

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

For the Fiscal Year Ended December 31, 2019

Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Commission File Number: 001-36257

RETROPHIN, INC.

(Exact Name of Registrant as specified in its Charter)

Delaware

(State or other jurisdiction of incorporation or organization)

27-4842691

(I.R.S. Employer Identification No.)

3721 Valley Centre Drive, Suite 200

San Diego, CA 92130

(Address of Principal Executive Offices)

888-969-7879

(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.0001 per share	RTRX	The Nasdaq Global Market

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

Large Accelerated Filer	<input checked="" type="checkbox"/>	Accelerated Filer	<input type="checkbox"/>
Non-Accelerated Filer	<input type="checkbox"/>	Smaller Reporting Company	<input type="checkbox"/>
		Emerging growth Company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

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

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter. \$853,241,144.

The number of shares of outstanding common stock, par value \$0.0001 per share, of the registrant as of February 20, 2020 was 43,115,508.

DOCUMENTS INCORPORATED BY REFERENCE: Portions of the Proxy Statement for the registrant's Annual Meeting of Stockholders to be held May 13, 2020, to be filed within 120 days after the conclusion of the registrant's fiscal year ended December 31, 2019, are incorporated by reference into Part III of this Annual Report on Form 10-K.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Certain information contained in this Annual Report on Form 10-K of Retrophin, Inc., a Delaware corporation (the “Company”) include forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The statements herein which are not historical reflect our current expectations and projections about the Company’s future results, performance, liquidity, financial condition, prospects and opportunities and are based upon information currently available to the Company’s management and is subject to its interpretation of what are believed to be significant factors affecting the Company’s business, including many assumptions regarding future events. Such forward-looking statements include statements regarding, among other things:

- our ability to produce, sustain and expand sales of our products;
- our ability to develop, acquire and/or introduce new products;
- our projected future sales, profitability and other financial metrics;
- our future financing plans;
- our anticipated needs for working capital;
- the anticipated trends in our industry;
- acquisitions of other companies or assets that we might undertake in the future;
- our operations in the United States and abroad, and the domestic and foreign regulatory, economic and political conditions; and
- competition existing today or that will likely arise in the future.

Forward-looking statements, which involve assumptions and describe our future plans, strategies and expectations, are generally identifiable by use of the words “may,” “should,” “expect,” “anticipate,” “estimate,” “believe,” “intend,” “seek,” or “project” or the negative of these words or other variations on these words or comparable terminology. Actual results, performance, liquidity, financial condition and results of operations, prospects and opportunities could differ materially from those expressed in, or implied by, these forward-looking statements as a result of various risks, uncertainties and other factors, including the ability to raise sufficient capital to continue the Company’s operations. Actual events or results may differ materially from those discussed in forward-looking statements as a result of various factors, including, without limitation, the risks outlined under “Risk Factors” and matters described in this Annual Report generally. In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this Annual Report on Form 10-K, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned to not unduly rely upon these statements.

In light of these risks and uncertainties, there can be no assurance that the forward-looking statements contained in this Annual Report will in fact occur. Potential investors should not place undue reliance on any forward-looking statements. Except as expressly required by the federal securities laws, there is no undertaking to publicly update or revise any forward-looking statements, whether as a result of new information, future events, changed circumstances or any other reason.

The specific discussions in this Annual Report about the Company include financial projections and future estimates and expectations about the Company’s business. The projections, estimates and expectations are presented in this Annual Report only as a guide about future possibilities and do not represent actual amounts or assured events. All the projections and estimates are based exclusively on the Company management’s own assessment of the business, the industry in which it works and the economy at large and other operational factors, including capital resources and liquidity, financial condition, fulfillment of contracts and opportunities. The actual results may differ significantly from the projections.

Potential investors should not make an investment decision based solely on the Company’s projections, estimates or expectations.

PART I

In this Annual Report on Form 10-K, unless the context requires otherwise, the terms “we”, “our”, “us”, “Retrophin” and the “Company” refer to Retrophin, Inc., a Delaware corporation, as well as our direct and indirect subsidiaries.

We own or have rights to various trademarks used in our business, including those referenced in the subsection of Item 1 below titled “Trademarks”. Our logos and trademarks are the property of Retrophin, Inc. All other brand names or trademarks appearing in this report are the property of their respective holders.

ITEM 1. BUSINESS

Those statements in the following discussion that are not historical in nature should be considered forward-looking statements that are inherently uncertain. Actual results and the timing of the events may differ materially from those contained in these forward-looking statements due to a number of factors, including those discussed in the “Cautionary Statement Regarding Forward-Looking Statements” and “Risk Factors” set forth elsewhere in this Annual Report.

Overview

We are a biopharmaceutical company headquartered in San Diego, California, focused on identifying, developing and delivering life-changing therapies to people living with rare diseases. Our approach centers on our pipeline with multiple late clinical-stage programs targeting rare diseases with significant unmet medical needs. Our research and development efforts are partially supported by revenues from our commercialized products, Chenodal®, Cholbam®, Thiola® and Thiola EC®. In addition, we regularly evaluate and, where appropriate, act on opportunities to expand our product pipeline through licenses and acquisitions of products in areas that will serve patients with serious or rare diseases and that we believe offer attractive growth characteristics.

Our Pipeline and Approved Products

The following table summarizes the status of our clinical programs, preclinical programs and approved products, each of which is described in further detail below.

Program / Product	Indication	Preclinical	Phase 1	Phase 2	Phase 3	Approved
Sparsentan (RE-021)	FSGS					
	IgAN					
Cooperative Research and Development Agreements	NGLY1 Deficiency					
	Alagille Syndrome					
						
						
 						

*Chenodal is indicated for the treatment of patients suffering from gallstones and is also in Phase 3 for treatment of cerebrotendinous xanthomatosis (“CTX”).

Clinical Programs:

Sparsentan

Sparsentan, also known as RE-021, is an investigational product candidate with a dual mechanism of action, a selective endothelin receptor antagonist (“ERA”), with in vitro selectivity toward endothelin receptor type A and a potent angiotensin receptor blocker (“ARB”). Sparsentan is currently being evaluated in two pivotal Phase 3 clinical studies in the following indications:

- **Focal segmental glomerulosclerosis (“FSGS”)**, a leading cause of end-stage renal disease and nephrotic syndrome (“NS”). There are currently no United States Food and Drug Administration (“FDA”) approved pharmacologic treatments for FSGS and off-label treatments are limited to ACE/ARBs, steroids, and immunosuppressant agents, which are effective in only a subset of patients. Every year approximately 5,400 patients are diagnosed with FSGS and we estimate that there are approximately 40,000 FSGS patients in the United States and a similar number in Europe with approximately half of them being candidates for sparsentan. Sparsentan has orphan drug designation in the United States and European Union. In 2016, we generated positive data from our Phase 2 DUET study in FSGS. In 2018, we announced the initiation of the Phase 3 DUPLEX study of sparsentan in FSGS. The Company continues to enroll patients with FSGS in the pivotal Phase 3 DUPLEX Study, a global, randomized, multicenter, double-blind, parallel-arm, active-controlled clinical trial evaluating the safety and efficacy of sparsentan in approximately 300 patients. The DUPLEX Study protocol provides for an unblinded analysis of at least 190 patients to be performed after 36 weeks of treatment to evaluate the interim efficacy endpoint - the proportion of patients achieving a FSGS partial remission of proteinuria endpoint (FPRE), which is defined as urine protein-to-creatinine ratio (Up/C) ≤ 1.5 g/g and a >40 percent reduction in Up/C from baseline, at week 36. While the confirmatory endpoint of the study is the change in slope of estimated glomerular filtration rate (eGFR) after 108 weeks of treatment, successful achievement of the interim 36-week proteinuria endpoint is expected to serve as the basis for submission of a New Drug Application (NDA) under the Subpart H accelerated approval pathway in the U.S. and Conditional Marketing Authorization (“CMA”) consideration in Europe. Top-line data from the interim analysis are expected to become available in the first half of 2021.
- **Immunoglobulin A nephropathy (“IgAN”)** is characterized by hematuria, proteinuria, and variable rates of progressive renal failure. With an estimated prevalence of more than 100,000 people in the United States and greater numbers in Europe and Asia, IgAN is the most common primary glomerular disease. Most patients are diagnosed between the ages of 16 and 35, with up to 40% progressing to end stage renal disease within 15 years. There are currently no FDA approved treatments for IgAN. The current standard of care is renin-angiotensin-aldosterone system (RAAS) blockade with immunosuppression also being commonly used for patients with significant proteinuria or rapidly progressive glomerulonephritis. In 2018, we announced that the first patient had been dosed in the PROTECT Study, a global, pivotal Phase 3 clinical trial evaluating the long-term nephroprotective potential of sparsentan for the treatment of IgAN. The PROTECT Study, a global, randomized, multicenter, double-blind, parallel-arm, active-controlled pivotal Phase 3 clinical trial evaluating the safety and efficacy of sparsentan in approximately 280 patients with IgAN, continues to enroll. The primary efficacy endpoint in the PROTECT Study is the change in proteinuria (urine protein-to-creatinine ratio) from baseline after 36 weeks of treatment. Successful achievement of this endpoint is expected to support submission of an NDA under the Subpart H accelerated approval pathway in the U.S., as well as an application for CMA consideration in Europe. Secondary efficacy endpoints include change in eGFR from baseline to four weeks post-cessation of randomized treatment, as well as the rate of change in eGFR over 52-week and 104-week periods following the first six weeks of randomized treatment. Top-line data from the primary endpoint are expected to become available in the first half of 2022.

Chenodal

In January 2020, we randomized the first patients in a Phase 3 clinical trial to evaluate the effects of Chenodal in adult and pediatric patients with cerebrotendinous xanthomatosis (“CTX”). The pivotal study, known as the RESTORE study, is intended to support a new drug application (“NDA”) submission for marketing authorization of Chenodal for CTX in the United States. Chenodal has also been the standard of care for CTX patients for more than three decades but is not currently labeled for this indication.

Cooperative Research and Development Agreements (“CRADAs”):

We are a participant in two CRADAs, which form a multi-stakeholder approach to pool resources with leading experts, and incorporates the patient perspective early in the identification and development process. We have partnered with the National Institutes of Health’s National Center for Advancing Translational Sciences (“NCATS”) and leading patient advocacy organizations, NGLY1.org and Alagille Syndrome Alliance (“ALGSA”), aimed at the identification of potential small molecule therapeutics for NGLY1 deficiency and Alagille syndrome, respectively. There are no treatment options currently approved for these diseases.

Approved Products:

Chenodal (chenodiol tablets)

Chenodal is a synthetic oral form of chenodeoxycholic acid, a naturally occurring primary bile acid synthesized from cholesterol in the liver, indicated for the treatment of radiolucent stones in well-opacifying gallbladders in patients in whom selective surgery would be undertaken except for the presence of increased surgical risk due to systemic disease or age.

Chenodal administration is known to reduce biliary cholesterol and the dissolution of radiolucent gallstones through suppression of hepatic synthesis of cholesterol, cholic acid and deoxycholic acid in the bile pool. Chenodal was first approved by the FDA in 1983 for the management of gallstones but its marketing was later discontinued due to lack of commercial success. In 2009, Nexgen Pharma Inc.'s Abbreviated New Drug Application ("ANDA") for Chenodal was approved by the FDA for the treatment of gallstones. Chenodal is manufactured under this ANDA. In 2010, Chenodal was granted orphan drug designation for the treatment of CTX, a rare autosomal recessive lipid storage disease. We acquired Chenodal in March 2014.

While Chenodal is not labeled for CTX, it has been used as the standard of care for over three decades. We are working to obtain FDA approval of Chenodal for the treatment of CTX. The prevalence of CTX is estimated in the literature to be as high as 1 in 70,000 in the overall population. Pathogenesis of CTX involves deficiency of the enzyme 27-hydroxylase (encoded by the gene CYP27A1), a rate-limiting enzyme in the synthesis of primary bile acids, including chenodeoxycholic acid ("CDCA"), from cholesterol. The disruption of primary bile acid synthesis in CTX leads to toxic accumulation of cholesterol and cholestanol in most tissues. Most patients present with intractable diarrhea, premature cataracts, tendon xanthomas, atherosclerosis, and cardiovascular disease in childhood and adolescence. Neurological manifestations of the disease, including dementia and cognitive and cerebellar deficiencies, emerge during late adolescence and adulthood. Oral administration of CDCA has been shown to normalize primary bile acid synthesis in patients with CTX.

In January 2020, we randomized the first patients in a Phase 3 clinical trial to evaluate the effects of Chenodal in adult and pediatric patients with CTX. The pivotal study, known as the RESTORE study, is intended to support an NDA submission for marketing authorization of Chenodal for CTX in the United States.

Cholbam (cholic acid capsules)

The FDA approved Cholbam (cholic acid capsules) in March 2015, the first FDA approved treatment for pediatric and adult patients with bile acid synthesis disorders due to single enzyme defects, and for adjunctive treatment of patients with peroxisomal disorders (including Zellweger spectrum disorders). The effectiveness of Cholbam has been demonstrated in clinical trials for bile acid synthesis disorders and the adjunctive treatment of peroxisomal disorders. An estimated 200 to 300 patients are current candidates for therapy.

Kolbam, the branded name of Cholbam in Europe, is indicated in Europe for the treatment of certain inborn errors of primary bile acid synthesis, encompassing select single enzyme defects, in infants from one month of age for continuous lifelong treatment through adulthood.

Thiola and Thiola EC (tiopronin)

Thiola and Thiola EC are approved by the FDA for the treatment of cystinuria, a rare genetic cystine transport disorder that causes high cystine levels in the urine and the formation of recurring kidney stones. The resulting long-term damage can cause loss of kidney function in addition to substantial pain and loss of productivity associated with renal colic and stone passage. The prevalence of cystinuria in the United States is estimated to be 10,000 to 12,000, indicating that there may be as many as 4,000 to 5,000 affected individuals with cystinuria in the United States that would be candidates for Thiola. On June 28, 2019 we announced that the FDA approved 100 mg and 300 mg tablets of Thiola EC, a new enteric-coated formulation of Thiola, to be used for the treatment of cystinuria. Thiola EC offers the potential for administration with or without food, and the ability to reduce the number of tablets necessary to manage cystinuria. Thiola EC became available to patients in July of 2019.

Changes in Development Activities:

In August 2019, we announced that the Phase 3 FORT Study evaluating the safety and efficacy of fosmetpantotenate compared to placebo in patients with pantothenate kinase-associated neurodegeneration ("PKAN") did not meet its primary endpoint and did not demonstrate a difference between treatment groups. The study also did not meet its secondary endpoint. We will not proceed with further development of fosmetpantotenate for PKAN.

In August 2019, following a strategic review of the CNSA-001 program in patients with phenylketonuria ("PKU"), we made the decision to decline to exercise the option to acquire Censa Pharmaceuticals and accordingly discontinued the joint development program for CNSA-001. We impaired the related \$15.0 million long-term investment, initially recorded in 2018, during the third quarter of 2019.

During the first quarter of 2019, we elected to discontinue development of the L-UDCA program, resulting in impairment of the intangible asset of \$25.5 million, which was originally recorded in 2016, and the reversal of the associated contingent liability of \$18.0 million. This resulted in a net \$7.5 million non-cash charge to first quarter operations.

Our Strategy

Our goal is to become a preeminent, global and fully-integrated biopharmaceutical company within the rare disease community. In order to achieve our goal, we intend to:

- **Focus on developing products to treat rare diseases characterized by severe unmet medical needs.** We believe that our research, development, and commercialization capabilities in rare disease represent distinct competitive advantages. We leverage our development capabilities in rare disease to focus on advancing therapeutic candidates with life-changing potential. Given these capabilities, the well-established regulatory model and the ability to demonstrate clinical effects in small clinical studies, we believe that we can successfully bring new therapies to patients living with severe unmet medical needs.
- **Develop a sustainable pipeline by employing disciplined decision criteria in the evaluation of potential in-licensing candidates.** We seek to build a sustainable product pipeline by employing multiple therapeutic approaches and by developing or acquiring orphan drug candidates. We seek to augment our internally developed pipeline projects by selectively and strategically acquiring pipeline assets that will add value to the portfolio. We intend to mitigate risk by employing rigorous decision criteria, favoring drug candidates that have undergone at least some clinical study. Our decision to acquire rights to a drug candidate also depends on the scientific merits of the available clinical data; the identifiable orphan patient population; the economic terms of any proposed acquisition of rights; the projected amount of capital required to develop the drug candidate; and the economic potential of the drug candidate, should it be commercialized. We believe this strategy minimizes our clinical development risk and allows us to accelerate the development and potential commercialization of current and future drug candidates.
- **Evaluate the commercialization strategies on a product-by-product basis to maximize the value of each.** As we move our drug candidates through development toward regulatory approval, we will evaluate several options for each drug candidate's commercialization strategy. These options include utilizing or expanding our own internal sales force; entering into joint marketing partnerships with other pharmaceutical or biotechnology companies, whereby we jointly sell and market the product; and out-licensing our products, whereby other pharmaceutical or biotechnology companies sell and market our product and pay us a royalty on sales. Our decision will be made separately for each product and will be based on a number of factors including capital necessary to execute on each option, size of the market and terms of potential offers from other pharmaceutical and biotechnology companies.

Competition

The pharmaceutical and biotechnology industries are intensely competitive and subject to rapid and significant technological change. Many of our competitors are larger than our company and have substantially greater financial, marketing and technical resources than we have.

The development and commercialization of new products to treat orphan diseases is highly competitive, and we expect considerable competition from major pharmaceutical, biotechnology and specialty pharmaceutical companies. As a result, there are, and will likely continue to be, extensive research and substantial financial resources invested in the discovery and development of new orphan drug products.

Our competition will be determined in part by the potential indications for which drugs are developed and ultimately approved by regulatory authorities. The speed with which we can develop products, complete pre-clinical testing, clinical trials, approval processes, and supply commercial quantities to market are expected to be important competitive factors. We expect that competition among products approved for sale will be based on various factors, including product efficacy, safety, reliability, availability, price, reimbursement, patent position, and regulatory exclusivity.

Chenodal

There are other approved chenodeoxycholic acid products available outside of the United States. Furthermore, Chenodal is subject to immediate competition from compounded and generic entrants, as the ANDA for this drug has no remaining patent or nonpatent exclusivity.

Cholbam

There are currently no FDA approved treatments in the United States that compete with Cholbam.

Thiola

Penicillamine agents, including Cuprimine® and Depen® are FDA approved for the treatment of cystinuria, as well as Wilson's Disease. Additional generic versions of penicillamine have been approved by the FDA and some have entered the market.

Captopril is not FDA approved for the treatment of cystinuria but has been prescribed for patients with cystinuria.

Advicenne Pharma is developing ADV-7103, a microtablet formulation containing potassium citrate monohydrate and potassium bicarbonate, for the potential oral treatment of cystinuria. The European Medicines Agency ("EMA") has granted orphan drug designation for the use of ADV-7103 for the treatment of cystinuria.

Furthermore, Thiola is subject to immediate competition from compounded and generic entrants, as the NDA for this drug has no remaining patent or nonpatent exclusivity.

Sparsentan

There are currently no pharmacological treatments approved by the FDA or the EMA for FSGS or IgAN in Europe or the United States. For FSGS the current standard of care includes steroids, ACE/ARBs, calcineurin inhibitors, dialysis, and renal transplant. For IgAN, the current standard of care is renin-angiotensin-aldosterone system (RAAS) blockade with immunosuppression also being commonly used in patients with significant proteinuria or rapidly progressive glomerulonephritis.

Based on public sources, Aurinia Pharmaceuticals, ChemoCentryx, Complexa Inc., Dimerix Bioscience, Bristol-Myers Squibb Company ("BMS"), Pfizer, and Reata Pharmaceuticals may have programs in clinical development for the treatment of FSGS.

Based on public sources, Alnylam Pharmaceuticals, Apellis Pharmaceuticals, Aravive Biologics, Calliditas Therapeutics, EMD Serono, GSK, Ionis Pharmaceuticals, Novartis, Omeros Corporation, and Reata Pharmaceuticals may have programs in clinical development for the treatment of IgAN.

Additionally, there are several Phase 1 assets in development and other pre-clinical programs that may enter the clinic for the treatment of FSGS and IgAN.

Licenses and Royalties

Ligand License Agreement

In 2012, we entered into a license agreement with Ligand Pharmaceuticals, Inc. ("Ligand"), granting us a worldwide license for the development, manufacture and commercialization of sparsentan, which we are developing for the treatment of FSGS and IgAN. Under the license agreement, Ligand granted us a sublicense under certain of its patents and other intellectual property in connection with the development and commercialization of sparsentan. Under the license agreement, Ligand is obligated to transfer to us certain information, records, regulatory filings, materials and inventory controlled by Ligand and relating to or useful for developing sparsentan. We must use commercially reasonable efforts to develop and commercialize sparsentan in specified major market countries and other countries in which we believe it is commercially reasonable to develop and commercialize such products.

As consideration for the license, we are required to make payments upon the achievement of certain milestones, totaling up to \$114.1 million. Should we commercialize sparsentan or any products containing any of the licensed compounds, we will be obligated to pay Ligand an escalating annual royalty between 15% and 17% of net sales of all such products. Through 2019, we have made aggregate milestone payments to Ligand of \$7.2 million under the terms of the license agreement.

Under the terms of the license agreement, BMS has a right of first negotiation and Ligand has a right of second negotiation with respect to any license arrangement for a licensed compound except to the extent such rights may be waived.

Absent early termination, the license agreement will continue until neither party has any further payment obligations under the agreement and is expected to continue for approximately 10 to 20 years from the effective date. Ligand may terminate the license agreement due to (i) our insolvency, (ii) our material uncured breach of the agreement, (iii) our failure to use commercially reasonable efforts to develop and commercialize sparsentan as described above or (iv) certain other conditions. We may terminate the license agreement due to a material uncured breach of the agreement by Ligand.

Thiola License Agreement

In 2014, we entered into a license agreement with Mission Pharmacal Company ("Mission"), pursuant to which we obtained an exclusive, royalty-bearing license to market, sell and commercialize Thiola (tiopronin) in the United States and Canada, and a non-exclusive license to use know-how relating to Thiola to the extent necessary to market Thiola. We paid Mission an up-front license fee of \$3.0 million and through May 28, 2024 will pay guaranteed minimum royalties during each calendar year the greater of \$2.0 million or 20% of our net sales of Thiola in the United States and Canada.

In October 2015, the license agreement was amended to allow for us to secure enough active pharmaceutical ingredient ("API") to ensure an adequate level of safety stock to prevent an interruption in the supply of Thiola and to prepare for a reformulation development project. In March 2016, the license agreement was amended to, among other things, include a new formulation development project for tiopronin tablets. In November 2017, the license agreement was amended to extend the license term, at a minimum, through May 2029. In November 2018, the license agreement was amended to remove all territorial restrictions on our license rights and provide that we will pay guaranteed minimum royalties equaling the greater of \$0.1 million or 20% of our Thiola net sales generated outside of the United States during each calendar year.

Intellectual Property

The proprietary nature of, and protection for, our product candidates and our discovery programs, processes and know-how are important to our business. We have sought patent protection in the United States and certain other jurisdictions for sparsentan, where available and when appropriate. Our policy is to pursue, maintain and defend patent rights, whether developed internally or licensed from third parties, and to protect the technology, inventions and improvements that are commercially important to the development of our business. We also rely on trade secrets relating to our proprietary technology that may be important to the development of our business.

Our commercial success will depend in part on obtaining and maintaining patent protection and trade secret protection for our current and future product candidates and the methods used to develop and manufacture them, as well as successfully defending these patents against third-party challenges. Our ability to stop third parties from making, using, selling, offering to sell, or importing our products depends on the extent to which we have rights under valid and enforceable patents or trade secrets that cover these activities. We cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our product candidates, discovery programs and processes.

Sparsentan

Our patent portfolio for sparsentan is comprised of four distinct patent families, one of which is exclusively licensed from Ligand (the "Ligand patent family"). The other three patent families are owned by Retrophin (the "Retrophin patent family"). We previously had one additional licensed patent family related to sparsentan that was owned by BMS, exclusively licensed to Ligand and sub-licensed to us by Ligand. However, as of December 31, 2019, the BMS patent family is expired and therefore no longer in force.

The Ligand patent family is directed to methods of using sparsentan in the treatment of various diseases, including glomerulosclerosis and IgAN. As of December 31, 2018, this patent family included two U.S. patents (U.S. Patent No. 9,662,312, which we refer to herein as the '312 patent, and U.S. Patent No. 9,993,461, which we refer to herein as the '461 patent), a pending U.S. application (Application Serial No. 16,554,406, filed August 28, 2019), a European patent (European Patent No. EP2732818, which we refer to herein as the European '818 patent), a pending European application which is expected to grant as a patent in 2020, and a granted Hong Kong patent. The '312 patent and the European '818 patent claim the use of sparsentan for treating glomerulosclerosis. The '461 patent claims both the use of sparsentan for treating glomerulosclerosis and the use of sparsentan for treating IgAN. We expect the U.S. and foreign patents in this patent family to expire in March 2030.

The first Retrophin patent family is directed to methods of using sparsentan in the treatment of various kidney diseases, including focal segmental glomerulosclerosis (FSGS) and IgAN, by achieving a specified urine protein to creatinine ratio. As of December 31, 2019, this patent family was comprised of pending patent applications in the U.S., Brazil, Canada, China, the European Patent Office, Japan, Korea, New Zealand and South Africa.

The second Retrophin patent family is comprised of an international patent application (i.e., a PCT application) filed in 2019.

Likewise, the third Retrophin patent family also is comprised of a PCT application filed in 2019.

It is possible, assuming that sparsentan achieves regulatory approval and depending upon the date of any such approval, that the term of either the '312 patent or the '461 patent may be extended under the provisions of the Hatch-Waxman Act. Patent term extension also may be available in certain foreign jurisdictions upon regulatory approval. Likewise, it is possible, assuming that sparsentan achieves regulatory approval in Europe and depending upon the date of any such approval, that the term of the European '818 patent, or the patent expected to grant in 2020 from the pending European application, may be extended in various European countries under the provisions governing Supplementary Protection Certificates (SPCs).

Thiola

Our patent portfolio for Thiola is comprised of a patent family which is exclusively licensed from Mission Pharmacal (the "Mission patent family"). The Mission patent family is directed to a new formulation of Thiola, known as Thiola EC. As of December 31, 2019, this patent family included a U.S. patent application filed in 2018 and three additional U.S. patent applications derived from the original 2018 patent application.

Regulatory Exclusivity

If we obtain marketing approval for sparsentan in the United States or in certain jurisdictions outside of the United States, we may be eligible for regulatory exclusivity for the approved drug. For example, in the United States, an FDA approved drug product may be eligible to receive five years of new chemical entity exclusivity or, for drugs granted an orphan designation by the FDA, seven years of orphan drug exclusivity. In the European Union and European Free Trade Association ("EFTA") member states, a new drug product approved by the EMA may receive eight years of data exclusivity and up to 11 years of marketing exclusivity. Additionally, upon approval by the EMA, orphan drugs may receive ten years of market exclusivity or, in the case of orphan drugs for which a pediatric investigational plan (PIP) has been completed, twelve years of market exclusivity. The new drug exclusivity and the orphan drug exclusivity run concurrently from the date of EMA approval. There can be no assurance that we will qualify for any such regulatory exclusivity, or that any such exclusivity will prevent competitors from seeking approval solely on the basis of their own studies. See "Government Regulation" below.

Chenodal

Chenodal received orphan drug designation in the United States for the treatment of CTX in 2010. Consequently, if Chenodal is the first chenodeoxycholic acid product to gain FDA approval for the treatment of CTX, we expect it will have seven years of marketing exclusivity in the United States for that indication. Currently Chenodal does not have regulatory exclusivity in the United States.

Cholbam (Kolbam)

Cholbam received orphan drug designation in the United States for the treatment for pediatric and adult patients with bile acid synthesis disorders due to single enzyme defects and for patients with peroxisomal disorders, and therefore is expected to have marketing exclusivity in the United States for these indications until March 2022.

Kolbam, the branded name of Cholbam in Europe, received marketing authorization in November 2015 from the EMA for the treatment of inborn errors of primary bile acid synthesis, encompassing select single enzyme defects. We expect Kolbam to have marketing exclusivity in the European Union and European Economic Area for these indications until September 2024.

Thiola

Thiola does not have regulatory exclusivity in the United States.

Trademarks

Our trademark portfolio includes both Retrophin-owned and Retrophin-licensed trademarks and is comprised of various U.S. and foreign registered trademarks and pending trademark applications relating to our company name, our commercial products (Thiola, Chenodal and Cholbam/Kolbam), and our product candidate (i.e. sparsentan).

More specifically, as of December 31, 2019, our trademark portfolio included registered U.S. and foreign trademarks for the mark "RETROPHIN", one registered U.S. trademark and one registered Canadian trademark for the mark "CHENODAL", one registered U.S. trademark directed to the Chenodal logo, one registered U.S. trademark for the mark "MANCHESTER PHARMACEUTICALS", one registered U.S. trademark for the mark "KEEP IT BELOW THE LINE", registered U.S. and foreign trademarks for the mark "CHOLBAM", a registered European Community trademark for the mark "KOLBAM", a registered U.S. trademark for the mark "TOTAL CARE HUB", a registered U.S. trademark for the Total Care Hub logo, a registered U.S. trademark for a leaves logo, and U.S. trademark applications and foreign registered trademarks related to sparsentan. In addition, under our license agreement with Mission we have an exclusive license to use Mission's trademarks related to Thiola and Thiola EC, including three registered U.S. trademarks and one registered Canadian trademark for the mark "THIOLA", and one registered U.S. trademark for the mark "Thiola EC".

Trade Secrets

In addition to patents, we rely on trade secrets and know-how to develop and maintain our competitive position. We seek to protect our proprietary data and processes, in part, by confidentiality agreements and invention assignment agreements with our employees, consultants, scientific advisors, contractors, and partners. These agreements are designed to protect our proprietary information. We also seek to preserve the integrity and confidentiality of our data, trade secrets and know-how by maintaining physical security of our premises and physical and electronic security of our information technology systems. Trade secrets and know-how can be difficult to protect. Consequently, we anticipate that trade secrets and know-how will, over time, be disseminated within the industry through independent development, the publication of journal articles, and the movement of personnel skilled in the art from academic to industry scientific positions.

Manufacturing

Nexgen Pharma manufactures Chenodal, New Zealand Pharma manufactures the active pharmaceutical ingredient for Cholbam, Patheon Inc. formulates and packages Cholbam, and Mission manufactures Thiola and Thiola EC.

We intend to continue to use our financial resources to accelerate development of our drug candidates rather than establishing our own manufacturing facilities. We intend to meet our pre-clinical and clinical trial manufacturing requirements by establishing relationships with third-party manufacturers and other service providers to perform these services for us.

Should any of our drug candidates obtain marketing approval, we anticipate establishing relationships with third-party manufacturers and other service providers in connection with the commercial production of our products. We have some flexibility in securing other manufacturers to produce our drug candidates; however, our alternatives may be limited due to proprietary technologies or methods used in the manufacture of some of our drug candidates.

Sales, Marketing and Distribution

During fiscal 2019, we continued to utilize our specialty sales force to market our products in the United States. In order to commercialize our clinical drug candidates if and when they are approved for sale in the United States or elsewhere, we will need to increase our marketing, sales and distribution capabilities.

Commercialization

Through deep understanding of patient and healthcare provider needs, we believe we are able to:

- serve patients living with rare disease that have limited treatment options;
- drive optimum performance of our marketed products;
- educate and train healthcare providers about our products and the diseases for which they are approved to treat;
- support access to and reimbursement coverage for our products in the United States without significant restrictions; and
- minimize the number of patients who discontinue treatment or have low compliance with our products by providing patients with support services and disease education, to the extent and in the manner permitted under applicable laws, to help them maximize the benefits of treatment.

Our U.S. commercial initiatives are designed to support patients living with rare diseases and clinicians treating these patients. We believe that it is possible to commercialize our products in the United States with a relatively small specialty sales force. The primary call points for Thiola and Thiola EC include urologists and nephrologists. The primary call points for Cholbam are gastroenterologists, hepatologists, and metabolic specialists. We do not promote Chenodal using our sales force.

Our sales force is differentiated by its high level of experience, averaging more than 15 years in pharmaceutical sales including over five years of experience in rare disease. Our commercial management and operations team has an average of more than 15 years of pharmaceutical experience focused on specialty and rare disease.

Our small marketing team, supported by third-party agencies with rare disease experience, drives our commercialization and disease awareness efforts in the United States and countries where our products may be approved or available through named patient sales. Specifically, we implement a variety of marketing programs to educate physicians, including direct-to-physician contact by sales representatives, peer-to-peer educational programs, and participation in targeted medical convention programs.

We distribute our products through one direct to patient pharmacy, Eversana (formerly Dohmen Life Science Services), who also provides our comprehensive patient support services (i.e., the Total Care Hub). This patient support program (for all U.S. commercial products) includes a case-managed approach to patient education, insurance verification and reimbursement support, co-pay and other financial assistance for eligible patients, monitoring and support of adherence, and 24/7 access to pharmacist counseling.

Outside the United States, including Europe, we plan to continue to partner with local distributors and certain field-based personnel as necessary to conduct permitted commercial activities. Our near-term efforts are focused on securing pricing and reimbursement approval for Cholbam.

Medical Affairs

We have a medical affairs team in the United States which supports independent medical education programs and investigator-initiated studies by providing education and financial grants in a number of medical and disease-related areas. The responsibilities of medical affairs personnel also include providing education through the dissemination of medical information and publications, providing support in connection with our post-approval clinical commitments, and assisting in organizing scientific and medical advisory boards to obtain input from experts and practitioners on medical topics relevant to our products and diseases.

Government Regulation

Regulation by government authorities in the United States and foreign countries is a significant factor in the development, manufacture and marketing of our proposed products and in our ongoing research and product development activities. All of our products will require regulatory approval by government agencies prior to commercialization. In particular, human therapeutic products are subject to rigorous preclinical studies and clinical trials and other approval procedures of the FDA and similar regulatory authorities in foreign countries. Various federal and state statutes and regulations also govern or influence testing, manufacturing, safety, labeling, storage and record-keeping related to such products and their marketing. The process of obtaining these approvals and the subsequent compliance with appropriate federal and state statutes and regulations require the expenditure of substantial time and financial resources.

FDA Drug Approval Process

In the United States, pharmaceutical products are subject to extensive regulation by the FDA. The Federal Food, Drug, and Cosmetic Act, and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling and import and export of pharmaceutical products. Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve pending new drug applications, or NDAs, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties and criminal prosecution.

We cannot market a drug product candidate in the United States until the drug has received FDA approval. The steps required before a drug may be marketed in the United States generally include the following:

- completion of extensive pre-clinical laboratory tests, animal studies, and formulation studies in accordance with the FDA's GLP regulations;
- submission to the FDA of an IND for human clinical testing, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled human clinical trials in accordance with Good Clinical Practices ("GCP") requirements to establish the safety and efficacy of the drug for each proposed indication;
- submission to the FDA of an NDA after completion of all pivotal clinical trials;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the active pharmaceutical ingredient, or API, and finished drug product are produced and tested to assess compliance with current Good Manufacturing Practices ("cGMPs"); and
- FDA review and approval of the NDA prior to any commercial marketing or sale of the drug in the United States.

Satisfaction of FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity and novelty of the product or disease.

Preclinical tests include laboratory evaluation of product chemistry, formulation and toxicity, as well as animal trials to assess the characteristics and potential safety and efficacy of the product. The conduct of the preclinical tests must comply with federal regulations and requirements, including good laboratory practices. The results of preclinical testing are submitted to the FDA as part of an IND along with other information, including information about product chemistry, manufacturing and controls and a proposed clinical trial protocol. Long-term preclinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue after the IND is submitted.

A 30-day waiting period after the submission of each IND is required prior to the commencement of clinical testing in humans. If the FDA has neither commented on nor questioned the IND within this 30-day period, the clinical trial proposed in the IND may begin. If the FDA raises concerns or questions about the conduct of the trial, such as whether human research subjects will be exposed to an unreasonable health risk, the IND sponsor must resolve any outstanding FDA concerns or questions before clinical trials can proceed.

Clinical trials involve the administration of the investigational new drug to healthy volunteers or patients under the supervision of a qualified investigator. Clinical trials must be conducted in compliance with federal regulations, including GCP requirements, as well as under protocols detailing the objectives of the trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each protocol and subsequent protocol amendments must be submitted to the FDA as part of the IND.

The FDA may order the temporary, or permanent, discontinuation of a clinical trial at any time, or impose other sanctions, if it believes that the clinical trial either is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. The study protocol and informed consent information for patients in clinical trials also must be submitted for approval to an institutional review board, or IRB, for approval at each site at which the clinical trial will be conducted. An IRB also may require the clinical trial at its site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements, or may impose other conditions.

Clinical trials to support NDAs for marketing approval are typically conducted in three sequential phases, but the phases may overlap. In Phase 1, the initial administration of the drug to healthy human subjects or patients, the drug is tested to assess pharmacological actions, side effects associated with increasing doses and, if possible, early evidence on effectiveness. Phase 2 usually involves trials in a limited patient population to determine metabolism, pharmacokinetics, the effectiveness of the drug for a particular indication, dosage tolerance and optimum dosage, and to identify common adverse effects and safety risks. If a drug demonstrates evidence of effectiveness and an acceptable safety profile in Phase 2 evaluations, Phase 3 clinical trials, also called pivotal trials, are undertaken to obtain the additional information about clinical efficacy and safety in a larger number of patients, typically at geographically dispersed clinical trial sites, to permit the FDA to evaluate the overall benefit-risk relationship of the drug and to provide adequate information for the labeling of the drug. In most cases the FDA requires two adequate and well controlled Phase 3 clinical trials to demonstrate the efficacy of the drug. A single Phase 3 clinical trial with other confirmatory evidence may be sufficient in rare instances where the study is a large multicenter trial demonstrating internal consistency and a statistically very persuasive finding of a clinically meaningful effect on mortality, irreversible morbidity or prevention of a disease with a potentially serious outcome and where confirmation of the result in a second Phase 3 trial would be impractical or unethical. A sponsor may choose to pursue a Special Protocol Assessment, or SPA, agreement with FDA for the design of a Phase 3 trial. A SPA agreement is intended to provide assurance that if the agreed upon clinical trial protocols are followed and the clinical trial endpoints are achieved, the data may serve as the primary basis for an efficacy claim in support of an NDA. A SPA agreement is not binding on the FDA if previously unrecognized public health concerns arise during the performance of the clinical trial, if other new scientific concerns regarding product candidate safety or efficacy arise or if the sponsoring company fails to comply with the agreed upon clinical trial protocols.

After completion of the required clinical testing, an NDA is prepared and submitted to the FDA. FDA approval of the NDA is required before marketing of the product in the United States may begin. The NDA must include the results of all preclinical, clinical and other testing and a compilation of data relating to the product's pharmacology, chemistry, manufacture and controls. The cost of preparing and submitting an NDA is substantial. The submission of most NDAs is additionally subject to a substantial application user fee, and the sponsor of an approved NDA is also subject to an annual program user fee. These fees typically are increased annually.

The FDA has 60 days from its receipt of an NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has agreed to certain performance goals in the review of NDAs. Most such applications for standard review drug products are reviewed within 10 months of filing; most applications for priority review drugs are reviewed within eight months of filing. Priority review can be applied to drugs to treat serious conditions that the FDA determines offer significant improvement in safety or effectiveness. The review process for both standard and priority review may be extended by the FDA for three additional months to consider certain late-submitted information, or information intended to clarify information already provided in the submission.

The FDA also may refer applications for novel drug products, or drug products that present difficult questions of safety or efficacy, to an advisory committee—typically a panel that includes clinicians and other experts—for review, evaluation and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. Before approving an NDA, the FDA typically will inspect one or more clinical sites to assure compliance with GCPs. Additionally, the FDA will inspect the facility or the facilities at which the drug is manufactured. The FDA will not approve the product unless compliance with cGMPs is satisfactory and the NDA contains data that provide substantial evidence that the drug is safe and effective in the indication studied.

After the FDA evaluates the NDA and the manufacturing facilities, it issues either an approval letter or a complete response letter. A complete response letter generally outlines the deficiencies in the submission and may require substantial additional testing, or information, in order for the FDA to reconsider the application. If, or when, those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the NDA, the FDA will issue an approval letter. The FDA has committed to reviewing such resubmissions in two or six months depending on the type of information included.

An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications. As a condition of NDA approval, the FDA may require risk evaluation and mitigation strategies ("REMS") to ensure that the benefits of the drug outweigh the potential risks. REMS can include a medication guide, a communication plan for healthcare professionals and elements to assure safe use, such as special training and certification requirements for individuals who prescribe or dispense the drug, requirements that patients enroll in a registry and other measures that the FDA deems necessary to assure the safe use of the drug. The requirement for REMS can materially affect the potential market and

profitability of the drug. Moreover, product approval may require substantial post-approval testing and surveillance to monitor the drug's safety or efficacy. Once granted, product approvals may be withdrawn if compliance with regulatory standards is not maintained or problems are identified following initial marketing.

Changes to some of the conditions established in an approved application, including changes in indications, labeling, or manufacturing processes or facilities, require submission and FDA approval of a new NDA or NDA supplement before the change can be implemented. An NDA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements as it does in reviewing NDAs. Such supplements typically are reviewed within 10 months of receipt.

Orphan Drugs

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition—generally a disease or condition that affects fewer than 200,000 individuals in the U.S. Orphan drug designation must be requested before submitting an NDA. After the FDA confers orphan drug status, the generic identity of the drug and its potential orphan indication are disclosed publicly by the FDA. Orphan drug designation in and of itself does not convey any advantage in, or shorten the duration of, the regulatory review and approval process. The first NDA applicant to receive FDA approval for a particular active ingredient to treat a particular indication with FDA orphan drug designation is entitled to a seven-year exclusive marketing period in the U.S. for that product, for that indication. During the seven-year exclusivity period, the FDA may not approve any other applications to market the same drug for the same disease, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Orphan drug exclusivity does not prevent FDA from approving a different drug for the same disease or condition, or the same drug for a different disease or condition. Prior to FDA approval, orphan designation provides incentives for sponsors including tax credits for clinical research expenses, the opportunity to obtain government grant funding to support clinical research, and an exemption from FDA user fees.

Fast Track Designation

Fast track is a process designed by the FDA to facilitate the development of drugs to treat serious conditions through expediting their review. The purpose is to get important new drugs to patients earlier. Fast Track addresses a broad range of serious conditions. Determining whether a condition is serious is a matter of judgment, but generally is based on whether the drug will have an impact on such factors as survival, day-to-day functioning, or the likelihood that the condition, if left untreated, will progress from a less severe condition to a more serious one.

A drug that receives Fast Track designation is eligible for some or all of the following:

- more frequent meetings with FDA to discuss the drug's development plan and ensure collection of appropriate data needed to support drug approval;
- more frequent written communication from FDA about such things as the design of the proposed clinical trials and use of biomarkers;
- eligibility for Accelerated Approval and Priority Review, if relevant criteria are met; and
- rolling Review, which means that a drug company can submit completed sections of its Biologic License Application (BLA) or NDA for review by FDA, rather than waiting until every section is completed before the entire application can be reviewed. BLA or NDA review usually does not begin until the drug company has submitted the entire application to the FDA.

Once a drug receives Fast Track designation, early and frequent communication between the FDA and a drug company is encouraged throughout the entire drug development and review process. The frequency of communication assures that questions and issues are resolved quickly, often leading to earlier drug approval and access by patients.

Accelerated Approval

Under the FDA's Subpart H accelerated approval regulations, FDA may approve a drug for a serious or life-threatening illness that provides meaningful therapeutic benefit to patients over existing treatments based upon a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments.

In clinical trials, a surrogate endpoint is a measurement of laboratory or clinical signs of a disease or condition that substitutes for a direct measurement of how a patient feels, functions, or survives. Surrogate endpoints can often be measured more easily or more rapidly than clinical endpoints. A drug candidate approved on this basis is subject to rigorous post-marketing compliance requirements, including the completion of Phase 4 or post-approval clinical trials to confirm the effect on the clinical endpoint. Failure to conduct required post-approval studies, or confirm a

clinical benefit during post-marketing studies, will allow FDA to withdraw the drug from the market on an expedited basis. All promotional materials for drug candidates approved under accelerated regulations are subject to prior review by FDA.

The Hatch-Waxman Amendments: Orange Book Listing

In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent whose claims cover the applicant's product or its use for the relevant application. Upon approval of a drug, each of the patents listed in the application for the drug is then published in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential generic competitors in support of approval of an ANDA. An ANDA provides for marketing of a drug product that has the same active ingredients in the same strengths and dosage form as the listed drug and has been shown through bioequivalence testing to be therapeutically equivalent to the listed drug. Other than the requirement for bioequivalence testing, ANDA applicants are not required to conduct, or submit results of, pre-clinical or clinical tests to prove the safety or effectiveness of their drug product. Drugs approved in this way are commonly referred to as "generic equivalents" to the listed drug, and can often be substituted by pharmacists under prescriptions written for the original listed drug.

The ANDA applicant is required to certify to the FDA concerning all patents listed for the approved product in the FDA's Orange Book. Specifically, the applicant must certify that: (i) the required patent information has not been filed; (ii) the listed patent has expired; (iii) the listed patent has not expired, but will expire on a particular date and approval is sought after patent expiration; or (iv) the listed patent is invalid or will not be infringed by the new product. The ANDA applicant may also elect to submit a section viii statement certifying that its proposed ANDA label does not contain (or carves out) any language regarding the patented method-of-use rather than certify to a listed method-of-use patent. If the applicant does not challenge the listed patents, the ANDA application will not be approved until all the listed patents claiming the referenced product have expired.

A certification that the new product will not infringe the already approved product's listed patents, or that such patents are invalid, is called a Paragraph IV certification. If the ANDA applicant has provided a Paragraph IV certification to the FDA, the applicant must also send notice of the Paragraph IV certification to the NDA and patent holders once the ANDA has been accepted for filing by the FDA. The NDA and patent holders may then initiate a patent infringement lawsuit in response to the notice of the Paragraph IV certification. The filing of a patent infringement lawsuit within 45 days of the receipt of a Paragraph IV certification automatically prevents the FDA from approving the ANDA until the earlier of 30 months, expiration of the patent, settlement of the lawsuit, or a decision in the infringement case that is favorable to the ANDA applicant.

The ANDA application also will not be approved until any applicable non-patent exclusivity listed in the Orange Book for the referenced product has expired.

Post-Approval Requirements

Once an NDA is approved, a product will be subject to certain post-approval requirements. For instance, the FDA closely regulates the post-approval marketing and promotion of drugs, including standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the internet and social media. Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved labeling.

Adverse event reporting and submission of periodic reports is required following FDA approval of an NDA. The FDA also may require post-marketing testing, known as Phase 4 testing, REMS, surveillance to monitor the effects of an approved product, or restrictions on the distribution or use of the product. In addition, quality-control, drug manufacture, packaging and labeling procedures must continue to conform to cGMPs after approval. Drug manufacturers and certain of their subcontractors are required to register their establishments with the FDA and certain state agencies. Registration with the FDA subjects entities to periodic unannounced inspections by the FDA, during which the agency inspects manufacturing facilities to assess compliance with cGMPs. Accordingly, manufacturers must continue to expend time, money and effort in the areas of production and quality-control to maintain compliance with cGMPs. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical trials;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product approvals;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

Pricing and Reimbursement

A portion of our end-user demand for our drugs comes from patients covered under Medicaid, Medicare and other federal and state government-related programs such as TRICARE and the Department of Veterans Affairs, or the VA. As required by Federal regulations, we will provide rebates and discounts in connection with these programs.

Our commercial success depends in significant part on the extent to which coverage and adequate reimbursement for these products will be available from third-party payers, including government health administration authorities, private health insurers and other organizations. Third-party payers determine which medications they will cover and establish reimbursement levels. Even if a third-party payer covers a particular product, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high. Patients who are prescribed medications for the treatment of their conditions, and their prescribing physicians, generally rely on third-party payers to reimburse all or part of the costs associated with their prescription drugs. Patients are unlikely to use our products unless coverage is provided and reimbursement is adequate to cover all or a significant portion of the cost of our products. Therefore, coverage and adequate reimbursement is critical to product acceptance.

