription products on comparable terms. A change in suppliers, problems with its third-party manufacturing operations or related production capacity, or contract disputes with suppliers could cause a delay in manufacturing or shipment of finished goods and possible loss of sales, which could adversely affect operating results.

(19) Employment Agreements

The Company has entered into employment agreements with all its full-time employees. Each employment agreement provides for a salary for services performed, a potential annual bonus and, if applicable, a grant of restricted common shares pursuant to a restricted stock agreement.

(20) Discontinued Operations

In 2016, Cumberland entered into an agreement with Clinigen Group Plc ("Clinigen") for the rights and responsibilities associated with the commercialization of Ethyol in the United States. In 2017, the Company entered into another agreement with Clinigen for the rights and responsibilities associated with the commercialization of Totect in the United States. Ethyol and Totect are collectively referred to herein as the "Products."

Early in 2019, Cumberland announced a strategic review the Company's brands, capabilities, and international partners. This review followed an accelerated business development initiative, which resulted in a series of transactions. Because of that progress, Cumberland felt that it was prudent to take a fresh look at our product portfolio, partners, and organization to ensure proper focus and capabilities. During May 2019, following the strategic review, Cumberland entered into the Dissolution Agreement with Clinigen in which the Company returned the exclusive rights to commercialize Ethyol and Totect ("the Products") in the United States to Clinigen. This Dissolution Agreement originally targeted a transition from the Company's arrangements with Clinigen effective September 30, 2019, but was then amended to change the transition date to December 31, 2019. Under the terms of the Dissolution Agreement, Cumberland was no longer responsible for the distribution, marketing and promotion of

either the Products or any competing products after December 31, 2019. In exchange for the return of these product license rights and the non-compete provisions of the Dissolution Agreement, Cumberland is receiving $5 million in financial consideration paid in quarterly installments over the two-years following the transition date.

The exit from the Ethyol and Totect Products meets the accounting criteria to be reported as discontinued operations. December 31, 2019, as the transition date, was the final day Cumberland was responsible for the Products. Cumberland was responsible for the Products through December 31, 2019 and beginning on January 1, 2020, the Products' rights transitioned back to Clinigen. As a result, January 1, 2020, was the first day of discontinued operations for the Ethyol and Totect products.

The Products provided revenue, incurred direct expenses and resulted in discontinued operations income during the periods presented. The following amounts have been separated from continuing operations, as discontinued operations, for all periods presented. The direct expenses separated for discontinued operations do not reflect the direct selling and marketing costs attributable to the individuals at Cumberland responsible for promotion of the Products. Subsequent to the transaction date, those sales and marketing individuals who supported the Products shifted their efforts from the Products and continue to support other Cumberland brands.

	2019	2018	2017
Revenues	$ 13,145,344	$ 11,396,871	$ 14,827,504
Costs of products sold	1,330,704	1,361,273	1,952,575
Selling, Marketing and other	6,149,463	6,253,374	8,076,904
Income from discontinued operations	$ 5,665,177	$ 3,782,224	$ 4,798,025

The December 31, 2019 current assets associated with discontinued operations included $0.5 million in the remaining inventory for the Products sold and returned to Clinigen as part of the transaction. Except for the Products' inventory as of December 31, 2019, no other operating assets and no liabilities were transferred to Clinigen, as such the accounts receivable and accounts payable associated with discontinued operations were not sold or disposed of as part of the Dissolution Agreement. The following assets and liabilities have been presented as assets associated with discontinued operations or liabilities associated with discontinued operations, as appropriate, in the consolidated balance sheets.

	2019	2018
Accounts receivable	$ 1,922,457	$ 1,384,254
Prepaid and other current assets	—	27,721
Inventory	540,267	2,294,922
Current assets associated with discontinued operations	$ 2,462,724	$ 3,706,897

	2019	2018
Accounts payable	$ 1,918,868	$ 2,882,656
Other current liabilities	232,489	666,457
Current liabilities associated with discontinued operations	$ 2,151,357	$ 3,549,113

(21) Commitments and Contingencies

Commitments

In connection with the acquisition of certain Kristalose assets during 2011, the Company was required to make quarterly payments based on a percentage of Kristalose net sales through November 2018. The payments were treated as consideration for the assets acquired and were capitalized. They are being amortized over the remaining expected useful life of the acquired asset, currently through 2026.

In connection with its licensing agreements for Caldolor, the Company is required to pay royalties based on net sales over the life of the product. Royalty expense is recognized as a component of selling and marketing expense in the period that revenue is recognized.

In connection with its licensing agreements for Ethyol and Totect, the Company was required to pay royalties based on net sales. The royalty expense was recognized as a component of selling and marketing expense in the period the associated revenue was recognized through the end of the licensing period, December 31, 2019.

In connection with the acquisition of Vibativ, the Company is required to pay royalties based on net sales of the product. At the purchase date, Cumberland recorded the fair value of this liability and will continue to evaluate the liability each period and the royalty expense is recognized as a component of selling and marketing expense in the period that the change in fair value is recognized.

Legal Matters

Cumberland has a number of Patents issued through the United States Patent and Trademark Office (the “USPTO”) including U.S. Patent number 8,148,356 (the “356 Acetadote Patent”) which is assigned to the Company. The claims of the 356 Acetadote Patent encompass the new Acetadote formulation and include composition of matter claims. Following its issuance, the 356 Acetadote Patent was listed in the FDA Orange Book. The 356 Acetadote Patent is scheduled to expire in May 2026, which time period includes a 270-day patent term adjustment granted by the USPTO.