Government authorities and other third-party payers are developing increasingly sophisticated methods of controlling healthcare costs, such as by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payers are requiring that drug companies provide them with predetermined discounts from list prices as a condition of coverage, are using restrictive formularies and preferred drug lists to leverage greater discounts in competitive classes, and are challenging the prices charged for medical products. Third party payers also are carefully evaluating the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy, which may require us to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of our products. Further, no uniform policy requirement for coverage and reimbursement for drug products exists among third-party payers in the United States. Therefore, coverage and reimbursement for drug products can differ significantly from payer to payer. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payer separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

In addition, it is possible that future legislation in the United States and other jurisdictions could be enacted which could potentially impact the coverage and reimbursement rates for our products and also could further impact the levels of discounts and rebates paid to federal and state government entities. Any legislation that impacts these areas could impact, in a significant way, our ability to generate revenues from sales of products that, if successfully developed, we bring to market.

There have been a number of enacted or proposed legislative and regulatory changes affecting the healthcare system and pharmaceutical industry that could affect our commercial success. For example, in March 2010, President Obama signed into law the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, (collectively, the "PPACA") a law intended to, among other things, broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against healthcare fraud and abuse, add new transparency requirements for healthcare and health insurance industries, impose new taxes and fees on pharmaceutical and medical device manufacturers and impose additional health policy reforms. Specifically, by way of example, the PPACA revised the definition of "average manufacturer price" for reporting purposes, which could increase the amount of Medicaid drug rebates to states. PPACA also increased the mandated Medicaid rebate from 15.1% to 23.1% of the average manufacturer price, expanded the rebate to Medicaid managed care utilization and increased the types of entities eligible for the federal 340B drug discount program. There remain judicial and Congressional challenges to certain aspects of the PPACA, as well as efforts by the Trump administration to repeal or replace certain aspects of the PPACA. Since January 2017, President Trump has signed two Executive Orders and other directives designed to delay the implementation of certain provisions of the PPACA or otherwise circumvent some of the requirements for health insurance mandated by the PPACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the PPACA. While Congress has not passed comprehensive repeal legislation, two bills affecting the implementation of certain taxes under the PPACA have been signed into law. Legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act of 2017 ("Tax Act"), includes a provision which repealed, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate". In addition, the 2020 federal spending package permanently eliminates, effective January 1, 2020, the PPACA-mandated "Cadillac" tax on high-cost employer-sponsored health coverage and medical device tax and, effective January 1, 2021, also eliminates the health insurer tax. The Bipartisan Budget Act of 2018, or the BBA, among other things, amended the PPACA, effective January 1, 2019, to increase the discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D from 50 percent to 70 percent, and close the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole." In December 2018, the Centers for Medicare & Medicaid Services ("CMS") published a new final rule permitting further collections and payments to and from certain PPACA-qualified health plans and health insurance issuers under the PPACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment. On December 14, 2018, a Texas U.S. District Court Judge ruled that the PPACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress as part of the Tax Act. Additionally, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the PPACA are invalid as well. It is unclear how this decision, future decisions, subsequent appeals, and other efforts to repeal and replace the PPACA will impact the PPACA and our business.

In addition, other legislative changes have been proposed and adopted since the PPACA was enacted. For example, in August 2011, the President signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee on Deficit Reduction did not achieve a targeted deficit reduction of at least \$1.2 trillion for fiscal years 2012 through 2021, triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect beginning on April 1, 2013 and, due to subsequent legislative amendments, including the BBA, will stay in effect through 2029 unless additional Congressional action is taken. Additionally, in January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, reduced Medicare payments to several providers, including hospitals and imaging centers.

Moreover, the Drug Supply Chain Security Act imposes additional obligations on manufacturers of pharmaceutical products related to product tracking and tracing. Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products.

There has been increasing legislative and enforcement interest in the United States with respect to drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and numerous proposed and enacted legislation at both the state and federal levels designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, expedite generic competition, review the relationship between pricing and manufacturer patient programs, institute drug re-importation, and reform government program reimbursement methodologies for drugs. At the federal level, the Trump administration's budget proposal for fiscal year 2020 contains further drug price control measures that could be enacted during the budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. Additionally, the Trump administration released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. The HHS has solicited feedback on some of these measures and has implemented others under its existing authority. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage plans the option to use step therapy for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019. While some of these and other measures may require additional authorization to become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

We expect that the PPACA, as well as other federal and state healthcare reform measures that have been and may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any of our products, and could seriously harm our future revenues. In addition, it is possible that future legislation in the United States and other jurisdictions could be enacted which could potentially impact the reimbursement rates for the products we are developing and may develop in the future and also could further impact the levels of discounts and rebates paid to federal and state government entities. Any legislation that impacts these areas could impact, in a significant way, our ability to generate revenues from sales of products that, if successfully developed, we bring to market.

Health Care Regulatory Laws

In addition to FDA marketing restrictions and regulation of pharmaceutical products, several other types of state and federal laws have been applied to restrict and regulate certain business practices in the pharmaceutical industry in recent years. These laws include, without limitation, anti-kickback statutes and false claims laws, data privacy and security laws, and transparency laws regarding payments or other items of value provided to healthcare providers.

The federal healthcare program anti-kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce; or in return for; purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid, or other federally financed healthcare programs. This statute has been interpreted broadly to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers, and formulary managers, among others, on the other. Although there are a number of statutory exceptions and regulatory safe harbors protecting certain common activities from prosecution or other regulatory sanctions, the exceptions and safe harbors are drawn narrowly, and practices that involve remuneration that may induce prescribing, purchases, or recommendations may be subject to scrutiny if they do not qualify for an exemption or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the anti-kickback statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all its facts and circumstances. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the federal anti-kickback statute has been violated. Additionally, the PPACA amended the federal anti-kickback statute to a stricter standard such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the PPACA codified case law that a claim including items or services resulting from a violation of the federal anti-kickback statute constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act.

Federal false claims laws, including the civil False Claims Act, prohibit any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to the federal government, or knowingly making, or causing to be made, a false statement to have a false claim paid. This includes claims made to programs where the federal government reimburses, such as Medicaid, as well as programs where the federal government is a direct purchaser, such as when it purchases off the Federal Supply Schedule. The False Claims Act contains qui tam provisions, which allow a private individual, or relator, to bring a civil action on behalf of the federal government alleging that the defendant submitted a false claim to the federal government, and to share in any monetary recovery. In recent years, the number of suits brought by private individuals has increased dramatically. For example, pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly inflating drug prices they report to pricing services, which in turn were used by the government to set Medicare and Medicaid reimbursement rates, and for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. In addition, certain marketing practices, including off-label promotion, may also violate federal false claims laws.

Also, many states have similar fraud and abuse statutes or regulations, including state anti-kickback and false claims laws, that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payer.

The U.S. Foreign Corrupt Practices Act, and similar worldwide anti-bribery laws generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business. Our policies mandate compliance with these anti-bribery laws. We operate in parts of the world that have experienced governmental corruption to some degree and in certain circumstances, strict compliance with antibribery laws may conflict with local customs and practices or may require us to interact with doctors and hospitals, some of which may be state controlled, in a manner that is different than in the United States. We cannot assure you that our internal control policies and procedures will protect us from reckless or criminal acts committed by our employees or agents. Violations of these laws, or allegations of such violations, could disrupt our business and result in criminal or civil penalties or remedial measures, any of which could have a material adverse effect on our business, financial condition and results of operations and could cause the market value of our common stock to decline.

In addition, we may be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their respective implementing regulations, imposes specified requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH, through its implementing regulations, makes certain of HIPAA's privacy and security standards directly applicable to business associates, defined as a person or organization, other than a member of a covered entity's workforce, that creates, receives, maintains or transmits protected health information for or on behalf of a covered entity for a function or activity regulated by HIPAA.

Additionally, the federal Physician Payments Sunshine Act within the PPACA, and its implementing regulations, require that certain manufacturers of drugs, devices, biologicals and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to annually report information related to certain payments or other transfers of value made or distributed to physicians and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, physicians, as defined by such law, and teaching hospitals and to report annually certain ownership and investment interests held by physicians and their immediate family members. We implemented compliance with the Sunshine Act starting with reporting year 2014 and continue to report as required.

Further, certain states require implementation of commercial compliance programs and marketing codes, compliance with the pharmaceutical industry's voluntary compliance guidelines, and compliance with the applicable compliance guidance promulgated by the federal government. Other various state level requirements include restricting payments or the provision of other items of value that may be made to healthcare providers and other potential referral sources; restricting various marketing practices; requiring prescription drug companies to report expenses relating to the marketing and promotion of drug products; requiring the posting of information relating to clinical studies and their outcomes; requiring the registration of sales representatives; requiring the reporting of certain information related to drug pricing; and requiring drug manufacturers to track and report information related to payments, gifts, compensation, and other items of value to physicians and other healthcare providers. Additionally, states that have not implemented these types of regulations are considering similar proposals. Compliance with these laws is difficult and time consuming, and companies that do not comply with these state laws face civil penalties.

If our operations are found to be in violation of any of the health regulatory laws described above or any other laws that apply to us, we may be subject to significant penalties, including imprisonment, criminal fines, civil monetary penalties, administrative penalties, disgorgement, exclusion from participation in federal healthcare programs, contractual damages, injunctions, recall or seizure of products, total or partial suspension of production, reputational harm, administrative burdens, additional oversight and reporting obligations if we become subject to a corporate integrity agreement or similar agreement to resolve allegation of non-compliance with these laws, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

Foreign Regulation

In addition to regulations in the United States, we are subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we must obtain approval by the comparable regulatory authorities of foreign countries before we can commence clinical trials and approval of foreign countries or economic areas, such as the European Union, before we may market products in those countries or areas. The approval process and requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from place to place, and the time may be longer or shorter than that required for FDA approval.

Clinical Trials and Marketing Authorization in the European Union

In Europe, a clinical trial application (“CTA”) must currently be submitted to the competent national regulatory authority and to an independent ethics committee in each country in which we intend to conduct clinical trials. Once the CTA is approved in accordance with that country’s requirements, clinical trial development may proceed in that country. Under the new Regulation on Clinical Trials, which is expected to take effect in 2020, there will be a centralized application procedure where one national authority takes the lead in reviewing the application and the other national authorities have more limited involvement. Any substantial changes to the trial protocol or other information submitted with the clinical trial applications must be notified to or approved by the relevant competent authorities and ethics committees. In all cases, the clinical trials must be conducted in accordance with good clinical practices and other applicable regulatory requirements and medicines used in clinical trials must be manufactured in accordance with good manufacturing practices. A clinical trial may only be undertaken subject to certain conditions. The relevant ethics committee must give its opinion, before a clinical trial commences, on any issue requested. Clinical trials information must be entered into a European database. There are strict requirements in relation to the labeling and packaging of our product candidates, the verification of compliance with the provisions on good clinical and manufacturing practice and the notification of adverse events and serious adverse reactions.

Under European Union regulatory systems, a company may not market a medicinal product without a marketing authorization.

There are four procedures for submitting a Marketing Authorization Application (“MAA”) in Europe: (i) the national procedure, (ii) the mutual recognition procedure (“MRP”); (iii) the decentralized procedure (“DCP”) and (iv) the centralized procedure (“CP”). The submission strategy for a given product will depend on the nature of the product, the target indication(s), the history of the product, and the marketing plan. The centralized procedure is compulsory for certain medicinal products which are produced by biotechnology processes, advanced therapy medicinal products and for those which are designated as orphan medicinal products. Besides the products falling under the mandatory scope, the centralized procedure is also optional for medicinal products that constitute a significant therapeutic, scientific or technical innovation i.e. new active substances or other medicinal products that constitute a significant therapeutic, scientific or technical innovation, that contain an active substance not authorized in the European Union before May 20, 2004 or for which a centralized procedure would be in the interest of patients.

The centralized procedure leads to approval of the product in all 27 EU member states and in Norway, Iceland and Liechtenstein, collectively referred to herein as the EEA. Submission of one MAA thus leads to one assessment process and one authorization that allows access to the market of the entire EEA. The process of the centralized procedure is triggered when the applicant submits an MAA to the EMA. The letter of intent also initiates the assignment of the Rapporteur and Co-Rapporteur, who are the two appointed members of the Committee for Human Medicinal Products (“CHMP”) representing two EU member states. Under the centralized procedure, the maximum timeframe for the evaluation of an MAA by the EMA is 210 days. This excludes so-called clock stops, during which additional written or oral information is to be provided by the applicant in response to questions asked by the CHMP. At the end of the review period, the CHMP provides an opinion to the European Commission. If this is opinion favorable, the Commission may then adopt a decision to grant a marketing authorization. In exceptional cases, the CHMP might perform an accelerated review of an MAA in no more than 150 days. This is usually when the product is of major interest from the point of view of public health and, in particular, from the viewpoint of therapeutic innovation.

When using the MRP or DCP, the applicant must select which EU member states in which to seek approval. In the case of an MRP, the applicant must initially receive national approval in one EU member state. This will be the so-called reference member state (“RMS”) for the MRP. Then, the applicant seeks approval for the product in other EU member states, the so-called concerned member states (“CMS”), in a second step: the mutual recognition process. For the DCP, the applicant will approach all chosen member states at the same time. To do so, the applicant will identify the RMS that will assess the submitted MAA and provide the other selected member states with the conclusions and results of the assessment.

An innovator company enjoys a period of “data exclusivity” during which their pre-clinical and clinical trials data may not be referenced in the regulatory filings of another company (typically a generic company) for the same drug substance.

Data exclusivity in Europe is 8 years from the date of first authorization in Europe with an additional period of 2 years of “market exclusivity.” This is the period of time during which a generic company may not market an equivalent generic version of the originator’s pharmaceutical product. An additional 1 year may be obtained where the innovator company is granted a marketing authorization within the above 8-year period for a significant new indication for the relevant medicinal product.

The Paediatric Regulation provides that an application for a new marketing authorization must include the results of all trials performed and details of all information collected in compliance with an agreed pediatric investigation plan (PIP), unless a deferral or waiver applies on the basis that pediatric use is not relevant. This requirement can also be deferred by agreement.

When the application for marketing authorization is made, the competent authority responsible for granting a marketing authorization must verify whether the application complies with the relevant requirements, including compliance with the agreed PIP. Assuming it does, the marketing authorization may be granted and the relevant results are included in the summary of product characteristics (“SmPC”) for the product, along with a statement indicating compliance with the agreed PIP. The applicant then receives the six-month extension to the SPC. It is not necessary for the product to actually be indicated for use in the pediatric population (for example, if the results show that that would not be appropriate).

Other Laws and Regulatory Processes

We are subject to a variety of financial disclosure and securities trading regulations as a public company in the United States, including laws relating to the oversight activities of the Securities and Exchange Commission (“SEC”), and Nasdaq rules under which our stock is listed. In addition, the Financial Accounting Standards Board (“FASB”), the SEC, and other bodies that have jurisdiction over the form and content of our accounts, our financial statements and other public disclosures are constantly considering and interpreting proposals and existing pronouncements designed to ensure that companies best display relevant and transparent information relating to their respective businesses.

Our present and future business has been and will continue to be subject to various other laws and regulations. Various laws, regulations and recommendations relating to safe working conditions, laboratory practices, the experimental use of animals, and the purchase, storage, movement, import and export and use and disposal of hazardous or potentially hazardous substances used in connection with our research work are or may be applicable to our activities. Certain agreements entered into by us involving exclusive license rights or acquisitions may be subject to national antitrust regulatory control, the effect of which cannot be predicted. The extent of government regulation which might result from future legislation or administrative action, also cannot be predicted with accuracy.

Employees

As of January 31, 2020, we had 221 employees.

Available Information

We were incorporated in the state of Delaware in February 2011. Our website address is www.retrophin.com. We post links on our website to the following filings as soon as reasonably practicable after they are electronically filed with or furnished to the SEC: annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements, and any amendments to those reports filed or furnished pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended. All such filings are available through our website free of charge. The SEC also maintains an internet site at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

ITEM 1A. RISK FACTORS

Our business, as well as an investment in our common stock, is highly speculative in nature and involves a high degree of risk. Our securities should be purchased only by persons who can afford to lose their entire investment. Carefully consider the risks and uncertainties described below together with all of the other information included herein, including the financial statements and related notes, before deciding to invest in our common stock. If any of the following risks actually occur, they could adversely affect our business, prospects, financial condition and results of operations. In such event(s), the market price of our common stock could decline and result in a loss of part or all of your investment. Accordingly, prospective investors should carefully consider, along with other matters referred to herein, the following risk factors in evaluating our business before purchasing any shares of our common stock.

Risks Related to the Development of our Product Candidates

Our clinical trials may fail to demonstrate the safety and efficacy of our product candidates, including sparsentan, which could prevent or significantly delay their regulatory approval.

Before obtaining regulatory approval for the sale of any of our current or future product candidates, including sparsentan, we must subject these product candidates to extensive preclinical and clinical testing to demonstrate their safety and efficacy for humans. Clinical trials are expensive, time-consuming and may take years to complete.

We may experience numerous unforeseen events during, or as a result of, preclinical or nonclinical testing and the clinical trial process that could delay or prevent our ability to obtain regulatory approval or commercialize our product candidates, including:

- our preclinical or nonclinical tests or clinical trials may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional preclinical testing or clinical trials or we may abandon projects that we expect to be promising;
- regulators may require us to conduct studies of the long-term effects associated with the use of our product candidates;
- regulators or institutional review boards may not authorize us to commence a clinical trial or conduct a clinical trial at a prospective trial site;

- the FDA or any non-United States regulatory authority may impose conditions on us regarding the scope or design of our clinical trials or may require us to resubmit our clinical trial protocols to institutional review boards for re-inspection due to changes in the regulatory environment;
- the number of patients required for our clinical trials may be larger than we anticipate or participants may drop out of our clinical trials at a higher rate than we anticipate;
- our third-party contractors or clinical investigators may fail to comply with regulatory requirements or fail to meet their contractual obligations to us in a timely manner;
- we might have to suspend or terminate one or more of our clinical trials if we, regulators or institutional review boards determine that the participants are being exposed to unacceptable health risks;
- regulators or institutional review boards may require that we hold, suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements;
- the cost of our clinical trials may be greater than we anticipate;
- the supply or quality of our product candidates or other materials necessary to conduct our clinical trials may be insufficient or inadequate or we may not be able to reach agreements on acceptable terms with prospective clinical research organizations; and
- the effects of our product candidates may not be the desired effects or may include undesirable side effects or the product candidates may have other unexpected characteristics.

These risks and uncertainties impact all of our clinical programs that we pursue. We will only obtain regulatory approval to commercialize a product candidate if we can demonstrate to the satisfaction of the FDA, and in the case of foreign commercialization, to the applicable foreign regulatory authorities, in well-designed and conducted clinical trials, that our product candidates are safe and effective and otherwise meet the appropriate standards required for approval for a particular indication.

Our product development costs will also increase if we experience delays in testing or approvals. We do not know whether any preclinical tests or clinical trials will be initiated as planned, will need to be restructured or will be completed on schedule, if at all. Significant preclinical or clinical trial delays also could shorten the patent protection period during which we may have the exclusive right to commercialize our product candidates. Such delays could allow our competitors to bring products to market before we do and impair our ability to commercialize our products or product candidates.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete our clinical trials or other testing, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we may:

- be delayed in obtaining, or may not be able to obtain, marketing approval for one or more of our product candidates;
- obtain approval for indications that are not as broad as intended or entirely different than those indications for which we sought approval; and
- have the product removed from the market after obtaining marketing approval.

We are developing in Phase 3 clinical trials sparsentan to treat FSGS and IgAN, each of which is a rare disease. Given that this development candidate is still undergoing required testing, we may not be able to initiate or continue clinical trials if we are unable to locate a sufficient number of eligible patients willing and able to participate in the clinical trials required by the FDA or foreign regulatory agencies. In addition, as other companies and researchers may be concurrently developing therapies for the same or similar indications that we are focused on, we could face competition for a limited number of patients, investigators and clinical trial sites willing to participate in clinical trials. Our inability to enroll a sufficient number of patients for any of our current or future clinical trials would result in significant delays or may require us to abandon one or more clinical trials altogether.

In January 2020, we randomized the first patients in a Phase 3 clinical trial to evaluate the effects of Chenodal in adult and pediatric patients with CTX. The pivotal study, known as the RESTORE study, is intended to support an NDA submission for marketing authorization of Chenodal for CTX in the United States. While Chenodal has been used as the standard of care for CTX for over three decades, it is not labeled for CTX and as such we cannot market this drug candidate for the treatment of CTX unless and until it receives FDA approval for this indication. If we experience delays in obtaining approval or if we fail to obtain approval of Chenodal for the treatment of CTX, our business, financial condition and results of operations could be adversely affected.

Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful, and initial results from a clinical trial do not necessarily predict final results.

Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful, and initial results from a clinical trial do not necessarily predict final results. For example, although we observed favorable responses with the physician-initiated treatment of fosmetpantotenate in PKAN patients outside the United States, the Phase 3 FORT Study evaluating the safety and efficacy of fosmetpantotenate compared to placebo in patients with PKAN did not meet its primary endpoint, did not demonstrate a difference between treatment groups, and did not meet its secondary endpoint. In addition, there can be no assurance that the positive results from the DUET study of sparsentan in FSGS will be repeated in the Phase 3 clinical trial. Similarly, there can be no assurance that our clinical experience with sparsentan in FSGS will translate to favorable data in IgAN, which patient population has not previously been treated with sparsentan prior to the Phase 3 trial currently being conducted. We cannot assure that any current or future clinical trials of sparsentan will ultimately be successful.

Before obtaining regulatory approval to conduct clinical trials of our product candidates, we must conduct extensive preclinical tests to demonstrate the safety of our product candidates in animals. Preclinical testing is expensive, difficult to design and implement, and can take many years to complete. In addition, during the clinical development process, additional nonclinical toxicology studies are routinely conducted concurrently with the clinical development of a product candidate. If any of our product candidates show unexpected findings in concurrent toxicology studies, we could experience potentially significant delays in, or be required to abandon, development of that product candidate. A failure of one or more of our nonclinical studies can occur at any stage of testing.

Communications and/or feedback from the FDA related to our current or planned future clinical trials does not guarantee any particular outcome from regulatory review for such clinical trials.

Communications and/or feedback from the FDA related to our current or future clinical trials does not guarantee any particular outcome from regulatory review for such clinical trials.

In 2018 we initiated the following Phase 3 clinical trials of sparsentan: 1) a single Phase 3 clinical trial designed to serve as the basis for an NDA and MAA filing for sparsentan for the treatment of FSGS (the “DUPLICATE Study”), and 2) a single Phase 3 clinical trial designed to serve as the basis for an NDA and MAA filing for sparsentan for the treatment of IgAN (the “PROTECT Study”). We are conducting the DUPLICATE Study and the PROTECT Study under the Subpart H pathway for potential accelerated approval in the United States, and in Europe we plan to pursue potential Conditional Marketing Authorization, in both jurisdictions based on change in proteinuria. Recognition of change in proteinuria as a surrogate endpoint in kidney disease is a relatively new regulatory development, and, as the field continues to evolve, new learnings may impact regulatory viewpoints. We expect that the FDA’s and EMA’s determination as to whether the sufficiency of the data supports an accelerated approval in either jurisdiction will be made during the application review process. There can be no assurance that even if we achieve statistical significance on the interim or primary endpoints for the DUPLICATE Study and/or the PROTECT Study, as applicable, that the FDA or EMA will deem that sufficient to grant accelerated approval or Conditional Marketing Authorization.

Although we received feedback from the FDA at an End of Phase 2 meeting for the sparsentan FSGS program during which the FDA communicated that it was open to accepting a substantial treatment effect on proteinuria in the DUPLICATE Study as a basis for accelerated approval pursuant to Subpart H of the FDA regulations and although we subsequently gained alignment that our statistical modeling supported initiating a Phase 3 trial that proceeds on the Subpart H pathway, there can be no guarantee that the data generated from the study will be sufficient to serve as the basis for an NDA filing, including an NDA under Subpart H for accelerated approval. In addition, our statistical modeling that supports proceeding with the Duplex Study on the Subpart H pathway is based on data from other FSGS studies. To the extent that the model population is not representative of the Duplex Study population, the FDA may not agree that the new results continue to support a Subpart H pathway. Furthermore, even if sparsentan is granted accelerated approval for FSGS, there can be no assurance that the post-marketing confirmatory data will support full approval of sparsentan as a treatment for FSGS.

Also, although we have reached agreement with the FDA regarding the initiation of the PROTECT Study and the trial began in December 2018, we continue to have regulatory interactions regarding certain details of the study. There can be no assurance that the study will proceed as planned and there can be no guarantee that the data generated from the study will be sufficient to serve as the basis for an NDA filing, including an NDA under Subpart H for accelerated approval or support Conditional Marketing Authorization in the EU. Furthermore, even if sparsentan is granted accelerated approval for IgAN, there can be no assurance that the post-marketing confirmatory data will support full approval of sparsentan as a treatment for IgAN.

In addition, because both the DUPLICATE Study and PROTECT Study are evaluating the same compound for the treatment of chronic kidney diseases and utilizing similar endpoints, the risk of success or failure for the two studies may, depending on the outcomes of the studies, end up being correlated.

Interim, topline and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publicly disclose preliminary or topline or interim data from our clinical studies, which is based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular study. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the topline results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, topline data should be viewed with caution. From time to time, we may also disclose interim data from our clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment and dosing continues and more patient data become available. Adverse differences between preliminary or interim data and final or confirmatory data could significantly harm our business prospects.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate or product and our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is the material or otherwise appropriate information to include in our disclosure, and any information we determine not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular drug, drug candidate or our business. If the topline data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, our product candidates may be harmed, which could harm our business, operating results, prospects or financial condition.

Even if we receive regulatory approval for any product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense.

Any regulatory approvals that we receive for any product candidates may be subject to significant limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the product candidate.

In addition, if the FDA or a comparable foreign regulatory authority approves any product candidates, those products will be subject to extensive and ongoing regulatory requirements, including for the manufacturing, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export, recordkeeping, conduct of potential post-marketing studies and post-market submission requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with current good manufacturing practices and good clinical practices, for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, undesirable side effects caused by the product, problems encountered by our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, either before or after product approval, may result in, among other things:

- restrictions on the marketing, manufacturing, or distribution of the product;
- requirements to include additional warnings on the label;
- requirements to create or enhance a medication guide outlining the risks to patients;
- withdrawal of the product from the market;
- voluntary or mandatory product recalls;
- requirements to change the way the product is administered or for us to conduct additional clinical trials;
- fines, warning or untitled letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or our strategic partners, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products;

- injunctions or the imposition of civil or criminal penalties; and
- harm to our reputation.

For example, we have certain post-marketing requirements and commitments associated with Cholbam. Further, we face risks relating to the post marketing obligations and commercial acceptance of Cholbam, which was approved by the FDA on March 17, 2015. If the regulatory approval for Chenodal, Cholbam and/or Thiola are withdrawn for any reason, it would have a material adverse impact on our sales and profitability.

The independent clinical investigators and contract research organizations that we rely upon to conduct our clinical trials may not be diligent, careful or timely, and may make mistakes, in the conduct of our trials.

We depend on independent clinical investigators and contract research organizations (“CROs”) to conduct our clinical trials under agreements with us. The CROs play a significant role in the conduct of our clinical trials. Failure of the CROs to meet their obligations could adversely affect clinical development of our product candidates. The independent clinical investigators are not our employees and we cannot control the timing or amount of resources they devote to our studies. If their performance is substandard, it could delay or prevent approval of our FDA applications. Moreover, these independent investigators and CROs may also have relationships with other commercial entities, some of which may compete with us. If independent investigators and CROs allocate their resources to assist our competitors at our expense, it could harm our competitive position.

Risks Related to the Commercialization of Our Products

The commercial success of Chenodal, Cholbam and Thiola depends on them being considered to be effective drugs with advantages over other therapies.

The commercial success of our products Chenodal, Cholbam and Thiola depends on them being considered to be effective drugs with advantages over other therapies. A number of factors, as discussed in greater detail below, may adversely impact the degree of acceptance of these products, including their efficacy, safety, price and benefits over competing therapies, as well as the coverage and reimbursement policies of third-party payers, such as government and private insurance plans.

If unexpected adverse events are reported in connection with the use of any of these products, physician and patient acceptance of the product could deteriorate and the commercial success of such product could be adversely affected. We are required to report to the FDA events associated with our products relating to death or injury. Adverse events could result in additional regulatory controls, such as a requirement for costly post-approval clinical studies or revisions to our approved labeling which could limit the indications or patient population for a product or could even lead to the withdrawal of a product from the market.

We are subject to generic competition, and recent developments relating to generic competition for pharmaceutical products could cause our product sales and business to be negatively impacted.

Under the Hatch-Waxman Amendments of the Federal Food, Drug, and Cosmetic Act, a pharmaceutical manufacturer may file an ANDA, seeking approval of a generic copy of an approved innovator product or an NDA under Section 505(b)(2) that relies on the FDA’s prior findings of safety and effectiveness in approving the innovator product. A Section 505(b)(2) NDA may be for a new or improved version of the original innovator product. Certain of our products, including Thiola, are subject to immediate competition from compounded and generic entrants, as the ANDA and NDA for these drug products have no remaining or current patent or nonpatent exclusivity.

There have been a number of recent regulatory and legislative initiatives designed to encourage generic competition for pharmaceutical products, including expedited review procedures for generic manufacturers and incentives designed to spur generic competition of branded drugs. In particular, the FDA and the U.S. Federal Trade Commission (“FTC”) have been focused on brand companies’ denial of drug supply to potential generic competitors for testing. In December 2019, the CREATES Act was enacted, which provides a legislatively defined private right of action under which generic companies can bring suit against companies who refuse access to product for the bioequivalence testing needed to support approval of a generic product.

We are currently defending a lawsuit brought by Spring Pharmaceuticals, LLC (“Spring”), alleging that we refused to sell samples of Thiola in order for Spring to conduct bioequivalence studies. In addition, we are currently in the process of responding to a civil investigative demand from the FTC related to the marketing, sale, distribution and pricing of our products, including Thiola. At this time, the FTC has not initiated any claim or proceeding against the Company relating to these matters.

We cannot currently predict the specific outcome or impact on our business of such regulatory and legislative initiatives, litigation or investigation. However, it is our policy, which is in compliance with the CREATES Act, to evaluate requests for samples of our branded products, and to provide samples in response to bona fide requests from qualified third parties, including generic manufacturers, subject to specified conditions. We have provided and are in the process of providing samples to Spring and certain generic manufacturers.

If a generic version of Thiola, Chenodal or any of our other current or future products is approved, sales of that product likely would be negatively impacted, which could have a material adverse impact on our sales and profitability. Both the original formulation of Thiola and Thiola EC are subject to generic competition, and a generic version of either formulation could have a material adverse impact on sales of Thiola EC. In addition, the defense of litigation and response to investigation requests could result in substantial costs, reputational impact, and the diversion of management attention and resources.

Changes in reimbursement practices of third-party payers could affect the demand for our products and the prices at which they are sold.

The business and financial condition of healthcare-related businesses will continue to be affected by efforts of governments and third-party payers to contain or reduce the cost of healthcare through various means. In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval for sparsentan, or any other product candidate that we develop, restrict or regulate post-approval activities and affect our ability to profitably sell sparsentan, or any other product candidate for which we obtain marketing approval.

Our products are sold to patients whose healthcare costs are met by third-party payers, such as government programs, private insurance plans and managed-care programs. These third-party payers are increasingly attempting to contain healthcare costs by limiting both coverage and the level of reimbursement for medical products and services. Levels of reimbursement, if any, may be decreased in the future, and future healthcare reform legislation, regulations or changes to reimbursement policies of third-party payers may otherwise adversely affect the demand for and price levels of our products, which could have a material adverse effect on our sales and profitability.

Economic, social, and congressional pressure may result in individuals and government entities increasingly seeking to achieve cost savings through mechanisms that limit coverage or payment for our products. For example, state Medicaid programs are increasingly requesting manufacturers to pay supplemental rebates and requiring prior authorization for use of drugs. Managed care organizations continue to seek price discounts and, in some cases, to impose restrictions on the coverage of particular drugs. Government efforts to reduce Medicaid expenses may lead to increased use of managed care organizations by Medicaid programs. This may result in managed care organizations influencing prescription decisions for a larger segment of the population and a corresponding constraint on prices and reimbursement for our products.

We are dependent on third parties to manufacture and distribute our pharmaceutical products who may not fulfill their obligations.

We have no manufacturing capabilities and rely on third party manufacturers who are sole source suppliers for manufacturing of Chenodal, Cholbam and Thiola. The facilities used by our third-party manufacturers must be approved by the FDA, or in the case of Kolbam in Europe, the EMA. Our dependence on third parties for the manufacture of our products may harm our profit margin on the sale of products and our ability to deliver products on a timely and competitive basis. If our third-party manufacturers are unable to manufacture to specifications or in compliance with applicable regulatory requirements, our ability to commercialize our products will be adversely impacted and could affect our ability to gain market acceptance for our products and negatively impact our revenues.

We currently have no in-house distribution channels for Chenodal, Cholbam or Thiola and we are dependent on a third-party distributor, Dohmen Life Sciences Services, an Eversana Company, to distribute such products. We rely on this distributor for all of our proceeds from sales of Chenodal, Cholbam and Thiola in the United States. The outsourcing of our distribution function is complex, and we may experience difficulties that could reduce, delay or stop shipments of such products. If we encounter such distribution problems, and we are unable to quickly enter into a similar agreement with another distributor on substantially similar terms, distribution of Chenodal, Cholbam and/or Thiola could become disrupted, resulting in lost revenues, provider dissatisfaction, and/or patient dissatisfaction.

Governments outside the United States tend to impose strict price controls and reimbursement approval policies, which may adversely affect our prospects for generating revenue.

In some countries, particularly EU countries and EFTA member states, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time (6 to 12 months or longer) after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost effectiveness of our product candidate to other available therapies. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our prospects for generating revenue outside of the United States, if any, could be adversely affected and our business may suffer.

If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell our product candidates outside the United States, we may be unable to generate product revenue outside of the United States.

We may not be able to rely on orphan drug exclusivity for Cholbam/Kolbam or any of our products.

Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs for relatively small patient populations as orphan drugs. We have obtained orphan designation for Cholbam/Kolbam in the United States and Europe. Generally, if a product with an orphan drug designation subsequently receives the first marketing approval for the indication for which it has such designation, that product is entitled to a period of marketing exclusivity, which precludes the applicable regulatory authority from approving another marketing application for the same drug for the same indication for that time period. The applicable period is seven years in the United States and ten years in Europe or, in the case of orphan drugs for which a pediatric investigation plan has been completed, 12 years. Even though we have been awarded orphan drug exclusivity for Cholbam in the United States, we may not be able to maintain it. For example, if a competitive product that contains the same active moiety and treats the same disease as our product is shown to be clinically superior to our product, any orphan drug exclusivity we have obtained will not block the approval of such competitive product and we may effectively lose orphan drug exclusivity. Similarly, if a competitive product that contains the same active moiety and treats the same disease as our product candidate is approved for orphan drug exclusivity before our product candidate, we may not be able to obtain approval for our product candidate until the expiration of the competitive product's orphan drug exclusivity unless our product candidate is shown to be clinically superior to the competitive product.

If we are unable to maintain an effective and specialized sales force, we will not be able to commercialize our products successfully.

In order to successfully commercialize our products, we have built a specialized sales force. Factors that may hinder our ability to successfully market and commercially distribute our products include:

- inability of sales personnel to obtain access to or convince adequate numbers of physicians to prescribe our products;
- inability to recruit, retain and effectively manage adequate numbers of effective sales personnel;
- lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies that have more extensive product lines; and
- unforeseen delays, costs and expenses associated with maintaining our sales organization.

If we are unable to maintain our sales force for our products, we may not be able to generate sufficient product revenue.

We will need to continue to expend significant time and resources to train our sales forces to be credible, persuasive and compliant in discussing our products with the specialists treating the patients indicated under the product's label. In addition, if we are unable to effectively train our sales force and equip them with effective marketing materials our ability to successfully commercialize our products could be diminished, which would have a material adverse effect on our business, results of operations and financial condition.

Risks Related to our Products and Product Candidates

Our products may not achieve or maintain expected levels of market acceptance or commercial success.

The success of our products is dependent upon achieving and maintaining market acceptance. Commercializing products is time consuming, expensive and unpredictable. There can be no assurance that we will be able to, either by ourselves or in collaboration with our partners or through our licensees, successfully commercialize new products or current products or gain market acceptance for such products. New product candidates that appear promising in development may fail to reach the market or may have only limited or no commercial success.

Further, the discovery of significant problems with a product similar to one of our products that implicate (or are perceived to implicate) an entire class of products could have an adverse effect on sales of the affected products. Accordingly, new data about our products, or products similar to our products, could negatively impact demand for our products due to real or perceived side effects or uncertainty regarding efficacy and, in some cases, could result in product withdrawal.

Our current products and any products that we bring to the market, including sparsentan, if they receive marketing approval, may not gain market acceptance by physicians, patients, third-party payers, and others in the medical community. If these products do not achieve an adequate level of acceptance, we may not generate significant product revenue and we may not become profitable. The degree of market acceptance of our current products and product candidates, if approved for commercial sale, will depend on a number of factors, including:

- the prevalence and severity of any side effects, including any limitations or warnings contained in a product's approved labeling;
- the efficacy and potential advantages over alternative treatments;

- the pricing of our product candidates;
- relative convenience and ease of administration;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support and timing of market introduction of competitive products;
- publicity concerning our products or competing products and treatments; and
- sufficient third-party insurance coverage and reimbursement.

Even if a potential or current product displays a favorable efficacy and safety profile in preclinical and clinical trials, market acceptance of the product will not be known until after it is launched. Our efforts to educate patients, the medical community, and third-party payers on the benefits of our product may require significant resources and may never be successful. Such efforts to educate the marketplace may require more resources than are required by the conventional marketing technologies employed by our competitors.

If the market opportunities for our products and product candidates are smaller than we believe they are, our revenues may be adversely affected and our business may suffer.

Certain of the diseases that our current and future product candidates are being developed to address, such as FSGS and IgAN, are relatively rare. Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with our product candidates, may not be accurate.

Currently, most reported estimates of the prevalence of FSGS are based on studies of small subsets of the population of specific geographic areas, which are then extrapolated to estimate the prevalence of the diseases in the broader world population. As new studies are performed the estimated prevalence of these diseases may change. There can be no assurance that the prevalence of FSGS in the study populations accurately reflect the prevalence of these diseases in the broader world population. If our estimates of the prevalence of FSGS or IgAN or of the number of patients who may benefit from treatment with sparsentan prove to be incorrect, the market opportunities for our product candidates may be smaller than we believe they are, our prospects for generating revenue may be adversely affected and our business may suffer.

Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval or commercialization.

Undesirable side effects caused by our product candidates could interrupt, delay or halt clinical trials and could result in the denial of regulatory approval by the FDA or other regulatory authorities for any or all targeted indications, and in turn prevent us from commercializing our product candidates and generating revenues from their sale.

In addition, if any of our product candidates receive marketing approval and we or others later identify undesirable side effects caused by the product:

- regulatory authorities may require the addition of restrictive labeling statements;
- regulatory authorities may withdraw their approval of the product; and
- we may be required to change the way the product is administered or conduct additional clinical trials.

Any of these events could prevent us from achieving or maintaining market acceptance of the affected product or could substantially increase the costs and expenses of commercializing the product candidate, which in turn could delay or prevent us from generating significant revenues from its sale or adversely affect our reputation.

We do not currently have patent protection for our commercial products. If we are unable to obtain and maintain protection for the intellectual property relating to our technology and products, the value of our technology and products will be adversely affected.

Our success will depend in large part on our ability to obtain and maintain protection in the United States and other countries for the intellectual property covering, or incorporated into, our technology and products. The patent situation in the field of biotechnology and pharmaceuticals generally is highly uncertain and involves complex legal, technical, scientific and factual questions. We do not have, and do not expect to obtain, patent protection for Thiola, Chenodal or Cholbam. Additionally, although we have several pending U.S. patent applications directed to Thiola EC and/or its use for treating cystinuria, we do not know whether any of these patent applications will result in a granted patent covering Thiola EC or its use for treating cystinuria. More generally, we may not be able to obtain additional issued patents relating to our technology or products. Even if issued,

patents issued to us or our licensors may be challenged, narrowed, invalidated, held to be unenforceable or circumvented, which could limit our ability to stop competitors from marketing similar products or reduce the term of patent protection we may have for our products. Changes in either patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property or narrow the scope of our patent protection.

Our product candidate sparsentan is covered by U.S. Patent No. 6,638,937, which expires in 2019 and to which we have an exclusive license. In addition, U.S. Patent No. 9,662,312, to which we also have an exclusive license and which was granted on May 30, 2017 and expires in 2030, covers the use of sparsentan for treating glomerulosclerosis, including FSGS. And U.S. Patent No. 9,993,461, to which we also have an exclusive license and which was granted on June 12, 2018 and expires in 2030, covers the use of sparsentan for treating IgA nephropathy as well as glomerulosclerosis, including FSGS.

For products we develop based on a new chemical entity not previously approved by the FDA, we expect that in addition to the protection afforded by our patent filings that we will be able to obtain either five years regulatory exclusivity via the provisions of the FDC Act and possibly seven years regulatory exclusivity via the orphan drug provisions of the FDC Act. In addition, we may be able to obtain up to five years patent term extension (to compensate for regulatory approval delay) for a patent covering such a product.

The degree of future protection for our proprietary rights is uncertain, and we cannot ensure that:

- we or our licensors were the first to make the inventions covered by each of our pending patent applications;
- we or our licensors were the first to file patent applications for these inventions;
- others will not independently develop similar or alternative technologies or duplicate any of our technologies;
- any patents issued to us or our licensors that provide a basis for commercially viable products will provide us with any competitive advantages or will not be challenged by third parties;
- we will develop additional proprietary technologies that are patentable;
- we will file patent applications for new proprietary technologies promptly or at all;
- the claims we make in our patents will be upheld by patent offices in the United States and elsewhere;
- our patents will not expire prior to or shortly after commencing commercialization of a product; and
- the patents of others will not have a negative effect on our ability to do business.

We have negotiated a license agreement with Ligand Pharmaceuticals for the rights to sparsentan which we are initially developing for the treatment of FSGS and IgAN. This license subjects us to various commercialization, reporting and other obligations. If we were to default on our obligations, we could lose our rights to sparsentan. We have obtained a U.S. and European patent covering the use of sparsentan for treating glomerulosclerosis, including FSGS, and a second U.S. patent covering both the use of sparsentan for treating IgAN and the use of sparsentan for treating glomerulosclerosis, including FSGS. However, we cannot be certain that we will be able to obtain patent protection for various other potential indications for sparsentan, or whether, if granted, we would be able to enforce such patents.

Our patents also may not afford us protection against competitors with similar technology. Because patent applications in the United States and many other jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in the scientific literature often lag behind the actual discoveries, neither we nor our licensors can be certain that we or they were the first to make the inventions claimed in our or their issued patents or pending patent applications, or that we or they were the first to file for protection of the inventions set forth in these patent applications. If a third party has also filed a United States patent application prior to the effective date of the relevant provisions of the America Invents Act (i.e. before March 16, 2013) covering our product candidates or a similar invention, we may have to participate in an adversarial proceeding, known as an interference, declared by the USPTO to determine priority of invention in the United States. The costs of these proceedings could be substantial, and it is possible that our efforts could be unsuccessful, resulting in a loss of our United States patent position.

We cannot assure you that third parties will not assert patent or other intellectual property infringement claims against us with respect to technologies used in our products. If patent infringement suits were brought against us, we may be unable to commercialize some of our products which could severely harm our business. Litigation proceedings, even if not successful, could result in substantial costs and harm our business.

We expect to rely on orphan drug status to develop and commercialize certain of our product candidates, but our orphan drug designations may not confer marketing exclusivity or other expected commercial benefits.

We expect to rely on orphan drug exclusivity for sparsentan and potential future product candidates that we may develop. Orphan drug status currently confers seven years of marketing exclusivity in the United States under the FDC Act, and up to ten years of marketing exclusivity in Europe for a particular product in a specified indication or, in the case of orphan drugs for which a pediatric investigation plan has been completed, 12 years. The FDA and EMA have granted orphan designation for Chenodal and sparsentan for the treatment of CTX and FSGS, respectively. While we have been granted these orphan designations, we will not be able to rely on these designations to exclude other companies from manufacturing or selling these molecules for the same indication beyond these time frames. Furthermore, any marketing exclusivity in Europe can be reduced from ten years to six years if the initial designation criteria have significantly changed since the market authorization of the orphan product.

For any product candidate for which we have been granted orphan drug designation in a particular indication, it is possible that another company also holding orphan drug designation for the same product candidate will receive marketing approval for the same indication before we do. If that were to happen, our applications for that indication may not be approved until the competing company's period of exclusivity expires. Even if we are the first to obtain marketing authorization for an orphan drug indication in the United States, there are circumstances under which a competing product may be approved for the same indication during the seven-year period of marketing exclusivity, such as if the later product is shown to be clinically superior to our orphan product, or if the later product is deemed a different product than ours. Further, the seven-year marketing exclusivity would not prevent competitors from obtaining approval of the same product candidate as ours for indications other than those in which we have been granted orphan drug designation, or for the use of other types of products in the same indications as our orphan product.

Any drugs we develop may become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives, thereby harming our business.

In March 2010, President Obama signed the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (collectively, the "PPACA"), a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms. The PPACA revised the definition of "average manufacturer price" for reporting purposes, which could increase the amount of Medicaid drug rebates to states. The PPACA also increased the mandated Medicaid rebate from 15.1% to 23.1% of the average manufacturer price, expanded the rebate to Medicaid managed care utilization and increased the types of entities eligible for the federal 340B drug discount program. Further, the law imposes a significant annual fee on companies that manufacture or import certain branded prescription drug products. There remain judicial, Congressional, and political challenges to certain aspects of the PPACA, as well as efforts by the Trump administration to repeal or replace certain aspects of the PPACA. Since January 2017, President Trump has signed two Executive Orders and other directives designed to delay the implementation of certain provisions of the PPACA or otherwise circumvent some of the requirements for health insurance mandated by the PPACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the PPACA. While Congress has not passed comprehensive repeal legislation, bills affecting the implementation of certain taxes under the PPACA have been signed into law. For example, the Tax Act includes a provision which repealed, effective January 1, 2019, the tax-based shared responsibility payment imposed by the PPACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate". In addition, the 2020 federal spending package permanently eliminates, effective January 1, 2020, the PPACA-mandated "Cadillac" tax on high-cost employer-sponsored health coverage and medical device tax and, effective January 1, 2021, also eliminates the health insurer tax. The Bipartisan Budget Act of 2018 ("BBA"), among other things, amended the PPACA, effective January 1, 2019, to increase the discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D from 50 percent to 70 percent, and closed the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole". In December 2018, the Centers for Medicare & Medicaid Services ("CMS") published a new final rule permitting further collections and payments to and from certain PPACA qualified health plans and health insurance issuers under the PPACA risk adjustment program. On December 14, 2018, a Texas U.S. District Court Judge ruled that the PPACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress as part of the Tax Act. Additionally, on December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the PPACA are invalid as well. It is unclear how this decision, future decisions, subsequent appeals, and other efforts to repeal and replace the PPACA will impact the PPACA and our business.

In addition, other legislative changes have been proposed and adopted since the PPACA was enacted. For example, in August 2011, the President signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee on Deficit Reduction did not achieve a targeted deficit reduction of at least \$1.2 trillion for fiscal years 2012 through 2021, triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect beginning on April 1, 2013 and, due to subsequent legislative amendments, including the BBA, will stay in effect through 2029 unless additional Congressional action is taken. Additionally, in January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, reduced Medicare payments to several providers, including hospitals and imaging centers.

If we are unable to obtain coverage and adequate reimbursement from governments or third-party payers for any products that we may develop or if we are unable to obtain acceptable prices for those products, our prospects for generating revenue and achieving profitability will suffer.

Our prospects for generating revenue and achieving profitability will depend heavily upon the availability of coverage and adequate reimbursement for the use of our approved product candidates from governmental and other third-party payers, both in the United States and in other markets. Reimbursement by a third-party payer may depend upon a number of factors, including the third-party payer's determination that use of a product is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

Obtaining reimbursement approval for a product from each government or other third-party payer is a time consuming and costly process that could require us to provide supporting scientific, clinical and cost effectiveness data for the use of our products to each payer. We may not be able to provide data sufficient to gain acceptance with respect to reimbursement or we might need to conduct post-marketing studies in order to demonstrate the cost-effectiveness of any future products to such payers' satisfaction. Such studies might require us to commit a significant amount of management time and financial and other resources. Even when a payer determines that a product is eligible for reimbursement, the payer may impose coverage limitations that preclude payment for some uses that are approved by the FDA or non-United States regulatory authorities. Also, prior authorization for a product may be required. In addition, there is a risk that full reimbursement may not be available for high-priced products. Moreover, eligibility for coverage does not imply that any product will be reimbursed in all cases or at a rate that allows us to make a profit or even cover our costs. Interim payments for new products, if applicable, may also not be sufficient to cover our costs and may not be made permanent.

A primary trend in the United States healthcare industry and elsewhere is toward cost containment. We expect the changes made by PPACA, other legislation impacting the Medicare program and the 340B program, and the increasing emphasis on managed care to continue to put pressure on pharmaceutical product pricing. As these concerns continue to grow over the need for tighter oversight, there remains the possibility that the Health Resources and Services Administration or another agency under the HHS will propose regulations or that Congress will explore changes to the 340B program through legislation. For example, on November 30, 2018, HRSA published its final rule regarding the calculation of 340B ceiling price and imposition of civil monetary penalties on manufacturers for knowingly and intentionally overcharging covered entities, which became effective on January 1, 2019. Pursuant to the final rule, after January 1, 2019, manufacturers must calculate 340B program ceiling prices on a quarterly basis. Moreover, manufacturers could be subject to a \$5,000 penalty for each instance where they knowingly and intentionally overcharge a covered entity under the 340B program.

Further, there has been increasing legislative and enforcement interest in the United States with respect to drug pricing practices, including several recent U.S. congressional inquiries and federal and state legislation designed to, among other things, increase drug pricing transparency, expedite generic competition, review relationships between pricing and manufacturer patient assistance programs, and reform government program drug reimbursement methodologies. At the federal level, the Trump administration's budget proposals for fiscal year 2020 contain further drug price control measures that could be enacted during the budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. Further, the Trump administration released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. The HHS has solicited feedback on some of these measures and, has implemented others under its existing authority. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage Plans the option to use step therapy for Part B drugs beginning January 1, 2020. The final rule codified CMS's policy change that was effective January 1, 2019. Although a number of these existing measures, and other potential proposals, may require additional authorization to become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Any reduction in reimbursement from Medicare, Medicaid or other government-funded programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our drugs. Additionally, we are currently unable to predict what additional legislation or regulation, if any, relating to the healthcare industry may be enacted in the future or what effect recently enacted federal legislation or any such additional legislation or regulation would have on our business.

We face potential product liability exposure far in excess of our limited insurance coverage.

The use of any of our potential products in clinical trials, and the sale of any approved products, may expose us to liability claims. These claims might be made directly by consumers, health care providers, pharmaceutical companies or others selling our products. We have obtained limited product liability insurance coverage for our clinical trials in the amount of \$25 million per occurrence and \$25 million in the aggregate. However, our insurance may not reimburse us or may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive, and we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. We intend to expand our insurance coverage to include the sale of commercial products if we obtain marketing approval for product candidates in development, but we may be unable to obtain commercially reasonable product liability insurance for any products approved for marketing. On occasion, juries have awarded large judgments in class action lawsuits based on drugs that had unanticipated side effects. A successful product liability claim or series of claims brought against us would decrease our cash reserves and could cause our stock price to fall.

We face substantial competition, which may result in others discovering, developing or commercializing products before or more successfully than we do. Our operating results will suffer if we fail to compete effectively.

Several of our competitors have substantially greater financial, research and development, distribution, manufacturing and marketing experience and resources than we do and represent substantial long-term competition for us. Other companies may succeed in developing and marketing products that are more effective and/or less costly than any products that may be developed and marketed by us, or that are commercially accepted before any of our products. Factors affecting competition in the pharmaceutical and drug industries vary, depending on the extent to which a competitor is able to achieve a competitive advantage based on its proprietary technology and ability to market and sell drugs. The industry in which we compete is characterized by extensive research and development efforts and rapid technological progress. Although we believe that our orphan drug status for Cholbam and proprietary position with respect to sparsentan may give us a competitive advantage, new developments are expected to continue and there can be no assurance that discoveries by others will not render such potential products noncompetitive. Furthermore, competitors could enter the market with generic versions of our products.

Our competitive position also depends on our ability to enter into strategic alliances with one or more large pharmaceutical and contract manufacturing companies, attract and retain qualified personnel, develop effective proprietary products, implement development and marketing plans, obtain patent protection, secure adequate capital resources and successfully sell and market our approved products. There can be no assurance that we will be able to successfully achieve all of the foregoing objectives.

Use of third parties to manufacture our products and product candidates may increase the risk that we will not have sufficient quantities of our product and product candidates or such quantities at an acceptable cost, and clinical development and commercialization of our product and product candidates could be delayed, prevented or impaired.

We do not own or operate manufacturing facilities for clinical or commercial production of our products or product candidates. We have limited personnel with experience in drug manufacturing and we lack the resources and the capabilities to manufacture any of our product candidates on a clinical or commercial scale. We outsource all manufacturing and packaging of our preclinical, clinical, and commercial products to third parties. The manufacture of pharmaceutical products requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers of pharmaceutical products often encounter difficulties in production, particularly in scaling up initial production and in maintaining required quality control. These problems include difficulties with production costs and yields and quality control, including stability of the product candidate.

We do not currently have any agreements with third-party manufacturers for the long-term commercial supply of any of our development stage product candidates, including sparsentan. We may be unable to enter into agreements for commercial supply with third-party manufacturers, or may be unable to do so on acceptable terms. Even if we enter into these agreements, the manufacturers of each product candidate will be single source suppliers to us for a significant period of time. Reliance on third-party manufacturers entails risks to which we may not be subject if we manufactured our product candidates or products ourselves, including:

- reliance on the third party for regulatory compliance and quality assurance;
- limitations on supply availability resulting from capacity and scheduling constraints of the third parties;
- impact on our reputation in the marketplace if manufacturers of our products fail to meet the demands of our customers;
- the possible breach of the manufacturing agreement by the third party because of factors beyond our control; and
- the possible termination or nonrenewal of the agreement by the third party, based on its own business priorities, at a time that is costly or inconvenient for us.

The failure of any of our contract manufacturers to maintain high manufacturing standards could result in injury or death of clinical trial participants or patients using our products. Such failure could also result in product liability claims, product recalls, product seizures or withdrawals, delays or failures in testing or delivery, cost overruns or other problems that could seriously harm our business or profitability.

Our contract manufacturers will be required to adhere to FDA regulations setting forth cGMP. These regulations cover all aspects of the manufacturing, testing, quality control and recordkeeping relating to our product candidates and any products that we may commercialize. Our manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside the United States. Our manufacturers are subject to unannounced inspections by the FDA, state regulators and similar regulators outside the United States. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approval of our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect regulatory approval and supplies of our product candidates.

Our product and any products that we may develop may compete with other product candidates and products for access to manufacturing facilities. There are a limited number of manufacturers that operate under cGMP regulations and that are both capable of manufacturing for us and willing to do so. If the third parties that we engage to manufacture products for our developmental or commercial products should cease to continue to do so for any reason, we likely would experience interruptions in cash flows and/or delays in advancing our clinical trials while we identify and qualify replacement suppliers, and we may be unable to obtain replacement supplies on terms that are favorable to us. Later relocation to another manufacturer will also require notification, review and other regulatory approvals from the FDA and other regulators and will subject our production to further cost and instability in the availability of our product candidates. In addition, if we are not able to obtain adequate supplies of our product candidates, or the drug substances used to manufacture them, it will be more difficult for us to sell our products and to develop our product candidates. This could greatly reduce our competitiveness.

Our current and anticipated future dependence upon others for the manufacture of our product candidates may adversely affect our future profit margins and our ability to develop product candidates and commercialize any products that obtain regulatory approval on a timely and competitive basis.

Materials necessary to manufacture our products and product candidates may not be available on commercially reasonable terms, or at all, which may delay the development and commercialization of our products and product candidates.

We rely on the manufacturers of our products and product candidates to purchase from third-party suppliers the materials necessary to produce the compounds for our preclinical and clinical studies and rely on these other manufacturers for commercial distribution if we obtain marketing approval for any of our product candidates. Suppliers may not sell these materials to our manufacturers at the time we need them or on commercially reasonable terms and all such prices are susceptible to fluctuations in price and availability due to transportation costs, government regulations, price controls, and changes in economic climate or other foreseen circumstances. We do not have any control over the process or timing of the acquisition of these materials by our manufacturers. Moreover, we currently do not have any agreements for the commercial production of these materials. If our manufacturers are unable to obtain these materials for our preclinical and clinical studies, product testing and potential regulatory approval of our product candidates would be delayed, significantly impacting our ability to develop our product candidates. If our manufacturers or we are unable to purchase these materials after regulatory approval has been obtained for our product candidates, the commercial launch of our product candidates would be delayed or there would be a shortage in supply, which would materially affect our ability to generate revenues from the sale of our product candidates.

Risks Related to Our Business

Our limited operating history makes it difficult to evaluate our future prospects, and our profitability in the future is uncertain.

We face the problems, expenses, difficulties, complications and delays, many of which are beyond our control, associated with any business in its early stages and have a limited operating history on which an evaluation of our prospects can be made. Such prospects should be considered in light of the risks, expenses and difficulties frequently encountered in the establishment of a business in a new industry, characterized by a number of market entrants and intense competition, and in the shift from development to commercialization of new products based on innovative technologies.

We have experienced significant growth over the past three years in the number of our employees and the scope of our operations. We have added sales and marketing, compliance and legal functions in addition to expansion of all functions to support a commercial organization. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited resources, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The physical expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability on the part of our management to manage growth could delay the execution of our business plans or disrupt our operations.

Factors that may inhibit our efforts to commercialize our products without strategic partners or licensees include:

- our inability to recruit and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to or educate adequate numbers of physicians to prescribe our products;
- the lack of complementary products to be offered by our sales personnel, which may put us at a competitive disadvantage against companies with broader product lines;
- unforeseen costs associated with expanding our own sales and marketing team for new products or with entering into a partnering agreement with an independent sales and marketing organization; and
- efforts by our competitors to commercialize competitive products.

Moreover, though we generate revenues from product sales arrangements, we may incur significant operating losses over the next several years. Our ability to achieve profitable operations in the future will depend in large part upon successful in-licensing of products approved by the FDA, selling and manufacturing these products, completing development of our products, obtaining regulatory approvals for these products, and bringing these products to market. The likelihood of the long-term success of our company must be considered in light of the expenses, difficulties and delays frequently encountered in the development and commercialization of new drug products, competitive factors in the marketplace, as well as the regulatory environment in which we operate.

In addition, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors.

We will likely experience fluctuations in operating results and could incur substantial losses.

We expect that our operating results will vary significantly from quarter-to-quarter and year-to-year as a result of investments in research and development, specifically our clinical and preclinical development activities. We have not completed development of any drugs and we anticipate that our expenses will increase substantially as we:

- continue the open label portion of DUET and conduct the planned Phase 3 trials of sparsentan indications;
- continue the research and development of additional product candidates;
- expand our sales and marketing infrastructure to commercialize our current products and any new products for which we may obtain regulatory approval; and
- expand operational, financial, and management information systems and personnel, including personnel to support product development efforts and our obligations as a public company.

To attain and sustain profitability, we must succeed in developing and commercializing drugs with significant market potential. This will require us to be successful in a range of challenging activities, including the discovery of product candidates, successful completion of preclinical testing and clinical trials of our product candidates, obtaining regulatory approval for these product candidates and manufacturing, marketing and selling those products for which we may obtain regulatory approval. We are only in the preliminary stages of these activities. We may not be successful enough in these activities to generate revenues that are substantial enough to achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become or remain profitable could depress the market price of our common stock and could impair our ability to raise capital, expand our business, diversify our product offerings or continue our operations. A decline in the market price of our common stock may also cause a loss of a part or all of your investment.

Negative publicity regarding any of our products could impair our ability to market any such product and may require us to spend time and money to address these issues.

If any of our products or any similar products distributed by other companies prove to be, or are asserted to be, harmful to consumers and/or subject to FDA enforcement action, our ability to successfully market and sell our products could be impaired. Because of our dependence on patient and physician perceptions, any adverse publicity associated with illness or other adverse effects resulting from the use or misuse of our products or any similar products distributed by other companies could limit the commercial potential of our products and expose us to potential liabilities.

We may not have sufficient insurance to cover our liability in any current or future litigation claims either due to coverage limits or as a result of insurance carriers seeking to deny coverage of such claims.

We face a variety of litigation-related liability risks. Our certificate of incorporation, bylaws, other applicable agreements, and/or Delaware law require us to indemnify (and advance expenses to) our current and past directors and officers and employees from reasonable expenses related to the defense of any action arising from their service to us, including circumstances under which indemnification is otherwise discretionary. While our

directors and officers are included in a director and officer liability insurance policy, which covers all our directors and officers in some circumstances, our insurance coverage does not cover all of our indemnification obligations and may not be adequate to cover any indemnification or other claims against us. In addition, the underwriters of our present coverage may seek to avoid coverage in certain circumstances based upon the terms of the respective policies. If we incur liabilities that exceed our coverage under our directors and officers insurance policy or incur liabilities not covered by our insurance, we would have to self-fund any indemnification amounts owed to our directors and officers and employees in which case our results of operations and financial condition could be materially adversely affected. Further, if D&O insurance becomes prohibitively expensive to maintain in the future, we may be unable to renew such insurance on economic terms or unable to renew such insurance at all. The lack of D&O insurance may make it difficult for us to retain and attract talented and skilled directors and officers to serve our company, which could adversely affect our business

We may need substantial funding and may be unable to raise capital when needed, which would force us to delay, reduce or eliminate our product development programs or commercialization efforts.

We expect our general and research and development expenses to increase in connection with our ongoing and planned activities, particularly as we conduct Phase 3 clinical trials of sparsentan, and conduct any other later-stage clinical trials of our product candidates. In addition, subject to obtaining regulatory approval of any of our product candidates, we expect to incur significant commercialization expenses for product sales and marketing, securing commercial quantities of product from our manufacturers, and product distribution. We currently have no additional commitments or arrangements for any additional financing to fund the research and development and commercial launch of our product candidates.

Management believes our ability to continue our operations depends on our ability to sustain and grow revenue, results of operations and our ability to access capital markets when necessary to accomplish our strategic objectives. Management believes that we may incur losses in the immediate future. We expect that our operating results will vary significantly from quarter-to-quarter and year-to-year as a result of investments in research and development, specifically our clinical and preclinical development activities. We expect to finance our cash needs from cash on hand and results of operations, and depending on results of operations we may either need additional equity or debt financing, or need to enter into strategic alliances on products in development to continue our operations until we can achieve sustained profitability and positive cash flows from operating activities. Additional funds may not be available to us when we need them on terms that are acceptable to us, or at all. If adequate funds are not available to us on a timely basis, we may be required to reduce or eliminate research development programs or commercial efforts.

Our future capital requirements will depend on many factors, including:

- the progress and results of our pre-clinical and clinical studies of sparsentan for FSGS and IgAN, Chenodal for CTX, and any other drug candidates;
- the costs, timing and outcome of regulatory review of our product candidates;
- debt service obligations on the 2025 Notes;
- the number and development requirements of other product candidates that we pursue;
- the costs of commercialization activities, including product marketing, sales and distribution;
- the emergence of competing technologies and other adverse market developments;
- the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property related claims;
- the extent to which we acquire or invest in businesses, products and technologies; and
- our ability to establish collaborations and obtain milestone, royalty or other payments from any such collaborators.

The market price for shares of our common stock may be volatile and purchasers of our common stock could incur substantial losses.

The price of our stock is likely to be volatile. The stock market in general, and the market for biotechnology companies in particular, have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. The market price for our common stock may be influenced by many factors, including:

- results of clinical trials of our product candidates or those of our competitors;
- our entry into or the loss of a significant collaboration;

- regulatory or legal developments in the United States and other countries, including changes in the health care payment systems;
- our ability to obtain and maintain marketing approvals from the FDA or similar regulatory authorities outside the United States;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors and issuance of new or changed securities analysts' reports or recommendations;
- general economic, industry and market conditions;
- results of clinical trials conducted by others on drugs that would compete with our product candidates;
- developments or disputes concerning patents or other proprietary rights;
- public concern over our product candidates or any products approved in the future;
- litigation;
- communications from government officials regarding health care costs or pharmaceutical pricing;
- future sales or anticipated sales of our common stock by us or our stockholders; and
- the other factors described in this "Risk Factors" section.

In addition, the stock markets, and in particular, the Nasdaq Global Market, have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many pharmaceutical companies. The realization of any of the above risks or any of a broad range of other risks, including those described in these "Risk Factors" could have a dramatic and material adverse impact on the market price of our common stock.

We may be unable to successfully integrate new products or businesses we may acquire.

We intend to expand our product pipeline by pursuing acquisition of pharmaceutical products. If an acquisition is consummated, the integration of the acquired business, product or other assets into our company may also be complex and time-consuming and, if such businesses, products and assets are not successfully integrated, we may not achieve the anticipated benefits, cost-savings or growth opportunities. Potential difficulties that may be encountered in the integration process include the following:

- integrating personnel, operations and systems, while maintaining focus on producing and delivering consistent, high quality products;
- coordinating geographically dispersed organizations;
- distracting employees from operations;
- retaining existing customers and attracting new customers; and
- managing inefficiencies associated with integrating the operations of the Company.

Furthermore, these acquisitions and other arrangements, even if successfully integrated, may fail to further our business strategy as anticipated, expose us to increased competition or challenges with respect to our products or geographic markets, and expose us to additional liabilities associated with an acquired business, product, technology or other asset or arrangement. Any one of these challenges or risks could impair our ability to realize any benefit from our acquisitions or arrangements after we have expended resources on them.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

Our business exposes us to potential liability risks inherent in the research, development, manufacturing and marketing of pharmaceutical products. If any of our product candidates in clinical trials or commercialized products harm people we may be subject to costly and damaging product liability claims. We have clinical trial insurance and commercial product liability coverage. However, this insurance may not be adequate to cover all claims.

We may be exposed to product liability claims and product recalls, including those which may arise from misuse or malfunction of, or design flaws in, such products, whether or not such problems directly relate to the products and services we have provided. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or products that we may develop;
- damage to our reputation;
- regulatory investigations that could require costly recalls or product modifications;
- withdrawal of clinical trial participants;
- costs to defend the related litigation;
- substantial monetary awards to trial participants or patients, including awards that substantially exceed our product liability insurance, which we would then be required to pay from other sources, if available, and would damage our ability to obtain liability insurance at reasonable costs, or at all, in the future;
- loss of revenue;
- the diversion of management's attention from managing our business; and
- the inability to commercialize any products that we may develop.

A successful product liability claim or a series of claims brought against us could cause our stock price to fall and, if judgments exceed our insurance coverage, could decrease our available cash and adversely affect our business.

We are involved in certain litigation matters, any of which could result in substantial costs, divert management's attention and otherwise have a material adverse effect on our business, operating results or financial condition.

We are involved in certain litigation matters, including those described in Note 11 of the Consolidated Financial Statements included in this report. Although we intend to vigorously defend our interests in each matter, there is no guarantee that we will be successful and we may have to pay damages awards or otherwise may enter into settlement arrangements in connection with such matters. Any such payments or settlement arrangements could have material adverse effects on our business, operating results or financial condition. Even if we are successful in defending our interests in each matter, litigation with respect to such matters could result in substantial costs and significant adverse impact on our reputation and divert management's attention and resources, which could have a material adverse effect on our business, operating results or financial condition.

We are subject to significant ongoing regulatory obligations and oversight, which may result in significant additional expense and may limit our commercial success.

We are subject to significant ongoing regulatory obligations, such as safety reporting requirements and additional post-marketing obligations, including regulatory oversight of the promotion and marketing of our products. In addition, the manufacture, quality control, labeling, packaging, safety surveillance, adverse event reporting, storage and recordkeeping for our products are subject to extensive and ongoing regulatory requirements. If we become aware of previously unknown problems with any of our products, a regulatory agency may impose restrictions on our products, our contract manufacturers or us. If we, our products and product candidates, or the manufacturing facilities for our products and product candidates fail to comply with applicable regulatory requirements, a regulatory agency, including the FDA, may send enforcement letters, mandate labeling changes, suspend or withdraw regulatory approval, suspend any ongoing clinical trials, refuse to approve pending applications or supplements filed by us, suspend or impose restrictions on manufacturing operations, request a recall of, seize or detain a product, seek criminal prosecution or an injunction, or impose civil or criminal penalties or monetary fines. In such instances, we could experience a significant drop in the sales of the affected products, our product revenues and reputation in the marketplace may suffer, and we could become the target of lawsuits.

We are also subject to regulation by national, regional, state and local agencies, including but not limited to the FDA, CMS, Department of Justice, the Federal Trade Commission, the HHS Office of Inspector General and other regulatory bodies. The FDC Act, Social Security Act, Public Health Service Act and other federal and state statutes and regulations govern to varying degrees the research, development, manufacturing and commercial activities relating to prescription pharmaceutical products, including preclinical testing, clinical research, approval, production, labeling, sale, distribution, post-market surveillance, advertising, dissemination of information, promotion, marketing, and pricing to government purchasers and government health care programs. Our manufacturing partners are subject to many of the same requirements.

Companies may not promote drugs for “off-label” uses—that is, uses that are not described in the product’s labeling and that differ from those approved by the FDA or other applicable regulatory agencies. However, a company may share truthful and not misleading information that is otherwise consistent with the product’s labeling. A company that is found to have improperly promoted off-label uses may be subject to significant liability, including civil and administrative remedies as well as criminal sanctions. In addition, management’s attention could be diverted from our business operations and our reputation could be damaged.

The federal health care program Anti-Kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting, or receiving remuneration to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any health care item or service reimbursable under Medicare, Medicaid or other federally financed healthcare programs. This statute has been interpreted broadly to apply to arrangements that pharmaceutical companies have with prescribers, purchasers and formulary managers, among others. Further, the PPACA, among other things, amends the intent requirement of the federal anti-kickback statute so that a person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it. In addition, the PPACA provides that the government may assert that a claim including items or services resulting from a violation of the federal anti-kickback statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act. Although there are a number of statutory exceptions and regulatory safe harbors under the federal anti-kickback statute protecting certain common manufacturer business arrangements and activities from prosecution, the exceptions and safe harbors are drawn narrowly and an arrangement must meet all of the conditions specified in order to be fully protected from scrutiny under the federal anti-kickback statute. We seek to comply with the exceptions and safe harbors whenever possible, but our practices, such as our patient assistance programs and prompt pay discounts with certain customers, may not in all cases meet all of the criteria for protection from anti-kickback liability and may be subject to scrutiny.

The federal false claims laws, including the federal False Claims Act, prohibit any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to the federal government, or knowingly making, or causing to be made, a false statement to get a false claim paid. Additionally, the civil monetary penalties statute imposes penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. Many pharmaceutical and other health care companies have been investigated and have reached substantial financial settlements with the federal government under the federal False Claims Act for a variety of alleged marketing activities, including providing free product to customers with the expectation that the customers would bill federal programs for the product; providing consulting fees, grants, free travel, and other benefits to physicians to induce them to prescribe the company’s products; and inflating prices reported to private price publication services, which may be used by states to set drug payment rates under government health care programs. Companies have been prosecuted for causing false claims to be submitted because of the marketing of their products for unapproved uses. Pharmaceutical and other health care companies have also been prosecuted on other legal theories of Medicare and Medicaid fraud.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. It is not clear whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of any Retrophin products, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA’s approval process may significantly delay or prevent marketing approval, as well as subject Retrophin to more stringent product labeling and post-marketing testing and other requirements.

We also could become subject to government investigations and related subpoenas. Such subpoenas are often associated with previously filed qui tam actions, or lawsuits filed under seal under the federal False Claims Act. Qui tam actions are brought by private plaintiffs suing on behalf of the federal government for alleged violations of the federal False Claims Act. The time and expense associated with responding to such subpoenas, and any related qui tam or other actions, may be extensive, and we cannot predict the results of our review of the responsive documents and underlying facts or the results of such actions. Responding to government investigations, defending any claims raised, and any resulting fines, restitution, damages and penalties, settlement payments or administrative actions, as well as any related actions brought by stockholders or other third parties, could have a material impact on our reputation, business and financial condition and divert the attention of our management from operating our business.

The number and complexity of both federal and state laws continues to increase, and additional governmental resources are being added to enforce these laws and to prosecute companies and individuals who are believed to be violating them. In particular, the PPACA includes a number of provisions aimed at strengthening the government’s ability to pursue anti-kickback and false claims cases against pharmaceutical manufacturers and other healthcare entities, including substantially increased funding for healthcare fraud enforcement activities, enhanced investigative powers, amendments to the federal False Claims Act that make it easier for the government and whistleblowers to pursue cases for alleged kickback and false claim violations and public reporting of certain payments and transfers of value by certain pharmaceutical manufacturers to physicians and teaching hospitals nationwide. We anticipate that government scrutiny of pharmaceutical sales and marketing practices will continue for the foreseeable future and subject us to the risk of further government investigations and enforcement actions. Responding to a government investigation or enforcement action would be expensive and time-consuming, and could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

The U.S. Foreign Corrupt Practices Act, and similar worldwide anti-bribery laws generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business. Our policies mandate compliance with these anti-bribery laws. We operate in parts of the world that have experienced governmental corruption to some degree and in certain circumstances, strict compliance with antibribery laws may conflict with local customs and practices or may require us to interact with doctors and hospitals, some of

which may be state controlled, in a manner that is different than in the United States. We cannot assure that our internal control policies and procedures will protect us from reckless or criminal acts committed by our employees or agents. Violations of these laws, or allegations of such violations, could disrupt our business and result in criminal or civil penalties or remedial measures, any of which could have a material adverse effect on our business, financial condition and results of operations and could cause the market value of our common stock to decline.

The federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), created new federal criminal statutes that prohibit, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payers, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Like the federal anti-kickback statute, the PPACA amended the intent standard for certain healthcare fraud provisions under HIPAA such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

Additionally, the federal Physician Payments Sunshine Act within the PPACA, and its implementing regulations, require that certain manufacturers of drugs, devices, biologicals and medical supplies to report annually information related to certain payments or other transfers of value made or distributed to physicians and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, physicians, as defined by such law, and teaching hospitals and to report annually certain ownership and investment interests held by physicians and their immediate family members. Moreover, the Drug Supply Chain Security Act imposes obligations on manufacturers of pharmaceutical products related to product tracking and tracing. We are not sure whether additional legislative changes will be enacted, or whether the current regulations, guidance or interpretations will be changed, or what the impact of such changes on our business, if any, may be.

Also, many states have similar fraud and abuse statutes or regulations, including state anti-kickback and false claims laws, that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payer. Further, certain states require implementation of commercial compliance programs and marketing codes, compliance with the pharmaceutical industry's voluntary compliance guidelines, and compliance with the applicable compliance guidance promulgated by the federal government. Other various state level requirements include restricting payments or the provision of other items of value that may be made to healthcare providers and other potential referral sources; restricting various marketing practices; requiring prescription drug companies to report expenses relating to the marketing and promotion of drug products; requiring the posting of information relating to clinical studies and their outcomes; requiring the registration of sales representatives; requiring the reporting of certain information related to drug pricing; and requiring drug manufacturers to track and report information related to payments, gifts, compensation, and other items of value to physicians and other healthcare providers.

In addition, we may be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act ("HITECH"), and their respective implementing regulations, imposes specified requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH, through its implementing regulations, makes certain of HIPAA's privacy and security standards directly applicable to business associates, defined as a person or organization, other than a member of a covered entity's workforce, that creates, receives, maintains or transmits protected health information for or on behalf of a covered entity for a function or activity regulated by HIPAA. International data protection laws also impose strict obligations on the ability to process health related and other personal information of citizens of member states, including in relation to collection, analysis and transfer. The EU General Data Protection Regulation was officially adopted in April 2016 and has been in effect since May 2018. The EU General Data Protection Regulation introduced new data protection requirements in the European Union, as well as substantial fines for breaches of the data protection rules. The EU General Data Protection Regulation will increase our responsibility and liability in relation to personal data that we control and/or process, and we may be required to put in place additional mechanisms to ensure compliance with the new EU data protection rules. Additionally, California recently enacted legislation known as the California Consumer Privacy Act (the "CCPA"), which creates new individual privacy rights for consumers (as that word is broadly defined in the law) and places increased privacy and security obligations on entities handling personal data of consumers or households. The CCPA, which became effective on January 1, 2020, requires covered companies to provide new disclosures to California consumers, provides such consumers new ways to opt-out of certain sales of personal information, and allows for a new cause of action for data breaches. The CCPA will likely impact (possibly significantly) our business activities and exemplifies the vulnerability of our business to not only cyber threats but also the evolving regulatory environment related to personal data and protected health information.

If we or any of our partners fail to comply with applicable regulatory requirements, we or they could be subject to a range of regulatory actions that could affect our or our partners' ability to commercialize our products and could harm or prevent sales of the affected products, or could substantially increase the costs and expenses of commercializing and marketing our products. Any threatened or actual government enforcement action could also generate adverse publicity and require that we devote substantial resources that could otherwise be used in other aspects of our business. Compliance with applicable federal and state laws is difficult and time consuming, and companies that violate them may face substantial penalties. The potential sanctions include significant criminal fines, civil monetary penalties, administrative penalties, disgorgement, exclusion from participation in federal health care programs, individual imprisonment, injunctions, recall or seizure of products, total or partial suspension of production, reputational harm, administrative burdens, additional oversight and reporting obligations if we become subject to a corporate integrity agreement or similar agreement to resolve allegation of non-compliance with these laws, diminished profits and future earnings, and the curtailment or restructuring of our operations, and other sanctions. Because of the breadth of these laws, it is possible that some of our business activities could be subject to challenge under one or more of these laws. Such a challenge, irrespective of the underlying merits of the challenge or the ultimate outcome of the matter, could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

If we are not able to obtain and maintain required regulatory approvals, we will not be able to commercialize our products, and our ability to generate revenue will be materially impaired.

Our product candidates, once approved, and the activities associated with their manufacture, marketing, distribution, and sales are subject to extensive regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in other countries. Failure to adhere to regulations set out by these bodies for one or more of our commercial products could prevent us from commercializing the product candidate in the jurisdiction of the regulatory authority. We have only limited experience in meeting the regulatory requirements incumbent on the sale of drugs in the United States and elsewhere, and expect to rely on third-parties to assist us in these processes. If these third parties fail to adequately adhere to the regulations governing drug distribution and promotion we may be unable to sell our products, which could have a material effect on our ability to generate revenue.

Our product candidates and the activities associated with their development and commercialization, including testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in other countries. Failure to obtain regulatory approval for a product candidate will prevent us from commercializing the product candidate in the jurisdiction of the regulatory authority. We have only limited experience in filing and prosecuting the applications necessary to obtain regulatory approvals and expect to rely on third-party contract research organizations to assist us in this process.

Securing FDA approval requires the submission of extensive preclinical and clinical data and supporting information to the FDA for each therapeutic indication to establish the product candidate's safety and efficacy. Securing FDA approval also requires the submission of information about the product manufacturing process to, and successful inspection of manufacturing facilities by, the FDA. Our future products may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining regulatory approval or prevent or limit commercial use.

Our product candidates may fail to obtain regulatory approval for many reasons, including:

- our failure to demonstrate to the satisfaction of the FDA or comparable regulatory authorities that a product candidate is safe and effective for a particular indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable regulatory authorities for approval;
- our inability to demonstrate that a product candidate's benefits outweigh its risks;
- our inability to demonstrate that the product candidate presents an advantage over existing therapies;
- the FDA's or comparable regulatory authorities' disagreement with the manner in which we interpret the data from preclinical studies or clinical trials;
- failure of the third-party manufacturers with which we contract for clinical or commercial supplies to satisfactorily complete an FDA pre-approval inspection of the facility or facilities at which the product is manufactured to assess compliance with the FDA's cGMP regulations to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity; and
- a change in the approval policies or regulations of the FDA or comparable regulatory authorities or a change in the laws governing the approval process.

The process of obtaining regulatory approvals is expensive, often takes many years, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved. Changes in regulatory approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application may cause delays in the approval or rejection of an application. The FDA and non-United States regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data is insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent regulatory approval of a product candidate. Any regulatory approval we ultimately obtain may be limited or subject to restrictions or post approval commitments that render the approved product not commercially viable. Any FDA or other regulatory approval of our product candidates, once obtained, may be withdrawn, including for failure to comply with regulatory requirements or if clinical or manufacturing problems follow initial marketing.

Changes in tax laws or regulations that are applied adversely to us or our customers may have a material adverse effect on our business, cash flow, financial condition or results of operations.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time, which could affect the tax treatment of our domestic and foreign earnings. Any new taxes could adversely affect our domestic and international business operations, and our business and financial performance. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us. For example, the Tax Act enacted many significant changes to the U.S. tax laws and significantly revised the Internal Revenue Code of 1986, as amended. Future guidance from the Internal Revenue Service and other tax authorities with respect to the Tax Act may affect us, and certain aspects of the Tax Act could be repealed or modified in future legislation. In addition, it is uncertain if and to what extent various states will conform to the Tax Act or any newly enacted federal tax legislation. Changes in corporate tax rates, the realization of net deferred tax assets relating to our operations, the taxation of foreign earnings, and the deductibility of expenses under the Tax Act or future reform legislation could have a material impact on the value of our deferred tax assets, could result in significant one-time charges, and could increase our future U.S. tax expense.

Our effective tax rate may fluctuate, and we may incur obligations in tax jurisdictions in excess of accrued amounts.

Our effective tax rate is derived from a combination of applicable tax rates in the various places that we operate. In preparing our financial statements, we estimate the amount of tax that will become payable in each of such places. Nevertheless, our effective tax rate may be different than experienced in the past due to numerous factors, including passage of the Tax Act, changes in the mix of our profitability from state to state, the results of examinations and audits of our tax filings, our inability to secure or sustain acceptable agreements with tax authorities, changes in accounting for income taxes and changes in tax laws. Any of these factors could cause us to experience an effective tax rate significantly different from previous periods or our current expectations and may result in tax obligations in excess of amounts accrued in our financial statements.

Our ability to use net operating loss carryforwards and certain other tax attributes to offset future taxable income may be limited.

As of December 31, 2019, we had federal net operating loss, or NOL, carryforwards of \$113.6 million. Our federal NOL carryforwards generated in tax years ending on or prior to December 31, 2017, are only permitted to be carried forward for 20 years under applicable U.S. tax law. Under the Tax Act, our federal NOLs generated in tax years ending after December 31, 2017, may be carried forward indefinitely, but the deductibility of such federal NOLs generated in tax years beginning after December 31, 2017, is limited. It is uncertain if and to what extent various states will conform to the Tax Act. In addition, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, and corresponding provisions of state law, if a corporation undergoes an “ownership change,” which is generally defined as a greater than 50% change, by value, in its equity ownership over a three-year period, the corporation’s ability to use its pre-change NOL carryforwards and other pre-change U.S. tax attributes (such as research tax credits) to offset its post-change income or taxes may be limited. It is possible that we have experienced an ownership change in the past. In addition, we may experience ownership changes in the future as a result of subsequent shifts in our stock ownership, some of which may be outside of our control.

As a result, our pre-2018 NOL carryforwards may expire prior to being used, and our NOL carryforwards generated in 2018 and thereafter will be subject to a percentage limitation. In addition, it is possible that we have in the past undergone, and in the future may undergo, additional ownership changes that could limit our ability to use all of our pre-change NOL carryforwards and other pre-change tax attributes (such as research tax credits) to offset our post-change income or taxes. Similar provisions of state tax law may also apply to limit our use of accumulated state tax attributes. In addition, at the state level, there may be periods during which the use of NOL carryforwards is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. As a result, we may be unable to use all or a material portion of our NOL carryforwards and other tax attributes, which would harm our future operating results by effectively increasing our future tax obligations.

Our internal computer systems, or those of our CROs or other contractors and vendors who host our applications or consultants, may fail or suffer security breaches, which could result in a material disruption of our product development programs.

Despite the implementation of security measures, our internal computer systems and those of our CROs and other contractors or vendors who host our applications and those of our consultants are vulnerable to damage or disruption from computer viruses, software bugs, unauthorized access including cyber-attack, natural disasters, terrorism, war, and telecommunication, equipment and electrical failures. While we have not, to our knowledge, experienced any significant system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our programs. For example, the loss of clinical trial data from completed or ongoing clinical trials for any of our product candidates could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach results in a loss of or damage to our data or applications, or inappropriate disclosure or theft of confidential or proprietary information, we could incur liability, the further development of our product candidates could be delayed, our competitive position could be compromised, or our business reputation could be harmed.

We are dependent on information technology systems, infrastructure and data, which exposes us to data security risks.

We are dependent upon our own or third-party information technology systems, infrastructure and data, including mobile technologies, to operate our business. The multitude and complexity of our computer systems may make them vulnerable to service interruption or destruction, disruption of data integrity, malicious intrusion, or random attacks. Likewise, data privacy or security incidents or breaches by employees or others may pose a risk that sensitive data, including our intellectual property, trade secrets or personal information of our employees, patients, customers or other business partners may be exposed to unauthorized persons or to the public. Cyber-attacks are increasing in their frequency, sophistication and intensity. Cyber-attacks could include the deployment of harmful malware, denial-of-service, social engineering and other means to affect service reliability and threaten data confidentiality, integrity and availability. Our business partners face similar risks and any security breach of their systems could adversely affect our security posture. A security breach or privacy violation that leads to disclosure or modification of or prevents access to patient information, including personally identifiable information or protected health information, could harm our reputation, compel us to comply with federal and/or state breach notification laws and foreign law equivalents, subject us to mandatory corrective action, require us to verify the correctness of database contents and otherwise subject us to litigation or other liability under laws and regulations that protect personal data, any of which could disrupt our business and/or result in increased costs or loss of revenue. Moreover, the prevalent use of mobile devices that access confidential information increases the risk of data security breaches, which could lead to the loss of confidential information, trade secrets or other intellectual property. While we have invested, and continue to invest, in the protection of our data and information technology infrastructure, there can be no assurance that our efforts will prevent service interruptions, or identify breaches in our systems, that could adversely affect our business and operations and/or result in the loss of critical or sensitive information, which could result in financial, legal, business or reputational harm to us. In addition, our liability insurance may not be sufficient in type or amount to cover us against claims related to security breaches, cyber-attacks and other related breaches.

Changes in funding for the FDA, the SEC and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the SEC and other government agencies on which our operations may rely, including those that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA and the SEC, have had to furlough critical FDA, SEC and other government employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

The withdrawal of the United Kingdom, from the European Union, commonly referred to as “Brexit,” may adversely impact our ability to obtain regulatory approvals of our product candidates in the European Union, result in restrictions or imposition of taxes and duties for importing our product candidates into the European Union, and may require us to incur additional expenses in order to develop, manufacture and commercialize our product candidates in the European Union.

Following the result of a referendum in 2016, the United Kingdom left the European Union on January 31, 2020, commonly referred to as Brexit. Pursuant to the formal withdrawal arrangements agreed between the United Kingdom and the European Union, the United Kingdom will be subject to a transition period until December 31, 2020, or the Transition Period, during which EU rules will continue to apply. Negotiations between the United Kingdom and the European Union are expected to continue in relation to the customs and trading relationship between the United Kingdom and the European Union following the expiry of the Transition Period.

Since a significant proportion of the regulatory framework in the United Kingdom applicable to our business and our product candidates is derived from EU directives and regulations, Brexit, following the Transition Period, could materially impact the regulatory regime with respect to the development, manufacture, importation, approval and commercialization of our product candidates in the United Kingdom or the European Union. For example, as a result of the uncertainty surrounding Brexit, the EMA relocated to Amsterdam from London. Following the Transition Period, the United Kingdom will no longer be covered by the centralized procedures for obtaining EU-wide marketing authorization from the EMA and, unless a specific agreement is entered into, a separate process for authorization of drug products, including our product candidates, will be required in the United Kingdom, the potential process for which is currently unclear. Any delay in obtaining, or an inability to obtain, any marketing approvals, as a result of Brexit or otherwise, would prevent us from commercializing our product candidates in the United Kingdom or the European Union and restrict our ability to generate revenue and achieve and sustain profitability. In addition, we may be required to pay taxes or duties or be subjected to other hurdles in connection with the importation of our product candidates into the European Union, or we may incur expenses in establishing a

manufacturing facility in the European Union in order to circumvent such hurdles. If any of these outcomes occur, we may be forced to restrict or delay efforts to seek regulatory approval in the United Kingdom or the European Union for our product candidates, or incur significant additional expenses to operate our business, which could significantly and materially harm or delay our ability to generate revenues or achieve profitability of our business. Any further changes in international trade, tariff and import/export regulations as a result of Brexit or otherwise may impose unexpected duty costs or other non-tariff barriers on us. These developments, or the perception that any of them could occur, may significantly reduce global trade and, in particular, trade between the impacted nations and the United Kingdom.

Business disruptions could seriously harm future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our third-party manufacturers, CROs and other contractors and consultants, could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

Our corporate headquarters are located in San Diego, California, an area prone to wildfires and earthquakes. These and other natural disasters could severely disrupt our operations, and have a material adverse effect on our business, results of operations, financial condition and prospects. If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as the manufacturing facilities of our third-party contract manufacturers, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible for us to continue our business for a substantial period of time. Any disaster recovery and business continuity plans we have in place may prove inadequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which, could have a material adverse effect on our business.

In addition, we rely on third-party manufacturers, some of whom are located in China, to manufacture API for certain of our product candidates, including sparsentan. Any disruption in production or inability of our manufacturers in China to produce or ship adequate quantities to meet our needs, whether as a result of a natural disaster or other causes (such as the recent outbreak of the coronavirus in China), could impair our ability to operate our business on a day-to-day basis and to continue our research and development of our product candidates. In addition, we are exposed to the possibility of product supply disruption and increased costs in the event of changes in the policies of the United States or Chinese governments (such as tariffs on chemical intermediates we use that are manufactured in China), political unrest or unstable economic conditions in China. Any recall of the manufacturing lots or similar action regarding our API used in clinical trials could delay the trials or detract from the integrity of the trial data and its potential use in future regulatory filings. In addition, manufacturing interruptions or failure to comply with regulatory requirements by any of these manufacturers could significantly delay clinical development of potential products and reduce third-party or clinical researcher interest and support of proposed trials. These interruptions or failures could also impede commercialization of our product candidates and impair our competitive position.

Risks Related to our Indebtedness and Investments

Our indebtedness could adversely affect our financial condition.

As of December 31, 2019, we had approximately \$276 million of total debt outstanding, classified as long-term. As a result of our indebtedness, a portion of our cash flow will be required to pay interest and principal on the 2025 Notes if the notes are not converted to shares of common stock prior to maturity. We may not generate sufficient cash flow from operations or have future borrowings available to enable us to repay our indebtedness or to fund other liquidity needs.

Our indebtedness pursuant to the 2025 Notes could have important consequences. For example, it could:

- make it more difficult for us to satisfy our obligations with respect to any other debt we may incur in the future;
- increase our vulnerability to general adverse economic and industry conditions;
- require us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness and related interest, thereby reducing the availability of our cash flow to fund working capital, capital expenditures and other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;
- increase our cost of borrowing;
- place us at a competitive disadvantage compared to our competitors that may have less debt; and
- limit our ability to obtain additional financing for working capital, capital expenditures, acquisitions, debt service requirements or general corporate purposes.

We expect to use cash flow from operations and outside financings to meet our current and future financial obligations, including funding our operations, debt service and capital expenditures. Our ability to make these payments depends on our future performance, which will be affected by financial, business, economic and other factors, many of which we cannot control. Our business may not generate sufficient cash flow from operations in the future, which could result in our being unable to repay indebtedness, or to fund other liquidity needs. If we do not generate sufficient cash from operations, we may be forced to reduce or delay our business activities and capital expenditures, sell assets, obtain additional debt or equity capital or restructure or refinance all or a portion of our debt, including the 2025 Notes, on or before maturity. We cannot make any assurances that we will be able to accomplish any of these alternatives on terms acceptable to us, or at all. In addition, the terms of existing or future indebtedness may limit our ability to pursue any of these alternatives.

We may be unable to raise the funds necessary to repurchase the 2025 Notes for cash following a fundamental change, or to pay any cash amounts due upon conversion, and our future indebtedness may limit our ability to repurchase the 2025 Notes or pay cash upon their conversion.

Noteholders may require us to repurchase their 2025 Notes following a fundamental change at a cash repurchase price generally equal to the principal amount of the 2025 Notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date. In addition, upon conversion, we will satisfy part or all of our conversion obligation in cash unless we elect to settle conversions solely in shares of our common stock.

We may not have enough available cash or be able to obtain financing at the time we are required to repurchase the 2025 Notes or pay the cash amounts due upon conversion of the 2025 Notes. In addition, applicable law, regulatory authorities and the agreements governing our future indebtedness may restrict our ability to repurchase the 2025 Notes or pay the cash amounts due upon conversion of the 2025 Notes. Our failure to repurchase the 2025 Notes or to pay the cash amounts due upon conversion of the 2025 Notes when required will constitute a default under the base and supplemental indentures that will govern the 2025 Notes, which we refer to collectively as the “indenture.” We may not have sufficient funds to satisfy all amounts due under the other indebtedness and the 2025 Notes.

A default under the 2025 Notes may have a material adverse effect on our financial condition.

If an event of default under the 2025 Notes occurs, the principal amount of the 2025 Notes, plus accrued and unpaid interest (including additional interest, if any) may be declared immediately due and payable, subject to certain conditions set forth in the indenture governing such notes. Events of default include, but are not limited to:

- failure to pay (for more than 30 days) interest when due;
- failure to pay principal when due;
- failure to deliver shares of common stock upon conversion of a 2025 Notes;
- failure to provide notice of a fundamental change;
- acceleration on our other indebtedness in excess of \$10 million (other than indebtedness that is non-recourse to us); or
- certain types of bankruptcy or insolvency involving us.

Accordingly, the occurrence of a default under the 2025 Notes, unless cured or waived, may have a material adverse effect on our results of operations.

Provisions of the 2025 Notes could discourage an acquisition of us by a third party.

Certain provisions of the 2025 Notes could make it more difficult or more expensive for or prevent a third party to acquire us. Upon the occurrence of certain transactions constituting a fundamental change, holders of the 2025 Notes will have the right, at their option, to require us to repurchase all of their 2025 Notes or any portion of the principal amount of such Notes in integral multiples of \$1,000. We may also be required to increase the conversion rate for conversions in connection with certain fundamental changes.

Conversion of the Notes may dilute the ownership interest of existing stockholders, including holders who had previously converted their 2025 Notes.

To the extent we issue shares of common stock upon conversion of the 2025 Notes, the conversion of some or all of the 2025 Notes will dilute the ownership interests of existing stockholders. Any sales in the public market of shares of the common stock issuable upon such conversion could adversely affect prevailing market prices of shares of our common stock. In addition, the existence of the 2025 Notes may encourage short selling by market participants because the conversion of the 2025 Notes could depress the price of shares of our common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We lease the following locations to conduct our business:

Location	Address	Lease Expiration	Square Feet
San Diego, California	Various suites in 3721, 3661, 3611 & 3579 Valley Centre Drive	July 31, 2024	45,446

We believe these facilities are adequate to conduct our business.

For additional information regarding our lease agreements, see Note 18 of the Consolidated Financial Statements included in this report.

ITEM 3. LEGAL PROCEEDINGS

The information required by this Item is incorporated herein by reference to Note 11 of the Consolidated Financial Statements included in this report.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our common stock is listed for quotation on the Nasdaq Global Market under the trading symbol "RTRX" and is part of the Nasdaq Biotechnology Index (Nasdaq: NBI).