Since 2012, Cumberland has to continued to vigorously defend and protect its Acetadote product and related intellectual property rights including the use of all its legal options.

The Company is a party to various other legal proceedings in the ordinary course of its business. In the opinion of management, the liability associated with these matters, will not have a material adverse effect on the Company's consolidated financial position, results of operations or cash flows.

(22) Quarterly Financial Information (Unaudited)

The following table sets forth the unaudited operating results for each fiscal quarter of 2019 and 2018:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2019:					
Net revenues	$ 8,729,860	$ 9,417,443	$ 6,935,439	$ 9,305,553	$ 34,388,295
Operating income (loss)	(1,323,932)	(1,373,424)	(3,196,436)	(3,394,390)	(9,288,182)
Net income (loss) from continuing operations	(1,187,553)	(1,338,521)	(3,316,286)	(3,369,328)	(9,211,688)
Net income (loss) from discontinued operations	1,147,136	771,709	1,349,351	2,396,981	5,665,177
Net income (loss) attributable to common shareholders	(73,878)	(549,507)	(1,953,668)	(960,706)	(3,537,759)
Earnings (loss) per share attributable to common shareholders [1]					
Continuing operations - basic	$ (0.08)	$ (0.09)	$ (0.22)	$ (0.22)	$ (0.60)
Discontinued operations - basic	0.08	0.05	0.09	0.16	0.37
Basic	$ —	$ (0.04)	$ (0.13)	$ (0.06)	$ (0.23)
Continuing operations - diluted	$ (0.08)	$ (0.09)	$ (0.22)	$ (0.22)	$ (0.60)
Discontinued operations - diluted	0.08	0.05	0.09	0.16	0.37
Diluted	$ —	$ (0.04)	$ (0.13)	$ (0.06)	$ (0.23)
2018:					
Net revenues	$ 5,918,758	$ 7,084,843	$ 5,853,451	$ 10,487,842	$ 29,344,894
Operating income (loss)	(3,315,936)	(1,919,189)	(2,644,614)	(3,293,257)	(11,172,996)
Net income (loss) from continuing operations	(3,255,903)	(1,795,661)	(2,501,752)	(3,267,680)	(10,820,996)
Net income (loss) from discontinued operations	863,714	1,050,211	837,731	1,030,568	3,782,224
Net income (loss) attributable to common shareholders	(2,379,239)	(720,688)	(1,643,044)	(2,220,097)	(6,963,068)
Earnings (loss) per share attributable to common shareholders [1]					
Continuing operations - basic	$ (0.21)	$ (0.11)	$ (0.16)	$ (0.21)	$ (0.70)
Discontinued operations - basic	0.06	0.06	0.05	0.07	0.25
Basic	$ (0.15)	$ (0.05)	$ (0.11)	$ (0.14)	$ (0.45)
Continuing operations - diluted	$ (0.21)	$ (0.11)	$ (0.16)	$ (0.21)	$ (0.70)
Discontinued operations - diluted	0.06	0.06	0.05	0.07	0.25
Diluted	$ (0.15)	$ (0.05)	$ (0.11)	$ (0.14)	$ (0.45)

(1) Due to the nature of interim earnings per share calculations, the sum of the quarterly earnings (loss) per share amounts may not equal the reported earnings (loss) per share for the full year.

(23) Subsequent events

On March 11, 2020, the World Health Organization declared the outbreak of a novel coronavirus ("COVID-19") as a global pandemic, which continues to spread throughout the United States and around the world. As of March 20, 2020, the Company is aware of changes in its business as a result of COVID-19 but uncertain of the impacts of those changes on its consolidated statements of position, operations or cash flows. Management believes any disruption, when and if experienced, could be temporary; however, there is uncertainty around when any disruption might occur, the duration and hence the potential impact. As a result, we are unable to estimate the potential impact on our business as of the date of this filing.

Schedule II

CUMBERLAND PHARMACEUTICALS INC. AND SUBSIDIARIES

Valuation and Qualifying Accounts

Years ended December 31, 2019, 2018 and 2017

Description	Balance at beginning of period	Charged to costs and expenses		Charged to other accounts	Deductions		Balance at end of period
Allowance for uncollectible amounts, cash discounts, chargebacks, and credits issued for damaged products:							
For the years ended December 31:							
2017	$ 446,514	$ 3,371,446		$ —	$ (3,491,263)	(1)	$ 326,697
2018	326,697	4,610,899		—	(4,133,176)	(1)	804,420
2019	804,420	5,915,066		—	(5,927,435)	(1)	792,051
Valuation allowance for deferred tax assets:							
For the years ended December 31:							
2017	$ 388,500	$ (665,039)	(2)	$ 15,908,774	$ —		$ 15,632,235
2018	15,632,235	1,749,817		—	—		17,382,052
2019	17,382,052	1,129,109		—	—		18,511,161

(1) Composed of actual returns and credits for chargebacks and cash discounts.

(2) Amount includes $4,202,854 related to increase in the valuation allowance during the year, net of $4,867,893 related to the revaluation of deferred income tax balances for new rates under the Tax Act.