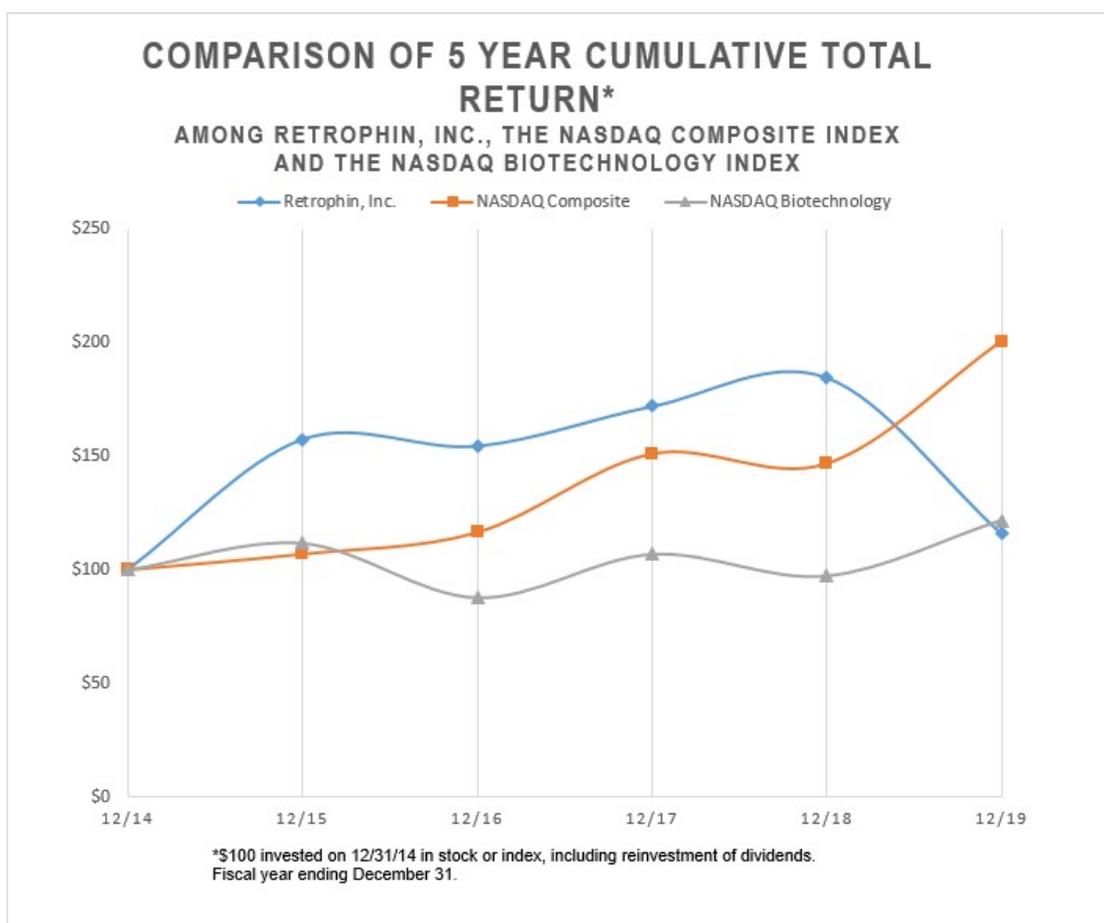
As of February 20, 2020, the last reported sale price of our Common Stock as reported by the Nasdaq was \$17.18.

As of February 20, 2020, we had approximately 192 holders of record of our common stock.

Performance Graph

The following is not deemed "filed" with the Securities and Exchange Commission and is not to be incorporated by reference into any filing we make under the Securities Act of 1933, as amended, whether made before or after the date hereof and irrespective of any general incorporation by reference language in such filing.

Our common stock is traded on the Nasdaq Global Market and is a component of both the Nasdaq Composite Index and the Nasdaq Biotechnology Index. The total return for our common stock and for each index assumes the reinvestment of dividends, although dividends have never been declared on our common stock, and is based on the returns of the component companies weighted according to their capitalizations as of the end of each monthly period. The Nasdaq-Composite tracks the aggregate price performance of equity securities of companies traded on the Nasdaq National Market. The Nasdaq Biotechnology Index contains securities and tracks the aggregate price performance of equity securities of Nasdaq-listed companies classified according to the Industry Classification Benchmark as either Biotechnology or Pharmaceuticals which also meet other eligibility criteria. The comparisons shown in the graph are based upon historical data and we caution that the stock price performance shown in the graph is not indicative of, nor intended to forecast, the potential future performance of our stock.



Dividends

Since inception we have not paid any dividends on our common stock. We currently do not anticipate paying any cash dividends in the foreseeable future on our common stock. Although we intend to retain our earnings, if any, to finance the exploration and growth of our business, our Board of Directors will have the discretion to declare and pay dividends in the future. Payment of dividends in the future will depend upon our earnings, capital requirements and other factors which our Board of Directors may deem relevant.

ITEM 6. SELECTED FINANCIAL DATA

The following table presents selected historical financial data of the Company for the periods indicated. The selected historical financial information is derived from the audited Consolidated Financial Statements of the Company referred to under Item 8 of this Annual Report on Form 10-K, and previously published historical financial statements. The following selected financial data should be read in conjunction with Item 7 - Management’s Discussion and Analysis of Financial Condition and Results of Operations, and the Company’s Consolidated Financial Statements, including the notes thereto, included elsewhere herein.

Selected historical financial data (in thousands, except share and per share amounts):

Consolidated Statement of Operations:	For the year ended December 31,				
	2019	2018	2017	2016	2015
Net product sales	\$ 175,338	\$ 164,246	\$ 154,937	\$ 133,591	\$ 99,892
Total operating expenses	312,699	244,286	208,728	191,805	150,640
Operating loss	(137,361)	(80,040)	(53,791)	(58,214)	(50,748)
Total other income (expenses), net	(9,087)	(21,827)	(4,572)	632	156,215
Income (Loss) before benefit (provision) for income taxes	(146,448)	(101,867)	(58,363)	(57,582)	105,467
Income tax benefit (provision)	21	(811)	(1,368)	9,679	11,770
Net income (loss)	\$ (146,427)	\$ (102,678)	\$ (59,731)	\$ (47,903)	\$ 117,237
Per Share Data:					
Net Income (loss) per common share, basic	\$ (3.46)	\$ (2.54)	\$ (1.54)	\$ (1.29)	\$ 3.49
Net Income (loss) per common share, diluted	\$ (3.46)	\$ (2.54)	\$ (1.54)	\$ (1.29)	\$ 3.17
Weighted average common shares outstanding, basic	42,339,961	40,433,171	38,769,816	36,997,865	33,560,249
Weighted average common shares outstanding, diluted	42,339,961	40,433,171	38,769,816	38,288,012	37,581,439

Balance Sheet data:	As of December 31,				
	2019	2018	2017	2016	2015
Cash, cash equivalents and marketable securities	\$ 398,524	\$ 471,541	\$ 300,630	\$ 255,873	\$ 229,604
Working capital	333,615	391,057	240,139	249,090	214,951
Total assets	604,800	709,160	520,346	525,282	512,264
Long-term debt	204,861	195,091	45,077	44,422	43,766
Total stockholders' equity	\$ 221,196	\$ 318,253	\$ 293,134	\$ 307,767	\$ 299,971

Note: Cash dividends were not paid during the above periods.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with our audited Consolidated Financial Statements, including the notes thereto.

Overview

We are a biopharmaceutical company headquartered in San Diego, California, focused on identifying, developing and delivering life-changing therapies to people living with rare diseases.

Research and Development:

Sparsentan, also known as RE-021, is an investigational product candidate with a dual mechanism of action, a selective endothelin receptor antagonist ("ERA"), with in vitro selectivity toward endothelin receptor type A and a potent angiotensin receptor blocker ("ARB"). Sparsentan is currently being evaluated in two pivotal Phase 3 clinical studies in the following indications:

- **Focal segmental glomerulosclerosis ("FSGS")**, a leading cause of end-stage renal disease and nephrotic syndrome ("NS"). There are currently no United States Food and Drug Administration ("FDA") approved pharmacologic treatments for FSGS and off-label treatments are limited to ACE/ARBs, steroids, and immunosuppressant agents, which are effective in only a subset of patients. Every year approximately 5,400 patients are diagnosed with FSGS and we estimate that there are approximately 40,000 FSGS patients in the United States and a similar number in Europe with approximately half of them being candidates for sparsentan. Sparsentan has orphan drug designation in the United States and European Union. In 2016, we generated positive data from our Phase 2 DUET study in FSGS. In 2018, we announced the initiation of the Phase 3 DUPLEX study of sparsentan in FSGS. The Company continues to enroll patients with FSGS in the pivotal Phase 3 DUPLEX Study, a global, randomized, multicenter, double-blind, parallel-arm, active-controlled clinical trial evaluating the safety and efficacy of sparsentan in approximately 300 patients. The DUPLEX Study protocol provides for an unblinded analysis of at least 190 patients to be performed after 36 weeks of treatment to evaluate the interim efficacy endpoint - the proportion of patients achieving a FSGS partial remission of proteinuria endpoint (FPRE), which is defined as urine protein-to-creatinine ratio (Up/C) ≤ 1.5 g/g and a >40 percent reduction in Up/C from baseline, at week 36. While the confirmatory endpoint of the study is the change in slope of estimated glomerular filtration rate (eGFR) after 108 weeks of treatment, successful achievement of the interim 36-week proteinuria endpoint is expected to serve as the basis for submission of a New Drug Application (NDA) under the Subpart H accelerated approval pathway in the U.S. and Conditional Marketing Authorization ("CMA") consideration in Europe. Top-line data from the interim analysis are expected to become available in the first half of 2021.
- **Immunoglobulin A nephropathy ("IgAN")** is characterized by hematuria, proteinuria, and variable rates of progressive renal failure. With an estimated prevalence of more than 100,000 people in the United States and greater numbers in Europe and Asia, IgAN is the most common primary glomerular disease. Most patients are diagnosed between the ages of 16 and 35, with up to 40% progressing to end stage renal disease within 15 years. There are currently no FDA approved treatments for IgAN. The current standard of care is renin-angiotensin-aldosterone system (RAAS) blockade with immunosuppression also being commonly used for patients with significant proteinuria or rapidly progressive glomerulonephritis. In 2018, we announced that the first patient had been dosed in the PROTECT Study, a global, pivotal Phase 3 clinical trial evaluating the long-term nephroprotective potential of sparsentan for the treatment of IgAN. The PROTECT Study, a global, randomized, multicenter, double-blind, parallel-arm, active-controlled pivotal Phase 3 clinical trial evaluating the safety and efficacy of sparsentan in approximately 280 patients with IgAN, continues to enroll. The primary efficacy endpoint in the PROTECT Study is the change in proteinuria (urine protein-to-creatinine ratio) from baseline after 36 weeks of treatment. Successful achievement of this endpoint is expected to support submission of an NDA under the Subpart H accelerated approval pathway in the U.S., as well as an application for CMA consideration in Europe. Secondary efficacy endpoints include change in eGFR from baseline to four weeks post-cessation of randomized treatment, as well as the rate of change in eGFR over 52-week and 104-week periods following the first six weeks of randomized treatment. Top-line data from the primary endpoint are expected to become available in the first half of 2022.

Chenodal

In January 2020, we randomized the first patients in a Phase 3 clinical trial to evaluate the effects of Chenodal in adult and pediatric patients with cerebrotendinous xanthomatosis ("CTX"). The pivotal study, known as the RESTORE study, is intended to support a new drug application ("NDA") submission for marketing authorization of Chenodal for CTX in the United States. Chenodal has also been the standard of care for CTX patients for more than three decades but is not currently labeled for this indication.

Cooperative Research and Development Agreements ("CRADAs"):

The Company is a participant in two CRADAs, which form a multi-stakeholder approach to pool resources with leading experts, and incorporates the patient perspective early in the identification and development process. Retrophin has partnered with the National Institutes of Health's National Center for Advancing Translational Sciences ("NCATS") and leading patient advocacy organizations, NGLY1.org and Alagille Syndrome Alliance ("ALGSA"), aimed at the identification of potential small molecule therapeutics for NGLY1 deficiency and Alagille syndrome, respectively. There are no treatment options currently approved for these diseases.

We currently sell the following products:

Chenodal (chenodiol tablets)

Chenodal is a synthetic oral form of chenodeoxycholic acid, a naturally occurring primary bile acid synthesized from cholesterol in the liver, indicated for the treatment of radiolucent stones in well-opacifying gallbladders in patients in whom selective surgery would be undertaken except for the presence of increased surgical risk due to systemic disease or age.

Chenodal administration is known to reduce biliary cholesterol and the dissolution of radiolucent gallstones through suppression of hepatic synthesis of cholesterol, cholic acid and deoxycholic acid in the bile pool. Chenodal was first approved by the FDA in 1983 for the management of gallstones but its marketing was later discontinued due to lack of commercial success. In 2009, Nexgen Pharma Inc.'s ANDA for Chenodal was approved by the FDA for the treatment of gallstones. Chenodal is manufactured under this ANDA. In 2010, Chenodal was granted orphan drug designation for the treatment of CTX, a rare autosomal recessive lipid storage disease. We acquired Chenodal in March 2014.

While Chenodal is not labeled for CTX, it has been used as the standard of care for over three decades. We are working to obtain FDA approval of Chenodal for the treatment of CTX and initiated a Phase 3 clinical trial for this indication in January 2020. The prevalence of CTX is estimated in the literature to be as high as 1 in 70,000 in the overall population. Pathogenesis of CTX involves deficiency of the enzyme 27-hydroxylase (encoded by the gene CYP27A1), a rate-limiting enzyme in the synthesis of primary bile acids, including CDCA, from cholesterol. The disruption of primary bile acid synthesis in CTX leads to toxic accumulation of cholesterol and cholestanol in most tissues. Most patients present with intractable diarrhea, premature cataracts, tendon xanthomas, atherosclerosis, and cardiovascular disease in childhood and adolescence. Neurological manifestations of the disease, including dementia and cognitive and cerebellar deficiencies, emerge during late adolescence and adulthood. Oral administration of CDCA has been shown to normalize primary bile acid synthesis in patients with CTX.

Cholbam (cholic acid capsules)

The FDA approved Cholbam (cholic acid capsules) in March 2015, the first FDA approved treatment for pediatric and adult patients with bile acid synthesis disorders due to single enzyme defects, and for adjunctive treatment of patients with peroxisomal disorders (including Zellweger spectrum disorders). The effectiveness of Cholbam has been demonstrated in clinical trials for bile acid synthesis disorders and the adjunctive treatment of peroxisomal disorders. An estimated 200 to 300 patients are current candidates for therapy.

Thiola and Thiola EC (tiopronin)

Thiola and Thiola EC are approved by the FDA for the treatment of cystinuria, a rare genetic cystine transport disorder that causes high cystine levels in the urine and the formation of recurring kidney stones. The resulting long-term damage can cause loss of kidney function in addition to substantial pain and loss of productivity associated with renal colic and stone passage. The prevalence of cystinuria in the United States is estimated to be 10,000 to 12,000, indicating that there may be as many as 4,000 to 5,000 affected individuals with cystinuria in the United States that would be candidates for Thiola. On June 28, 2019, we announced that the FDA approved 100 mg and 300 mg tablets of Thiola EC, a new enteric-coated formulation of Thiola, to be used for the treatment of cystinuria. Thiola EC offers the potential for administration with or without food, and the ability to reduce the number of tablets necessary to manage cystinuria. Thiola EC became available to patients in July of 2019.

Financial Overview

Research and Development Costs

Research and development costs include expenses related to sparsentan, discontinued programs fosmetpantotate and CNSA-001, and our other pipeline programs. We expense all research and development costs as they are incurred. Our research and development costs are comprised of salaries and bonuses, benefits, non-cash share-based compensation, license fees, milestones under license agreements, costs paid to third-party contractors to perform research, conduct clinical trials, and develop drug materials and delivery methods, and associated overhead expenses and facilities costs. We charge direct internal and external program costs to the respective development programs. We also incur indirect costs that are not allocated to specific programs because such costs benefit multiple development programs and allow us to increase our pharmaceutical development capabilities. These consist of internal shared resources related to the development and maintenance of systems and processes applicable to all of our programs.

We record expenses in connection with our clinical trials under contracts with contract research organizations ("CROs") that support conducting and managing clinical trials. The financial terms and activities of these agreements vary from contract to contract and may result in uneven expense levels. Generally, these agreements set forth activities that drive the recording of expenses such as start-up, initiation activities, enrollment, treatment of patients, or the completion of other clinical trial activities.

Expenses related to clinical trials are accrued based on our estimates and/or representations from service providers regarding work performed, including actual level of patient enrollment, completion of patient studies and progress of the clinical trials. Other incidental costs related to patient enrollment or treatment are accrued when reasonably certain. If the amounts we are obligated to pay under our clinical trial agreements are modified (for instance, as a result of changes in the clinical trial protocol or scope of work to be performed), we adjust our accruals accordingly on a prospective basis. Revisions to our contractual payment obligations are charged to expense in the period in which the facts that give rise to the revision become reasonably certain.

We currently have three Phase 3 clinical trials in process that are in varying stages of activity, with ongoing non-clinical support studies. As such, clinical trial expenses will vary depending on all the factors set forth above and may fluctuate significantly from quarter to quarter.

At any point in time, we typically have various early stage research and drug discovery projects. Our internal resources, employees and infrastructure are not directly tied to any one research or drug discovery project and are typically deployed across multiple projects. As such, we do not maintain information regarding costs incurred for these early stage research and drug discovery programs on a project-specific basis.

We routinely engage vendors and service providers for scientific research, clinical trial, regulatory compliance, manufacturing and other consulting services. We also make grants to research and non-profit organizations to conduct research which may lead to new intellectual properties that we may subsequently license under separately negotiated license agreements. Such grants may be funded in lump sums or installments.

The following table summarizes our research and development expenses during the years ended December 31, 2019, 2018 and 2017. The internal costs include personnel, facility costs, and discovery and research related activities associated with our pipeline. The external program costs reflect external costs attributable to our clinical development candidates and preclinical candidates selected for further development. Such expenses primarily include third-party contract costs relating to clinical trial activities, nonclinical studies and manufacturing.

	For the Year Ended December 31,		
	<i>(in thousands)</i>		
	2019	2018	2017
External service provider costs:			
Sparsentan	\$ 48,533	\$ 39,826	\$ 20,237
Fosmetpantotenate (discontinued)	31,193	21,330	16,571
Censa (discontinued)	3,166	16,831	—
Other product candidates	496	242	331
General	19,638	16,258	15,827
Total external service provider costs:	103,026	94,487	52,966
Internal personnel costs:	37,937	29,270	25,202
Total research and development	\$ 140,963	\$ 123,757	\$ 78,168

Most of our product development programs are in clinical trials which are highly uncertain and may not result in approved products. Completion dates and completion costs can vary significantly for each product candidate and are difficult to project. Given the uncertainty associated with clinical trial enrollments and the risks inherent in the development process, we are unable to determine the duration and completion costs of current or future clinical trials of our product candidates, or if and to what extent we will generate revenues, if any, from the commercialization and sale of any of our product candidates.

Selling, General and Administrative

Selling, general and administrative expenses consist of salaries and bonuses, benefits, non-cash share-based compensation, legal and other professional fees, rent, depreciation and amortization, travel, insurance, business development, sales and marketing programs, and other operating expenses.

Other Income/Expenses

Other income/expenses consists of interest income and expense, finance expense, loss on the extinguishment of debt, change in fair value of derivative instruments and miscellaneous other income/expenses.

License Agreements

Ligand License Agreement

In 2012, we entered into a license agreement with Ligand, granting us a worldwide license for the development, manufacture and commercialization of sparsentan, which we are developing in connection with the treatment of FSGS. Under the license agreement, Ligand granted us a sublicense under certain of its patents and other intellectual property in connection with the development and commercialization of sparsentan. Under the license agreement, Ligand is obligated to transfer to us certain information, records, regulatory filings, materials and inventory controlled by Ligand and relating to or useful for developing sparsentan. We must use commercially reasonable efforts to develop and commercialize sparsentan in specified major market countries and other countries in which we believe it is commercially reasonable to develop and commercialize such products.

As consideration for the license, we are required to make payments upon the achievement of certain milestones, totaling up to \$114.1 million. Should we commercialize sparsentan or any products containing any of the licensed compounds, we will be obligated to pay Ligand an escalating annual royalty between 15% and 17% of net sales of all such products. Through 2019, we made milestone payments to Ligand of \$7.2 million under the license agreement.

Under the terms of the license agreement, BMS has a right of first negotiation and Ligand has a right of second negotiation with respect to any license arrangement for a licensed compound, except to the extent such rights may be waived.

The license agreement will continue until neither party has any further payment obligations under the agreement and is expected to continue for approximately 10 to 20 years from the effective date. Ligand may terminate the license agreement due to (i) our insolvency, (ii) our material uncured breach of the agreement, (iii) our failure to use commercially reasonable efforts to develop and commercialize sparsentan as described above or (iv) certain other conditions. We may terminate the license agreement due to a material uncured breach of the agreement by Ligand.

Thiola License Agreement

In 2014, we entered into a license agreement with Mission, pursuant to which we obtained an exclusive, royalty-bearing license to market, sell and commercialize Thiola (tiopronin) in the United States and Canada, and a non-exclusive license to use know-how relating to Thiola to the extent necessary to market Thiola. We paid Mission an up-front license fee of \$3.0 million and will pay guaranteed minimum royalties during each calendar year the greater of \$2.0 million or 20% of our net sales of Thiola in the United States and Canada.

In October 2015, the license agreement was amended to allow for us to secure enough API to ensure an adequate level of safety stock to prevent an interruption in the supply of Thiola and to prepare for a reformulation development project.

In March 2016, the license agreement was amended to, among other things, include a new formulation development project for tiopronin tablets.

In November 2017, we amended the license agreement to extend the term through May of 2029.

In November 2018, the license agreement was amended to remove all territorial restrictions on our license rights. As consideration for the expanded territory we paid an up-front fee of \$0.3 million and will pay guaranteed minimum royalties equaling the greater of \$0.1 million or 20% of our Thiola net sales generated outside of the United States during each calendar year.

See Note 9 to Consolidated Financial Statements for further discussion.

Results of Operations

Net Product Sales

The following table provides information regarding net product sales (*in thousands*):

	Year Ended December 31,			Year Ended December 31,		
	2019	2018	Change	2018	2017	Change
Tiopronin products	\$ 95,638	\$ 89,176	\$ 6,462	\$ 89,176	\$ 82,311	\$ 6,865
Bile acid products	79,700	75,070	4,630	75,070	72,626	2,444
Total net product revenues	<u>\$ 175,338</u>	<u>\$ 164,246</u>	<u>\$ 11,092</u>	<u>\$ 164,246</u>	<u>\$ 154,937</u>	<u>\$ 9,309</u>

Net product sales for the years ended December 31, 2019, 2018 and 2017 were \$175.3 million, \$164.2 million and \$154.9 million, respectively, and consisted of sales of Thiola ("Tiopronin products"), Chenodal and Cholbam ("Bile acid products"), less allowances for government and commercial rebates and patient assistance programs. On June 28, 2019, the Company announced that the FDA approved 100 mg and 300 mg tablets of Thiola EC (tiopronin), a new enteric-coated formulation of THIOLA® (tiopronin), to be used for the treatment of cystinuria.

The increase in net product sales for the year ended December 31, 2019 as compared to the same period in 2018, is due to increased patient counts for all products.

The increase in net product sales for the year ended December 31, 2018 as compared to the same period in 2017, is due to increased patient counts for all products.

We use a direct-to-patient distributor. Under this distribution model, we record revenues when customers take control of the product (at delivery).

Operating Expenses

The following table provides information regarding operating expenses (*in thousands*):

	Year Ended December 31,			Year Ended December 31,		
	2019	2018	Change	2018	2017	Change
Cost of goods sold	\$ 5,234	\$ 5,527	\$ (293)	\$ 5,527	\$ 3,605	\$ 1,922
Research and development	140,963	123,757	17,206	123,757	78,168	45,589
Selling, general and administrative	128,951	103,654	25,297	103,654	101,333	2,321
Change in fair value of contingent consideration	15,051	11,590	3,461	11,590	19,389	(7,799)
Restructuring	—	(242)	242	(242)	3,608	(3,850)
Legal fee settlement	—	—	—	—	2,625	(2,625)
Impairment of L-UDCA IPR&D intangible asset	25,500	—	25,500	—	—	—
Write off of L-UDCA contingent consideration	(18,000)	—	(18,000)	—	—	—
Impairment of long-term investment	15,000	—	15,000	—	—	—
	<u>\$ 312,699</u>	<u>\$ 244,286</u>	<u>\$ 68,413</u>	<u>\$ 244,286</u>	<u>\$ 208,728</u>	<u>\$ 35,558</u>

2019 versus 2018 results

Operating expenses for the year ended December 31, 2019, were \$312.7 million compared to \$244.3 million for the year ended December 31, 2018, an increase of \$68.4 million.

Cost of goods sold decreased by \$0.3 million due primarily to higher inventory reserves in 2018.

Research and development costs increased by \$17.2 million due to increased clinical trial expenses and internal costs related to our two ongoing Phase 3 studies for sparsentan in FSGS and IgAN, as well as the discontinued Phase 3 FORT Study of fosmetpantotenate in PKAN.

Selling, general and administrative expenses increased by \$25.3 million due to increased legal and compensation expenses.

The Company impaired the \$15.0 million long-term investment during the third quarter 2019 following the decision to decline to exercise its option to acquire Censa Pharmaceuticals and accordingly discontinue its joint development program for CNSA-001.

The following table provides the change in the fair value of contingent consideration of \$3.5 million, which were due to changes in revenue forecasts, discount factors and timing of payments (*in thousands*):

	Year Ended December 31,		
	2019	2018	Change
Bile acid products	\$ 15,051	\$ 10,590	\$ 4,461
L-UDCA	—	1,000	(1,000)
	<u>\$ 15,051</u>	<u>\$ 11,590</u>	<u>\$ 3,461</u>

Write off of L-UDCA Contingent Consideration and impairment of L-UDCA IPR&D intangible assets: In June 2016, the Company acquired certain rights to its product candidate L-UDCA for \$0.5 million cash. At the same time the Company established a related non-cash asset of \$25.5 million and liability of \$25.0 million for IPR&D and contingent consideration (deferred financing) related net sales royalties and milestones. As a result of our ongoing quarterly valuation update process the resulting balance of the L-UDCA contingent liability at December 31, 2018 was \$18.0 million.

During the first quarter of 2019, the Company elected to discontinue development of the L-UDCA program, resulting in the removal of the intangible asset of \$25.5 million which was originally recorded in 2016, and the reversal of associated contingent consideration of \$18.0 million. This resulted in a net \$7.5 million non-cash charge to first quarter operations.

Restructuring expense decreased \$0.2 million as we completed the consolidation of our research and development function to San Diego in 2018.

2018 versus 2017 results

Our operating expenses for the year ended December 31, 2018 were \$244.3 million compared to \$208.7 million for the year ended December 31, 2017, an increase of \$35.6 million.

Cost of goods sold increased by \$1.9 million due primarily to higher inventory reserves.

Research and development costs increased by \$45.6 million due to ongoing clinical trials for sparsentan, fosmetpantotenate and CNSA-001, and non-clinical studies to support the clinical trials.

Selling, general and administrative expenses increased by \$2.3 million, which reflects additional marketing initiatives to support our commercial portfolio and corporate initiatives.

The following table provides the change in the fair value of contingent consideration of \$7.8 million, which was due to changes in revenue forecasts, discount factors and timing of payments (*in thousands*):

	Year Ended December 31,		
	2018	2017	Change
Bile acid products	\$ 10,590	\$ 25,089	\$ (14,499)
L-UDCA	1,000	(5,700)	6,700
	<u>\$ 11,590</u>	<u>\$ 19,389</u>	<u>\$ (7,799)</u>

Restructuring expense decreased \$3.9 million as we completed the consolidation of our research and development function to San Diego in 2017.

Legal fee settlement expense of \$2.6 million in 2017 relates to amounts we advanced for legal fees to our former executive in defense of litigation for his actions. See Note 11 to the Consolidated Financial Statements for further discussion.

Other Income/Expenses

The following table provides information regarding other income (expenses) (*in thousands*):

	Year Ended December 31,			Year Ended December 31,		
	2019	2018	Change	2018	2017	Change
Other income (expense), net	\$ (314)	\$ (474)	\$ 160	\$ (474)	\$ 1,107	\$ (1,581)
Interest income	10,055	5,499	4,556	5,499	3,234	2,265
Interest expense	(18,828)	(9,810)	(9,018)	(9,810)	(4,422)	(5,388)
Loss on extinguishment of debt	—	(17,042)	17,042	(17,042)	—	(17,042)
Change in fair value of derivative instruments	—	—	—	—	(4,491)	4,491
	<u>\$ (9,087)</u>	<u>\$ (21,827)</u>	<u>\$ 12,740</u>	<u>\$ (21,827)</u>	<u>\$ (4,572)</u>	<u>\$ (17,255)</u>

Other expense for the year ended December 31, 2019 was \$9.1 million compared to other expense of \$21.8 million for the year ended December 31, 2018, which represents change of \$12.7 million. The change was primarily attributable to the 2018 loss on the partial extinguishment of our 4.5% senior convertible notes due in 2019 offset by increase in interest expense related to the 2.50% senior convertible notes due 2025.

Other expense for the year ended December 31, 2018 was \$21.8 million compared to other expense of \$4.6 million for the year ended December 31, 2017, which represents an increase of \$17.3 million. The change was primarily attributable to the loss on the partial extinguishment of our 4.5% senior convertible notes due in 2019 and the increase in interest expense related to the 2.50% senior convertible notes due 2025, offset by a loss on the change in fair value of derivative instruments in 2017.

Income Tax Benefit (Provision):

We follow ASC 740, Income Taxes, which requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Under this method, deferred tax assets and liabilities are based on the differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance to the extent management concludes it is more likely than not that the asset will not be realized.

The standard addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under ASC 740, we may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the tax authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position should be measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement. ASC 740 also provides guidance on de-recognition, classification, interest and penalties on income taxes, accounting in interim periods and requires increased disclosures. Our policy is to record estimated interest and penalty related to the underpayment of income taxes or unrecognized tax benefits as a component of its income tax provision.

Tax benefit for fiscal 2019 of \$0.02 million decreased from the fiscal 2018 tax expense of \$0.8 million.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Liquidity and Capital Resources

We believe that our available cash and short-term investments as of the date of this filing will be sufficient to fund our anticipated level of operations for more than the next 12 months. Management believes that our operating results will vary from quarter to quarter and year to year depending upon various factors including revenues, general and administrative expenses, and research and development expenses.

For the years ended December 31, 2019 and 2018, we had the following financial performance (*in thousands*):

	December 31, 2019		December 31, 2018	
Revenue	\$	175,338	\$	164,246
Net loss		(146,427)		(102,678)
Cash & cash equivalents		62,436		102,873
Short-term investments		336,088		368,668
Accumulated deficit		(416,444)		(270,017)
Stockholders' equity		221,196		318,253
Working capital	\$	333,615	\$	391,057
Working capital ratio		4.50		4.74

Borrowings

Convertible Senior Notes Due 2025

On September 10, 2018, we completed a registered underwritten public offering of \$276 million aggregate principal amount of 2.50% Convertible Senior Notes due 2025 ("2025 Notes"), and entered into a base indenture and supplemental indenture agreement ("2025 Indenture") with respect to the 2025 Notes. The 2025 Notes will mature on September 15, 2025 ("Maturity Date"), unless earlier repurchased, redeemed, or converted. The 2025 Notes are senior unsecured obligations of ours and bear interest at an annual rate of 2.50%, payable semi-annually in arrears on March 15 and September 15 of each year, beginning on March 15, 2019.

The net proceeds from the issuance of the 2025 Notes were approximately \$267.2 million, after deducting commissions and the offering expenses payable by us. A portion of the net proceeds from the 2025 Notes were used by us to repurchase \$23.4 million aggregate principal amount of its then-outstanding 4.5% senior convertible notes due in 2019 in privately-negotiated transactions.

The initial conversion rate for the 2025 Notes is 25.7739 shares of our common stock per \$1,000 principal amount of 2025 Notes, which represents an initial conversion price of approximately \$38.80 per share. If a "make-whole fundamental change" (as defined in the 2025 Indenture) occurs, then we will, in certain circumstances, increase the conversion rate for a specified period of time.

The 2025 Notes will be redeemable, in whole or in part, at our option at any time, and from time to time, on or after September 15, 2022 and, in the case of any partial redemption, on or before the 40th scheduled trading day before the Maturity Date, at a cash redemption price equal to the principal amount of the 2025 Notes to be redeemed, plus accrued and unpaid interest, if any, to, but excluding, the redemption date, but only if the last reported sale price per share of our common stock exceeds 130% of the conversion price on each of at least 20 trading days during the 30 consecutive trading days ending on, and including, the trading day immediately before the date we send the related redemption notice. If a fundamental change (as defined in the 2025 Indenture) occurs, then, subject to certain exceptions, holders may require us to repurchase their 2025 Notes at a cash repurchase price equal to the principal amount of the 2025 Notes to be repurchased, plus accrued and unpaid interest, if any, to, but excluding, the fundamental change repurchase date.

The effective interest rate on the liability components of the 2025 Notes for the period from the date of issuance was 7.7%.

Convertible Senior Notes Due 2019

On May 29, 2014, the Company entered into a Note Purchase Agreement relating to a private placement by the Company of \$46.0 million aggregate principal amount of 2019 Notes which were convertible into shares of the Company's common stock at an initial conversion price of \$17.41 per share. The conversion price was subject to customary anti-dilution protection. The 2019 Notes bore interest at a rate of 4.5% per annum, payable semiannually in arrears on May 15 and November 15 of each year. The maturity date of the 2019 Notes was on May 30, 2019, and there were no contractual payments due prior to that date.

In September 2018, the Company used part of the net proceeds from the issuance of the 2025 Notes to repurchase \$23.4 million aggregate principal amount of the 2019 Notes in privately-negotiated transactions for approximately \$40.2 million in cash. The partial repurchase of the 2019 Notes resulted in a \$17.0 million loss on early extinguishment of debt in September 2018.

In May 2019, the remaining \$22.6 million outstanding principal amount of 2019 Notes was converted by the holders thereof into approximately 1.3 million shares of common stock. At December 31, 2019, there was no outstanding balance on the 2019 Notes.

Interest Expense

Total interest expense recognized for the years ended December 31, 2019, 2018 and 2017 was \$18.8 million, \$9.8 million, and \$4.4 million, respectively.

License Agreement Obligations

See discussion above under the heading "License Agreements".

Funding Requirements

We believe that our available cash and short-term investments as of the date of this filing will be sufficient to fund our anticipated level of operations for more than the next 12 months. This belief is based on many factors; however, some factors are beyond our control. Factors affecting our financing requirements include, but are not limited to:

- revenue growth of our marketed products;
- the rate of progress and cost of our clinical trials, preclinical studies and other discovery and research and development activities;
- the timing of, and costs involved in, seeking and obtaining marketing approvals for our products, and in maintaining quality systems standards for our products;
- our ability to manufacture sufficient quantities of our products to meet expected demand;
- the costs of preparing, filing, prosecuting, maintaining and enforcing any patent claims and other intellectual property rights, litigation costs and the results of litigation;
- our ability to enter into collaboration, licensing or distribution arrangements and the terms and timing of these arrangements;
- the potential need to expand our business, resulting in additional payroll and other overhead expenses;
- the potential acquisition or in-licensing of other products or technologies; and
- the emergence of competing products or other adverse market developments.

Future capital requirements will also depend on the extent to which we acquire or invest in additional complementary businesses, products and technologies.

Cash Flows

The following table summarizes our cash flows for the periods set forth below (*in thousands*):

	Twelve Months Ended December 31,		
	2019	2018	2017
Net cash provided by (used in) operating activities	\$ (58,214)	\$ (24,958)	\$ 7,403
Net cash provided by (used in) investing activities	19,863	(203,291)	45,602
Net cash provided by (used in) financing activities	(2,077)	231,863	5,445
Effect of exchange rate changes on cash	(9)	(135)	(58)
Net increase (decrease) in cash	(40,437)	3,479	58,392
Cash & cash equivalents, beginning of period	102,873	99,394	41,002
Cash & cash equivalents, end of period	\$ 62,436	\$ 102,873	\$ 99,394

Management considers marketable securities to be available to fund current operations, and they are classified as available for sale and included within current assets in our Consolidated Balance Sheets. Therefore, cash and short-term investments available to fund operations is \$398.5 million as of December 31, 2019.

Cash Flows from Operating Activities

Operating activities used \$58.2 million of cash during the year ended December 31, 2019 compared to \$25.0 million of cash used for the year ended December 31, 2018. The increase in cash used is attributable to increased research and development and legal expenses and changes in working capital.

Operating activities used \$25.0 million of cash during the year ended December 31, 2018 compared to \$7.4 million of cash provided for the year ended December 31, 2017. After excluding non-cash adjustments, the variance is primarily due to changes in operating accounts, payments related to the change in fair value of contingent consideration, and increased research and development expenses.

Cash Flows from Investing Activities

Cash provided by investing activities for the year ended December 31, 2019 was \$19.9 million compared to \$203.3 million of cash used for the year ended December 31, 2018. The change was due to timing differences associated with the purchases and sales and maturities of our available-for-sale investments, as well as changes in our portfolio-mix between cash equivalents and short-term and long-term investment holdings, along with our \$15.0 million investment in Censa in the first quarter of 2018.

Cash used by investing activities for the year ended December 31, 2018 was \$203.3 million compared to \$45.6 million of cash provided for the year ended December 31, 2017. The variance was primarily driven by the proceeds from the issuance of the 2025 Notes being invested in marketable securities, offset by higher maturities for marketable securities in 2018 and proceeds from a note receivable payment of \$47.5 million in 2017.

Cash Flows from Financing Activities

For the year ended December 31, 2019, cash used by financing activities was \$2.1 million compared to cash provided of \$231.9 million during the year ended December 31, 2018. The change was due to the issuance of convertible debt in 2018 and lower proceeds from the exercise of stock options in 2019.

For the year ended December 31, 2018, cash provided by financing activities was \$231.9 million compared to cash provided of \$5.4 million during the year ended December 31, 2017. The variance is primarily due to net proceeds received from the issuance of the 2025 Notes offset by the repurchase of the 2019 Notes.

Contractual Commitments

The following table summarizes our principal contractual commitments, excluding open orders that support normal operations, as of December 31, 2019 (in thousands):

	<u>Total</u>	<u>Less than 1 year</u>	<u>1-3 years</u>	<u>3-5 years</u>	<u>More than 5 years</u>
Operating lease	\$ 12,226	\$ 2,958	\$ 5,046	\$ 4,222	\$ —
Note payable, including contractual interest	335,338	9,000	18,000	18,000	290,338
Sales support services	1,804	416	833	555	—
Product supply contracts	8,791	5,317	1,610	1,257	607
Purchase order commitments	470	235	235	—	—
	<u>\$ 358,629</u>	<u>\$ 17,926</u>	<u>\$ 25,724</u>	<u>\$ 24,034</u>	<u>\$ 290,945</u>

Critical Accounting Policies and Estimates

See Note 2 to the Consolidated Financial Statements for discussion.

Recently Issued Accounting Pronouncements

See Note 2 to the Consolidated Financial Statements for discussion.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our primary exposure to market risk is related to changes in interest rates. As of December 31, 2019, we had cash equivalents and marketable securities of approximately \$398.5 million, consisting of money market funds, U.S. government agency debt, corporate debt and commercial paper. This exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because our investments are in short-term marketable securities. Our marketable securities are subject to interest rate risk and will fall in value if market interest rates increase. Due to the short-term duration of our investment portfolio and the low risk profile of our investments, a 10% change in interest rates would have approximately a \$22.0 million impact on our investments. We carry our investments based on publicly available information.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Consolidated Financial Statements and supplementary data of Retrophin, Inc. required by this Item are described in Item 15 of this Annual Report on Form 10-K and are presented beginning on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the timelines specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can only provide reasonable assurance of achieving the desired control objectives, and in reaching a reasonable level of assurance, management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by SEC Rule 13a-15(b), we carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of the

end of the year covered by this report. Based on the foregoing, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Report on Internal Control Over Financial Reporting

Internal control over financial reporting refers to the process designed by, or under the supervision of, our Chief Executive Officer and Chief Financial Officer, and effected by our board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles, and includes those policies and procedures that:

- (1) Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
- (2) Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorization of our management and directors; and
- (3) Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk. Management is responsible for establishing and maintaining adequate internal control over financial reporting for the company.

Management has used the framework set forth in the report entitled Internal Control-Integrated Framework (2013 framework) published by the Committee of Sponsoring Organizations of the Treadway Commission, known as COSO, to evaluate the effectiveness of our internal control over financial reporting. Based on this assessment, our Chief Executive Officer and Chief Financial Officer concluded that our internal control over financial reporting was effective as of December 31, 2019. BDO USA, LLP, our independent registered public accounting firm, has issued an attestation report on our internal control over financial reporting as of December 31, 2019, which is included herein.

Changes in Internal Control Over Financial Reporting

There have not been any changes in our internal control over financial reporting during the quarter ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

Shareholders and Board of Directors

Retrophin, Inc.

San Diego, California

Opinion on Internal Control over Financial Reporting

We have audited Retrophin, Inc. and its subsidiaries' (the "Company's") internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "COSO criteria"). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of the Company and subsidiaries as of December 31, 2019 and 2018, the related consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and our report dated February 24, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Item 9A, Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit of internal control over financial reporting in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ BDO USA, LLP

San Diego, California

February 24, 2020

ITEM 9B. OTHER INFORMATION

On February 24, 2020, we entered into an Open Market Sale Agreement (the “Sales Agreement”) with Jefferies LLC, as agent (“Jefferies”), pursuant to which we may offer and sell, from time to time through Jefferies, shares of our common stock having an aggregate offering price of up to \$100.0 million (the “ATM Shares”). The ATM Shares will be sold pursuant to our effective registration statement on Form S-3 (Registration Statement No. 333-227182), as previously filed with the Securities and Exchange Commission. We will also file a prospectus supplement with the Securities and Exchange Commission in connection with the offer and sale of the ATM Shares.

Under the Sales Agreement, Jefferies may sell the ATM Shares by any method permitted by law and deemed to be an “at the market offering” as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended (the “Securities Act”), including sales made directly on the Nasdaq Stock Market, on any other existing trading market for our common stock or to or through a market maker. In addition, under the Sales Agreement, Jefferies may sell the ATM Shares by any other method permitted by law. We may instruct Jefferies not to sell the ATM Shares if the sales cannot be effected at or above the price designated by us from time to time.

We are not obligated to make any sales of the ATM Shares under the Sales Agreement. The offering of the ATM Shares pursuant to the Sales Agreement will terminate upon the earlier of (a) the sale of all of the ATM Shares subject to the Sales Agreement or (b) the termination of the Sales Agreement by Jefferies or us, as permitted therein.

The Sales Agreement contains customary representations, warranties and agreements by us, and customary indemnification and contribution rights and obligations of the parties. We will pay Jefferies a sales commission of 3.0% of the aggregate gross proceeds from each sale of the ATM Shares. We will also reimburse Jefferies for certain specified expenses in connection with entering into the Sales Agreement.

The Sales Agreement is filed as Exhibit 1.1 to this report, and the description of the terms of the Sales Agreement is qualified in its entirety by reference to such exhibit. A copy of the opinion of Cooley LLP relating to the legality of the issuance and sale of the ATM Shares is attached as Exhibit 5.1 hereto.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information required by this item will be contained in our Definitive Proxy Statement for our 2020 Annual Meeting of Stockholders, to be filed pursuant to Regulation 14A with the Securities and Exchange Commission within 120 days of December 31, 2019. Such information is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

Information required by this item will be contained in our Definitive Proxy Statement for our 2020 Annual Meeting of Stockholders, to be filed pursuant to Regulation 14A with the Securities and Exchange Commission within 120 days of December 31, 2019. Such information is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information required by this item will be contained in our Definitive Proxy Statement for our 2020 Annual Meeting of Stockholders, to be filed pursuant to Regulation 14A with the Securities and Exchange Commission within 120 days of December 31, 2019. Such information is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information required by this item will be contained in our Definitive Proxy Statement for our 2020 Annual Meeting of Stockholders, to be filed pursuant to Regulation 14A with the Securities and Exchange Commission within 120 days of December 31, 2019. Such information is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information required by this item will be contained in our Definitive Proxy Statement for our 2020 Annual Meeting of Stockholders, to be filed pursuant to Regulation 14A with the Securities and Exchange Commission within 120 days of December 31, 2019. Such information is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) The financial statements at page F-1 are incorporated by reference to a part of this Annual Report on Form 10-K.

Financial statement schedules are omitted because they are not applicable or the required information is shown in the financial statements or notes thereto.

(b) Exhibits: The exhibits to this report are listed in the exhibit index below.

Exhibit No.	Description
1.1	Open Market Sales Agreement, dated February 24, 2020, by and between Retrophin, Inc. and Jefferies LLC.
2.1	Asset Purchase Agreement, dated May 22, 2015, by and between Retrophin, Inc. and Sanofi (incorporated by reference to Exhibit 2.1 to the Company's Current report on Form 8-K filed with the SEC on May 27, 2015).
3.1	Certificate of Incorporation of the Company (incorporated by reference to Exhibit 3.1 to Amendment No. 2 to the Company's General Form for Registration of Securities on Form 10-12G, filed with the SEC on October 28, 2010).
3.2	Certificate of Amendment of Certificate of Incorporation of the Company (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K, filed with the SEC on June 11, 2015).
3.3	Amended and Restated Bylaws of the Company (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K, filed with the SEC on June 11, 2015).
4.1	Reference is made to Exhibits to 3.1 , 3.2 and 3.3 .
4.2	Description of Common Stock.
4.3	Base Indenture, dated September 10, 2018, between the Company and U.S. Bank National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, filed with the SEC on September 10, 2018).
4.4	First Supplemental Indenture, dated September 10, 2018, between the Company and U.S. Bank National Association, as Trustee (including the form of 2.50% Convertible Senior Note due 2025) (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K, filed with the SEC on September 10, 2018).
5.1	Opinion of Cooley LLP.
10.1	Trademark License and Supply Agreement, dated May 29, 2014, by and between Retrophin, Inc. and Mission Pharmacal Company (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the SEC on June 4, 2014).
10.2	First Amendment to Trademark License and Supply Agreement, effective as of July 28, 2014, by and between Mission Pharmacal Company and Retrophin, Inc. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the SEC on July 29, 2014).
10.3	International Rights Purchase Agreement, dated as of March 26, 2014, by and between Manchester Pharmaceuticals LLC and Retrophin Therapeutics International, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the SEC on March 31, 2014).
10.4+	Sublicense Agreement, dated February 16, 2012, by and among Ligand Pharmaceuticals Incorporated, a Delaware corporation, Pharmacopeia, Inc., a Delaware limited liability company, and Retrophin, LLC, a Delaware limited liability company (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the SEC on December 19, 2012).
10.5†	Employment Agreement, dated March 2, 2015, by and between Retrophin, Inc. and Laura M. Clague (incorporated by reference to Exhibit 10.25 to the Company's Annual Report on Form 10-K, filed with the SEC on March 11, 2015).
10.6†	Retrophin, Inc. 2014 Incentive Compensation Plan as amended (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K, filed with the SEC on February 9, 2015).
10.7+	Amendment No. 4 to Sublicense Agreement dated as of September 17, 2015, between Retrophin, Inc. and Ligand Pharmaceuticals Incorporated (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q/A, filed with the SEC on December 22, 2015).
10.8	Addendum to Trademark License and Supply Agreement, dated October 19, 2015, by and between to Company and Mission Pharmacal (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on November 6, 2015).
10.9	Asset Purchase Agreement dated as of January 9, 2015, between Retrophin, Inc. and Turing Pharmaceuticals AG (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 11, 2015).
10.10	Asset Purchase Agreement dated as of February 12, 2015, among Retrophin, Inc., Manchester Pharmaceuticals LLC and Turing Pharmaceuticals AG (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 11, 2015).
10.11+	Amendment No. 3 to Sublicense Agreement dated as of February 27, 2015, between Retrophin, Inc. and Ligand Pharmaceuticals Incorporated (incorporated by reference to Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 11, 2015).

10.12+	Asset Purchase Agreement dated January 10, 2015 by and between Retrophin, Inc. and Asklepiion Pharmaceuticals, LLC (incorporated by reference to Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 11, 2015).
10.13+	Amendment One to the Third Amendment to Trademark License and Supply Agreement, dated September 12, 2016, by and between the Company and Mission Pharmacal Company (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on November 4, 2016).
10.14+	Amendment Two to the Third Amendment to Trademark License and Supply Agreement, dated November 3, 2017, by and between the Company and Mission Pharmacal Company (incorporated by reference to Exhibit 10.20 to the Company's Annual Report on Form 10-K, filed with the SEC on February 27, 2018).
10.15+	Third Amendment to Trademark License and Supply Agreement dated as of March 17, 2016, between Retrophin Inc. and Mission Pharmacal. (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 5, 2016).
10.16	Fourth Amendment to Trademark License and Supply Agreement dated as of November 28, 2018, between Retrophin Inc. and Mission Pharmacal (incorporated by reference to Exhibit 10.19 to the Company's Annual Report on Form 10-K, filed with the SEC on February 26, 2019).
10.17+	Asset Purchase Agreement dated as of June 9, 2016 between Retrophin, Inc. and Asklepiion Pharmaceuticals, LLC (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on August 4, 2016).
10.18	Retrophin, Inc. 2015 Equity Incentive Plan, as amended (incorporated by reference to Exhibit 99.1 to the Company's current report on Form 8-K, filed with the SEC on May 18, 2017).
10.19†	Amendment to Employment Agreement, entered into as of April 11, 2017 and modifies the Employment Agreement dated March 2, 2015, by and between Retrophin, Inc. and Laura M. Clague (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 5, 2017).
10.20	Retrophin, Inc. 2017 Employee Stock Purchase Plan (incorporated by reference to Exhibit 99.2 to the Company's current report on Form 8-K, filed with the SEC on May 18, 2017).
10.21	Form of Stock Option Grant Notice, Option Agreement and Notice of Exercise for Inducement Grant Outside of 2015 Equity Incentive Plan (incorporated by reference to Exhibit 99.3 to the Company's current report on Form S-8, filed with the SEC on June 8, 2017).
10.22	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement for Inducement Grant Outside of 2015 Equity Incentive Plan (incorporated by reference to Exhibit 99.4 to the Company's current report on Form S-8, filed with the SEC on June 8, 2017).
10.23	Retrophin, Inc. 2018 Equity Incentive Plan, Form of Stock Option Grant Notice, Option Agreement and Exercise Notice, Form of Restricted Stock Unit Award Agreement for use thereunder. (incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K, filed with the SEC on May 10, 2018).
10.24†	Retrophin, Inc. 2018 Equity Incentive Plan, as amended, and, Form of Stock Option Grant Notice, Option Agreement and Exercise Notice, Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement for use thereunder (incorporated by reference to Exhibit 99.1 to the Company's Registration Statement on Form S-8 (File No. 333-232857), filed with the SEC on July 26, 2019).
10.25	Form of Stock Option Grant Notice, Option Agreement and Notice of Exercise for Inducement Grant Outside of 2018 Equity Incentive Plan, as amended (incorporated by reference to Exhibit 99.2 to the Company's Registration Statement on Form S-8 (File No. 333-232857), filed with the SEC on July 26, 2019).
10.26	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement for Inducement Grant Outside of 2018 Equity Incentive Plan, as amended (incorporated by reference to Exhibit 99.3 to the Company's Registration Statement on Form S-8 (File No. 333-232857), filed with the SEC on July 26, 2019).
10.27	Form of Indemnity Agreement (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 1, 2018).
10.28	Amendment No. 5 to Sublicense Agreement dated as of March 20, 2018, between the Company and Ligand Pharmaceuticals Incorporated (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 1, 2018).
10.29	Employment Agreement, dated February 13, 2017, and Amendment to Employment Agreement, dated April 11, 2017, by and between the Company and William Rote (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 1, 2018).
10.30	Employment Agreement, dated February 6, 2017, and Amendment to Employment Agreement, dated April 11, 2017, by and between the Company and Elizabeth E. Reed (incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 1, 2018).
10.31†	2019 Retrophin, Inc. Executive Officer Annual Bonus Plan. (incorporated by reference to Exhibit 10.32 to the Company's Annual Report on Form 10-K, filed with the SEC on February 26, 2019).
10.32†	Retirement Agreement, dated January 4, 2019, by and between the Company and Stephen Aselage (incorporated by reference to Exhibit 10.33 to the Company's Annual Report on Form 10-K, filed with the SEC on February 26, 2019).
10.33†	Employment Agreement, dated January 4, 2019, by and between the Company and Eric M. Dube (incorporated by reference to Exhibit 10.34 to the Company's Annual Report on Form 10-K, filed with the SEC on February 26, 2019).
10.34†	Employment Agreement, dated July 26, 2018, by and between the Company and Noah Rosenberg, M.D. (incorporated by reference to Exhibit 10.35 to the Company's Annual Report on Form 10-K, filed with the SEC on February 26, 2019).
10.35†	Separation Agreement, dated April 19, 2019, by and between the Company and Neil McFarlane (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the SEC on April 19, 2019).
10.36	Office Lease, effective April 12, 2019, between the Company and Kilroy Realty, L.P. (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, filed with the SEC on August 6, 2019).
10.37†	Non-Employee Director Compensation Program.

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21.1	List of subsidiaries of the Company.
23.1	Consent of BDO USA, LLP.
23.2	Consent of Cooley LLP (included in Exhibit 5.1)
24.1	Power of Attorney (see signature page hereto).
31.1	Chief Executive Officer's Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Chief Financial Officer's Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Chief Executive Officer's Certification pursuant to Section 906 of Sarbanes Oxley Act of 2002.
32.2	Chief Financial Officer's Certification pursuant to Section 906 of Sarbanes Oxley Act of 2002.
101.INS	Inline XBRL Instance Document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Taxonomy Extension Presentation Linkbase Document.
104	The cover page to this Annual Report on Form 10-K has been formatted in Inline XBRL.

+ We have received confidential treatment of certain portions of this agreement, which have been omitted and filed separately with the SEC pursuant to Rule 406 under the Securities Act of 1933, as amended, or Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

† Indicates management contract or compensatory plan.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

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

Date: February 24, 2020

RETROPHIN, INC.

By: /s/ Eric M. Dube

Name: Eric M. Dube

Title: Chief Executive Officer

POWER OF ATTORNEY

Know all persons by these presents, that each person whose signature appears below constitutes and appoints Eric Dube and Laura Clague, and each of them, as his attorneys-in-fact and agents, each with power of substitution in any and all capacities, to sign any amendments to this annual report on Form 10-K, and to file the same with exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that the attorney-in-fact or his substitute or substitutes may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Eric M. Dube</u> Eric M. Dube	Chief Executive Officer and Director (Principal Executive Officer)	February 24, 2020
<u>/s/ Laura Clague</u> Laura Clague	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	February 24, 2020
<u>/s/ Stephen Aselage</u> Stephen Aselage	Director	February 24, 2020
<u>/s/ Roy D. Baynes</u> Roy D. Baynes	Director	February 24, 2020
<u>/s/ Timothy Coughlin</u> Timothy Coughlin	Director	February 24, 2020
<u>/s/ Gary Lyons</u> Gary Lyons	Director	February 24, 2020
<u>/s/ Jeffrey A. Meckler</u> Jeffrey A. Meckler	Director	February 24, 2020
<u>/s/ John A. Orwin</u> John A. Orwin	Director	February 24, 2020
<u>/s/ Sandra E. Poole</u> Sandra E. Poole	Director	February 24, 2020
<u>/s/ Ron Squarer</u> Ron Squarer	Director	February 24, 2020

RETROPHIN, INC. AND SUBSIDIARIES

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Report of independent Registered Public Accounting Firm

Shareholders and Board of Directors

Retrophin, Inc.

San Diego, California

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Retrophin, Inc. (the “Company”) and subsidiaries as of December 31, 2019 and 2018, the related consolidated statements of operations and comprehensive loss, stockholders’ equity, and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (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.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the Company’s internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) and our report dated February 24, 2020 expressed an unqualified opinion thereon.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed its method of accounting for leases in 2019 due to the adoption of Accounting Standards Codification Topic 842, Leases, and its method of accounting for certain financial instruments with down round features in 2018 due to the adoption of Accounting Standards Update 2017-11, Earnings Per Share (Topic 260); Distinguishing Liabilities from Equity (Topic 480); Derivatives and Hedging (Topic 815); (Part I) Accounting for Certain Financial Instruments with Down Round Features.

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.

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.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Contingent Consideration

As described in Note 8 to the consolidated financial statements, the Company acquired two businesses, related to the Cholbam and Chenodal products, whose purchase price included potential future payments that are contingent on the achievement of certain milestones and percentages of future net

sales derived from the products acquired. The Company recorded contingent consideration liabilities at their fair value on the acquisition date and revalues them at the end of each reporting period.

We identified the determination of the contingent consideration liabilities' fair value as a critical audit matter. The determination of the contingent consideration liabilities' fair value requires management to make significant judgments including the appropriateness of the valuation model and the reasonableness of estimates and assumptions included in the forecasts of future net sales and the discount rates applied to such forecasts. Changes in these estimates and assumptions could have a significant impact on the fair value of the contingent consideration liabilities. Auditing these elements involved especially challenging auditor judgment due to the subjectivity and the nature and extent of audit effort required to address the matter, including the extent of specialized skill or knowledge needed.

The primary procedures we performed to address this critical audit matter included:

- Testing the design and operating effectiveness of certain controls over the development of the significant assumptions used in the valuation model, including controls over assumptions related to: (i) estimates in the forecasts of future net sales and (ii) discount rates applied to the forecasts.
- Assessing the reasonableness of certain significant assumptions used in the valuation model, through: (i) reviewing the products' historical performance, (ii) evaluating the reasonableness of significant assumptions (including revenue projections) against budgets and the current performance of the Company, and (iii) performing sensitivity analyses to test the potential effect of changes in certain assumptions on the valuation.
- Utilizing professionals with specialized skills and knowledge to assist in evaluating the appropriateness of the valuation models utilized by management and to assess the reasonableness of certain estimates and assumptions used by management to develop the discount rates applied to the net sales forecasts.

/s/ BDO USA, LLP

We have served as the Company's auditor since 2014.

San Diego, California

February 24, 2020

RETROPHIN, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share amounts)

	<u>December 31, 2019</u>	<u>December 31, 2018</u>
Assets		
Current assets:		
Cash and cash equivalents	\$ 62,436	\$ 102,873
Marketable securities	336,088	368,668
Accounts receivable, net	18,048	12,662
Inventory, net	6,082	5,619
Prepaid expenses and other current assets	5,015	4,140
Prepaid taxes	1,395	1,716
Total current assets	<u>429,064</u>	<u>495,678</u>
Property and equipment, net	2,891	3,146
Other assets	14,709	7,709
Investment-equity	—	15,000
Intangible assets, net	157,200	186,691
Goodwill	936	936
Total assets	<u>\$ 604,800</u>	<u>\$ 709,160</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 26,614	\$ 6,954
Accrued expenses	51,745	49,695
Other current liabilities	8,590	6,165
Business combination-related contingent consideration	8,500	19,350
Convertible debt	—	22,457
Total current liabilities	<u>95,449</u>	<u>104,621</u>
Convertible debt	204,861	195,091
Other noncurrent liabilities	20,894	17,545
Business combination-related contingent consideration, less current portion	62,400	73,650
Total liabilities	<u>383,604</u>	<u>390,907</u>
Stockholders' Equity:		
Preferred stock \$0.0001 par value; 20,000,000 shares authorized; 0 issued and outstanding as of December 31, 2019 and 2018, respectively	—	—
Common stock \$0.0001 par value; 100,000,000 shares authorized; 43,088,921 and 41,389,524 issued and outstanding as of December 31, 2019 and 2018, respectively	4	4
Additional paid-in capital	636,910	589,795
Accumulated deficit	(416,444)	(270,017)
Accumulated other comprehensive income (loss)	726	(1,529)
Total stockholders' equity	<u>221,196</u>	<u>318,253</u>
Total liabilities and stockholders' equity	<u>\$ 604,800</u>	<u>\$ 709,160</u>

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

RETROPHIN, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share amounts)

	Years Ended December 31,		
	2019	2018	2017
Net product sales	\$ 175,338	\$ 164,246	\$ 154,937
Operating expenses:			
Cost of goods sold	5,234	5,527	3,605
Research and development	140,963	123,757	78,168
Selling, general and administrative	128,951	103,654	101,333
Change in fair value of contingent consideration	15,051	11,590	19,389
Restructuring	—	(242)	3,608
Legal fee settlement	—	—	2,625
Impairment of L-UDCA IPR&D intangible asset	25,500	—	—
Write off of L-UDCA contingent consideration	(18,000)	—	—
Impairment of long-term investment	15,000	—	—
Total operating expenses	312,699	244,286	208,728
Operating loss	(137,361)	(80,040)	(53,791)
Other Income (expense), net:			
Other income (expense), net	(314)	(474)	1,107
Interest income	10,055	5,499	3,234
Interest expense	(18,828)	(9,810)	(4,422)
Loss on extinguishment of debt	—	(17,042)	—
Change in fair value of derivative instruments	—	—	(4,491)
Total other expense, net	(9,087)	(21,827)	(4,572)
Loss before benefit (provision) for income taxes	(146,448)	(101,867)	(58,363)
Income tax benefit (provision)	21	(811)	(1,368)
Net loss	\$ (146,427)	\$ (102,678)	\$ (59,731)
Basic and diluted net loss per common share:	\$ (3.46)	\$ (2.54)	\$ (1.54)
Basic and diluted weighted average common shares outstanding	42,339,961	40,433,171	38,769,816
Comprehensive loss:			
Net loss	\$ (146,427)	\$ (102,678)	\$ (59,731)
Foreign currency translation gain (loss)	92	39	(339)
Unrealized gain (loss) on marketable securities	2,163	(553)	(186)
Comprehensive loss	\$ (144,172)	\$ (103,192)	\$ (60,256)

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

RETROPHIN, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands, except share amounts)

	Common Stock		Additional Paid in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
BALANCE - DECEMBER 31, 2016	37,906,669	\$ 4	\$ 421,309	\$ (490)	\$ (113,056)	\$ 307,767
Adoption of ASU 2016-16 required de-recognition of intra-company deferred tax assets	—	—	—	—	(4,868)	(4,868)
Share based compensation	—	—	26,645	—	—	26,645
Exercise of warrants and reclassification of derivative liability	607,481	—	14,866	—	—	14,866
Unrealized gain/(loss) on marketable securities	—	—	—	(186)	—	(186)
Foreign currency translation adjustments	—	—	—	(339)	—	(339)
Issuance of common shares under the equity incentive plan and proceeds from exercise.	819,573	—	8,087	—	—	8,087
ESPP stock purchase and expense	40,022	—	893	—	—	893
Net loss	—	—	—	—	(59,731)	(59,731)
BALANCE - DECEMBER 31, 2017	39,373,745	\$ 4	\$ 471,800	\$ (1,015)	\$ (177,655)	\$ 293,134
Adoption of ASU 2017-11 - reclassification of derivative liability of warrants with down round provisions	—	—	5,394	—	10,316	15,710
Share based compensation	—	—	19,494	—	—	19,494
Exercise of warrants	1,036,054	—	5,305	—	—	5,305
Unrealized gain/(loss) on marketable securities	—	—	—	(553)	—	(553)
Foreign currency translation adjustments	—	—	—	39	—	39
Issuance of common shares under the equity incentive plan and proceeds from exercise.	892,713	—	10,588	—	—	10,588
ESPP stock purchase and expense	87,012	—	2,269	—	—	2,269
Convertible debt issue	—	—	74,945	—	—	74,945
Net loss	—	—	—	—	(102,678)	(102,678)
BALANCE - DECEMBER 31, 2018	41,389,524	\$ 4	\$ 589,795	\$ (1,529)	\$ (270,017)	\$ 318,253
Share based compensation	—	—	20,463	—	—	20,463
Unrealized gain/(loss) on marketable securities	—	—	—	2,163	—	2,163
Foreign currency translation adjustments	—	—	—	92	—	92
Issuance of common shares under the equity incentive plan and proceeds from exercise.	272,730	—	1,618	—	—	1,618
ESPP stock purchase and expense	129,324	—	2,444	—	—	2,444
Convertible debt issue	1,297,343	—	22,590	—	—	22,590
Net loss	—	—	—	—	(146,427)	(146,427)
BALANCE - DECEMBER 31, 2019	43,088,921	\$ 4	\$ 636,910	\$ 726	\$ (416,444)	\$ 221,196

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

RETROPHIN, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	For the year ended December 31,		
	2019	2018	2017
Cash Flows from Operating Activities:			
Net loss	\$ (146,427)	\$ (102,678)	\$ (59,731)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization	20,408	18,668	17,804
Deferred income tax	—	—	(6,425)
Settlement expense	—	—	2,625
Loss on extinguishment of debt	—	17,042	—
Impairment of intangible assets	25,500	—	—
Loss on allowance for inventory	1,468	2,457	609
Loss on impairment of long-term investment	15,000	—	—
Accretion of notes receivable	—	—	(651)
Accretion of contingent consideration	1,485	1,357	1,723
Amortization of debt discount and deferred financing costs	9,903	3,398	656
Amortization of (discounts) premiums on investments	(788)	382	1,338
Share based compensation	21,105	19,774	26,874
Change in estimated fair value of contingent consideration	(2,948)	11,590	19,389
Payments from change in fair value of contingent consideration	(5,661)	(8,085)	(3,949)
Change in estimated fair value of liability classified warrants	—	—	4,491
Foreign currency transaction gain	112	464	(1,081)
Other operating activities	(51)	(396)	(83)
Changes in operating assets and liabilities, net of business acquisitions:			
Accounts receivable	(5,184)	152	4,945
Inventory	(1,958)	(2,773)	(1,706)
Prepaid expenses and other current assets	(7,931)	(1,358)	(2,702)
Prepaid income taxes	555	1,126	621
Accounts payable	9,255	(2,708)	2,060
Accrued expenses and other current liabilities	7,943	16,630	596
Net cash provided by (used in) operating activities	(58,214)	(24,958)	7,403
Cash Flows from Investing Activities:			
Purchase of fixed assets	(195)	(727)	(887)
Purchase of intangible assets	(15,370)	(18,974)	(13,122)
Investment - Equity	—	(15,000)	—
Proceeds from the sale/maturity of marketable securities	259,140	162,755	114,526
Purchase of marketable securities	(223,712)	(331,345)	(102,415)
Proceeds from the maturity of notes receivable	—	—	47,500
Net cash provided by (used in) investing activities	19,863	(203,291)	45,602
Cash Flows from Financing Activities:			
Payment of acquisition-related contingent consideration	(3,388)	(9,721)	(4,099)
Payment of other liability	—	(1,000)	(852)
Payment of guaranteed minimum royalty	(2,084)	(2,000)	(2,000)
Proceeds from exercise of warrants	—	5,305	3,645
Proceeds from exercise of stock options	1,618	10,588	8,087
Proceeds from issuance of 2025 convertible senior notes	—	276,000	—
Repurchase of 2019 convertible senior notes including premium	—	(40,203)	—
Payment of debt issuance and financing costs	—	(8,820)	—
Other financing activities	1,777	1,714	664
Net cash provided by (used in) financing activities	(2,077)	231,863	5,445
Effect of exchange rate changes on cash	(9)	(135)	(58)
Net increase (decrease) in cash and cash equivalents	(40,437)	3,479	58,392
Cash and cash equivalents, beginning of year	102,873	99,394	41,002
Cash and cash equivalents, end of year	\$ 62,436	\$ 102,873	\$ 99,394
Supplemental Disclosure of Cash Flow Information:			
Cash paid for interest	\$ 7,669	\$ 1,880	\$ 2,070
Cash paid for income taxes	\$ 656	\$ 218	\$ 7,172
Non-cash Investing and financing activities:			

Reclassification of derivative liability to equity due to exercise of warrants	\$ —	\$ —	\$ 11,221
Accrued royalty in excess of minimum payable to the sellers of Thiola	\$ 15,815	\$ 14,572	\$ 13,247
Term extension of current Thiola agreement	\$ —	\$ —	\$ 5,885
Adoption of ASU 2017-11 - reclassification of derivative liability of warrants with down round provisions	\$ —	\$ 15,710	\$ —

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

RETROPHIN, INC. AND SUBSIDIARIES**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS****NOTE 1. DESCRIPTION OF BUSINESS****Organization and Description of Business**

Retrophin, Inc. (“we”, “our”, “us”, “Retrophin” and the “Company”) refers to Retrophin, Inc., a Delaware corporation, as well as our direct and indirect subsidiaries. Retrophin is a fully integrated biopharmaceutical company headquartered in San Diego, California focused on identifying, developing and delivering life-changing therapies to people with rare diseases. We regularly evaluate and, where appropriate, act on opportunities to expand our product pipeline through licenses and acquisitions of products in areas that will serve patients with serious or rare diseases and that we believe offer attractive growth characteristics.

Clinical Programs

Sparsentan, also known as RE-021, is an investigational product candidate with a dual mechanism of action, a selective endothelin receptor antagonist (“ERA”), with in vitro selectivity toward endothelin receptor type A and a potent angiotensin receptor blocker (“ARB”). Sparsentan is currently being evaluated in two pivotal Phase 3 clinical studies in the following indications:

- **Focal segmental glomerulosclerosis (“FSGS”)** is a rare kidney disease characterized by proteinuria where the glomeruli become progressively scarred. FSGS is a leading cause of end-stage renal disease.
- **Immunoglobulin A nephropathy (“IgAN”)** is an immune-complex-mediated glomerulonephritis characterized by hematuria, proteinuria, and variable rates of progressive renal failure. IgAN is the most common primary glomerular disease.

Chenodal® has also been the standard of care for cerebrotendinous xanthomatosis (“CTX”) patients for more than three decades but is not currently labeled for this indication. In January 2020, we randomized the first patients in a Phase 3 clinical trial to evaluate the effects of Chenodal in adult and pediatric patients with CTX. The pivotal study, known as the RESTORE study, is intended to support a new drug application (“NDA”) submission for marketing authorization of Chenodal for CTX in the United States.

Cooperative Research and Development Agreements (“CRADAs”):

The Company is a participant in two CRADAs, which form a multi-stakeholder approach to pool resources with leading experts, and incorporates the patient perspective early in the identification and development process. Retrophin has partnered with the National Institutes of Health’s National Center for Advancing Translational Sciences (“NCATS”) and leading patient advocacy organizations, NGLY1.org and Alagille Syndrome Alliance (“ALGSA”), aimed at the identification of potential small molecule therapeutics for NGLY1 deficiency and Alagille syndrome, respectively. There are no treatment options currently approved for these diseases.

Approved products:

- Chenodal (chenodiol tablets) is approved in the United States for the treatment of patients suffering from gallstones in whom surgery poses an unacceptable health risk due to disease or advanced age. Chenodal has been the standard of care for CTX patients for more than three decades.
- Cholbam® (cholic acid capsules) is approved in the United States for the treatment of bile acid synthesis disorders due to single enzyme defects and is further indicated for adjunctive treatment of patients with peroxisomal disorders.
- Thiola® and Thiola EC® (tiopronin tablets) are approved in the United States for the prevention of cystine (kidney) stone formation in patients with severe homozygous cystinuria.

Changes in Development Activities:

In August 2019, the Company announced that the Phase 3 FORT Study evaluating the safety and efficacy of fosmetpantotenate compared to placebo in patients with pantothenate kinase-associated neurodegeneration (“PKAN”) did not meet its primary endpoint and did not demonstrate a difference between treatment groups. The study also did not meet its secondary endpoint. The Company will not proceed with further development of fosmetpantotenate for PKAN.

In August 2019, following a strategic review of the CNSA-001 program in patients with phenylketonuria ("PKU"), the Company made the decision to decline to exercise its option to acquire Censa Pharmaceuticals and accordingly discontinue its joint development program for CNSA-001. The Company impaired the related \$15 million long-term investment during the third quarter of 2019.

During the first quarter of 2019, the Company elected to discontinue development of the L-UDCA program, resulting in impairment of the intangible asset of \$25.5 million, originally recorded in 2016, and the related \$18.0 million in contingent liability. This resulted in a net \$7.5 million non-cash charge to first quarter operations.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A summary of the significant accounting policies applied in the preparation of the accompanying consolidated financial statements follows:

Principles of Consolidation

The consolidated financial statements represent the consolidation of the accounts of the Company and its subsidiaries in conformity with accounting principles generally accepted in the United States ("U.S. GAAP"). All intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

In preparing financial statements in conformity with U.S. GAAP, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of expenses during the reporting period. Due to inherent uncertainty involved in making estimates, actual results reported in future periods may be affected by changes in these estimates. On an ongoing basis, the Company evaluates its estimates and assumptions. These estimates and assumptions include revenue recognition, valuing equity securities in share-based payments, estimating expenses of contracted research organizations, estimating fair value of equity instruments recorded as derivative liabilities, estimating the useful lives of depreciable and amortizable assets, goodwill impairment, estimating the fair value of contingent consideration, estimating of valuation allowances and uncertain tax positions, and estimates associated with the assessment of impairment for long-lived assets.

Revenue Recognition

Effective January 1, 2018, the Company adopted Accounting Standards Codification ("ASC"), Topic 606, Revenue from Contracts with Customers, using the full retrospective transition method. This standard applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, collaboration arrangements and financial instruments. Under Topic 606, an entity recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of Topic 606, the entity performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that the entity will collect substantially all the consideration it is entitled to in exchange for the goods or services it transfers to the customer.

Revenue from product sales is recorded at delivery, net of applicable provisions for rebates under government (including medicaid) programs, commercial rebates, prompt pay discounts, and other sales-related deductions. We review our estimates of rebates and other applicable provisions each period and record any necessary adjustments in the current period.

See Note 3 for further discussion.

Research and Development Costs

Research and development includes expenses related to sparsentan, fosmetpantotenate and our other pipeline programs. We expense all research and development costs as they are incurred. Our research and development costs are comprised of salaries and bonuses, benefits, non-cash share-based compensation, license fees, milestones under license agreements, costs paid to third-party contractors to perform research, conduct clinical trials, and develop drug materials and delivery devices, and associated overhead expenses and facilities costs. We charge direct internal and external program costs to the respective development programs. We also incur indirect costs that are not allocated to specific programs because such costs benefit multiple development programs and allow us to increase our pharmaceutical development capabilities. These consist of internal shared resources related to the development and maintenance of systems and processes applicable to all of our programs.

Clinical Trial Expenses

We record expenses in connection with our clinical trials under contracts with contract research organizations (CROs) that support conducting and managing clinical trials. The financial terms and activities of these agreements vary from contract to contract and may result in uneven expense levels. Generally, these agreements set forth activities that drive the recording of expenses such as start-up and initiation activities, enrollment and treatment of patients, or the completion of other clinical trial activities.

Expenses related to clinical trials are accrued based on our estimates and/or representations from service providers regarding work performed, including actual level of patient enrollment, completion of patient studies and progress of the clinical trials. Other incidental costs related to patient enrollment or treatment are accrued when reasonably certain. If the amounts we are obligated to pay under our clinical trial agreements are modified (for instance, as a result of changes in the clinical trial protocol or scope of work to be performed), we adjust our accruals accordingly on a prospective basis. Revisions to our contractual payment obligations are charged to expense in the period in which the facts that give rise to the revision become reasonably certain.

We currently have three Phase 3 clinical trials in process that are in varying stages of activity, with ongoing non-clinical support trials. As such, clinical trial expenses will vary depending on the all the factors set forth above and may fluctuate significantly from quarter to quarter.

Employee Stock-Based Compensation

The Company recognizes all employee share-based compensation as a cost in the financial statements. Equity-classified awards principally related to stock options, restricted stock units ("RSUs") and performance stock units ("PSUs"), are measured at the grant date fair value of the award. The Company determines grant date fair value of stock option awards using the Black-Scholes option-pricing model. The fair value of RSUs and PSUs are determined using the closing price of the Company's common stock on the grant date. For service based vesting grants, expense is recognized over the requisite service period based on the number of options or shares expected to ultimately vest. For PSUs, expense is recognized over the implicit service period, assuming vesting is probable. No expense is recognized for PSUs if it is not probable the vesting criteria will be satisfied. Forfeitures are accounted for as they occur.

	Vesting Term
Stock Options	3 to 4 years
Restricted Stock Units	1 to 4 years

Earnings (Loss) Per Share

We calculate our basic earnings per share by dividing net income by the weighted average number of shares outstanding during the period. The diluted earnings per share computation includes the effect, if any, of shares that would be issuable upon the exercise of outstanding stock options, derivative warrant liability, convertible debt and RSUs, reduced by the number of shares which are assumed to be purchased by the Company from the resulting proceeds at the average market price during the year, when such amounts are dilutive to the earnings per share calculation.

Cash and Cash Equivalents

We consider all highly liquid marketable securities with an original maturity of three months or less to be cash equivalents. Due to the short-term maturity of such investments, the carrying amounts are a reasonable estimate of fair value.

Marketable Securities

The Company accounts for marketable securities held as "available-for-sale" in accordance with ASC 320, "Investments Debt and Equity Securities" ("ASC 320"). The Company classifies these investments as current assets and carries them at fair value. Unrealized gains and losses on debt securities are recorded as a separate component of stockholders' equity as accumulated other comprehensive loss. Realized gains or losses on marketable security transactions are reported in the Consolidated Statements of Operations and Comprehensive Loss. Marketable securities are maintained at one financial institution and are governed by the Company's investment policy as approved by the Company's Board of Directors.

Trade Receivables, Net

Trade accounts receivable are recorded net of allowances for prompt payment and doubtful accounts. Estimates for allowances for doubtful accounts are determined based on existing contractual obligations, historical payment patterns and individual customer circumstances. The allowance for doubtful accounts was zero at both December 31, 2019 and 2018, respectively. For the years ended December 31, 2019, 2018 and 2017, bad debt expense recorded in the Statement of Operations and Comprehensive Loss was approximately \$0.1 million, zero and \$0.2 million, respectively.

Inventory, Related Reserves and Cost of Goods Sold

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Inventory, which is recorded at the lower of cost or net realizable value, includes materials, labor, and other direct and indirect costs and is valued using the first-in, first-out method. The Company periodically analyzes its inventory levels to identify inventory that may expire prior to expected sale or has a cost basis in excess of its estimated realizable value, and writes down such inventory as appropriate. In addition, the Company's products are subject to strict quality control and monitoring which the Company's manufacturers perform throughout their manufacturing process. The Company does not directly manufacture any product. The Company has single suppliers for products Chenodal and Thiola, and prospectively arranges for manufacture from contract service providers for its product Cholbam. The inventory reserve was \$3.1 million and \$1.8 million at December 31, 2019 and 2018, respectively.

Inventory, net of reserve, consisted of the following at December 31, 2019 and 2018 (*in thousands*):

	December 31, 2019	December 31, 2018
Raw material	\$ 2,713	\$ 2,883
Finished goods	3,369	2,736
Total inventory	\$ 6,082	\$ 5,619

Cost of goods sold includes the cost of inventory sold, third party manufacturing and supply chain costs, product shipping and handling costs, and provisions for excess and obsolete inventory.

Segment Information

The Company currently operates in one business segment focused on the development and commercialization of innovative therapies for people with serious and life-threatening rare diseases and medical conditions. The Company is not organized by market and is managed and operated as one business. A single management team reports to the chief operating decision maker who comprehensively manages the entire business. The Company does not operate any separate lines of business or separate business entities with respect to its products. Accordingly, the Company does not accumulate discrete financial information with respect to separate products, other than revenues, and does not have separately reportable segments.

Property and Equipment, net

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is computed using the straight-line method over the related estimated useful lives as presented in the table below. Significant additions and improvements are capitalized, while repairs and maintenance are charged to expense as incurred. Property and equipment purchased for specific research and development projects with no alternative use is expensed as incurred.

The major classifications of property and equipment, including their respective expected useful lives, consists of the following:

Computers and equipment	3 years
Furniture and fixtures	7 years
Leasehold improvements	Shorter of length of lease or life of the asset

Intangible Assets, Net

Our intangible assets consist of licenses and purchased technology. Intangible assets with definite lives are amortized on a straight-line basis over their estimated useful lives and are reviewed periodically for impairment.

Intangible assets related to IPR&D projects are considered to be indefinite-lived until the completion or abandonment of the associated research and development efforts. During the period the assets are considered indefinite-lived, they will not be amortized but will be tested for impairment. If and when development is complete, which generally occurs when regulatory approval to market a product is obtained, the associated assets are deemed finite-lived and are amortized over a period that best reflects the economic benefits provided by these assets.

Goodwill

Goodwill represents the excess of purchase price over fair value of net assets acquired in a business combination and is not amortized. Goodwill is subject to impairment testing at least annually or when a triggering event occurs that could indicate a potential impairment. The Company has one segment and one reporting unit and as such reviews goodwill for impairment at the consolidated level.

For the years ended December 31, 2019, 2018 and 2017 there were no impairments to goodwill.

Impairment of Long-Lived Assets

Our long-lived assets are primarily comprised of intangible assets and property and equipment. We evaluate our finite-lived intangible assets, other than goodwill and property and equipment, for impairment whenever events or changes in circumstances indicate the carrying value of an asset or group of assets may not be recoverable. If these circumstances exist, recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset group to future undiscounted net cash flows expected to be generated by the use and eventual disposition of the asset group. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets.

In addition, indefinite-lived intangible assets, comprised of IPR&D, are reviewed for impairment annually and whenever events or changes in circumstances indicate that it is more likely than not that the asset is impaired by comparing the fair value to the carrying value of the asset. To determine the fair value of the asset, the Company used the multi-period excess earnings method of the income approach. The more significant assumptions inherent in the application of this method include: the amount and timing of projected future cash flows (including revenue, cost of sales, research and development costs, and sales and marketing expenses), and the discount rate selected to measure the risks inherent in the future cash flows.

During the first quarter of 2019, the Company elected to discontinue development of the L-UDCA program, resulting in the write off of the IPR&D intangible asset, see Note 5 for further discussion.

There were no impairments related to intangible assets in the years ended December 31, 2018 and 2017.

Contingent Consideration

We record contingent consideration resulting from a business combination at its fair value on the acquisition date. On a quarterly basis, we revalue these obligations and record increases or decreases from their fair value as an adjustment to the consolidated statement of operations. Changes to contingent consideration obligations can result from changes to discount rates, accretion of the liability due to the passage of time, changes in revenue forecasts and changes in our estimates of the likelihood or timing of achieving commercial revenue milestones.

Income Taxes

The Company follows ASC 740, Income Taxes, which requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Under this method, deferred tax assets and liabilities are based on the differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance to the extent management concludes it is more likely than not that the asset will not be realized.

The standard addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under ASC 740, the Company may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the tax authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position should be measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement. ASC 740 also provides guidance on de-recognition, classification, interest and penalties on income taxes, accounting in interim periods and requires increased disclosures. The Company's policy is to record estimated interest and penalty related to the underpayment of income taxes or unrecognized tax benefits as a component of its income tax provision.

Reclassifications

Certain reclassifications have been made to the prior year financial statements in order to conform to the current year's presentation.

Patents

The Company expenses external costs, such as filing fees and associated attorney fees, incurred to obtain issued patents and patent applications pending. The Company also expenses costs associated with maintaining and defending patents subsequent to their issuance in the period incurred.

Derivative Financial Instruments, Warrants

The Company does not use derivative instruments to hedge exposures to cash flow, market or foreign currency risks. However, since 2013, the Company has issued five tranches of common stock purchase warrants to secure financing, remediate covenant violations and provide consideration for amendments with respect to a credit facility extinguished in 2015.

Historically, the Company accounted for these instruments, which did not have fixed settlement provisions, as derivative instruments in accordance with FASB ASC 815-40, *Derivative and Hedging - Contracts in Entity's Own Equity*. This was due to an anti-dilution provision for the warrants that provided for a reduction to the exercise price if the Company issued equity or equity linked instruments in the future at an effective price per share less than the exercise price then in effect for the warrant ("down round provision"). As such, the warrants were re-measured at each balance sheet date based on estimated fair value. Changes in estimated fair value were recorded as non-cash adjustments within other income (expenses), net, in the Company's Consolidated Statements of Operations and Comprehensive Income (Loss).

As of January 1, 2018, the Company early adopted ASU 2017-11, which revised the guidance for instruments with down round provisions. As such the Company treats outstanding warrants as free-standing equity linked instruments that will be recorded to equity in the Consolidated Balance Sheet.

The fair value of the derivative liability balance as of December 31, 2017 of \$15.7 million was reclassified by means of a cumulative-effect adjustment to equity as of January 1, 2018.

Restructuring

On March 7, 2017, the Company initiated a plan to consolidate its operations to its corporate headquarters in San Diego, California. The Company adjusted employee related separation charges by \$0.2 million and \$3.6 million in 2018 and 2017 as a result of this consolidation.

Recently Adopted Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, Leases. The new standard establishes a right-of-use ("ROU") model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. See Note 18 for further discussion.

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers. Under the new standard, revenue is recognized at the time a good or service is transferred to a customer for the amount of consideration for which the entity expects to be entitled for that specific good or service. Entities may use a full retrospective approach or report the cumulative effect as of the date of adoption. The Company adopted the new standard on January 1, 2018 using the full retrospective approach and there was no impact on timing or recognition of revenue. See Note 3 for further discussion.

In October 2016, the FASB issued ASU No. 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory. The new guidance changes the accounting for income tax effects of intra-entity transfers of assets other than inventory. Under the new guidance, the selling (transferring) entity is required to recognize a current tax expense or benefit upon transfer of the asset. Similarly, the purchasing (receiving) entity is required to recognize a deferred tax asset or deferred tax liability, as well as the related deferred tax benefit or expense, upon receipt of the asset. As of January 1, 2017, the Company reversed the balance of \$4.9 million in its prepaid tax asset account as a charge to retained earnings.

In July 2017, the FASB issued ASU No. 2017-11, Earnings Per Share (Topic 260); Distinguishing Liabilities from Equity (Topic 480); Derivatives and Hedging (Topic 815): (Part I) Accounting for Certain Financial Instruments with Down Round Features. These amendments simplify the accounting for certain financial instruments with down round features. The amendments require companies to disregard the down round feature when assessing whether the instrument is indexed to its own stock, for purposes of determining liability or equity classification. See Note 15 for further discussion.

In January 2017, the FASB issued ASU 2017-01, Business Combinations (Topic 805): Clarifying the Definition of a Business. The new guidance dictates that, when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or a group of similar identifiable assets, it should be treated as an acquisition or disposal of an asset. The guidance was adopted as of January 1, 2018.

Recently Issued Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies. Unless otherwise discussed, the Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on its consolidated financial position or results of operations upon adoption.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. Topic 326 amends guidance on reporting credit losses for assets held at amortized cost basis and available for sale debt securities. For assets held at amortized cost basis, Topic 326 eliminates the probable initial recognition threshold in current GAAP and, instead, requires an entity to reflect its current estimate of all expected credit losses. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial assets to present the net amount expected to be collected. For available for sale debt securities, credit losses should be measured in a manner similar to current GAAP, however Topic 326 will require that credit losses be presented as an allowance rather than as a write-down. This ASU update affects entities holding financial assets and net investment in leases that are not accounted for at fair value through net income. The amendments affect loans, debt securities, trade receivables, net investments in leases, off balance sheet credit exposures, reinsurance receivables, and any other financial assets not excluded from the scope that have the contractual right to receive cash. This

update is effective for the company for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. The Company evaluated the adoption of the new standard and it will not have a material effect on its consolidated financial statements and related disclosures.

NOTE 3. REVENUE RECOGNITION

Product Revenue, Net

Product sales for the year ended December 31, 2019 consisted of sales of Bile Acid products (Chenodal and Cholbam) and Tiopronin products (Thiola and Thiola EC). Prior to 2019 product sales consisted of Chenodal, Cholbam and Thiola.

The Company sells its products through direct-to-patient distributors worldwide, with more than 95% of the revenue generated in North America.

Revenues from product sales are recognized when the customer obtains control of the Company's product, which occurs upon delivery to the customer. The Company receives payments from its product sales based on terms that generally are within 30 days of delivery of product to the patient.

Deductions from Revenue

Revenues from product sales are recorded at the net sales price, which includes provisions resulting from discounts, rebates and co-pay assistance that is offered to its customers, health care providers, payors and other indirect customers relating to the Company's sales of its products. These provisions are based on the amounts earned or to be claimed on the related sales and are classified as a reduction of accounts receivable (if the amount is payable to the customer) or as a current liability (if the amount is payable to a party other than a customer). Where appropriate, these reserves take into consideration the Company's historical experience, current contractual and statutory requirements and specific known market events and trends. Overall, these reserves reflect the Company's best estimates of the amount of consideration to which it is entitled based on the terms of the contract. If actual results in the future vary from the Company's provisions, the Company will adjust the provision, which would affect net product revenue and earnings in the period such variances become known. Our historical experience is that such adjustments have been immaterial.

Government Rebates: We calculate the rebates that we will be obligated to provide to government programs and deduct these estimated amounts from our gross product sales at the time the revenues are recognized. Allowances for government rebates and discounts are established based on actual payer information, which is reasonably estimated at the time of delivery, and the government-mandated discounts applicable to government-funded programs. Rebate discounts are included in accrued expenses in the accompanying consolidated balance sheets.

Commercial Rebates: We calculate the rebates that we incur due to contracts with certain commercial payors and deduct these amounts from our gross product sales at the time the revenues are recognized. Allowances for commercial rebates are established based on actual payer information, which is reasonably estimated at the time of delivery. Rebate discounts are included in accrued expenses in the accompanying consolidated balance sheets.

Prompt Pay Discounts: We offer discounts to certain customers for prompt payments. We accrue for the calculated prompt pay discount based on the gross amount of each invoice for those customers at the time of sale.

Product Returns: Consistent with industry practice, we offer our customers a limited right to return product purchased directly from the Company, which is principally based upon the product's expiration date. Generally, shipments are only made upon a patient prescription thus returns are minimal.

Co-pay Assistance: We offer a co-pay assistance program, which is intended to provide financial assistance to qualified commercially insured patients with prescription drug co-payments required by payors. The calculation of the accrual for co-pay assistance is based on an identification of claims and the cost per claim associated with product that has been recognized as revenue.

The following table summarizes net product revenues for the twelve months ended December 31, 2019, 2018 and 2017 (*in thousands*):

	Twelve Months Ended December 31,		
	2019	2018	2017
Tiopronin products	\$ 95,638	\$ 89,176	\$ 82,311
Bile acid products	79,700	75,070	72,626
Total net product revenue	\$ 175,338	\$ 164,246	\$ 154,937

NOTE 4. FUTURE ACQUISITION RIGHT AND JOINT DEVELOPMENT AGREEMENT

Censa Pharmaceuticals Inc.

In December 2017, the Company entered into a Future Acquisition Right and Joint Development Agreement (the "Option Agreement") with Censa, which became effective in January 2018. The Company made an upfront payment of \$10.0 million, agreed to fund certain development activities of Censa's CNSA-001 program which were approximately \$19.9 million through proof of concept, and paid \$5.0 million related to a development milestone for the right, but not the obligation, to acquire Censa (the "Option") on the terms and subject to the conditions set forth in a separate Agreement and Plan of Merger. The Company capitalized the upfront and milestone payments and expensed the development funding as incurred. The Company treated the upfront payment and milestone payment, both of which were consideration for the Option, as a cost-method investment with a carrying value of \$15.0 million.

The Company determined that Censa was a variable interest entity ("VIE"), and concluded that the Company was not the primary beneficiary of the VIE. As such, the Company did not consolidate Censa's results into its consolidated financial statements.

In August 2019, following a strategic review of the CNSA-001 program in patients with PKU, the Company made the decision to decline to exercise its option to acquire Censa Pharmaceuticals and accordingly discontinue its joint development program for CNSA-001. The Company impaired the \$15 million long-term investment during the third quarter of 2019.

If the Company had exercised the Option, the Company would have acquired Censa for an additional \$65.0 million, which would have been reduced by up to \$2.8 million of development funding ("creditable"), paid as a combination of 20% in cash and 80% in shares of the Company's common stock, valued at a fixed price of \$21.40 per share; provided, however, that Censa could have elected on behalf of its equity holders to receive the upfront consideration in 100% cash if the average price per share of the Company's common stock for the ten trading days ending on the date the Company provided notice of interest to exercise the Option was less than \$19.26. In addition, if the Company had exercised the Option and acquired Censa, the Company would have been required to make further cash payments to Censa's equity holders of up to an aggregate of \$25.0 million if the CNSA-001 program had achieved specified development and commercial milestones.

NOTE 5. ACQUISITIONS AND DISPOSITIONS

Amendment to Trademark License and Supply Agreement

In November 2017, the Company amended their agreement with the manufacturer of Thiola to extend the term of the current exclusive U.S. and Canada licensing agreement by an additional five years, to 2029. The royalty rate and guaranteed minimum payment were also extended through the new agreement term.

In November 2018, the license agreement was amended to extend the territorial rights beyond the United States and Canada. As consideration for the expanded territory the Company paid an up-front fee of \$0.3 million and will pay guaranteed minimum royalties equaling the greater of \$0.1 million or 20% of our Thiola net sales generated from outside of the United States during each calendar year. Upon execution of the amendment, the Company capitalized an additional \$1.0 million in intangible assets and recorded a guaranteed minimum liability of \$0.7 million related to this amendment.

Acquisition and disposition of Liquid Ursodeoxycholic Acid (L-UDCA)

On June 20, 2016, the Company signed a definitive agreement to purchase the rights, titles, licenses and ownership of L-UDCA from Asklepiion Pharmaceuticals, LLC ("Asklepiion").

The acquisition was accounted for under the acquisition method of accounting in accordance with Accounting Standard Codification ("ASC") 805. The fair value of assets acquired and liabilities assumed was based upon an independent third-party valuation and the Company's estimates. Critical estimates in valuing certain intangible assets include but are not limited to future expected cash flows from acquired product rights for L-UDCA, licenses, trade names and developed technologies, present value and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates.

The purchase included \$25.5 million for an intangible asset with a definite life related to product rights in the U.S. The useful life related to the acquired product rights was expected to be approximately 17 years once the NDA was approved by the FDA. Until approval, the asset was considered IPR&D with an indefinite life and was not amortized.

The contingent consideration of \$25.0 million (present value) recorded during the period ended June 30, 2016, was related to an agreement to pay an additional cash amount in the form of milestones and sales royalties through 2035.

During the first quarter of 2019, the Company elected to discontinue development of the L-UDCA program and wrote off the \$25.5 million intangible asset and related contingent consideration liability of \$18 million.

NOTE 6. MARKETABLE SECURITIES

The Company's marketable securities as of December 31, 2019 and 2018 were comprised of available-for-sale marketable debt securities which are carried at fair value, with the unrealized gains and losses reported in accumulated other comprehensive income (loss). The amortized cost of debt securities in this category are adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization and accretion is included in interest income (loss). Realized gains and losses and declines in value judged to be other-than-temporary, if any, on available-for-sale securities are included in other income or expense. The cost of securities sold is based on the specific identification method. Interest and dividends on securities classified as available-for-sale are included in interest income. All available-for-sale securities are classified as current assets, even if the maturity when acquired by the Company is greater than one year due to the ability to liquidate within the next 12 months.

Marketable securities consist of the following (*in thousands*):

	As of December 31,	
	2019	2018
Marketable Securities:		
Commercial paper	\$ 17,152	\$ 59,255
Corporate debt securities	306,436	299,413
Securities of government sponsored entities	12,500	10,000
Total Marketable Securities:	\$ 336,088	\$ 368,668

The following is a summary of short-term marketable securities classified as available-for-sale as of December 31, 2019 (*in thousands*):

	Contractual Maturity (in years)	Amortized Cost	Unrealized Gains	Unrealized Losses	Aggregate Estimated Fair Value
Marketable Securities:					
Commercial paper	Less than 1	\$ 17,136	\$ 16	\$ —	\$ 17,152
Corporate debt securities	Less than 1	191,770	582	(10)	192,342
Total maturity less than 1 year		208,906	598	(10)	209,494
Corporate debt securities	1 to 2	113,799	351	(56)	114,094
Securities of government-sponsored entities	1 to 2	12,501	—	(1)	12,500
Total maturity 1 to 2 years		126,300	351	(57)	126,594
Total available-for-sale securities		\$ 335,206	\$ 949	\$ (67)	\$ 336,088

The following is a summary of short-term marketable securities classified as available-for-sale as of December 31, 2018 (*in thousands*):

	Contractual Maturity (in years)	Amortized Cost	Unrealized Gains	Unrealized Losses	Aggregate Estimated Fair Value
Marketable Securities:					
Commercial paper	Less than 1	\$ 59,313	\$ —	\$ (58)	\$ 59,255
Corporate debt securities	Less than 1	149,824	—	(604)	149,220
Total maturity less than 1 year		209,137	—	(662)	208,475
Corporate debt securities	1 to 2	150,813	18	(638)	150,193
Securities of government-sponsored entities	1 to 2	9,997	4	(1)	10,000
Total maturity 1 to 2 years		160,810	22	(639)	160,193
Total available-for-sale securities		\$ 369,947	\$ 22	\$ (1,301)	\$ 368,668

During 2019 and 2018, the Company had no realized gains or losses on marketable securities. The Company received proceeds from the sale or maturity of marketable securities of \$259.1 million, \$162.8 million and \$114.5 million for 2019, 2018 and 2017, respectively.

The primary objective of the Company’s investment portfolio is to enhance overall returns while preserving capital and liquidity. The Company’s investment policy limits interest-bearing security investments to certain types of instruments issued by institutions with primarily investment grade credit ratings and places restrictions on maturities and concentration by asset class and issuer.

The Company reviews the available-for-sale investments for other-than-temporary declines in fair value below cost basis each quarter and whenever events or changes in circumstances indicate that the cost basis of an asset may not be recoverable. This evaluation is based on a number of factors, including the length of time and the extent to which the fair value has been below the cost basis and adverse conditions related specifically to the security, including any changes to the credit rating of the security, and the intent to sell, or whether the Company will more likely than not be required to sell the security before recovery of its amortized cost basis. The assessment of whether a security is other-than-temporarily impaired could change in the future due to new developments or changes in assumptions related to any particular security. As of December 31, 2019 and 2018, the Company believed the cost basis for available-for-sale investments were recoverable in all material respects. For both December 31, 2019 and 2018, any investments in an unrealized loss position for longer than 12 months were immaterial.

NOTE 7. CONVERTIBLE SENIOR NOTES

Convertible Senior Notes Due 2025

On September 10, 2018, the Company completed its registered underwritten public offering of \$276 million aggregate principal amount of 2.50% Convertible Senior Notes due 2025 (“2025 Notes”) and entered into a base indenture and supplemental indenture agreement (“2025 Indenture”) with respect to the 2025 Notes. The 2025 Notes will mature on September 15, 2025 (“Maturity Date”), unless earlier repurchased, redeemed, or converted. The 2025 Notes are senior unsecured obligations of the Company and bear interest at an annual rate of 2.50%, payable semi-annually in arrears on March 15 and September 15 of each year, beginning on March 15, 2019.

The composition of the Company’s 2025 Notes are as follows (*in thousands*):

	December 31, 2019	December 31, 2018
2.50% convertible senior notes due 2025	\$ 276,000	\$ 276,000
Unamortized debt discount	(65,963)	(74,836)
Unamortized debt issuance costs	(5,176)	(6,073)
Total 2025 Notes, net of unamortized debt discount and debt issuance costs	<u>\$ 204,861</u>	<u>\$ 195,091</u>

The net proceeds from the issuance of the 2025 Notes were approximately \$267.2 million, after deducting commissions and the offering expenses payable by the Company. A portion of the net proceeds from the 2025 Notes were used by the Company to repurchase \$23.4 million aggregate principal amount of its 4.5% senior convertible notes due in 2019 in privately-negotiated transactions.

Holders may convert their 2025 Notes at their option only in the following circumstances: (1) during any calendar quarter commencing after the calendar quarter ending on December 31, 2018 (and only during such calendar quarter), if the last reported sale price per share of the Company’s common stock for each of at least 20 trading days, whether or not consecutive, during the period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter exceeds 130% of the conversion price on the applicable trading day; (2) during the five consecutive business days immediately after any 10 consecutive trading day period (“measurement period”) if the trading price per \$1,000 principal amount of 2025 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price per share of the Company’s common stock on such trading day and the conversion rate on such trading day; (3) upon the occurrence of certain corporate events or distributions on the Company’s common stock; (4) if the Company calls the 2025 Notes for redemption; and (5) at any time from, and including, May 15, 2025 until the close of business on the scheduled trading day immediately before the Maturity Date. The Company will settle conversions by paying or delivering, as applicable, cash, shares of the Company’s common stock, or a combination of cash and shares of the Company’s common stock, at the Company’s election, based on the applicable conversion rate.

The initial conversion rate for the 2025 Notes is 25.7739 shares of the Company’s common stock per \$1,000 principal amount of 2025 Notes, which represents an initial conversion price of approximately \$38.80 per share. If a “make-whole fundamental change” (as defined in the 2025 Indenture) occurs, then the company will, in certain circumstances, increase the conversion rate for a specified period of time.

The 2025 Notes will be redeemable, in whole or in part, at the Company’s option at any time, and from time to time, on or after September 15, 2022 and, in the case of any partial redemption, on or before the 40th scheduled trading day before the Maturity Date, at a cash redemption price equal to the principal amount of the 2025 Notes to be redeemed, plus accrued and unpaid interest, if any, to, but excluding, the redemption date, but only if the last reported sale price per share of the Company’s common stock exceeds 130% of the conversion price on each of at least 20 trading days during the 30 consecutive trading days ending on, and including, the trading day immediately before the date the Company sends the related redemption notice. If a fundamental change (as defined in the 2025 Indenture) occurs, then, subject to certain exceptions, holders may require the

Company to repurchase their 2025 Notes at a cash repurchase price equal to the principal amount of the 2025 Notes to be repurchased, plus accrued and unpaid interest, if any, to, but excluding, the fundamental change repurchase date.

As of December 31, 2019, the 2025 Notes had a market price of \$775 per \$1,000 or \$213.9 million principal amount. In the event of conversion, holders would forgo all future interest payments, any unpaid accrued interest and the possibility of further stock price appreciation. Upon the receipt of conversion requests, the settlement of the 2025 Notes will be paid pursuant to the terms of the 2025 Indenture. In the event that all of the 2025 Notes are converted, the Company would be required to repay the \$276.0 million in principal value and any conversion premium in any combination of cash and shares of its common stock at the Company’s option. In addition, calling the 2025 Notes for redemption will constitute a “make whole fundamental change.”

The 2025 Notes are the Company’s general unsecured obligations that rank senior in right of payment to all of its indebtedness that is expressly subordinated in right of payment to the 2025 Notes, and equal in right of payment to the Company’s unsecured indebtedness.

The 2025 Notes are currently classified on the Company’s consolidated balance sheet at December 31, 2019 as long-term debt.

Under ASC 470-20, Debt with Conversion and Other Options, an entity must separately account for the liability and equity components of convertible debt instruments (such as the 2025 Notes) that may be settled entirely or partially in cash upon conversion, in a manner that reflects the issuer’s economic interest cost. The liability component of the instrument is valued in a manner that reflects the market interest rate for a similar nonconvertible instrument at the date of issuance. The initial carrying value of the liability component was \$198.6 million. The equity component of \$77.4 million, representing the conversion option, was determined by deducting the fair value of the liability component from the par value of the 2025 Notes and is recorded in additional paid-in capital on the consolidated balance sheet at the issuance date. That equity component is treated as a discount on the liability component of the 2025 Notes, which is amortized over the seven-year term of the 2025 Notes using the effective interest rate method. The equity component is not re-measured as long as it continues to meet the conditions for equity classification. The Company allocated the total transaction costs of approximately \$8.8 million related to the issuance of the 2025 Notes to the liability and equity components of the 2025 Notes based on their relative values. Transaction costs attributable to the liability component are amortized to interest expense over the seven-year term of the 2025 Notes, and transaction costs attributable to the equity component are netted with the equity component in stockholders’ equity.

The effective interest rate on the liability components of the 2025 Notes for the period from the date of issuance through December 31, 2019 was 7.7%. The following table sets forth total interest expense recognized related to the 2025 Notes (*in thousands*):

	Twelve Months Ended December 31,	
	2019	2018
Contractual interest expense	\$ 6,900	\$ 2,108
Amortization of debt discount	8,874	2,582
Amortization of debt issuance costs	896	273
Total interest expense for the 2025 Notes	\$ 16,670	\$ 4,963

The 2025 Notes do not contain any financial or operating covenants or any restrictions on the payment of dividends, the issuance of other indebtedness or the issuance or repurchase of securities by the Company. The 2025 Indenture contains customary events of default with respect to the 2025 Notes, including that upon certain events of default, 100% of the principal and accrued and unpaid interest on the 2025 Notes will automatically become due and payable.

Convertible Senior Notes Due 2019

On May 29, 2014, the Company entered into a Note Purchase Agreement relating to a private placement by the Company of \$46 million aggregate principal senior convertible notes due 2019 (the “2019 Notes”) which were convertible into shares of the Company’s common stock at an initial conversion price of \$17.41 per share. The conversion price was subject to customary anti-dilution protection. The 2019 Notes bore interest at a rate of 4.5% per annum, payable semiannually in arrears on May 15 and November 15 of each year, beginning on November 15, 2014. The 2019 Notes had a maturity date of May 30, 2019. The aggregate carrying value of the 2019 Notes on their issuance was \$43 million, which was net of the \$3 million debt discount.

In September 2018, the Company used part of the net proceeds from the issuance of the 2025 Notes discussed above to repurchase \$23.4 million aggregate principal value of the 2019 Notes in privately-negotiated transactions for approximately \$40.2 million in cash. The partial repurchase of the 2019 Notes resulted in a \$17.0 million loss on early extinguishment of debt.

As of December 31, 2018, the total 2019 Notes, net of unamortized debt discount and debt issuance costs was \$22.5 million, consisting of \$22.6 million of aggregate principle and \$0.1 million of unamortized debt discount and debt issuance costs.

In May 2019, the remaining \$22.6 million outstanding principal amount of 2019 Notes was converted by the holders thereof into approximately 1.3 million shares of common stock.

Interest Expense

Total interest expense recognized for the years ended December 31, 2019, 2018 and 2017 was \$18.8 million, \$9.8 million and \$4.4 million, respectively.

NOTE 8. FAIR VALUE MEASUREMENTS

The Company accounts for financial instruments in accordance with ASC 820, “Fair Value Measurements and Disclosures” (“ASC 820”). ASC 820 establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy 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). The three levels of the fair value hierarchy under ASC 820 are described below:

Level 1 – Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;

Level 2 – Quoted prices in markets that are not active or financial instruments for which all significant inputs are observable, either directly or indirectly; and

Level 3 – Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable.

The Company acquired two businesses, related to the Cholbam and Chenodal products, whose purchase price included potential future payments that are contingent on the achievement of certain milestones and percentages of future net sales derived from the products acquired. The Company recorded contingent consideration liabilities at their fair value on the acquisition date and revalues them at the end of each reporting period. In estimating the fair value of the Company’s contingent consideration, the Company uses a Monte Carlo Simulation. The determination of the contingent consideration liabilities requires significant judgments including the appropriateness of the valuation model and reasonableness of estimates and assumptions included in the forecasts of future net sales and the discount rates applied to such sales. Changes in these estimates and assumptions could have a significant impact on the fair value of the contingent consideration liabilities. Based on the fair value hierarchy, the Company classified contingent consideration within Level 3 because valuation inputs are based on projected revenues discounted to a present value

Financial instruments with carrying values approximating fair value include cash and cash equivalents, accounts receivable, notes receivable, deposits on lease agreements, and accounts payable, due to their short-term nature.

The following table presents the Company’s asset and liabilities that are measured and recognized at fair value on a recurring basis, classified under the appropriate level of the fair value hierarchy as of December 31, 2019 (*in thousands*):

	As of December, 2019	Fair Value Hierarchy at December 31, 2019		
	Total carrying and estimated fair value	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Asset:				
Cash and Cash Equivalents	\$ 62,436	\$ 62,436	\$ —	\$ —
Marketable securities, available-for-sale	336,088	—	336,088	—
Total	\$ 398,524	\$ 62,436	\$ 336,088	\$ —
Liabilities:				
Business combination-related contingent consideration	\$ 70,900	\$ —	\$ —	\$ 70,900
Total	\$ 70,900	\$ —	\$ —	\$ 70,900

The following table presents the Company's assets and liabilities that are measured and recognized at fair value on a recurring basis, classified under the appropriate level of the fair value hierarchy as of December 31, 2018 (*in thousands*):

	As of December, 2018	Fair Value Hierarchy at December 31, 2018		
	Total carrying and estimated fair value	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Asset:				
Cash and Cash Equivalents	\$ 102,873	\$ 62,978	\$ 39,895	\$ —
Marketable securities, available-for-sale	368,668	—	368,668	—
Total	\$ 471,541	\$ 62,978	\$ 408,563	\$ —
Liabilities:				
Business combination-related contingent consideration	93,000	—	—	93,000
Total	\$ 93,000	\$ —	\$ —	\$ 93,000

The following table sets forth a summary of changes in the estimated fair value of the Company's Level 3 business combination-related contingent consideration for the years ended December 31, 2019 and 2018 (*in thousands*):

	Contingent Consideration (Level 3)	
	2019	2018
Balance at January 1,	\$ 93,000	\$ 90,000
L-UDCA write-off	(18,000)	—
Increase from revaluation of contingent consideration	15,051	11,590
Contractual Payments	(6,696)	(6,373)
Contractual Payments accrued at December 31	(12,253)	(2,171)
Foreign currency impact	(202)	(46)
Balance at December 31,	\$ 70,900	\$ 93,000

NOTE 9. INTANGIBLE ASSETS

Ligand License Agreement

In 2013, the Company entered into a \$2.5 million agreement with Ligand for a worldwide sublicense to develop, manufacture and commercialize a drug technology compound including sparsentan (the "Ligand License Agreement"). The cost of the Ligand License Agreement, which is presented net of amortization in the accompanying Consolidated Balance Sheet in intangible assets, net, is being amortized to research and development on a straight-line basis through September 30, 2023. As consideration for the license, we are required to make substantial payments upon the achievement of certain milestones, totaling up to \$114.1 million. Through 2019, we have made milestone payments to Ligand of \$7.2 million under the terms of the Ligand License Agreement. Should we commercialize sparsentan or any products containing related compounds, we will be obligated to pay to Ligand an escalating annual royalty between 15% and 17% of net sales of all such products.

In September 2015, the Ligand License Agreement was amended to facilitate sub-licensing in Asia-Pacific. As consideration for the amendment the Company paid \$1.0 million.

In March 2018, the Ligand License Agreement was amended to update certain development milestones set forth in the Sublicense Agreement to comport with the current development timeline for sparsentan. As consideration, the Company paid Ligand \$4.6 million, which replaced the amount that would have been due upon initiation of the first Phase 3 trial for sparsentan.

Manchester Pharmaceuticals LLC

In 2014, the Company acquired intangible assets with finite lives related to the Chenodal product rights, trade names, and customer relationships with the values of \$67.8 million, \$0.2 million, and \$0.4 million, respectively. The useful lives related to the acquired product rights, trade names, and customer relationships are expected to be approximately 16, 1 and, 10 years, respectively. Amortization of product rights, trade names and customer relationships are being recorded in selling, general and administrative expense over their respective lives.

Thiola License Agreement

The Company entered into a license agreement with Mission Pharmacal in 2014, in which the Company obtained an exclusive, royalty-bearing license to market, sell and commercialize Thiola (tiopronin) in the United States and Canada, and a non-exclusive license to use know-how relating to Thiola to the extent necessary to market Thiola. The initial term of the license is 10 years and will automatically renew thereafter for periods of one year.

The Company paid Mission an up-front license fee of \$3 million and will pay guaranteed minimum royalties during each calendar year the greater of \$2 million or twenty percent (20%) of the Company’s net sales of Thiola through May 28, 2024.

In November 2017, the Company amended its agreement with Mission to extend the term of the current exclusive U.S. and Canada licensing agreement by an additional five years, to 2029. The royalty rate and guaranteed minimum payment were also extended through the new agreement term. Upon execution of the amendment, the Company capitalized an additional \$5.9 million in intangible assets and recorded a guaranteed minimum liability for the same amount.

In November 2018, the Company amended its agreement with Mission to remove all territorial restrictions on our license. As consideration for the expanded territory the Company paid an up-front fee of \$0.3 million and will pay guaranteed minimum royalties equaling the greater of \$0.1 million or 20% of our Thiola net sales generated outside of the United States during each calendar year. Upon execution of the amendment, the Company capitalized an additional \$1.0 million in intangible assets and recorded a guaranteed minimum liability of \$0.7 million related to this amendment.

The present value of guaranteed minimum royalties payable using a discount rate of ranging from approximately 7% to 11% based on the Company’s then borrowing rate is \$14.3 million and \$15.2 million as of December 31, 2019 and 2018, respectively. As of December 31, 2019, the guaranteed minimum royalty current and long-term liability was approximately \$2.1 million and \$12.2 million, respectively, and is recorded as Other Liability in the Consolidated Balance Sheet. As of December 31, 2018, the guaranteed minimum royalty current and long-term liability was approximately \$2.1 million and \$13.1 million, respectively, and is recorded as Other Liability in the Consolidated Balance Sheet. The Company has capitalized \$85.8 million related to the Thiola intangible asset which consists of the up-front license fee, professional fees, present value of the guaranteed minimum royalties and any additional payments through 2019 in excess of minimum royalties. In 2019 the Company added \$15.8 million to the intangible asset related to the royalties in excess of the minimum.

There are 9.4 years remaining in the term of the license agreement.

Cholbam (Kolbam) Asset Purchase

On March 31, 2015, the Company completed its acquisition from Asklepiion of all worldwide rights, titles and ownership of Cholbam, including all related contracts, data assets, intellectual property, regulatory assets and the PRV. The Company capitalized \$75.9 million and \$7.3 million for the U.S. and international economic interest, respectively.

L-UDCA

On June 20, 2016, the Company signed a definitive agreement to purchase the rights, titles, and ownership of L-UDCA from Asklepiion. The purchase included \$25.5 million for an intangible asset with a definite life related to product rights for the U.S. The useful life related to the acquired product rights is expected to be approximately 17 years once the NDA is approved by the FDA. During the first quarter of 2019, the Company elected to discontinue development of the L-UDCA program, resulting in the write off of the intangible asset of \$25.5 million. See Note 5 for further discussion.

Amortizable intangible assets as of December 31, 2019 (in thousands):

	Useful Life	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Chenodal Product Rights	16	\$ 67,849	\$ (24,451)	\$ 43,398
Thiola License	15	85,824	(20,417)	65,407
Economic Interest - U.S. revenue Cholbam	10	75,900	(36,071)	39,829
Economic Interest - International revenue Cholbam	10	7,544	(3,585)	3,959
Ligand License	11	7,900	(3,555)	4,345
Manchester Customer Relationships	10	403	(232)	171
Manchester Trade Name	1	175	(175)	—
Internal use software	5	207	(116)	91
Total		\$ 245,802	\$ (88,602)	\$ 157,200

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Amortizable intangible assets as of December 31, 2018 (in thousands):

	Useful Life	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Chenodal Product Rights	16	\$ 67,849	\$ (20,213)	\$ 47,636
Thiola License	15	70,009	(14,523)	55,486
Economic Interest - U.S. revenue Cholbam	10	75,900	(28,487)	47,413
Economic Interest - International revenue Cholbam	10	7,700	(2,890)	4,810
Economic Interest - L-UDCA (acquired IPR&D)	Indefinite	25,500	—	25,500
Ligand License	11	7,900	(2,397)	5,503
Manchester Customer Relationships	10	403	(192)	211
Manchester Trade Name	1	175	(175)	—
Internal use software	5	207	(75)	132
Total		\$ 255,643	\$ (68,952)	\$ 186,691

The following table summarizes amortization expense for the twelve months ended December 31, 2019, 2018 and 2017 (in thousands):

	2019	2018	2017
Research and development	\$ 1,158	\$ 976	\$ 327
Selling, general and administrative	18,549	17,052	17,004
Total amortization expense	\$ 19,707	\$ 18,028	\$ 17,331

As of December 31, 2019, amortization expense for the next five years is expected to be as follows (in thousands):

2020	\$ 20,773
2021	20,773
2022	20,739
2023	20,449
2024	19,543
Thereafter	54,923
Total	\$ 157,200

NOTE 10. ACCRUED EXPENSES

Accrued expenses consist of the following at December 31, 2019 and 2018 (in thousands):

	2019	2018
Compensation related costs	\$ 14,045	\$ 10,446
Research and development	16,067	16,515
Government rebate reserves	6,584	8,464
Selling, general and administrative	3,552	2,990
Royalty/contingent consideration	7,272	6,805
Miscellaneous accrued expenses	4,225	4,475
Total accrued expenses	\$ 51,745	\$ 49,695

NOTE 11. COMMITMENTS AND CONTINGENCIES

Legal Proceedings

In August 2017, Martin Shkreli, the Company's former Chief Executive Officer, was convicted on securities fraud charges. Mr. Shkreli's conviction was subsequently affirmed upon appeal. In connection with the trial and appeal proceedings, the Company advanced a portion of Mr. Shkreli's legal fees, of which \$3.8 million was reimbursed by its directors' and officers' insurance carriers. Pending the outcome of Mr. Shkreli's appeal, the insurance carriers reserved their rights to assert that certain of the advanced funds pertain to claims excluded from coverage under the relevant

insurance policy and are therefore recoverable by the carriers, and therefore the final amount of the reimbursement from the insurance carriers is not currently estimable.

In October 2018, Spring Pharmaceuticals, LLC (Spring) filed a lawsuit against the Company, Martin Shkreli, Mission Pharmacal Company and Alamo Pharma Services, Inc. in the United States District Court for the Eastern District of Pennsylvania alleging that the Company violated various federal and state antitrust and unfair competition laws by allegedly refusing to sell samples of the Thiola® brand drug so that Spring can conduct the bioequivalence testing needed to submit an ANDA to the FDA for approval to market a generic version of the product. The lawsuit sought injunctive relief and damages. In December 2019, the Court granted the Company's motion to dismiss the lawsuit, but granted Spring permission to amend its complaint. On February 10, 2020, Spring filed an amended complaint. Spring's amended complaint seeks injunctive relief and damages. The Company intends to vigorously defend against Spring's claims.

No amounts have been accrued related to this matter and the outcome cannot be determined.

The Company is not aware of any other proceedings or claims that could have, individually or in the aggregate, a material adverse effect on its results of operations or financial condition.

NOTE 12. STOCKHOLDERS' EQUITY / DEFICIT

Common Stock

The Company is currently authorized to issue up to 100,000,000 shares of \$0.0001 par value common stock. All issued shares of common stock are entitled to vote on a 1 share/1 vote basis.

Preferred Stock

The Company is currently authorized to issue up to 20,000,000 shares of \$0.0001 par value preferred stock, of which 1,000 shares are designated Class "A" Preferred shares. Class A Preferred Shares are not entitled to interest, have certain liquidation preferences, special voting rights and other provisions. No preferred stock has been issued to date.

2015 Equity Incentive Plan

On June 8, 2015, the Company's stockholders approved the 2015 Equity Incentive Plan (the "2015 Plan"). The 2015 Plan is intended as the successor to and continuation of the Company's 2014 Incentive Compensation Plan. Stockholders approved 1.4 million new shares to be issued under the 2015 Plan, in addition to 0.6 million unallocated shares remaining available for issuance under the 2014 Incentive Compensation Plan that were added to the 2015 Plan.

On May 18, 2016, the Company's stockholders approved an amendment to the 2015 Plan (the "Amended 2015 Plan"). The amendment provides for an additional 1.6 million new shares to be issued under the Amended 2015 Plan, in addition to 0.7 million unallocated shares remaining available for issuance. The amendment also includes a provision that on or after March 21, 2016, the number of shares available for issuance under the Amended 2015 Plan will be reduced by one share for each share subject to a stock option or stock appreciation right and by 2.0 shares for each share subject to any other type of stock award issued pursuant to the Amended 2015 Plan, and any such shares will return to the share reserve at the same rates upon cancellation or other forfeiture of such awards or shares.

On May 17, 2017, the Company's stockholders approved an amendment to the Amended 2015 Plan. The amendment provides for an additional 1.8 million new shares to be issued under the Amended 2015 Plan.

2018 Equity Incentive Plan

On May 9, 2018, the Company's stockholders approved the 2018 Equity Incentive Plan (the "2018 Plan"). The 2018 Plan is intended as the successor to and continuation of the Amended 2015 Plan. Stockholders approved 1.8 million new shares to be issued under the 2018 Plan, in addition to 1.6 million unallocated shares remaining available for issuance under the Amended 2015 Plan that were added to the 2018 Plan. Options issued under the 2018 Plan will generally expire ten years from the date of grant and vest over a four-year period. On May 9, 2019, the Company's stockholders approved an amendment to the 2018 Plan that increased the number of authorized shares issuable under the 2018 Plan by 2.0 million shares.

2017 Employee Stock Purchase Plan

The 2017 Employee Stock Purchase Plan ("2017 ESPP") originated with 380,000 shares of common stock available for issuance. Beginning on January 1, 2018, and ending on (and including) January 1, 2026, the number of shares of common stock available for issuance under the 2017

ESPP shall increase by an amount equal to the lesser of (i) one percent (1%) of the total number of shares of common stock outstanding on December 31st of the preceding calendar year and (ii) 300,000 shares of common stock.

Substantially all employees are eligible to participate and, through payroll deductions, can purchase shares on established dates semi-annually. The purchase price per share sold pursuant to the 2017 ESPP will be the lower of (i) 85% of the fair market value of common stock on the first day of the offering period or (ii) 85% of the fair market value on the purchase date. Each offering period will span up to six months. Purchases may be up to 15% of qualified compensation, with an annual limit of \$25,000. The 2017 ESPP is intended to qualify as an “employee stock purchase plan” under Section 423 of the Internal Revenue Code.

As of December 31, 2019, there were approximately 980,000 shares authorized and 723,642 shares reserved for future issuance under the 2017 ESPP.

Stock Options

The fair values of stock option grants during the years ended December 31, 2019, 2018 and 2017 were calculated on the date of grant using the Black-Scholes option pricing model. Compensation expense is recognized over the period of service, generally the vesting period. During the year ended December 31, 2019, 1,360,925 stock options were granted by the Company. The following weighted average assumptions were used in the Black-Scholes options pricing model to estimate the fair value of stock options for the specified reporting periods:

	Twelve Months Ended December 31,		
	2019	2018	2017
Risk free rate	2.30%	2.80%	2.10%
Expected volatility	68%	68%	70%
Expected life (in years)	6.2	6.2	6.1
Expected dividend yield	—	—	—

The risk-free interest rate was based on rates established by the Federal Reserve. The Company’s expected volatility was based on analysis of the Company’s volatility, as well as the volatilities of guideline companies. The expected life of the Company’s options was determined using the simplified method as a result of limited historical data regarding the Company’s exercise activity. The dividend yield is based upon the fact that the Company has not historically paid dividends, and does not expect to pay dividends in the foreseeable future.

The following table summarizes our stock option activity and related information for the year ended December 31, 2019:

	Shares Underlying Options	Weighted Average		Aggregate Intrinsic Value (in thousands)
		Exercise Price	Remaining Contractual Term (in years)	
Outstanding at December 31, 2018	7,277,337	\$ 18.55	6.94	\$ 40,650
Granted	1,360,925	19.11	—	—
Forfeited and expired	(1,131,002)	13.73	—	—
Exercised	(135,527)	11.94	—	—
Outstanding at December 31, 2019	7,371,733	\$ 19.52	6.63	\$ 4,906

The following table summarizes our stock options exercisable at December 31, 2019, 2018 and 2017:

	Shares Underlying Options	Weighted Average		Aggregate Intrinsic Value (in thousands)
		Exercise Price	Remaining Contractual Term (in years)	
2018	4,834,781	\$ 16.81	5.98	\$ 35,387
2019	4,936,995	\$ 18.93	5.62	\$ 4,490

The weighted average grant date fair value of options granted was \$12.11, \$16.21, and \$11.77 during the years ended December 31, 2019, 2018 and 2017, respectively. The aggregate intrinsic value for outstanding options is calculated as the difference between the exercise price of the underlying awards and the closing price of the Company’s common stock of \$14.20, \$22.63 and \$21.07 as of December 31, 2019, 2018 and 2017, respectively. Unrecognized compensation cost associated with unvested stock options amounts to \$26.9 million as of December 31, 2019, which will be expensed over a weighted average remaining vesting period of 2.6 years.

Restricted Stock Units

As of December 31, 2019, there was approximately \$11.9 million of unrecognized compensation cost related to restricted stock units ("RSUs") granted. This amount is expected to be recognized over a weighted average period of 2.6 years.

The following table summarizes our restricted stock unit activity for the year ended December 31, 2019:

	Number of RSUs	Weighted Average Grant Date Fair Value
Unvested December 31, 2018	400,426	\$ 24.95
Granted	559,815	17.15
Vested	(137,203)	24.43
Forfeited/cancelled	(59,310)	20.97
Unvested December 31, 2019	763,728	\$ 19.64

Performance-based Stock Units

As of December 31, 2019, there was approximately \$0.5 million of unrecognized compensation cost related to performance-based stock units ("PSUs") granted. This amount is expected to be recognized over a weighted average period of 1.0 years.

The following table summarizes our performance-based stock unit activity for the year ended December 31, 2019:

	Number of PSUs	Weighted Average Grant Date Fair Value
Unvested December 31, 2018	226,750	\$ 21.54
Granted	80,000	21.32
Vested	—	—
Forfeited/cancelled	(73,250)	23.33
Unvested December 31, 2019	233,500	\$ 20.90

Share Based Compensation

Total non-cash stock-based compensation expense consisted of the following for the years ended December 31, 2019, 2018 and 2017 (*in thousands*):

	Twelve Months Ended December 31,		
	2019	2018	2017
Selling, general and administrative expenses	\$ 14,195	\$ 13,550	\$ 17,924
Research and development expenses	6,910	6,224	8,950
Total	\$ 21,105	\$ 19,774	\$ 26,874

Exercise of Warrants

During the twelve months ended December 31, 2018 and 2017, the Company issued the following shares of common stock upon the exercise of warrants for cash received by the Company: (*in thousands except share amounts*)

	Shares Issued	Cash Received	Derivative Liability Reclassified as Equity	Change in Fair Value Expense
2017	607,481	\$ 3,645	\$ 11,221	\$ 3,033
2018	1,036,054	\$ 5,305	n/a	n/a
2019	n/a	n/a	n/a	n/a

As of December 31, 2019, there are no warrants for common shares outstanding. See Note 15 for further discussion.

NOTE 13. LOSS PER SHARE

Basic earnings (loss) per share (“EPS”) represents net income (loss) attributable to common shareholders divided by the weighted average number of common shares outstanding during the measurement period. Diluted EPS represents net income attributable to common shareholders divided by the weighted average number of common shares outstanding during the measurement period while also giving effect to all potentially dilutive common shares that were outstanding during the period using the treasury stock method.

Basic and diluted EPS is calculated as follows (*net loss amounts are stated in thousands*):

	For the year ended December 31,								
	2019			2018			2017		
	Shares	Net loss	EPS	Shares	Net loss	EPS	Shares	Net Loss	EPS
Basic and dilutive loss per share	42,339,961	\$ (146,427)	\$ (3.46)	40,433,171	\$ (102,678)	\$ (2.54)	38,769,816	\$ (59,731)	\$ (1.54)

For the years ended December 31, 2019, 2018 and 2017, the following shares were excluded because they were anti-dilutive:

	For the year ended December 31,		
	2019	2018	2017
Convertible Debt	7,632,414	8,410,932	2,642,160
Restricted Stock	599,298	395,034	157,319
Options	7,644,251	7,210,576	7,080,998
Warrants	—	282,807	1,159,424
Total Anti-Dilutive Shares	15,875,963	16,299,349	11,039,901

NOTE 14. INCOME TAXES

For financial reporting purposes, net loss before income taxes includes the following components (*in thousands*):

	Year Ended December 31,		
	2019	2018	2017
United States	\$ (129,452)	\$ (87,573)	\$ (55,611)
Foreign	(16,996)	(14,294)	(2,752)
Total	\$ (146,448)	\$ (101,867)	\$ (58,363)

The components of the provision (benefit) for income taxes, in the Consolidated Statement of Operations are as follows (*in thousands*):

	2019			2018			2017		
Current									
Federal	\$	(319)	\$	698	\$	6,991			
State		298		113		802			
		(21)		811		7,793			
Deferred									
Federal		—		—		(7,965)			
State		—		—		1,540			
		—		—		(6,425)			
Total tax provision (benefit)	\$	(21)	\$	811	\$	1,368			

The following is a reconciliation of the statutory federal income tax rate to the Company’s effective tax rate expressed as a percentage of loss before income taxes:

	2019	2018	2017
Statutory rate - federal	(21.00)%	(21.00)%	(35.00)%
State taxes, net of federal benefit	(4.35)%	(4.44)%	(3.30)%
Change in FV of derivative liability (warrants)	— %	— %	2.82 %
Change in federal tax rate	— %	— %	23.29 %
Convertible Debt	— %	21.77 %	— %
Loss on extinguishment of debt	— %	4.09 %	— %
Other permanent differences	0.24 %	0.10 %	1.04 %
Tax credits	(15.17)%	(11.86)%	(5.79)%
Return to provision adjustments and other true-ups	0.44 %	1.42 %	(3.48)%
Other	2.32 %	1.06 %	1.25 %
Change in valuation allowance	37.50 %	9.79 %	21.62 %
Income tax provision (benefit)	(0.02)%	0.93 %	2.45 %

The significant components of the Company’s deferred tax assets and liabilities as of December 31, 2019 and 2018 are as follows (*in thousands*):

	2019	2018
Deferred Tax Assets:		
Net operating loss	\$ 27,747	\$ 9,700
Research and development and other tax credits	33,315	14,715
Contingent consideration	18,029	23,459
Other accrued expenses	4,319	3,710
Stock based compensation	19,458	16,761
Charitable Contributions	1,256	—
Other	—	555
	<u>104,124</u>	<u>68,900</u>
Deferred Tax Liabilities:		
Intangible assets	(2,749)	(14,288)
Convertible Debt	(16,182)	(18,419)
Tax basis depreciation less than book depreciation	(448)	—
	<u>(19,379)</u>	<u>(32,707)</u>
Net deferred tax assets before valuation allowance	84,745	36,194
Valuation allowance	(84,745)	(36,194)
Total deferred tax assets	<u>\$ —</u>	<u>\$ —</u>

The Company has established a full valuation allowance against its U.S. federal and state deferred tax assets due to the uncertainty surrounding the realization of such assets in future periods. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which temporary differences become deductible. Management considers the scheduled reversal of deferred liabilities and tax planning strategies in making this assessment and evaluates the recoverability of the deferred tax assets as of each reporting date. At such time as it is determined that it is more likely than not that deferred assets are realizable, the valuation allowance will be reduced accordingly and recorded as a tax benefit.

The Company has recorded a valuation allowance of \$84.7 million as of December 31, 2019 to reflect the estimated amount of deferred tax assets that may not be realized. The Company increased its valuation allowance by \$48.6 million for the year ended December 31, 2019.

At December 31, 2019, the Company had available unused U.S. federal and state net operating loss (“NOL”) carryforwards of \$113.6 million and \$65.8 million, respectively, all of which are fully offset by a valuation allowance. The state NOL carryforwards will begin to expire in 2022. In addition, at December 31, 2019, the Company had federal orphan drug tax credit carryforwards of \$28.5 million that begin to expire in 2037 unless utilized, federal research and development tax credit carryforwards of \$3.3 million that begin to expire in 2038 unless utilized and California Competes tax credit carryforwards of \$2.0 million that begin to expire in 2022. The Company has international subsidiaries whose operations are not material for the year ended December 31, 2019.

The Company accounts for uncertain tax benefits in accordance with the provisions of ASC 740-10 of the *Accounting for Uncertainty in Income Taxes*. As of December 31, 2019 the Company had \$0.2 million in unrecognized tax benefits.

The Company does not anticipate that the amount of unrecognized tax benefits as of December 31, 2019 will change materially within the following 12 months.

A reconciliation of the Company's unrecognized tax benefits for the years 2019 and 2018 is provided in the following table (*in thousands*):

	2019	2018
Balance as of January 1:	\$ —	\$ —
Increase in current period positions	235	—
Decrease in prior period positions	—	—
Increase in prior period positions	—	—
Balance as of December 31:	\$ 235	\$ —

The Company files income tax returns in the U.S. federal jurisdiction, various state and local, and foreign jurisdictions. The Company's income tax returns are open to examination by federal, state and foreign tax authorities, generally for the years ended December 31, 2016 and later.

The Company's policy is to record estimated interest and penalties related to the underpayment of income taxes or unrecognized tax benefits as a component of its income tax provision. During the years ended 2019, 2018 and 2017, the Company did not recognize any interest or penalties in its Consolidated Statements of Operations and Comprehensive Loss and there were no accruals recorded for interest or penalties at December 31, 2019 and 2018.

NOTE 15. DERIVATIVE FINANCIAL INSTRUMENTS

Since 2013, the Company has issued 5 tranches of common stock purchase warrants to secure financing, remediate covenant violations related to a credit facility and provide consideration for credit facility amendments.

Historically, the Company accounted for these instruments, which do not have fixed settlement provisions, as derivative instruments in accordance with FASB ASC 815-40, *Derivative and Hedging - Contracts in Entity's Own Equity*. This was due to an anti-dilution provision for the warrants that provides for a reduction to the exercise price if the Company issues equity or equity linked instruments in the future at an effective price per share less than the exercise price then in effect for the warrant ("down round provision"). As such, the warrants were re-measured at each balance sheet date based on estimated fair value. Changes in estimated fair value were recorded as non-cash adjustments within other income (expenses), net, in the Company's Consolidated Statements of Operations and Comprehensive Income (Loss).

As of January 1, 2018, the Company early adopted ASU 2017-11, which revised the guidance for instruments with down round provisions. As such the Company treats outstanding warrants as free-standing equity linked instruments that will be recorded to equity in the Consolidated Balance Sheet.

The fair value of the derivative liability balance as of December 31, 2017 of \$15.7 million was reclassified by means of a cumulative-effect adjustment to equity as of January 1, 2018.

The following table presents the Company's derivative warrant issuances and balances outstanding during the year ended December 31, 2018:

	Warrants	Weighted Average	
		Exercise Price	Grant Date Fair Value
Outstanding at December 31, 2017	1,159,424	\$ 7.86	\$ 4.15
Issued	—	—	—
Canceled	554	5.99	3.33
Exercised	1,158,870	7.88	4.15
Outstanding at December 31, 2018	—	—	—

As of December 31, 2019 and 2018, there were no outstanding warrants.

NOTE 16. RETIREMENT PLAN

The Company has a 401(k) defined contribution savings plan for the benefit of all eligible employees. Employer matching contributions were \$1.0 million, \$0.9 million, and \$0.6 million for the years ended December 31, 2019, 2018 and 2017, respectively.

NOTE 17. PROPERTY AND EQUIPMENT

Property, plant and equipment, net consisted of the following (*in thousands*):

	December 31,	
	2019	2018
Computers and equipment	\$ 577	\$ 506
Furniture and fixtures	1,251	1,150
Leasehold improvements	2,654	2,628
Construction-in-progress	249	—
	<u>4,731</u>	<u>4,284</u>
Less: Accumulated depreciation	(1,840)	(1,138)
Total property and equipment, net	<u>\$ 2,891</u>	<u>\$ 3,146</u>

The construction-in-process balance consists of costs related to the Company's leasehold improvements at its facilities in San Diego, California.

Depreciation expense for the years ended December 31, 2019, 2018 and 2017 was \$0.7 million, \$0.6 million and \$0.5 million, respectively.

The Company has not capitalized interest related to the property and equipment purchases.

NOTE 18. LEASES

As of January 1, 2019, the Company adopted ASU No. 2016-02, Leases, using a modified retrospective basis method under which prior comparative periods are not restated.

The new standard establishes an ROU model that requires a lessee to record an ROU asset and a lease liability on its balance sheet for all leases with terms longer than 12 months. Leases will be classified as either financing or operating, with classification affecting the pattern of expense recognition in the income statement. In addition, the FASB issued ASU No. 2018-10, Codification Improvements to Topic 842, ASU No. 2018-11, Targeted Improvements, and ASU No. 2018-20, Narrow-Scope Improvements for Lessors, to clarify and amend the guidance in ASU No. 2016-02. The Company has elected the following as practical expedients from within these ASUs: 1) an entity need not reassess whether any expired or existing contracts are or contain leases; 2) an entity need not reassess the lease classification for any expired or existing leases; and 3) an entity need not reassess initial direct costs for any existing leases.

As of January 1, 2019, the Company had a single operating lease for its office located in San Diego, California. The lease was originally signed in July 2016, and was amended in July 2017 to add office space in adjacent buildings. The term of the original lease is 7 years, 7 months, and is coterminous for all space occurring in July 2024. Under the terms of the lease, the Company will pay base annual rent (subject to an annual fixed percentage increase), plus property taxes and other normal and necessary expenses, such as utilities, repairs, security and maintenance. Certain incentives were included in the lease, including rent abatement and approximately \$2.3 million in tenant improvement allowances. The Company has the right to extend the lease for five years.

As of January 1, 2019, the Company's remaining minimum lease payments and unamortized lease incentives were approximately \$14.0 million and \$1.8 million, respectively. Using a discount rate equal to our borrowing rate of 7.7% and a remaining term of 5 years, 7 months, the Company determined the ROU asset and lease liability as of adoption were \$7.9 million and \$11.3 million, respectively. There was no cumulative adjustment to our beginning accumulated deficit balance.

In March 2019, the Company amended the existing office lease to add office space in adjacent buildings. The total additional space is expected to be utilized through August 2020 and has future minimum lease payments of approximately \$1.0 million. The Company determined the ROU asset and lease liability were each \$0.4 million for the lease space that has commenced and was occupied as of September 30, 2019.

On April 23, 2019, the Company entered into an office lease with an effective date of April 12, 2019 with Kilroy Realty, L.P. (the "Landlord"). The Company expects to use the premises as its new principal corporate offices and plans to consolidate its corporate headquarters into the premises from the current location of multiple suites. Under the terms of the lease, the Company will have the one-time right of first offer on the suites it currently occupies and a general right of first offer to lease additional space from the Landlord in the development. The commencement date of the lease is expected to be October 1, 2020. The initial term of the lease is 7 years, 7 months, and the Landlord has granted the Company an option to extend the term of the lease by a period of 5 years. The aggregate base rent due over the initial term of the lease is approximately \$36.5 million. The Company is conducting a tenant build improvement project to ensure that space requirements are met.

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Following is a schedule of the future minimum rental commitments for our commenced operating lease reconciled to the lease liability and ROU assets as of December 31, 2019 (*in thousands*):

	December 31, 2019
2020	\$ 2,613
2021	2,486
2022	2,561
2023	2,637
2024	1,584
Thereafter	—
Total undiscounted future minimum payments	11,881
Present value discount	(1,874)
Total lease liability	10,007
Lease incentives	(1,463)
Straight line lease expense in excess of cash payments	(1,549)
Total ROU asset	\$ 6,995

As of December 31, 2019, the ROU asset of \$7.0 million was recorded to the Consolidated Balance Sheets as non-current Other Assets.

The current and non-current portions of the lease liability were recorded to the Consolidated Balance Sheets as follows (*in thousands*):

	December 31, 2019
Other current liabilities	\$ 2,613
Other non-current liabilities	7,394
Total lease liabilities	\$ 10,007

For the twelve months ended December 31, 2019, the Company recorded \$2.7 million in expense related to operating leases.

Supplemental cash flow information related to leases is as follows (*in thousands*):

	December 31, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flow for operating leases	\$ 1,710
Right-of-use assets obtained in exchange for lease obligations:	
Operating leases ¹	\$ 11,717

¹Includes leases that commenced during the year ended December 31, 2019, as well as balances related to leases in existence as of the date of the adoption of Topic 842.

NOTE 19. SUBSEQUENT EVENTS

Leases

On February 7, 2020, the Company notified its landlord, Kilroy Realty, L.P., of its intention to vacate the premises of its existing office leases. The abandonment of this leased office space coincides with the Company's expected occupancy of the new office lease space in the adjacent building per the office lease made effective April 12, 2019. The expiration of the existing leases is estimated to occur in the third quarter of 2020, depending on the ability of the current tenant to vacate the new leased premises, through which date, the Company is obligated to pay all base rent, operating expenses and other obligations due under the existing lease. The impending expiration of the existing lease will result in an adjustment to the ROU asset and lease liability in the first quarter of 2020, with acceleration of certain costs through the expiration date, at which time the carrying amounts for the ROU asset and related lease liability will be reduced to zero. The ROU asset and lease liability related to the new office lease will be established when the Company is granted access to the premise and has the ability to direct its use. As such, the ROU asset for the new lease will be established prior to the extinguishment of the ROU asset and lease liability for the existing lease, resulting in an overlap of ROU assets during the interim period between inception of the new lease and the expiration of the old lease.

At-The-Market Equity Offering Program

On February 24, 2020, we entered into an Open Market Sale Agreement with Jefferies LLC, as agent ("Jefferies"), pursuant to which we may offer and sell, from time to time through Jefferies, shares of our common stock having an aggregate offering price of up to \$100.0 million (the "ATM

Shares”). The ATM Shares will be sold pursuant to our effective registration statement on Form S-3 (Registration Statement No. 333-227182), as previously filed with the Securities and Exchange Commission.

NOTE 20. QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

The following table presents selected consolidated statements of operations data for each quarter for the fiscal years ended December 31, 2019 and 2018 (*unaudited, in thousands, except for per share data*):

	Fourth Quarter	Third Quarter	Second Quarter	First Quarter
For the year ended December 31, 2019:				
Net product sales	\$ 46,688	\$ 44,373	\$ 44,707	\$ 39,570
Total operating expenses	74,855	78,810 ¹	81,236	77,798 ²
Operating loss	(28,167)	(34,437)	(36,529)	(38,228)
Total other expense, net	(2,060)	(2,576)	(2,103)	(2,348)
Loss before provision for income taxes	(30,227)	(37,013)	(38,632)	(40,576)
Income tax benefit (provision)	(32)	523	(69)	(401)
Net income (loss)	\$ (30,259)	\$ (36,490)	\$ (38,701)	\$ (40,977)
Net Loss per common share				
Basic and diluted	\$ (0.70)	\$ (0.85)	\$ (0.92)	\$ (0.99)
For the year ended December 31, 2018:				
Net product sales	\$ 43,771	\$ 40,706	\$ 41,337	\$ 38,432
Total operating expenses	48,756	76,289 ³	62,897	56,344
Operating loss	(4,985)	(35,583)	(21,560)	(17,912)
Total other income (expense), net	(2,470)	(18,518) ⁴	(602)	(237)
Income (loss) before provision for income taxes	(7,455)	(54,101)	(22,162)	(18,149)
Income tax benefit (provision)	—	(415)	(167)	(229)
Net income (loss)	\$ (7,455)	\$ (54,516)	\$ (22,329)	\$ (18,378)
Net loss per common share				
Basic and diluted	\$ (0.18)	\$ (1.34)	\$ (0.56)	\$ (0.46)

¹ In August 2019, following a strategic review of the CNSA-001 program in patients with PKU, the Company made the decision to decline to exercise its option to acquire Censa Pharmaceuticals and accordingly discontinue its joint development program for CNSA-001. The Company impaired the \$15 million long-term investment during the third quarter of 2019.

² During the first quarter of 2019, the Company elected to discontinue development of the L-UDCA program, resulting in the removal of the intangible asset of \$25.5 million which was originally recorded in 2016, and the reversal of associated contingent consideration of \$18.0 million. This resulted in a net \$7.5 million non-cash charge to first quarter operations.

³ During the third quarter of 2018, the Company's operating expenses increased due to the ramp up in on-going Phase 3 clinical trials for fosmetpantotenate in PKAN and sparsentan in FSGS, and changes in fair value of contingent consideration.

⁴ In September 2018, the Company executed a partial repurchase of the 2019 Notes that resulted in a \$17.0 million loss on early extinguishment of debt. See Note 7 for further discussion.

OPEN MARKET SALE AGREEMENTSM

February 24, 2020

JEFFERIES LLC
520 Madison Avenue
New York, New York 10022

Ladies and Gentlemen:

Retrophin, Inc., a Delaware corporation (the “**Company**”), proposes, subject to the terms and conditions stated herein, to issue and sell from time to time through Jefferies LLC, as sales agent and/or principal (the “**Agent**”), shares of the Company’s common stock, par value \$0.0001 per share (the “**Common Shares**”), having an aggregate offering price of up to \$100,000,000 on the terms set forth in this agreement (this “**Agreement**”).

Section 1. DEFINITIONS

(a) Certain Definitions. For purposes of this Agreement, capitalized terms used herein and not otherwise defined shall have the following respective meanings:

“**Affiliate**” of a Person means another Person that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such first- mentioned Person. The term “control” (including the terms “controlling,” “controlled by” and “under common control with”) means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

“**Agency Period**” means the period commencing on the date of this Agreement and expiring on the earliest to occur of (x) the date on which the Agent shall have placed the Maximum Program Amount pursuant to this Agreement and (y) the date this Agreement is terminated pursuant to Section 7.

“**Commission**” means the U.S. Securities and Exchange Commission.

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Commission thereunder.

“**Floor Price**” means the minimum price set by the Company in the Issuance Notice below which the Agent shall not sell Shares during the applicable period set forth in the Issuance Notice, which may be adjusted by the Company at any time during the period set forth in the Issuance Notice by delivering written notice of such change to the Agent and which in no event shall be less than \$1.00 without the prior written consent of the Agent, which may be withheld in the Agent’s sole discretion.

“Issuance Amount” means the aggregate Sales Price of the Shares to be sold by the Agent pursuant to any Issuance Notice.

“Issuance Notice” means a written notice delivered to the Agent by the Company in accordance with this Agreement in the form attached hereto as Exhibit A that is executed by its Chief Executive Officer, President or Chief Financial Officer.

“Issuance Notice Date” means any Trading Day during the Agency Period that an Issuance Notice is delivered pursuant to Section 3(b)(i).

“Issuance Price” means the Sales Price less the Selling Commission.

“Maximum Program Amount” means Common Shares with an aggregate Sales Price of the lesser of (a) the number or dollar amount of Common Shares registered under the effective Registration Statement (as defined below) pursuant to which the offering is being made, (b) the number of authorized but unissued Common Shares (less Common Shares issuable upon exercise, conversion or exchange of any outstanding securities of the Company or otherwise reserved from the Company’s authorized capital stock), (c) the number or dollar amount of Common Shares permitted to be sold under Form S-3 (including General Instruction I.B.6 thereof, if applicable), (d) the number or dollar amount of Common Shares for which the Company has filed a Prospectus (as defined below), or (e) \$100,000,000.

“Person” means an individual or a corporation, partnership, limited liability company, trust, incorporated or unincorporated association, joint venture, joint stock company, governmental authority or other entity of any kind.

“Principal Market” means the Nasdaq Global Market or such other national securities exchange on which the Common Shares, including any Shares, are then listed.

“Sales Price” means the actual sale execution price of each Share placed by the Agent pursuant to this Agreement.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations of the Commission thereunder.

“Selling Commission” means three percent (3%) of the gross proceeds of Shares sold pursuant to this Agreement, or as otherwise agreed between the Company and the Agent with respect to any Shares sold pursuant to this Agreement.

“Settlement Date” means the second business day following each Trading Day during the period set forth in the Issuance Notice on which Shares are sold pursuant to this Agreement, when the Company shall deliver to the Agent the amount of Shares sold on such Trading Day and the Agent shall deliver to the Company the Issuance Price received on such sales.

“Shares” shall mean the Company’s Common Shares issued or issuable pursuant to this Agreement.

“Trading Day” means any day on which the Principal Market is open for trading.

Section 2. REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company represents and warrants to, and agrees with, the Agent that as of (1) the date of this Agreement, (2) each Issuance Notice Date, (3) each Settlement Date, (4) each Triggering Event Date (as

defined below) and (5) as of each Time of Sale (each of the times referenced above is referred to herein as a “**Representation Date**”), except as may be disclosed in the Prospectus (including any documents incorporated by reference therein and any supplements thereto) on or before a Representation Date:

(a) The Company has prepared and filed with the Commission a shelf registration statement on Form S-3 (File No. 333-227182) that contains a base prospectus. Such registration statement registers the issuance and sale by the Company of the Shares under the Securities Act. The Company may file one or more additional registration statements from time to time that will contain a base prospectus and related prospectus or prospectus supplement, if applicable, with respect to the Shares. Except where the context otherwise requires, such registration statement(s), including any information deemed to be a part thereof pursuant to Rule 430B under the Securities Act, including all financial statements, exhibits and schedules thereto and all documents incorporated or deemed to be incorporated therein by reference pursuant to Item 12 of Form S-3 under the Securities Act as from time to time amended or supplemented, is herein referred to as the “**Registration Statement**,” and the prospectus constituting a part of such registration statement(s), together with any prospectus supplement filed with the Commission pursuant to Rule 424(b) under the Securities Act relating to a particular issuance of the Shares, including all documents incorporated or deemed to be incorporated therein by reference pursuant to Item 12 of Form S-3 under the Securities Act, in each case, as from time to time amended or supplemented, is referred to herein as the “**Prospectus**,” except that if any revised prospectus is provided to the Agent by the Company for use in connection with the offering of the Shares that is not required to be filed by the Company pursuant to Rule 424(b) under the Securities Act, the term “**Prospectus**” shall refer to such revised prospectus from and after the time it is first provided to the Agent for such use. The Registration Statement at the time it originally became effective is herein called the “**Original Registration Statement**.” As used in this Agreement, the terms “amendment” or “supplement” when applied to the Registration Statement or the Prospectus shall be deemed to include the filing by the Company with the Commission of any document under the Exchange Act after the date hereof that is or is deemed to be incorporated therein by reference.

All references in this Agreement to financial statements and schedules and other information which is “contained,” “included” or “stated” in the Registration Statement or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is or is deemed to be incorporated by reference in or otherwise deemed under the Securities Act to be a part of or included in the Registration Statement or the Prospectus, as the case may be, as of any specified date; and all references in this Agreement to amendments or supplements to the Registration Statement or the Prospectus shall be deemed to mean and include, without limitation, the filing of any document under the Exchange Act which is or is deemed to be incorporated by reference in or otherwise deemed under the Securities Act to be a part of or included in the Registration Statement or the Prospectus, as the case may be, as of any specified date.

At the time the Registration Statement was or will be originally declared effective and at the time the Company’s most recent annual report on Form 10-K was filed with the Commission, if later, the Company met the then-applicable requirements for use of Form S-3 under the Securities Act. During the Agency Period, each time the Company files an annual report on Form 10-K the Company will meet the then-applicable requirements for use of Form S-3 under the Securities Act.

(b) The Original Registration Statement and any Rule 462(b) Registration Statement have been declared effective by the Commission under the Securities Act. The Company has complied to the Commission’s satisfaction with all requests of the Commission for additional or supplemental information. No stop order suspending the effectiveness of the Registration Statement or any Rule 462(b) Registration Statement is in effect and no proceedings for such purpose have been instituted or are pending or, to the best knowledge of the Company, are contemplated or threatened by the Commission.

The Prospectus, when filed, complied in all material respects with the Securities Act and, if filed with the Commission through its Electronic Data Gathering, Analysis and Retrieval system (“EDGAR”) (except as may be permitted by Regulation S-T under the Securities Act), was identical to the copy thereof delivered to the Agent for use in connection with the issuance and sale of the Shares. Each of the Registration Statement, any Rule 462(b) Registration Statement and any post-effective amendment thereto, at the time it became effective and at each Representation Date, complied and will comply in all material respects with the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the date of this Agreement, the Prospectus and any Free Writing Prospectus (as defined below) considered together (collectively, the “**Time of Sale Information**”) did not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Prospectus, as amended or supplemented, as of its date and at each Representation Date, did not and will not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the three immediately preceding sentences do not apply to statements in or omissions from the Registration Statement, any Rule 462(b) Registration Statement, or any post-effective amendment thereto, or the Prospectus, or any amendments or supplements thereto, made in reliance upon and in conformity with information relating to the Agent furnished to the Company in writing by the Agent expressly for use therein, it being understood and agreed that the only such information furnished by the Agent to the Company consists of the information described in Section 6 below. There are no contracts or other documents required to be described in the Prospectus or to be filed as exhibits to the Registration Statement which have not been described or filed as required. The Registration Statement and the offer and sale of the Shares as contemplated hereby meet the requirements of Rule 415 under the Securities Act and comply in all material respects with said rule.

(c) The Company is not an “ineligible issuer” in connection with the offering of the Shares pursuant to Rules 164, 405 and 433 under the Securities Act. Any Free Writing Prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been, or will be, filed with the Commission in accordance with the requirements of the Securities Act. Each Free Writing Prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act or that was prepared by or on behalf of or used or referred to by the Company complies or will comply in all material respects with the requirements of Rule 433 under the Securities Act including timely filing with the Commission or retention where required and legending, and each such Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the issuance and sale of the Shares did not, does not and will not include any information that conflicted, conflicts with or will conflict with the information contained in the Registration Statement or the Prospectus, including any document incorporated by reference therein. Except for the Free Writing Prospectuses, if any, and electronic road shows, if any, furnished to you before first use, the Company has not prepared, used or referred to, and will not, without your prior consent, prepare, use or refer to, any Free Writing Prospectus.

(d) This Agreement has been duly authorized, executed and delivered by the Company.

(e) The Shares have been duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company against payment therefor pursuant to this Agreement, will be validly issued, fully paid and nonassessable, and the issuance and sale of the Shares is not subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase the Shares.

(f) There are no persons with registration or other similar rights to have any equity or debt securities registered for sale under the Registration Statement or included in the offering contemplated by this Agreement.

(g) Except as otherwise disclosed in the Registration Statement and the Prospectus, subsequent to the respective dates as of which information is given in the Registration Statement and the Prospectus: (i) there has been no material adverse change, or any development that would reasonably be expected to result in a material adverse change, in the condition, financial or otherwise, or in the earnings, business, properties, operations, assets, liabilities or prospects, whether or not arising from transactions in the ordinary course of business, of the Company and its subsidiaries, considered as one entity (any such change being referred to herein as a “**Material Adverse Change**”); (ii) the Company and its subsidiaries, considered as one entity, have not incurred any material liability or obligation, indirect, direct or contingent, including without limitation any losses or interference with their business from fire, explosion, flood, earthquakes, accident or other calamity, whether or not covered by insurance, or from any strike, labor dispute or court or governmental action, order or decree, that are material, individually or in the aggregate, to the Company and its subsidiaries, considered as one entity, and have not entered into any transactions not in the ordinary course of business; and (iii) there has not been any material decrease in the capital stock or any material increase in any short-term or long-term indebtedness of the Company or its subsidiaries and there has been no dividend or distribution of any kind declared, paid or made by the Company or, except for dividends paid to the Company or other subsidiaries, by any of the Company’s subsidiaries on any class of capital stock, or any repurchase or redemption by the Company or any of its subsidiaries of any class of capital stock.

(h) BDO USA, LLP, which has expressed its opinion with respect to the financial statements (which term as used in this Agreement includes the related notes thereto) filed with the Commission as a part of the Registration Statement and the Prospectus, is (i) an independent registered public accounting firm as required by the Securities Act, the Exchange Act, and the rules of the Public Company Accounting Oversight Board (“**PCAOB**”), (ii) in compliance with the applicable requirements relating to the qualification of accountants under Rule 2-01 of Regulation S-X under the Securities Act and (iii) a registered public accounting firm as defined by the PCAOB whose registration has not been suspended or revoked and who has not requested such registration to be withdrawn.

(i) The financial statements filed with the Commission as a part of the Registration Statement and the Prospectus present fairly, in all material respects, the consolidated financial position of the Company and its subsidiaries as of the dates indicated and the results of their operations, changes in stockholders’ equity and cash flows for the periods specified. Such financial statements have been prepared in conformity with generally accepted accounting principles as applied in the United States applied on a consistent basis throughout the periods involved, except as may be expressly stated in the related notes thereto. The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the Commission’s rules and guidelines applicable thereto. No other financial statements or supporting schedules are required to be included in the Registration Statement or the Prospectus. The financial data set forth in each of the Registration Statement and the Prospectus under the caption “Ratio of Earnings to Fixed Charges” fairly present, in all material respects, the information set forth therein on a basis consistent with that of the audited financial statements contained in the Registration Statement and the Prospectus. To the Company’s knowledge, no person who has been suspended or barred from being associated with a registered public accounting firm, or who has failed to comply with any sanction pursuant to Rule 5300 promulgated by the PCAOB, has participated in the preparation of, or audited, the financial statements, supporting schedules or other financial data filed with the Commission as a part of the Registration Statement and the Prospectus.

(j) The Company and each of its subsidiaries make and keep accurate books and records and maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management’s general or specific authorization;

(ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles as applied in the United States and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (v) the interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement and the Prospectus fairly presents the information called for in all material respects and is prepared in accordance with the Commission's rules and guidelines applicable thereto.

(k) The Company has established and maintains disclosure controls and procedures (as defined in Rules 13a-15 and 15d-15 under the Exchange Act), which (i) are designed to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to the Company's principal executive officer and its principal financial officer by others within those entities, particularly during the periods in which the periodic reports required under the Exchange Act are being prepared; (ii) have been evaluated by management of the Company for effectiveness as of the end of the Company's most recent fiscal quarter; and (iii) are effective in all material respects to perform the functions for which they were established. Since the end of the Company's most recent audited fiscal year, there have been no significant deficiencies or material weaknesses in the Company's internal control over financial reporting (whether or not remediated) and no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. The Company is not aware of any change in its internal control over financial reporting that has occurred during its most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(l) The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction of its incorporation and has the corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement and the Prospectus and to enter into and perform its obligations under this Agreement. The Company is duly qualified as a foreign corporation to transact business and is in good standing in the State of California and each other jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to be so qualified or in good standing, as the case may be, would not, individually or in the aggregate, have a Material Adverse Effect (as defined below).

(m) Each of the Company's "subsidiaries" (for purposes of this Agreement, as defined in Rule 405 under the Securities Act) has been duly incorporated or organized, as the case may be, and is validly existing and in good standing (where such concept is recognized) under the laws of the jurisdiction of its incorporation or organization and has the power and authority (corporate or other) to own, lease and operate its properties and to conduct its business as described in the Registration Statement and the Prospectus. Each of the Company's subsidiaries is duly qualified to transact business and is in good standing (where such concept is recognized) in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to be so qualified or in good standing, as the case may be, would not, individually or in the aggregate, have a Material Adverse Effect. All of the issued and outstanding capital stock or other equity or ownership interests of each of the Company's subsidiaries have been duly authorized and validly issued, are fully paid and nonassessable and are owned by the Company, directly or through subsidiaries, free and clear of any security interest, mortgage, pledge, lien, encumbrance or adverse claim. The Company does not own or control, directly or indirectly, any corporation, association or other entity other than the subsidiaries listed in Exhibit 21.1 to the Company's most recent Annual Report on Form 10-K.

(n) The authorized, issued and outstanding capital stock of the Company is as set forth in the Registration Statement and the Prospectus under the caption “Description of Capital Stock” (other than for subsequent issuances, if any, pursuant to employee benefit plans, or upon the exercise of outstanding options or warrants, in each case described in the Registration Statement and the Prospectus). The Common Shares (including the Shares, when issued pursuant to the terms of this Agreement) conform in all material respects to the description thereof contained in the Prospectus. All of the issued and outstanding Common Shares have been duly authorized and validly issued, are fully paid and nonassessable and have been issued in compliance with all applicable federal and state securities laws. None of the outstanding Common Shares were issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no authorized or outstanding options, warrants, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any capital stock of the Company or any of its subsidiaries other than those described in the Registration Statement and the Prospectus. The descriptions of the Company’s stock option, stock bonus and other stock plans or arrangements, and the options or other rights granted thereunder, set forth in the Registration Statement and the Prospectus accurately and fairly presents, in all material respects, the information required to be shown with respect to such plans, arrangements, options and rights.

(o) The Common Shares are registered pursuant to Section 12(b) of the Exchange Act and are listed on the Principal Market, and the Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Common Shares under the Exchange Act or delisting the Common Shares from the Principal Market, nor has the Company received any notification that the Commission or the Principal Market is contemplating terminating such registration or listing. To the Company’s knowledge, it is in compliance with all applicable listing requirements of the Principal Market.

(p) Neither the Company nor any of its subsidiaries is in violation of its charter or by-laws, partnership agreement or operating agreement or similar organizational documents, as applicable, or is in default (or, with the giving of notice or lapse of time, would be in default) (“**Default**”) under any indenture, loan, credit agreement, note, lease, license agreement, contract, franchise or other instrument (including, without limitation, any pledge agreement, security agreement, mortgage or other instrument or agreement evidencing, guaranteeing, securing or relating to indebtedness) to which the Company or any of its subsidiaries is a party or by which it or any of them may be bound, or to which any of their respective properties or assets are subject (each, an “**Existing Instrument**”), except for such Defaults as could not be expected, individually or in the aggregate, to have a material adverse effect on the condition (financial or other), earnings, business, properties, operations, assets, liabilities or prospects of the Company and its subsidiaries, considered as one entity (a “**Material Adverse Effect**”). The Company’s execution, delivery and performance of this Agreement, consummation of the transactions contemplated hereby and by the Registration Statement and the Prospectus and the issuance and sale of the Shares (including the use of proceeds from the sale of the Shares as described in the Registration Statement and the Prospectus under the caption “Use of Proceeds”) (i) have been duly authorized by all necessary corporate action and will not result in any violation of the provisions of the charter or by-laws, partnership agreement or operating agreement or similar organizational documents, as applicable, of the Company or any subsidiary, (ii) will not conflict with or constitute a breach of, or Default or a Debt Repayment Triggering Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its subsidiaries pursuant to, or require the consent of any other party to, any Existing Instrument and (iii) will not result in any violation of any law, administrative regulation or administrative or court decree applicable to the Company or any of its subsidiaries. No consent, approval, authorization or other order of, or registration or filing with, any court or other governmental or regulatory authority or agency, is required for the Company’s execution, delivery and performance of this Agreement, issuance of the Shares and consummation of the

transactions contemplated by this Agreement and by the Registration Statement and the Prospectus, except such as have been obtained or made by the Company and are in full force and effect under the Securities Act and such as may be required under applicable state securities or blue sky laws or FINRA (as defined below). As used herein, a “**Debt Repayment Triggering Event**” means any event or condition which gives, or with the giving of notice or lapse of time would give, the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder’s behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its subsidiaries.

(q) The Company and its subsidiaries have been and are in compliance with all applicable laws, rules and regulations, except where failure to be so in compliance could not be expected, individually or in the aggregate, to have a Material Adverse Effect.

(r) Except as otherwise disclosed in the Prospectus, there is no action, claim, suit, demand, hearing, arbitration, enforcement, investigation, subpoena, notice of violation or deficiency, proceeding, inquiry or investigation (collectively, “**Proceedings**”) brought by or before any governmental entity now pending or, to the knowledge of the Company, threatened, against or affecting the Company or any of its subsidiaries, which could be expected, individually or in the aggregate, to have a Material Adverse Effect or materially and adversely affect the consummation of the transactions contemplated by this Agreement or the performance by the Company of its obligations under this Agreement; and the aggregate of all pending legal or governmental proceedings to which the Company or any such subsidiary is a party or of which any of their respective properties or assets is the subject, including ordinary routine litigation incidental to the business, if determined adversely to the Company, could not be expected to have a Material Adverse Effect. No material labor dispute with the employees of the Company or any of its subsidiaries, or with the employees of any principal supplier, manufacturer, customer or contractor of the Company, exists or, to the knowledge of the Company, is threatened or imminent.

(s) Except as otherwise disclosed in the Registration Statement or the Prospectus, the Company and its subsidiaries own, or have obtained valid and enforceable licenses for, the inventions, patent applications, patents, trademarks, trade names, service names, copyrights, trade secrets and other intellectual property described in the Registration Statement and the Prospectus as being owned or licensed by them or which are necessary for the conduct of their respective businesses as currently conducted or as currently proposed to be conducted (collectively, “**Intellectual Property**”), except to the extent the failure to own, possess or license such Intellectual Property would not be expected, individually or in the aggregate, to have a Material Adverse Effect, and the conduct of their respective businesses does not and will not infringe, misappropriate or otherwise conflict in any material respect with any such rights of others. The Intellectual Property of the Company has not been adjudged by a court of competent jurisdiction to be invalid or unenforceable, in whole or in part, and the Company is unaware of any facts which would form a reasonable basis for any such adjudication. To the Company’s knowledge: (i) there are no third parties who have rights to any Intellectual Property, except for customary reversionary rights of third-party licensors or rights of third-party licensees as applicable with respect to Intellectual Property that is disclosed in the Registration Statement and the Prospectus as licensed to the Company or one or more of its subsidiaries; and (ii) there is no infringement by third parties of any Intellectual Property. There is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others: (A) challenging the Company’s rights in or to any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; (B) challenging the validity, enforceability or scope of any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; or (C) asserting that the Company or any of its subsidiaries infringes or otherwise violates, or would, upon the commercialization of any product or service described in the Registration Statement or the Prospectus as under development, infringe or violate, any patent, trademark,

trade name, service name, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim. The Company and its subsidiaries have complied in all material respects with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company or any subsidiary, and all such agreements are in full force and effect. To the Company's knowledge, there are no material defects in any of the patents or patent applications included in the Intellectual Property. The Company and its subsidiaries have taken all reasonable steps to protect, maintain and safeguard their Intellectual Property, including the execution of appropriate nondisclosure, confidentiality agreements and invention assignment agreements and invention assignments with their employees, and no employee of the Company is in or has been in violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement, or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment with the Company. The duty of candor and good faith as required by the United States Patent and Trademark Office during the prosecution of the United States patents and patent applications included in the Intellectual Property have been complied with; and in all foreign offices having similar requirements, all such requirements have been complied with. None of the Company owned Intellectual Property or technology (including information technology and outsourced arrangements) employed by the Company or its subsidiaries has been obtained or is being used by the Company or its subsidiary in violation of any contractual obligation binding on the Company or its subsidiaries or any of their respective officers, directors or employees or otherwise in violation of the rights of any persons. The product candidates described in the Registration Statement and the Prospectus as under development by the Company or any subsidiary fall within the scope of claims of one or more patents owned by, or exclusively licensed to, the Company or any subsidiary.

(t) Except as otherwise disclosed in the Prospectus, the Company and its subsidiaries possess, and are operating in compliance with, such valid and current certificates, authorizations or permits required by state, federal or foreign regulatory agencies or bodies to conduct their respective businesses as currently conducted and as described in the Registration Statement or the Prospectus ("**Permits**"). Neither the Company nor any of its subsidiaries is in violation of, or in default under, any of the Permits or has received any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such certificate, authorization or permit.

(u) Except as otherwise disclosed in the Prospectus, the Company and its subsidiaries have good and marketable title to all of the real and personal property and other assets reflected as owned in the financial statements referred to in Section 2(i) above (or elsewhere in the Registration Statement or the Prospectus), in each case free and clear of any security interests, mortgages, liens, encumbrances, equities, adverse claims and other defects. The real property, improvements, equipment and personal property held under lease by the Company or any of its subsidiaries are held under valid and enforceable leases, with such exceptions as are not material and do not materially interfere with the use made or proposed to be made of such real property, improvements, equipment or personal property by the Company or such subsidiary.

(v) The Company and its subsidiaries have filed all necessary federal, state and foreign income and franchise tax returns or have properly requested extensions thereof and have paid all taxes required to be paid by any of them and, if due and payable, any related or similar assessment, fine or penalty levied against any of them except as may be being contested in good faith and by appropriate proceedings. The Company has made adequate charges, accruals and reserves in the applicable financial statements referred to in Section 2(i) above in respect of all federal, state and foreign income and franchise taxes for all periods as to which the tax liability of the Company or any of its subsidiaries has not been finally determined.

(w) Except as otherwise disclosed in the Prospectus, each of the Company and its subsidiaries are insured by recognized, financially sound and reputable institutions with policies in such amounts and with such deductibles and covering such risks as are generally deemed adequate and customary for their businesses including, but not limited to, policies covering real and personal property owned or leased by the Company and its subsidiaries against theft, damage, destruction, acts of vandalism and earthquakes and policies covering the Company and its subsidiaries for product liability claims and clinical trial liability claims. The Company has no reason to believe that it or any of its subsidiaries will not be able (i) to renew its existing insurance coverage as and when such policies expire or (ii) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that could not be expected to have a Material Adverse Effect. Neither the Company nor any of its subsidiaries has been denied any insurance coverage which it has sought or for which it has applied.

(x) Except as described in the Prospectus and except as could not be expected, individually or in the aggregate, to have a Material Adverse Effect: (i) neither the Company nor any of its subsidiaries is in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products (collectively, “**Hazardous Materials**”) or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, “**Environmental Laws**”); (ii) the Company and its subsidiaries have all permits, authorizations and approvals required under any applicable Environmental Laws and are each in compliance with their requirements; (iii) there are no pending or, to the knowledge of the Company, threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company or any of its subsidiaries; and (iv) there are no events or circumstances that might reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or governmental body or agency, against or affecting the Company or any of its subsidiaries relating to Hazardous Materials or any Environmental Laws.

(y) In the ordinary course of its business, the Company conducts a periodic review of the effect of Environmental Laws on the business, operations and properties of the Company and its subsidiaries, in the course of which it identifies and evaluates associated costs and liabilities (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws or any permit, license or approval, any related constraints on operating activities and any potential liabilities to third parties). No facts or circumstances have come to the Company’s attention that could result in costs or liabilities that could be expected, individually or in the aggregate, to have a Material Adverse Effect.

(z) Except as otherwise disclosed in the Prospectus, the Company and its subsidiaries and any “employee benefit plan” (as defined under the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder (collectively, “**ERISA**”)) established or maintained by the Company, its subsidiaries or their “ERISA Affiliates” (as defined below) are in compliance in all material respects with ERISA. “**ERISA Affiliate**” means, with respect to the Company or any of its subsidiaries, any member of any group of organizations described in Sections 414(b), (c), (m) or (o) of the Internal Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the “Code”) of which the Company or such subsidiary is a member. No “reportable event” (as

defined under ERISA) has occurred or is reasonably expected to occur with respect to any “employee benefit plan” established or maintained by the Company, its subsidiaries or any of their ERISA Affiliates. No “employee benefit plan” established or maintained by the Company, its subsidiaries or any of their ERISA Affiliates, if such “employee benefit plan” were terminated, would have any “amount of unfunded benefit liabilities” (as defined under ERISA). Neither the Company, its subsidiaries nor any of their ERISA Affiliates has incurred or reasonably expects to incur any liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any “employee benefit plan” or (ii) Sections 412, 4971, 4975 or 4980B of the Code. Each “employee benefit plan” established or maintained by the Company, its subsidiaries or any of their ERISA Affiliates that is intended to be qualified under Section 401(a) of the Code is so qualified and nothing has occurred, whether by action or failure to act, which would reasonably be expected to cause the loss of such qualification.

(aa) The Company is not, and will not be, either after receipt of payment for the Shares or after the application of the proceeds therefrom as described under “Use of Proceeds” in the Registration Statement or the Prospectus, required to register as an “investment company” under the Investment Company Act of 1940, as amended (the “**Investment Company Act**”).

(bb) Neither the Company nor any of its subsidiaries has taken, directly or indirectly, any action designed to or that would reasonably be expected to cause or result in stabilization or manipulation of the price of the Common Shares or of any “reference security” (as defined in Rule 100 of Regulation M under the Exchange Act (“**Regulation M**”)) with respect to the Common Shares, whether to facilitate the sale or resale of the Shares or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

(cc) There are no business relationships or related-party transactions involving the Company or any of its subsidiaries or any other person required to be described in the Registration Statement or the Prospectus that have not been described as required.

(dd) All of the information provided to the Agent or to counsel for the Agent by the Company, its counsel, its officers and directors and the holders of any securities (debt or equity) or options to acquire any securities of the Company in connection with the offering of the Shares is true, complete, correct and compliant with Financial Industry Regulatory Authority, Inc.’s (“**FINRA**”) rules and any letters, filings or other supplemental information provided to FINRA pursuant to FINRA Rules or NASD Conduct Rules is true, complete and correct. The Company meets the requirements for use of Form S-3 under the Securities Act specified in FINRA Rule 5110(b)(7)(C)(i).

(ee) All statistical, demographic and market-related data included in the Registration Statement or the Prospectus are based on or derived from sources that the Company believes, after reasonable inquiry, to be reliable and accurate. To the extent required, the Company has obtained the written consent to the use of such data from such sources.

(ff) Except as described or incorporated by reference in the Registration Statement or the Prospectus, neither the Company nor any of its subsidiaries has sent or received any communication regarding termination of, or intent not to renew, any of the contracts or agreements referred to or described in any preliminary prospectus, the Prospectus or any free writing prospectus, or referred to or described in, or filed as an exhibit to, the Registration Statement, or any document incorporated by reference therein, and no such termination or non-renewal has been threatened by the Company or any of its subsidiaries or, to the Company’s knowledge, any other party to any such contract or agreement, which threat of termination or non-renewal has not been rescinded as of the date hereof.

(gg) Except as otherwise disclosed in the Prospectus, neither the Company nor any of its subsidiaries nor, to the best of the Company's knowledge, any employee or agent of the Company or any subsidiary, has made any contribution or other payment to any official of, or candidate for, any federal, state or foreign office in violation of any law or of the character required to be disclosed in the Registration Statement or the Prospectus.

(hh) Neither the Company nor any of its subsidiaries nor any director, officer, or employee of the Company or any of its subsidiaries, nor to the knowledge of the Company, any agent, affiliate or other person acting on behalf of the Company or any of its subsidiaries has, in the course of its actions for, or on behalf of, the Company or any of its subsidiaries (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made or taken any act in furtherance of an offer, promise, or authorization of any direct or indirect unlawful payment or benefit to any foreign or domestic government official or employee, including of any government-owned or controlled entity or public international organization, or any political party, party official, or candidate for political office; (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "**FCPA**"), the UK Bribery Act 2010, or any other applicable anti-bribery or anti-corruption law; or (iv) made, offered, authorized, requested, or taken an act in furtherance of any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment or benefit. The Company and its subsidiaries and, to the knowledge of the Company, the Company's affiliates acting on behalf of the Company have conducted their respective businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(ii) The operations of the Company and its subsidiaries are, and have been conducted at all times, in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar applicable rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "**Money Laundering Laws**") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

(jj) Neither the Company nor any of its subsidiaries, directors, officers, or employees, nor, to the knowledge of the Company, after due inquiry, any agent, affiliate or other person acting on behalf of the Company or any of its subsidiaries is currently the subject or the target of any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury or the U.S. Department of State, the United Nations Security Council, the European Union, Her Majesty's Treasury of the United Kingdom, or other relevant sanctions authority (collectively, "**Sanctions**"); nor is the Company or any of its subsidiaries located, organized or resident in a country or territory that is the subject or the target of Sanctions, including, without limitation, Crimea, Cuba, Iran, North Korea, and Syria (collectively, "**Sanctioned Countries**"); and the Company will not directly or indirectly use the proceeds of this offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, or any joint venture partner or other person or entity, for the purpose of financing the activities of or business with any person, or in any country or territory, that at the time of such financing, is the subject or the target of Sanctions or in any other manner that will result in a violation by any person (including any person participating in the transaction whether as underwriter, advisor, investor or otherwise) of applicable Sanctions. For the past five years, the Company and its subsidiaries have not knowingly engaged in and are not now knowingly engaged in any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject or the target of Sanctions or with any Sanctioned Country.

(kk) Except as otherwise disclosed in the Prospectus, there is no broker, finder or other party that is entitled to receive from the Company any brokerage or finder's fee or other fee or commission as a result of any transactions contemplated by this Agreement.

(ll) Each financial or operational projection or other "forward-looking statement" (as defined by Section 27A of the Securities Act or Section 21E of the Exchange Act) contained in the Registration Statement or the Prospectus (i) was so included by the Company in good faith and with reasonable basis after due consideration by the Company of the underlying assumptions, estimates and other applicable facts and circumstances and (ii) is accompanied by meaningful cautionary statements identifying those factors that could cause actual results to differ materially from those in such forward-looking statement. No such statement was made with the knowledge of an executive officer or director of the Company that is was false or misleading.

(mm) Except as described in the Registration Statement and Prospectus, each of the Company and its subsidiaries: (A) is and at all times has been in compliance with all statutes, rules or regulations of the U.S. Food and Drug Administration (the "FDA") and any other comparable U.S. or non-U.S. federal, state, local or other governmental or regulatory authority, governmental or regulatory agency or body, court, arbitrator or self-regulatory organization (each, a "Governmental Authority") applicable to the ownership, testing, development, manufacture, packaging, processing, use, marketing, distribution, storage, import, export or disposal of any product under development, manufactured or distributed by the Company or each such subsidiary (collectively, the "Applicable Laws"), except where such noncompliance would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; (B) has not had any product or manufacturing site (whether Company- or subsidiary-owned or that of a contract manufacturer for Company or subsidiary products) subject to a Governmental Authority (including the FDA) shutdown or import or export prohibition, nor received any FDA Form 483 or other Governmental Authority notice of inspectional observations, warning letter, untitled letter or other correspondence or notice from the FDA or any Governmental Authority alleging or asserting material noncompliance with any Applicable Laws or any licenses, certificates, approvals, clearances, exemptions, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws (collectively, the "Authorizations"); (C) possesses all Authorizations, except where failure to possess an Authorization would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, and such Authorizations are valid and in full force and effect and the Company or such subsidiary is in compliance with the terms of such Authorizations and has fulfilled and performed all of its obligations with respect to such Authorizations, except where such noncompliance or failure to fulfill or perform such obligations would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; (D) has not received notice that the FDA or any Governmental Authority has taken, is taking or intends to take action to limit, suspend, modify or revoke any material Authorizations, has no knowledge that the FDA or any Governmental Authority is considering such action and has no knowledge that any event has occurred which allows, or after notice or lapse of time would allow, revocation or termination thereof or results in any other material impairment of the rights of the holder of any Authorizations; and (E) has filed, obtained, maintained or submitted all reports, documents, forms, notices, applications, records, claims, data, submissions and supplements or amendments as required by any Applicable Laws or Authorizations except where failure to do so would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect and that all such reports, documents, forms, notices, applications, records, claims, data, submissions and supplements or amendments were materially complete, true and correct on the date filed (or were corrected or supplemented by a subsequent submission).

(nn) The studies, tests and preclinical and clinical trials conducted by, sponsored by or, to the Company's knowledge, conducted on behalf of the Company and its subsidiaries that are described in the

Registration Statement and the Prospectus, or the results of which are referred to in the Registration Statement and the Prospectus, as applicable, were and, if still ongoing, are being conducted in all material respects in accordance with Applicable Laws, including, without limitation, the Federal Food, Drug and Cosmetic Act and the rules and regulations promulgated thereunder at 21 C.F.R. Parts 50, 54, 56, 58 and 312; the descriptions of such studies, tests and trials, including any related results and regulatory status, contained in the Registration Statement and the Prospectus are accurate and complete in all material respects and fairly present the data derived from such studies, tests and trials; except to the extent disclosed in the Registration Statement and the Prospectus, the Company is not aware of any studies, tests or trials, the results of which reasonably call into question the study, test, or trial results described or referred to in the Registration Statement and the Prospectus when viewed in the context in which such results are described and the clinical state of development; and, except to the extent disclosed in the Registration Statement and the Prospectus, the Company has not received any notices or correspondence from the FDA or any other Governmental Authority requiring the termination or suspension of any studies, tests or preclinical or clinical trials conducted by, sponsored by or conducted on behalf of the Company that are described in the Registration Statement and the Prospectus or the results of which are referred to in the Registration Statement and the Prospectus, other than ordinary course communications with respect to modifications in connection with the design and implementation of such trials, and neither the FDA nor any other Governmental Authority has commenced, or, to the Company's knowledge, threatened to initiate, any action to place a clinical hold order on, or otherwise terminate, delay or suspend such studies, tests or preclinical or clinical trials.

(oo) Except as described in the Registration Statement and the Prospectus: (A) there have been no recalls, field notifications, field corrections, market withdrawals or replacements, warnings, "dear doctor" letters, investigator notices, safety alerts or other notices of action relating to an alleged lack of safety, efficacy or regulatory compliance of the Company products (collectively, "**Safety Notices**") that remain unresolved or open; and (B) to the Company's knowledge, there are no material complaints with respect to the Company products that are currently unresolved. To the Company's knowledge, there are no facts that would be reasonably likely to result in: (A) a material Safety Notice with respect to the Company products; (B) a material change in labeling of any of the Company products; or (C) a termination or suspension of marketing or testing of any of the Company products.

(pp) Each of the Company and its subsidiaries is, and has been, in compliance in all respects with all applicable Health Care Laws (as defined below), except where such noncompliance would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, and there are no facts or circumstances that could reasonably be expected to result in false claims liability, civil penalties, or mandatory or permissive exclusion from Medicare, Medicaid, or any other government health care program. For purposes of this Agreement, "**Health Care Laws**" means: (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. §§ 301 et seq.) and the regulations promulgated thereunder; (ii) all applicable federal, state, local and all applicable foreign health care related fraud and abuse laws, including, without limitation, the U.S. Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the U.S. Physician Payments Sunshine Act (42 U.S.C. § 1320a-7h), the U.S. Civil False Claims Act (31 U.S.C. Section 3729 et seq.), the criminal False Claims Law (42 U.S.C. § 1320a-7b(a)), all criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. Sections 286 and 287, and the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 ("**HIPAA**") (42 U.S.C. Section 1320d et seq.), the exclusions laws (42 U.S.C. § 1320a-7), the civil monetary penalties law (42 U.S.C. § 1320a-7a), HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.), and the regulations promulgated pursuant to such statutes; (iii) Medicare (Title XVIII of the Social Security Act); (iv) Medicaid (Title XIX of the Social Security Act); and (v) any and all other applicable health care laws and regulations, including the collection and reporting requirements, and the processing of any applicable rebate, chargeback or adjustment, under applicable rules and regulations relating

to the Medicaid Drug Rebate Program (42 U.S.C. § 1396r-8) and any state supplemental rebate program, Medicare average sales price reporting (42 U.S.C. § 1395w-3a), the VA Federal Supply Schedule (38 U.S.C. § 8126) or under any state pharmaceutical assistance program or U.S. Department of Veterans Affairs agreement, and any successor government programs. Neither the Company nor any of its subsidiaries has received notice of any Proceeding from any Governmental Authority or third party alleging that any product operation or activity is in material violation of any Health Care Laws, and, to the Company's knowledge, no such Proceeding is threatened. Neither the Company nor any of its subsidiaries is a party to or has any ongoing reporting obligations pursuant to any corporate integrity agreements, deferred prosecution agreements, monitoring agreements, consent decrees, settlement orders, plans of correction or similar agreements with or imposed by the FDA or any committee thereof or from any other U.S. or foreign government or drug or medical device regulatory agency, or health care facility Institutional Review Board or other Governmental Authority. Additionally, neither the Company, its subsidiaries nor the employees, officers or directors of the Company or its subsidiaries have been excluded, suspended or debarred from, or are otherwise ineligible for participation in, any U.S. federal health care program or human clinical research; nor, to the knowledge of the Company, are they subject to any Proceeding by a Governmental Authority that could reasonably be expected to result in debarment, suspension, exclusion, or other ineligibility.

(qq) The documents incorporated or deemed to be incorporated by reference in the Registration Statement and the Prospectus, at the time they were filed with the Commission, complied in all material respects with the requirements of the Exchange Act, as applicable, and, when read together with the other information in the Prospectus, do not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

(rr) The documents incorporated or deemed to be incorporated by reference in the Prospectus, at the time they were or hereafter are filed with the Commission, and any Free Writing Prospectus or amendment or supplement thereto complied and will comply in all material respects with the requirements of the Exchange Act, and, when read together with the other information in the Prospectus, at the time the Registration Statement and any amendments thereto become effective and at each Time of Sale, as the case may be, will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(ss) The Company is in compliance, in all material respects, with all applicable provisions of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated thereunder.

(tt) No stamp or other issuance or transfer taxes or duties and no capital gains, income, withholding or other taxes are payable by the Agent in the United States or any political subdivision or taxing authority thereof or therein in connection with the execution, delivery or performance of this Agreement by the Company or the sale and delivery by the Company of the Shares.

(uu) To the best of the Company's knowledge, the Company and its subsidiaries' information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "**IT Systems**") are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company and its subsidiaries as currently conducted, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Company and its subsidiaries have implemented and maintained commercially reasonable physical, technical and administrative controls, policies, procedures, and safeguards to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data, including "Personal Data," used in connection with their businesses. "**Personal**

Data” means (i) a natural person’s name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver’s license number, passport number, credit card number, bank information, or customer or account number; (ii) any information which would qualify as “personally identifying information” under the Federal Trade Commission Act, as amended; (iii) “personal data” as defined by GDPR (as defined below); (iv) any information which would qualify as “protected health information” under the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act (collectively, “**HIPAA**”); and (v) any other piece of information that allows the identification of such natural person, or his or her family, or permits the collection or analysis of any data related to an identified person’s health or sexual orientation. There have been no breaches, violations, outages or unauthorized uses of or accesses to same, except for those that have been remedied without material cost or liability or the duty to notify any other person, nor any incidents under internal review or investigations relating to the same, except as would not be expected, individually or in the aggregate, to have a Material Adverse Effect. The Company and its subsidiaries are presently in material compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification, except as would not be expected, individually or in the aggregate, to have a Material Adverse Effect.

(vv) The Company and its subsidiaries are, and at all prior times were, in compliance with all applicable state and federal data privacy and security laws and regulations, including without limitation HIPAA, and the Company and its subsidiaries have taken commercially reasonable actions to prepare to comply with, and since May 25, 2018, have been and currently are in compliance with, the European Union General Data Protection Regulation (“**GDPR**”) (EU 2016/679) (collectively, the “**Privacy Laws**”), except as would not be expected, individually or in the aggregate, to have a Material Adverse Effect. To ensure compliance with the Privacy Laws, the Company and its subsidiaries have in place, comply with, and take appropriate steps reasonably designed to ensure compliance in all material respects with their policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling, and analysis of Personal Data (the “**Policies**”). Except as would not be expected, individually or in the aggregate, to have a Material Adverse Effect, the Company and its subsidiaries have at all times made all disclosures to users or customers required by applicable laws and regulatory rules or requirements, and none of such disclosures made or contained in any Policy have, to the knowledge of the Company, been inaccurate or in violation of any applicable laws and regulatory rules or requirements in any respect. Except as would not be expected, individually or in the aggregate, to have a Material Adverse Effect, the Company further certifies that neither it nor any subsidiary: (i) has received notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) is currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order, decree, or agreement that imposes any obligation or liability under any Privacy Law.

(ww) The Company is not a party to any agreement with an agent or underwriter for any other “at the market” or continuous equity transaction.

Any certificate signed by any officer or representative of the Company or any of its subsidiaries and delivered to the Agent or counsel for the Agent in connection with an issuance of Shares shall be deemed a representation and warranty by the Company to the Agent as to the matters covered thereby on the date of such certificate.

The Company acknowledges that the Agent and, for purposes of the opinions to be delivered pursuant to Section 4(p) hereof, counsel to the Company and counsel to the Agent, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

Section 3. ISSUANCE AND SALE OF COMMON SHARES

(a) Sale of Securities. On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company and the Agent agree that the Company may from time to time seek to sell Shares through the Agent, acting as sales agent, or directly to the Agent, acting as principal, as follows, with an aggregate Sales Price of up to the Maximum Program Amount, based on and in accordance with Issuance Notices as the Company may deliver, during the Agency Period.

(b) Mechanics of Issuances.

(i) Issuance Notice. Upon the terms and subject to the conditions set forth herein, on any Trading Day during the Agency Period on which the conditions set forth in Section 5(a) and Section 5(b) shall have been satisfied, the Company may exercise its right to request an issuance of Shares by delivering to the Agent an Issuance Notice; *provided, however*, that (A) in no event may the Company deliver an Issuance Notice to the extent that (I) the sum of (x) the aggregate Sales Price of the requested Issuance Amount, plus (y) the aggregate Sales Price of all Shares issued under all previous Issuance Notices effected pursuant to this Agreement, would exceed the Maximum Program Amount; and (B) prior to delivery of any Issuance Notice, the period set forth for any previous Issuance Notice shall have expired or been terminated. An Issuance Notice shall be considered delivered on the Trading Day that it is received by e-mail to the persons set forth in Schedule A hereto and confirmed by the Company by telephone (including a voicemail message to the persons so identified), with the understanding that, with adequate prior written notice, the Agent may modify the list of such persons from time to time.

(ii) Agent Efforts. Upon the terms and subject to the conditions set forth in this Agreement, upon the receipt of an Issuance Notice, the Agent will use its commercially reasonable efforts consistent with its normal sales and trading practices to place the Shares with respect to which the Agent has agreed to act as sales agent, subject to, and in accordance with the information specified in, the Issuance Notice, unless the sale of the Shares described therein has been suspended, cancelled or otherwise terminated in accordance with the terms of this Agreement. For the avoidance of doubt, the parties to this Agreement may modify an Issuance Notice at any time provided they both agree in writing to any such modification.

(iii) Method of Offer and Sale. The Shares may be offered and sold (A) in negotiated transactions with the consent of the Company or (B) by any other method permitted by law deemed to be an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act, including block transactions, sales made directly on the Principal Market or sales made into any other existing trading market of the Common Shares. Nothing in this Agreement shall be deemed to require either party to agree to the method of offer and sale specified in the preceding sentence, and (except as specified in clause (A) above) the method of placement of any Shares by the Agent shall be at the Agent’s discretion.

(iv) Confirmation to the Company. If acting as sales agent hereunder, the Agent will provide written confirmation to the Company no later than the opening of the Trading Day next following the Trading Day on which it has placed Shares hereunder setting forth the number of shares sold on such Trading Day, the corresponding Sales Price and the Issuance Price payable to the Company in respect thereof.

(v) Settlement. Each issuance of Shares will be settled on the applicable Settlement Date for such issuance of Shares and, subject to the provisions of Section 5, on or before each Settlement Date, the Company will, or will cause its transfer agent to, electronically transfer the Shares being sold by crediting the Agent or its designee's account at The Depository Trust Company through its Deposit/Withdrawal At Custodian (DWAC) System, or by such other means of delivery as may be mutually agreed upon by the parties hereto and, upon receipt of such Shares, which in all cases shall be freely tradable, transferable, registered shares in good deliverable form, the Agent will deliver, by wire transfer of immediately available funds, the related Issuance Price in same day funds delivered to an account designated by the Company prior to the Settlement Date. The Company may sell Shares to the Agent as principal at a price agreed upon at each relevant time Shares are sold pursuant to this Agreement (each, a "**Time of Sale**").

(vi) Suspension or Termination of Sales. Consistent with standard market settlement practices, the Company or the Agent may, upon notice to the other party hereto in writing or by telephone (confirmed immediately by verifiable email), suspend any sale of Shares, and the period set forth in an Issuance Notice shall immediately terminate; *provided, however*, that (A) such suspension and termination shall not affect or impair either party's obligations with respect to any Shares placed or sold hereunder prior to the receipt of such notice; (B) if the Company suspends or terminates any sale of Shares after the Agent confirms such sale to the Company, the Company shall still be obligated to comply with Section 3(b)(v) with respect to such Shares; and (C) if the Company defaults in its obligation to deliver Shares on a Settlement Date, the Company agrees that it will hold the Agent harmless against any loss, claim, damage or expense (including, without limitation, penalties, interest and reasonable legal fees and expenses), as incurred, arising out of or in connection with such default by the Company. The parties hereto acknowledge and agree that, in performing its obligations under this Agreement, the Agent may borrow Common Shares from stock lenders in the event that the Company has not delivered Shares to settle sales as required by subsection (v) above, and may use the Shares to settle or close out such borrowings. The Company agrees that no such notice shall be effective against the Agent unless it is made to the persons identified in writing by the Agent pursuant to Section 3(b)(i).

(vii) No Guarantee of Placement, Etc. The Company acknowledges and agrees that (A) there can be no assurance that the Agent will be successful in placing Shares; (B) the Agent will incur no liability or obligation to the Company or any other Person if it does not sell Shares; and (C) the Agent shall be under no obligation to purchase Shares on a principal basis pursuant to this Agreement, except as otherwise specifically agreed by the Agent and the Company.

(viii) Material Non-Public Information. Notwithstanding any other provision of this Agreement, the Company and the Agent agree that the Company shall not deliver any Issuance Notice to the Agent, and the Agent shall not be obligated to place any Shares, during any period in which the Company is in possession of material non-public information.

(c) Fees. As compensation for services rendered, the Company shall pay to the Agent, on the applicable Settlement Date, the Selling Commission for the applicable Issuance Amount (including with respect to any suspended or terminated sale pursuant to Section 3(b)(vi)) by the Agent deducting the Selling Commission from the applicable Issuance Amount.

(d) Expenses. The Company agrees to pay all costs, fees and expenses incurred in connection with the performance of its obligations hereunder and in connection with the transactions contemplated hereby, including without limitation (i) all expenses incident to the issuance and delivery of the Shares (including all printing and engraving costs); (ii) all fees and expenses of the registrar and transfer agent of the Shares; (iii) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Shares; (iv) all fees and expenses of the Company's counsel, independent public or certified public

accountants and other advisors; (v) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement (including financial statements, exhibits, schedules, consents and certificates of experts), the Prospectus, any Free Writing Prospectus prepared by or on behalf of, used by, or referred to by the Company, and all amendments and supplements thereto, and this Agreement; (vi) all filing fees, attorneys' fees and expenses incurred by the Company or the Agent in connection with qualifying or registering (or obtaining exemptions from the qualification or registration of) all or any part of the Shares for offer and sale under the state securities or blue sky laws, and, if requested by the Agent, preparing and printing a "**Blue Sky Survey**" or memorandum, and any supplements thereto, advising the Agent of such qualifications, registrations, determinations and exemptions; (vii) the reasonable fees and disbursements of the Agent's counsel, including the reasonable fees and expenses of counsel for the Agent in connection with, FINRA review, if any, and approval of the Agent's participation in the offering and distribution of the Shares; (viii) the filing fees incident to FINRA review, if any; and (ix) the fees and expenses associated with listing the Shares on the Principal Market. The fees and disbursements of Agent's counsel pursuant to subsections (vi) and (vii) above shall not exceed (A) \$50,000 in connection with the first Issuance Notice and (B) \$15,000 in connection with each Triggering Event Date on which the Company is required to provide a certificate pursuant to Section 4(o).

Section 4. ADDITIONAL COVENANTS

The Company covenants and agrees with the Agent as follows, in addition to any other covenants and agreements made elsewhere in this Agreement:

(a) Exchange Act Compliance. During the Agency Period, the Company shall (i) file, on a timely basis, with the Commission all reports and documents required to be filed under Section 13, 14 or 15 of the Exchange Act in the manner and within the time periods required by the Exchange Act; and (ii) either (A) include in its quarterly reports on Form 10-Q and its annual reports on Form 10-K, a summary detailing, for the relevant reporting period, (1) the number of Shares sold through the Agent pursuant to this Agreement and (2) the net proceeds received by the Company from such sales or, in the Company's sole discretion, (B) prepare a prospectus supplement containing, or include in such other filing permitted by the Securities Act or Exchange Act (each an "**Interim Prospectus Supplement**"), such summary information and, at least once a quarter and subject to this Section 4, file such Interim Prospectus Supplement pursuant to Rule 424(b) under the Securities Act (and within the time periods required by Rule 424(b) and Rule 430B under the Securities Act).

(b) Securities Act Compliance. After the date of this Agreement, the Company shall promptly advise the Agent in writing (i) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission; (ii) of the time and date of any filing of any post-effective amendment to the Registration Statement, any Rule 462(b) Registration Statement or any amendment or supplement to the Prospectus, or any Free Writing Prospectus; (iii) of the time and date that any post-effective amendment to the Registration Statement or any Rule 462(b) Registration Statement becomes effective; and (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto, any Rule 462(b) Registration Statement or any amendment or supplement to the Prospectus or of any order preventing or suspending the use of any Free Writing Prospectus or the Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Common Shares from any securities exchange upon which they are listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time, the Company will use its best efforts to obtain the lifting of such order at the earliest possible moment. Additionally, the Company agrees that it shall comply with the provisions of Rule 424(b) and Rule 433, as applicable, under the Securities Act and will use its reasonable

efforts to confirm that any filings made by the Company under such Rule 424(b) or Rule 433 were received in a timely manner by the Commission.

(c) Amendments and Supplements to the Prospectus and Other Securities Act Matters. If any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus so that the Prospectus does not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered to a purchaser, not misleading, or if in the opinion of the Agent or counsel for the Agent it is otherwise necessary to amend or supplement the Prospectus to comply with applicable law, including the Securities Act, the Company agrees (subject to Section 4(d) and 4(f)) to promptly prepare, file with the Commission and furnish at its own expense to the Agent, amendments or supplements to the Prospectus so that the statements in the Prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered to a purchaser, be misleading or so that the Prospectus, as amended or supplemented, will comply with applicable law including the Securities Act. Neither the Agent's consent to, or delivery of, any such amendment or supplement shall constitute a waiver of any of the Company's obligations under Sections 4(d) and 4(f). Notwithstanding the foregoing, the Company shall not be required to file such amendment or supplement if there is no pending Issuance Notice and the Company believes that it is in its best interests not to file such amendment or supplement.

(d) Agent's Review of Proposed Amendments and Supplements. Prior to amending or supplementing the Registration Statement (including any registration statement filed under Rule 462(b) under the Securities Act) or the Prospectus (excluding any amendment or supplement through incorporation of any report filed under the Exchange Act), the Company shall furnish to the Agent for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each such proposed amendment or supplement, and the Company shall not file or use any such proposed amendment or supplement without the Agent's prior consent, and to file with the Commission within the applicable period specified in Rule 424(b) under the Securities Act any prospectus required to be filed pursuant to such Rule.

(e) Use of Free Writing Prospectus. Neither the Company nor the Agent has prepared, used, referred to or distributed, or will prepare, use, refer to or distribute, without the other party's prior written consent, any "written communication" that constitutes a "free writing prospectus" as such terms are defined in Rule 405 under the Securities Act with respect to the offering contemplated by this Agreement (any such free writing prospectus being referred to herein as a "**Free Writing Prospectus**").

(f) Free Writing Prospectuses. The Company shall furnish to the Agent for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each proposed free writing prospectus or any amendment or supplement thereto to be prepared by or on behalf of, used by, or referred to by the Company and the Company shall not file, use or refer to any proposed free writing prospectus or any amendment or supplement thereto without the Agent's consent. The Company shall furnish to the Agent, without charge, as many copies of any free writing prospectus prepared by or on behalf of, or used by the Company, as the Agent may reasonably request. If at any time when a prospectus is required by the Securities Act (including, without limitation, pursuant to Rule 173(d)) to be delivered in connection with sales of the Shares (but in any event if at any time through and including the date of this Agreement) there occurred or occurs an event or development as a result of which any free writing prospectus prepared by or on behalf of, used by, or referred to by the Company conflicted or would conflict with the information contained in the Registration Statement or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at that subsequent time, not misleading, the Company shall promptly amend or supplement such free writing prospectus to eliminate or correct such conflict or so that the statements in such

free writing prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at such subsequent time, not misleading, as the case may be; *provided, however*, that prior to amending or supplementing any such free writing prospectus, the Company shall furnish to the Agent for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of such proposed amended or supplemented free writing prospectus and the Company shall not file, use or refer to any such amended or supplemented free writing prospectus without the Agent's consent.

(g) Filing of Agent Free Writing Prospectuses. The Company shall not take any action that would result in the Agent or the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of the Agent that the Agent otherwise would not have been required to file thereunder.

(h) Copies of Registration Statement and Prospectus. After the date of this Agreement through the last time that a prospectus is required by the Securities Act (including, without limitation, pursuant to Rule 173(d)) to be delivered in connection with sales of the Shares, the Company agrees to furnish the Agent with copies (which may be electronic copies) of the Registration Statement and each amendment thereto, and with copies of the Prospectus and each amendment or supplement thereto in the form in which it is filed with the Commission pursuant to the Securities Act or Rule 424(b) under the Securities Act, both in such quantities as the Agent may reasonably request from time to time; and, if the delivery of a prospectus is required under the Securities Act or under the blue sky or securities laws of any jurisdiction at any time on or prior to the applicable Settlement Date for any period set forth in an Issuance Notice in connection with the offering or sale of the Shares and if at such time any event has occurred as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus is delivered, not misleading, or, if for any other reason it is necessary during such same period to amend or supplement the Prospectus or to file under the Exchange Act any document incorporated by reference in the Prospectus in order to comply with the Securities Act or the Exchange Act, to notify the Agent and to request that the Agent suspend offers to sell Shares (and, if so notified, the Agent shall cease such offers as soon as practicable); and if the Company decides to amend or supplement the Registration Statement or the Prospectus as then amended or supplemented, to advise the Agent promptly by telephone (with confirmation in writing) and to prepare and cause to be filed promptly with the Commission an amendment or supplement to the Registration Statement or the Prospectus as then amended or supplemented that will correct such statement or omission or effect such compliance; provided, however, that if during such same period the Agent is required to deliver a prospectus in respect of transactions in the Shares, the Company shall promptly prepare and file with the Commission such an amendment or supplement.

(i) Blue Sky Compliance. The Company shall cooperate with the Agent and counsel for the Agent to qualify or register the Shares for sale under (or obtain exemptions from the application of) the state securities or blue sky laws or Canadian provincial securities laws of those jurisdictions designated by the Agent, shall comply with such laws and shall continue such qualifications, registrations and exemptions in effect so long as required for the distribution of the Shares. The Company shall not be required to qualify as a foreign corporation or to take any action that would subject it to general service of process in any such jurisdiction where it is not presently qualified or where it would be subject to taxation as a foreign corporation. The Company will advise the Agent promptly of the suspension of the qualification or registration of (or any such exemption relating to) the Shares for offering, sale or trading in any jurisdiction or any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any order suspending such

qualification, registration or exemption, the Company shall use its best efforts to obtain the withdrawal thereof at the earliest possible moment.

(j) Earnings Statement. As soon as practicable, the Company will make generally available to its security holders and to the Agent an earnings statement (which need not be audited) covering a period of at least twelve months beginning with the first fiscal quarter of the Company occurring after the date of this Agreement which shall satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 under the Securities Act; provided that the Company will be deemed to have furnished such statement to its security holders and the Agent to the extent they are filed on EDGAR or any successor system.

(k) Listing; Reservation of Shares. (a) The Company will maintain the listing of the Shares on the Principal Market; and (b) the Company will reserve and keep available at all times, free of preemptive rights, Shares for the purpose of enabling the Company to satisfy its obligations under this Agreement.

(l) Transfer Agent. The Company shall engage and maintain, at its expense, a registrar and transfer agent for the Shares.

(m) Due Diligence. During the term of this Agreement, the Company will reasonably cooperate with any reasonable due diligence review conducted by the Agent in connection with the transactions contemplated hereby, including, without limitation, providing information and making available documents and senior corporate officers, during normal business hours and at the Company's principal offices, as the Agent may reasonably request from time to time.

(n) Representations and Warranties. The Company acknowledges that each delivery of an Issuance Notice and each delivery of Shares on a Settlement Date shall be deemed to be (i) an affirmation to the Agent that the representations and warranties of the Company contained in or made pursuant to this Agreement are true and correct as of the date of such Issuance Notice or of such Settlement Date, as the case may be, as though made at and as of each such date, except as may be disclosed in the Prospectus (including any documents incorporated by reference therein and any supplements thereto); and (ii) an undertaking that the Company will advise the Agent if any of such representations and warranties will not be true and correct as of the Settlement Date for the Shares relating to such Issuance Notice, as though made at and as of each such date (except that such representations and warranties shall be deemed to relate to the Registration Statement and the Prospectus as amended and supplemented relating to such Shares).

(o) Deliverables at Triggering Event Dates; Certificates. The Company agrees that on or prior to the date of the first Issuance Notice and, during the term of this Agreement after the date of the first Issuance Notice, upon:

(A) the filing of the Prospectus or the amendment or supplement of any Registration Statement or Prospectus (other than a prospectus supplement relating solely to an offering of securities other than the Shares or a prospectus filed pursuant to Section 4(a)(ii)(B)), by means of a post-effective amendment, sticker or supplement, but not by means of incorporation of documents by reference into the Registration Statement or Prospectus;

(B) the filing with the Commission of an annual report on Form 10-K or a quarterly report on Form 10-Q (including any Form 10-K/A or Form 10-Q/A containing amended financial information or a material amendment to the previously filed annual report on Form 10-K or quarterly report on Form 10-Q), in each case, of the Company; or

(C) the filing with the Commission of a current report on Form 8-K of the Company containing amended financial information (other than information “furnished” pursuant to Item 2.02 or 7.01 of Form 8-K or to provide disclosure pursuant to Item 8.01 of Form 8-K relating to reclassification of certain properties as discontinued operations in accordance with Statement of Financial Accounting Standards No. 144) that is material to the offering of securities of the Company in the Agent’s reasonable discretion;

(any such event, a “**Triggering Event Date**”), the Company shall furnish the Agent (but in the case of clause (C) above only if the Agent reasonably determines that the information contained in such current report on Form 8-K of the Company is material) with a certificate as of the Triggering Event Date, in the form and substance satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as amended or supplemented, (A) confirming that the representations and warranties of the Company contained in this Agreement are true and correct, (B) that the Company has performed all of its obligations hereunder to be performed on or prior to the date of such certificate and as to the matters set forth in Section 5(a)(iii) hereof, and (C) containing any other certification that the Agent shall reasonably request. The requirement to provide a certificate under this Section 4(o) shall be waived for any Triggering Event Date occurring at a time when no Issuance Notice is pending or a suspension is in effect, which waiver shall continue until the earlier to occur of the date the Company delivers instructions for the sale of Shares hereunder (which for such calendar quarter shall be considered a Triggering Event Date) and the next occurring Triggering Event Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Shares following a Triggering Event Date when a suspension was in effect and did not provide the Agent with a certificate under this Section 4(o), then before the Company delivers the instructions for the sale of Shares or the Agent sells any Shares pursuant to such instructions, the Company shall provide the Agent with a certificate in conformity with this Section 4(o) dated as of the date that the instructions for the sale of Shares are issued.

(p) Legal Opinions. On or prior to the date of the first Issuance Notice and on or prior to each Triggering Event Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 4(o) for which no waiver is applicable and excluding the date of this Agreement, a negative assurances letter and the written legal opinion of Cooley LLP, counsel to the Company, and Seed Intellectual Property Group LLP, intellectual property counsel to the Company, each dated the date of delivery, in form and substance reasonably satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented. In lieu of such opinions for subsequent periodic filings, in the discretion of the Agent, the Company may furnish a reliance letter from such counsel to the Agent, permitting the Agent to rely on a previously delivered opinion letter, modified as appropriate for any passage of time or Triggering Event Date (except that statements in such prior opinion shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented as of such Triggering Event Date).

(q) Comfort Letter. On or prior to the date of the first Issuance Notice and on or prior to each Triggering Event Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 4(o) for which no waiver is applicable and excluding the date of this Agreement, the Company shall cause BDO USA, LLP, the independent registered public accounting firm who has audited the financial statements included or incorporated by reference in the Registration Statement, to furnish the Agent a comfort letter, dated the date of delivery, in form and substance reasonably satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel; provided, however, that any such comfort letter will only be required on the Triggering Event Date specified to the extent that it contains financial statements filed with the Commission under the Exchange Act and incorporated or deemed to be incorporated by reference into a Prospectus. If requested by the Agent, the Company shall also cause

a comfort letter to be furnished to the Agent within ten (10) Trading Days of the date of occurrence of any material transaction or event requiring the filing of a current report on Form 8-K containing material amended financial information of the Company, including the restatement of the Company's financial statements. The Company shall be required to furnish no more than one comfort letter hereunder per calendar quarter.

(r) Secretary's Certificate. On or prior to the date of the first Issuance Notice, the Company shall furnish the Agent a certificate executed by the Secretary of the Company, signing in such capacity, dated the date of delivery (i) certifying that attached thereto are true and complete copies of the resolutions duly adopted by the Board of Directors of the Company authorizing the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby (including, without limitation, the issuance of the Shares pursuant to this Agreement), which authorization shall be in full force and effect on and as of the date of such certificate, (ii) certifying and attesting to the office, incumbency, due authority and specimen signatures of each Person who executed this Agreement for or on behalf of the Company and (iii) containing any other certification that the Agent shall reasonably request.

(s) Agent's Own Account; Clients' Account. The Company consents to the Agent trading, in compliance with applicable law, in the Common Shares for the Agent's own account and for the account of its clients at the same time as sales of the Shares occur pursuant to this Agreement.

(t) Investment Limitation. The Company shall not invest, or otherwise use the proceeds received by the Company from its sale of the Shares in such a manner as would require the Company or any of its subsidiaries to register as an investment company under the Investment Company Act.

(u) Market Activities. The Company will not take, directly or indirectly, any action designed to or that might be reasonably expected to cause or result in stabilization or manipulation of the price of the Shares or any other reference security, whether to facilitate the sale or resale of the Shares or otherwise, and the Company will, and shall cause each of its Affiliates to, comply with all applicable provisions of Regulation M. If the limitations of Rule 102 of Regulation M ("**Rule 102**") do not apply with respect to the Shares or any other reference security pursuant to any exception set forth in Section (d) of Rule 102, then promptly upon notice from the Agent (or, if later, at the time stated in the notice), the Company will, and shall cause each of its Affiliates to, comply with Rule 102 as though such exception were not available but the other provisions of Rule 102 (as interpreted by the Commission) did apply. The Company shall promptly notify the Agent if it no longer meets the requirements set forth in Section (d) of Rule 102.

(v) Notice of Other Sale. Without the written consent of the Agent, the Company will not, directly or indirectly, (i) offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Shares or securities convertible into or exchangeable for Common Shares (other than Shares hereunder), warrants or any rights to purchase or acquire Common Shares, during the period beginning on the third Trading Day immediately prior to the date on which any Issuance Notice is delivered to the Agent hereunder and ending on the third Trading Day immediately following the Settlement Date with respect to Shares sold pursuant to such Issuance Notice; (ii) effect a reverse stock split, recapitalization, share consolidation, reclassification or similar transaction affecting the outstanding Common Shares; or (iii) enter into any other "at the market" or continuous equity transaction offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Shares (other than the Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Shares, warrants or any rights to purchase or acquire, Common Shares prior to the termination of this Agreement; provided, however, that such restrictions will not be required in connection with the Company's (i) issuance or sale of Common Shares, options to purchase Common Shares or Common Shares issuable upon the exercise of options or other equity awards pursuant to any employee or director share option, incentive or benefit plan, share purchase or ownership plan, long-term incentive plan, dividend reinvestment plan, inducement award under Principal Market rules or other

compensation plan of the Company or its subsidiaries, as in effect on the date of this Agreement, (ii) issuance or sale of Common Shares issuable upon exchange, conversion or redemption of securities or the exercise or vesting of warrants, options or other equity awards outstanding at the date of this Agreement and (iii) modification of any outstanding options, warrants of any rights to purchase or acquire Common Shares.

Section 5. CONDITIONS TO DELIVERY OF ISSUANCE NOTICES AND TO SETTLEMENT

(a) Conditions Precedent to the Right of the Company to Deliver an Issuance Notice and the Obligation of the Agent to Sell Shares. The right of the Company to deliver an Issuance Notice hereunder is subject to the satisfaction, on the date of delivery of such Issuance Notice, and the obligation of the Agent to use its commercially reasonable efforts to place Shares during the applicable period set forth in the Issuance Notice is subject to the satisfaction, on each Trading Day during the applicable period set forth in the Issuance Notice, of each of the following conditions:

- (i) Accuracy of the Company's Representations and Warranties; Performance by the Company. The Company shall have delivered the certificate required to be delivered pursuant to Section 4(o) on or before the date on which delivery of such certificate is required pursuant to Section 4(o). The Company shall have performed, satisfied and complied with all covenants, agreements and conditions required by this Agreement to be performed, satisfied or complied with by the Company at or prior to such date, including, but not limited to, the covenants contained in Section 4(p), Section 4(q) and Section 4(r).
- (ii) No Injunction. No statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction or any self-regulatory organization having authority over the matters contemplated hereby that prohibits or directly and materially adversely affects any of the transactions contemplated by this Agreement, and no proceeding shall have been commenced that may have the effect of prohibiting or materially adversely affecting any of the transactions contemplated by this Agreement.
- (iii) Material Adverse Changes. Except as disclosed in the Prospectus and the Time of Sale Information, (a) in the judgment of the Agent there shall not have occurred any Material Adverse Change; and (b) there shall not have occurred any downgrading, nor shall any notice have been given of any intended or potential downgrading or of any review for a possible change that does not indicate the direction of the possible change, in the rating accorded any securities of the Company or any of its subsidiaries by any "nationally recognized statistical rating organization" as such term is defined for purposes of Section 3(a)(62) of the Exchange Act.
- (iv) No Suspension of Trading in or Delisting of Common Shares; Other Events. The trading of the Common Shares (including without limitation the Shares) shall not have been suspended by the Commission, the Principal Market or FINRA and the Common Shares (including without limitation the Shares) shall have been approved for listing or quotation on and shall not have been delisted from the Nasdaq Stock Market, the New York Stock Exchange or any of their constituent markets. There shall not have occurred (and be continuing in the case of occurrences under clauses (i) and (ii) below) any of the following: (i) trading or quotation in any of the Company's securities shall have been suspended or limited by the Commission or by the Principal Market or trading in securities generally on either the Principal Market shall have been suspended or limited, or minimum or maximum prices shall have been generally established on any of such stock exchanges by the Commission or the FINRA; (ii) a general

banking moratorium shall have been declared by any of federal or New York, authorities; or (iii) there shall have occurred any outbreak or escalation of national or international hostilities or any crisis or calamity, or any change in the United States or international financial markets, or any substantial change or development involving a prospective substantial change in United States' or international political, financial or economic conditions, as in the judgment of the Agent is material and adverse and makes it impracticable to market the Shares in the manner and on the terms described in the Prospectus or to enforce contracts for the sale of securities.

(b) Documents Required to be Delivered on each Issuance Notice Date. The Agent's obligation to use its commercially reasonable efforts to place Shares hereunder shall additionally be conditioned upon the delivery to the Agent on or before the Issuance Notice Date of a certificate in form and substance reasonably satisfactory to the Agent, executed by the Chief Executive Officer, President or Chief Financial Officer of the Company, to the effect that all conditions to the delivery of such Issuance Notice shall have been satisfied as at the date of such certificate (which certificate shall not be required if the foregoing representations shall be set forth in the Issuance Notice).

(c) No Misstatement or Material Omission. Agent shall not have advised the Company that the Registration Statement, the Prospectus or the Times of Sales Information, or any amendment or supplement thereto, contains an untrue statement of fact that in the Agent's reasonable opinion is material, or omits to state a fact that in the Agent's reasonable opinion is material and is required to be stated therein or is necessary to make the statements therein not misleading.

(d) Agent Counsel Legal Opinion. Agent shall have received from Latham & Watkins LLP, counsel for Agent, a negative assurances letter, on or before the date on which the delivery of the Company counsel legal opinion is required pursuant to Section 4(p), with respect to such matters as Agent may reasonably require, and the Company shall have furnished to such counsel such documents as they request for enabling them to pass upon such matters.

Section 6. INDEMNIFICATION AND CONTRIBUTION

(a) Indemnification of the Agent. The Company agrees to indemnify and hold harmless the Agent, its officers and employees, and each person, if any, who controls the Agent within the meaning of the Securities Act or the Exchange Act against any loss, claim, damage, liability or expense, as incurred, to which the Agent or such officer, employee or controlling person may become subject, under the Securities Act, the Exchange Act, other federal or state statutory law or regulation, or the laws or regulations of foreign jurisdictions where Shares have been offered or sold or at common law or otherwise (including in settlement of any litigation), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, including any information deemed to be a part thereof pursuant to Rule 430B under the Securities Act, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading; or (ii) any untrue statement or alleged untrue statement of a material fact contained in any Free Writing Prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433(d) of the Securities Act or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, and to reimburse the Agent and each such officer, employee and controlling person for any and all expenses (including the reasonable and documented fees and disbursements of counsel chosen by the Agent) as such expenses are reasonably incurred by the Agent or such officer, employee or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action; provided, however, that

the foregoing indemnity agreement shall not apply to any loss, claim, damage, liability or expense to the extent, but only to the extent, arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with written information furnished to the Company by the Agent expressly for use in the Registration Statement, any such Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), it being understood and agreed that the only such information furnished by the Agent to the Company consists of the information set forth in the information described in Section 6(b) below. The indemnity agreement set forth in this Section 6(a) shall be in addition to any liabilities that the Company may otherwise have.

(b) Indemnification of the Company, its Directors and Officers. The Agent agrees to indemnify and hold harmless the Company, each of its directors, each of its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of the Securities Act or the Exchange Act against any loss, claim, damage, liability or expense, as incurred, to which the Company or any such director, officer or controlling person may become subject, under the Securities Act, the Exchange Act, or other federal or state statutory law or regulation, or the laws or regulations of foreign jurisdictions where Shares have been offered or sold or at common law or otherwise (including in settlement of any litigation), arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, including any information deemed to be a part thereof pursuant to Rule 430B under the Securities Act, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading; or (ii) any untrue statement or alleged untrue statement of a material fact contained in any Free Writing Prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433(d) of the Securities Act or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; but only to the extent arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with written information furnished to the Company by the Agent expressly for use in the Registration Statement, any such Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), it being understood and agreed that the only such information furnished by the Agent to the Company consists of the information set forth in the first sentence of the ninth paragraph under the caption "Plan of Distribution" in the Prospectus, and to reimburse the Company and each such director, officer and controlling person for any and all expenses (including the fees and disbursements of counsel chosen by the Company) as such expenses are reasonably incurred by the Company or such officer, director or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action. The indemnity agreement set forth in this Section 6(b) shall be in addition to any liabilities that the Agent or the Company may otherwise have.

(c) Notifications and Other Indemnification Procedures. Promptly after receipt by an indemnified party under this Section 6 of notice of the commencement of any action, such indemnified party will, if a claim in respect thereof is to be made against an indemnifying party under this Section 6, notify the indemnifying party in writing of the commencement thereof, but the omission to so notify the indemnifying party will not relieve it from any liability which it may have to any indemnified party for contribution or otherwise than under the indemnity agreement contained in this Section 6 or to the extent it is not prejudiced as a proximate result of such failure. In case any such action is brought against any indemnified party and such indemnified party seeks or intends to seek indemnity from an indemnifying party, the indemnifying party will be entitled to participate in, and, to the extent that it shall elect, jointly with all other indemnifying parties similarly notified, by written notice delivered to the indemnified party promptly after receiving the aforesaid notice from such indemnified party, to assume the defense thereof with counsel reasonably satisfactory to such indemnified party; provided, however, if the defendants in any such action include both

the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded based on the advice of counsel that a conflict may arise between the positions of the indemnifying party and the indemnified party in conducting the defense of any such action or that there may be legal defenses available to it and/or other indemnified parties which are different from or additional to those available to the indemnifying party, the indemnified party or parties shall have the right to select separate counsel to assume such legal defenses and to otherwise participate in the defense of such action on behalf of such indemnified party or parties. Upon receipt of notice from the indemnifying party to such indemnified party of such indemnifying party's election so to assume the defense of such action and approval by the indemnified party of counsel, the indemnifying party will not be liable to such indemnified party under this Section 6 for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof unless (i) the indemnified party shall have employed separate counsel in accordance with the proviso to the preceding sentence (it being understood, however, that the indemnifying party shall not be liable for the fees and expenses of more than one separate counsel (together with local counsel), representing the indemnified parties who are parties to such action), which counsel (together with any local counsel) for the indemnified parties shall be selected by the Agent (in the case of counsel for the indemnified parties referred to in Section 6(a) above), (ii) the indemnifying party shall not have employed counsel satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of commencement of the action or (iii) the indemnifying party has authorized in writing the employment of counsel for the indemnified party at the expense of the indemnifying party, in each of which cases the fees and expenses of counsel shall be at the expense of the indemnifying party and shall be paid as they are incurred.

(d) Settlements. The indemnifying party under this Section 6 shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party against any loss, claim, damage, liability or expense by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by Section 6(c) hereof, the indemnifying party agrees that it shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request; and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened action, suit or proceeding in respect of which any indemnified party is or could have been a party and indemnity was or could have been sought hereunder by such indemnified party, unless such settlement, compromise or consent includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such action, suit or proceeding.

(e) Contribution. If the indemnification provided for in this Section 6 is for any reason held to be unavailable to or otherwise insufficient to hold harmless an indemnified party in respect of any losses, claims, damages, liabilities or expenses referred to therein, then each indemnifying party shall contribute to the aggregate amount paid or payable by such indemnified party, as incurred, as a result of any losses, claims, damages, liabilities or expenses referred to therein (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Agent, on the other hand, from the offering of the Shares pursuant to this Agreement; or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company, on the one hand, and the Agent, on the other hand, in connection with the statements or omissions which resulted in such losses, claims, damages, liabilities or expenses, as well as any other relevant equitable considerations. The relative benefits received by the Company, on the one hand, and the Agent, on the other hand, in connection with the offering of the Shares

pursuant to this Agreement shall be deemed to be in the same respective proportions as the total gross proceeds from the offering of the Shares (before deducting expenses) received by the Company bear to the total commissions received by the Agent. The relative fault of the Company, on the one hand, and the Agent, on the other hand, shall be determined by reference to, among other things, whether any such untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company, on the one hand, or the Agent, on the other hand, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

The amount paid or payable by a party as a result of the losses, claims, damages, liabilities and expenses referred to above shall be deemed to include, subject to the limitations set forth in Section 6(c), any legal or other fees or expenses reasonably incurred by such party in connection with investigating or defending any action or claim. The provisions set forth in Section 6(c) with respect to notice of commencement of any action shall apply if a claim for contribution is to be made under this Section 6(e); *provided, however*, that no additional notice shall be required with respect to any action for which notice has been given under Section 6(c) for purposes of indemnification.

The Company and the Agent agree that it would not be just and equitable if contribution pursuant to this Section 6(e) were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to in this Section 6(e).

Notwithstanding the provisions of this Section 6(e), the Agent shall not be required to contribute any amount in excess of the agent fees received by the Agent in connection with the offering contemplated hereby. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 6(e), each officer and employee of the Agent and each person, if any, who controls the Agent within the meaning of the Securities Act or the Exchange Act shall have the same rights to contribution as the Agent, and each director of the Company, each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company with the meaning of the Securities Act and the Exchange Act shall have the same rights to contribution as the Company.

Section 7. TERMINATION & SURVIVAL

(a) Term. Subject to the provisions of this Section 7, the term of this Agreement shall continue from the date of this Agreement until the end of the Agency Period, unless earlier terminated by the parties to this Agreement pursuant to this Section 7.

(b) Termination; Survival Following Termination.

- (i) Either party may terminate this Agreement prior to the end of the Agency Period, by giving written notice as required by this Agreement, upon notice to the other party; provided that, (A) if the Company terminates this Agreement after the Agent confirms to the Company any sale of Shares, the Company shall remain obligated to comply with Section 3(b)(v) with respect to such Shares and (B) Section 2, Section 6, Section 7 and Section 8 shall survive termination of this Agreement. If termination shall occur prior to the Settlement Date for any sale of Shares, such sale shall nevertheless settle in accordance with the terms of this Agreement.
- (ii) In addition to the survival provision of Section 7(b)(i), the respective indemnities, agreements, representations, warranties and other statements of the Company, of its officers and of the Agent set forth in or made pursuant to this Agreement will remain in full force and effect,

regardless of any investigation made by or on behalf of the Agent or the Company or any of its or their partners, officers or directors or any controlling person, as the case may be, and, anything herein to the contrary notwithstanding, will survive delivery of and payment for the Shares sold hereunder and any termination of this Agreement.

Section 8. MISCELLANEOUS

(a) Press Releases and Disclosure. The Company may issue a press release describing the material terms of the transactions contemplated hereby as soon as practicable following the date of this Agreement, and may file with the Commission a Current Report on Form 8-K, with this Agreement attached as an exhibit thereto, describing the material terms of the transactions contemplated hereby, and the Company shall consult with the Agent prior to making such disclosures, and the parties hereto shall use all commercially reasonable efforts, acting in good faith, to agree upon a text for such disclosures that is reasonably satisfactory to all parties hereto. No party hereto shall issue thereafter any press release or like public statement (including, without limitation, any disclosure required in reports filed with the Commission pursuant to the Exchange Act) related to this Agreement or any of the transactions contemplated hereby without the prior written approval of the other party hereto, except as may be necessary or appropriate in the reasonable opinion of the party seeking to make disclosure to comply with the requirements of applicable law or stock exchange rules. If any such press release or like public statement is so required, the party making such disclosure shall consult with the other party prior to making such disclosure, and the parties shall use all commercially reasonable efforts, acting in good faith, to agree upon a text for such disclosure that is reasonably satisfactory to all parties hereto.

(b) No Advisory or Fiduciary Relationship. The Company acknowledges and agrees that (i) the transactions contemplated by this Agreement, including the determination of any fees, are arm's-length commercial transactions between the Company and the Agent, (ii) when acting as a principal under this Agreement, the Agent is and has been acting solely as a principal and is not the agent or fiduciary of the Company, or its stockholders, creditors, employees or any other party, (iii) the Agent has not assumed nor will assume an advisory or fiduciary responsibility in favor of the Company with respect to the transactions contemplated hereby or the process leading thereto (irrespective of whether the Agent has advised or is currently advising the Company on other matters) and the Agent does not have any obligation to the Company with respect to the transactions contemplated hereby except the obligations expressly set forth in this Agreement, (iv) the Agent and its respective affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company, and (v) the Agent has not provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated hereby and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

(c) Research Analyst Independence. The Company acknowledges that the Agent's research analysts and research departments are required to and should be independent from their respective investment banking divisions and are subject to certain regulations and internal policies, and as such the Agent's research analysts may hold views and make statements or investment recommendations and/or publish research reports with respect to the Company or the offering that differ from the views of their respective investment banking divisions. The Company understands that the Agent is a full service securities firm and as such from time to time, subject to applicable securities laws, may effect transactions for its own account or the account of its customers and hold long or short positions in debt or equity securities of the companies that may be the subject of the transactions contemplated by this Agreement.

(d) Notices. All communications hereunder shall be in writing and shall be mailed, hand delivered or telecopied and confirmed to the parties hereto as follows:

If to the Agent:

Jefferies LLC
520 Madison Avenue
New York, NY 10022
Facsimile:
Attention: General Counsel

with a copy (which shall not constitute notice) to:

Latham & Watkins LLP
12670 High Bluff Drive
San Diego, CA 92130
Facsimile: (858) 523-5450
Attention: Cheston J. Larson, Esq.

If to the Company:

Retrophin, Inc.
3721 Valley Centre Drive, Suite 200
San Diego, CA 92130
Attention: Chief Executive Officer.

with a copy (which shall not constitute notice) to:

Cooley LLP
4401 Eastgate Mall
San Diego, CA 92121
Facsimile: (858) 550-6420
Attention: Jason L. Kent, Esq.

Any party hereto may change the address for receipt of communications by giving written notice to the others in accordance with this Section 8(d).

(e) Successors. This Agreement will inure to the benefit of and be binding upon the parties hereto, and to the benefit of the employees, officers and directors and controlling persons referred to in Section 6, and in each case their respective successors, and no other person will have any right or obligation hereunder. The term "successors" shall not include any purchaser of the Shares as such from the Agent merely by reason of such purchase.

(f) Partial Unenforceability. The invalidity or unenforceability of any Article, Section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other Article, Section, paragraph or provision hereof. If any Article, Section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

(g) Governing Law Provisions. This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York applicable to agreements made and to be performed in such state. Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby may be instituted in the federal courts of the United States of America located in the Borough of Manhattan in the City of New York or the courts of the State of New York in each case located

in the Borough of Manhattan in the City of New York (collectively, the “**Specified Courts**”), and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court, as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party’s address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum.

(h) General Provisions. This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This Agreement may be executed in two or more counterparts, each one of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument, and may be delivered by facsimile transmission or by electronic delivery of a portable document format (PDF) file. This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. The Article and Section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

[Signature Page Immediately Follows]

If the foregoing is in accordance with your understanding of our agreement, kindly sign and return to the Company the enclosed copies hereof, whereupon this instrument, along with all counterparts hereof, shall become a binding agreement in accordance with its terms

Very truly yours,

RETROPHIN, INC.

By: /s/ Laura M. Clague -
Name: Laura M. Clague
Title: Chief Financial Officer

The foregoing Agreement is hereby confirmed and accepted by the Agent in New York, New York as of the date first above written.

JEFFERIES LLC

By: /s/ Don Lynaugh
Name: Don Lynaugh
Title: Managing Director

EXHIBIT A
ISSUANCE NOTICE

[Date]

Jefferies LLC
520 Madison Avenue
New York, New York 10022

Attn: [_____]

Reference is made to the Open Market Sale Agreement between Retrophin, Inc. (the “**Company**”) and Jefferies LLC (the “**Agent**”) dated as of February 24, 2020. The Company confirms that all conditions to the delivery of this Issuance Notice are satisfied as of the date hereof.

Date of Delivery of Issuance Notice (determined pursuant to Section 3(b)(i)): _____

Issuance Amount (equal to the total Sales Price for such Shares):

\$_____

Number of days in selling period: _____

First date of selling period: _____

Last date of selling period: _____

Settlement Date(s) if other than standard T+2 settlement:

Floor Price Limitation (in no event less than \$1.00 without the prior written consent of the Agent, which consent may be withheld in the Agent’s sole discretion): \$ ____ per share

Comments: _____

By: _____

Name:

Title:

Schedule A

Notice Parties

The Agent

Michael Brinkman (mbrinkman@jefferies.com)

Michael Magarro (mmagarro@jefferies.com)

Donald Lynaugh (dlynaugh@jefferies.com)

DESCRIPTION OF COMMON STOCK

General

Our authorized capital stock consists of 100,000,000 shares of common stock, \$0.0001 par value per share, and 20,000,000 shares of preferred stock, \$0.0001 par value per share. All of our authorized preferred stock is undesignated, except for 1,000 Class "A" Preferred shares, par value \$0.001 per share. No Class "A" Preferred shares are outstanding. Our board of directors is authorized, without stockholder approval except as required by the listing standards of the Nasdaq Global Market, to issue additional shares of our capital stock.

The following summary description of our common stock is based on the provisions of our certificate of incorporation, as amended, as well as our amended and restated bylaws, and the applicable provisions of the Delaware General Corporation Law. This information is qualified entirely by reference to the applicable provisions of our certificate of incorporation, as amended, amended and restated bylaws, and the Delaware General Corporation Law.

Voting Rights

The holders of our common stock are entitled to one vote per share on matters on which our stockholders vote. There are no cumulative voting rights. Generally, all matters to be voted on by stockholders must be approved by a majority (or, in the case of election of directors, by a plurality) of the votes entitled to be cast by all shares of our common stock that are present in person or represented by proxy. Holders representing 50% of our common stock issued, outstanding and entitled to vote, represented in person or by proxy, are necessary to constitute a quorum at any meeting of our stockholders. A vote by the holders of a majority of our outstanding shares is required to effectuate certain fundamental corporate changes such as liquidation, merger or an amendment to our certificate of incorporation.

Dividends

Subject to any preferential dividend rights of any outstanding shares of preferred stock, holders of our common stock are entitled to receive dividends, if declared by our board of directors, out of funds that we may legally use to pay dividends.

Liquidation, Dissolution or Winding Up

If we liquidate or dissolve, holders of our common stock are entitled to share ratably in our assets once our debts and any liquidation preference owed to any then-outstanding preferred stockholders are paid.

Rights and Preferences

Our certificate of incorporation does not provide our common stock with any redemption, conversion or preemptive rights.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. The transfer agent and registrar's address is 59 Maiden Lane, New York, New York 10038.

Listing on the Nasdaq Global Market

Our common stock is listed on the Nasdaq Global Market under the symbol "RTRX."

Anti-Takeover Effects of Provisions of our Certificate of Incorporation, our Bylaws and Delaware Law

Some provisions of Delaware law, our certificate of incorporation, as amended, and our amended and restated bylaws contain provisions that could make the following transactions more difficult: acquisition of us by means of a tender offer; acquisition of us by means of a proxy contest or otherwise; or removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that might result in a premium over the market price for our shares. These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits persons deemed “interested stockholders” from engaging in a “business combination” with a publicly-held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an “interested stockholder” is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation’s voting stock. Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors, such as discouraging takeover attempts that might result in a premium over the market price of our common stock.



Jason L. Kent
+1 858 550 6044
jkent@cooley.com

February 24, 2020

Retrophin, Inc.
3721 Valley Centre Drive, Suite 200
San Diego, CA 92130

Ladies and Gentlemen:

We have acted as counsel to Retrophin, Inc., a Delaware corporation (the “**Company**”), in connection with the sale of shares of its common stock, par value \$0.0001 per share, having an aggregate offering price of up to \$100,000,000 (the “**Shares**”) pursuant to the Registration Statement on Form S-3 (File No. 333-227182) (the “**Registration Statement**”) filed with the Securities and Exchange Commission (the “**Commission**”) under the Securities Act of 1933, as amended (the “**Act**”), the prospectus included within the Registration Statement (the “**Base Prospectus**”) and the prospectus supplement dated February 24, 2020 to be filed with the Commission pursuant to Rule 424(b) promulgated under the Act (together with the Base Prospectus, the “**Prospectus**”). The Shares are to be sold by the Company in accordance with that certain Open Market Sales Agreement, dated February 24, 2020, by and between the Company and Jefferies LLC (the “**Agreement**”), as described in the Prospectus.

In connection with this opinion, we have examined and relied upon the Registration Statement and the Prospectus, the Agreement, the Company’s Amended and Restated Certificate of Incorporation, as amended, the Company’s Amended and Restated Bylaws, each as currently in effect, and originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. In rendering this opinion, we have assumed the genuineness and authenticity of all signatures on original documents; the genuineness and authenticity of all documents submitted to us as originals; the conformity to originals of all documents submitted to us as copies; the accuracy, completeness and authenticity of certificates of public officials and the due authorization, execution and delivery, by all persons other than by the Company, of all documents where due authorization, execution and delivery are a prerequisite to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters.

We have assumed (i) that each sale of Shares will be duly authorized by the Board of Directors of the Company, a duly authorized committee thereof or a person or body pursuant to an authorization granted in accordance with Section 152 of the General Corporation Law of the State of Delaware (the “**DGCL**”), (ii) that no more than 10,000,000 Shares will be sold under the Agreement pursuant to the Prospectus and (iii) that the price at which the Shares are sold will equal or exceed the par value of the Shares. We express no opinion to the extent that future issuances of securities of the Company and/or anti-dilution adjustments to outstanding securities of the Company cause the number of shares of the Company’s common stock outstanding or issuable upon conversion or exercise of outstanding securities of the Company to exceed the number of Shares then issuable under the Agreement.

Our opinion herein is expressed solely with respect to the DGCL. Our opinion is based on these laws as in effect on the date hereof. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued against payment therefor in accordance with the Agreement, the Registration Statement and the Prospectus, will be validly issued, fully paid and nonassessable.

We consent to the reference to our firm under the caption “Legal Matters” in the Prospectus and to the filing of this opinion as an exhibit Current Report on Form 8-K to be filed with the Commission for incorporation by reference into the Registration Statement.

Very truly yours,

Cooley LLP

By: /s/ Jason L. Kent
Jason L. Kent

Non-Employee Director Compensation Program (updated as of February 21, 2019) (“Effective Date”)

Each member of the Board of Directors (the “**Board**”) who is not also serving as an employee of Retrophin, Inc. (“**Retrophin**”) or any of its subsidiaries (each such member, an “**Eligible Director**”) will receive the compensation described in this Non-Employee Director Compensation Policy for his or her Board service. This policy is updated and effective as of the Effective Date and may be amended at any time in the sole discretion of the Board or the Compensation Committee of the Board.

Annual Cash Compensation

The annual cash compensation amount set forth below is payable in equal quarterly installments, payable in arrears for each quarter that the Eligible Director provided service. All annual cash fees are vested upon payment.

1. Annual Board Service Retainer:
 - a. All Eligible Directors: \$50,000
 - b. Chairman of the Board Service Retainer (in addition to Eligible Director Service Retainer): \$30,000

2. Committee Cash Compensation

- Audit Committee: an additional annual cash retainer of \$10,000 for service as a member of the Audit Committee (\$20,000 for service as the chairman of the Audit Committee)
- Compensation Committee: an additional annual cash retainer of \$7,500 for service as a member of the Compensation Committee (\$15,000 for service as the chairman of the Compensation Committee)
- Nominating/Corporate Governance Committee: \$5,000 for service as a member of the Nominating / Corporate Governance Committee (\$12,000 for service as the chairman of the Nominating / Corporate Governance committee)
- Science and Medical Technology Committee: \$5,000 for service as a member of the Science and Medical Technology Committee (\$10,000 for service as the chairman of Science and Medical Technology Committee)

Equity Compensation

The equity compensation set forth below will be granted under the Retrophin, Inc. 2018 Equity Incentive Plan (the “**Plan**”). All stock options granted under this policy will be nonstatutory stock options, with an exercise price per share equal to 100% of the Fair Market Value (as defined in the Plan) of the underlying Common Stock on the date of grant, and a term of ten years from the date of grant (subject to earlier termination in connection with a termination of service as provided in the Plan).

1. Initial Grant: On the date of the Eligible Director’s initial election to the Board, for each Eligible Director who is first elected to the Board following the Effective Date (or, if such date is not a market trading day, the first market trading day thereafter), the Eligible Director will be automatically, and without further action by the Board or Compensation Committee of the Board, granted a stock option for 14,000 shares (the “**Initial Stock Option Grants**”) and a restricted stock unit for 3,500 shares (the “**Initial RSU Grants**”). One-third of the shares subject to each Initial Stock Option Grant and Initial RSU Grant will vest on the one-year anniversary of the grant date, the balance of the shares subject to each Initial Stock Option Grant will vest on an

equal monthly basis over the following 24 months, and the balance of the shares subject to each Initial RSU Grant will vest on an equal annual basis over the following two years, subject, in each case, to the Eligible Director's Continuous Service through each such vesting date, and will vest in full upon a Change in Control.

2. Annual Grant: On the date of each Retrophin's annual stockholder meeting held after the Effective Date, for each Eligible Director who continues to serve as a non-employee member of the Board (or who is first elected to the Board at such annual stockholder meeting), the Eligible Director will be automatically, and without further action by the Board or Compensation Committee of the Board, granted a stock option for 8,000 shares and a restricted stock unit for 2,000 shares (the "**Annual Grants**"). The shares subject to each Annual Grant will vest on the one-year anniversary of the grant date, subject to the Eligible Director's Continuous Service (as defined in the Plan) through such vesting date, and will vest in full upon a Change in Control (as defined in the Plan).

RETROPHIN, INC.
LIST OF SUBSIDIARIES

No.	Name
1	Retrophin Pharmaceutical, Inc.
2	Retrophin Therapeutics I, Inc.
3	Retrophin Therapeutics II, Inc.
4	Retrophin Europe Ltd
5	Retrophin International Holdings Ltd
6	RTRX International CV
7	Retrophin Therapeutics International LLC
8	US LLC 2
9	Retrophin Research Ltd
10	Retrophin US Holdings LLC
11	Manchester Pharmaceuticals LLC
12	Centurion Merger Sub, Inc.
13	[10-em856580]

Consent of Independent Registered Public Accounting Firm

Retrophin, Inc.
San Diego, California

We hereby consent to the incorporation by reference in the Registration Statements on Form S3 (Nos. 333-227182, 333-202861, and 333-198648) and Form S-8 (Nos. 333-232857, 333-224848, 333-218582, 333-213599, 333-206510 and 333-200224) of Retrophin, Inc. and its subsidiaries' (the "Company") of our reports dated February 24, 2020, relating to the consolidated financial statements, and the effectiveness of the Company's internal control over financial reporting, which appear in this Form 10-K.

BDO USA, LLP
San Diego, California

February 24, 2020

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO EXCHANGE ACT RULE 13a-14(a) OR 15d-14(a)

I, Eric M. Dube, certify that:

1. I have reviewed this Annual Report on Form 10-K of Retrophin, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2020

/s/ Eric M. Dube

Eric M. Dube

Chief Executive Officer

(Principal Executive Officer)

**CERTIFICATION OF
CHIEF FINANCIAL OFFICER
PURSUANT TO EXCHANGE ACT RULE 13a-14(a) OR 15d-14(a)**

I, Laura Clague, certify that:

1. I have reviewed this Annual Report on Form 10-K of Retrophin, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 24, 2020

/s/ Laura Clague

Laura Clague
Chief Financial Officer
(Principal Financial Officer)

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

In connection with the accompanying Annual Report on Form 10-K of Retrophin, Inc. (the "Company"), for the period ended December 31, 2019 (the "Report"), the undersigned officer of the Company hereby certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to such officer's knowledge:

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

Date: February 24, 2020

/s/ Eric M. Dube

Eric M. Dube
Chief Executive Officer
(Principal Executive Officer)

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

In connection with the accompanying Annual Report on Form 10-K of Retrophin, Inc. (the “Company”), for the period ended December 31, 2019 (the “Report”), the undersigned officer of the Company hereby certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to such officer’s knowledge:

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

Date: February 24, 2020

/s/ Laura Clague

Laura Clague

Chief Financial Officer

(Principal Financial Officer)