UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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, 2021

of

CUMBERLAND PHARMACEUTICALS INC.

A Tennessee Corporation
IRS Employer Identification No. 62-1765329
Commission file number 001-33637

2525 West End Avenue, Suite 950
Nashville, Tennessee 37203
(615) 255-0068

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, $0.00 par value per share	CPIX	Nasdaq Global Select Market

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

Cumberland Pharmaceuticals Inc. is not a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Cumberland Pharmaceuticals Inc. is required to file reports pursuant to Section 13 or Section 15(d) of the Act. Cumberland Pharmaceuticals Inc. (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, and (2) has been subject to such filing requirements for the past 90 days.

Cumberland Pharmaceuticals Inc. has submitted electronically every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months.

Cumberland Pharmaceuticals Inc. is a non-accelerated filer and a smaller reporting company as defined in Rule 12b-2 of the Exchange Act and is not a shell company.

Cumberland Pharmaceuticals Inc. has not filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared and issued its audit report.

The aggregate market value of common stock held by non-affiliates as of June 30, 2021 was $23,775,019. The number of shares of the registrant’s Common Stock, no par value, outstanding as of March 7, 2022 was 14,840,330.

DOCUMENTS INCORPORATED BY REFERENCE
Certain information required in Part III of Form 10-K is incorporated by reference from the registrant’s Proxy Statement for its 2022 annual meeting of shareholders.

CUMBERLAND PHARMACEUTICALS INC. AND SUBSIDIARIES

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PART I

Item 1. Business.

THE COMPANY

Cumberland Pharmaceuticals Inc. ("Cumberland," the "Company," or as used in the context of "we," "us," or "our"), is a specialty pharmaceutical company focused on the acquisition, development and commercialization of branded prescription pharmaceutical products. We are dedicated to providing innovative products that improve the quality of care for patients and address poorly met medical needs.

Our primary target markets are hospital acute care, gastroenterology, rheumatology and oncology. These medical specialties are characterized by relatively concentrated prescriber bases, that we believe can be served effectively by small, targeted sales forces. We promote our approved products through our hospital, field and oncology sales divisions in the United States and are establishing a network of international partners to register and provide our medicines to patients in their countries.

Our portfolio of brands approved for marketing by the U.S. Food and Drug Administration ("FDA") includes:

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

In addition to these commercial brands, we have Phase II clinical programs underway evaluating our ifetroban product candidates for patients with cardiomyopathy associated with 1) *Duchenne Muscular Dystrophy* ("DMD"), a fatal, genetic neuromuscular disease, 2) *Systemic Sclerosis* ("SSc") or scleroderma, a debilitating autoimmune disorder characterized by fibrosis of the skin and internal organs and 3) *Aspirin-Exacerbated Respiratory Disease* ("AERD"), a severe form of asthma.

Cumberland has built core competencies in both the development and commercialization of pharmaceutical products. We have established the capabilities needed to acquire, develop and commercialize branded pharmaceuticals in the U.S. and believe we can leverage this existing infrastructure to support our expected growth. Our management team consists of pharmaceutical industry veterans with experience in business development, product development, regulatory, manufacturing, sales, marketing and finance.

Our business development team identifies, evaluates, and negotiates product acquisition, licensing and co- promotion agreements. Our product development team creates proprietary formulations, manages our clinical studies, prepares our FDA submissions and staffs our medical call center. Our quality and manufacturing professionals oversee the manufacturing, release and shipment of our products. Our marketing and sales organization is responsible for our commercial activities, and we work closely with our distribution partners to ensure the availability and delivery of our products.

COVID-19 Pandemic

In early 2020, the U.S. declared a health care emergency following the outbreak of SARS-CoV-2, a novel strain of coronavirus that causes COVID-19, a respiratory illness. The Company has managed through the resulting pandemic, continuing to operate our business – keeping facilities open and our organization intact. We moved quickly to ensure the health and safety of our team. We also maintained our ongoing compliance with the many laws and regulations that apply to us as a publicly traded pharmaceutical company.

Throughout the pandemic, Cumberland has faced the same challenges affecting other companies that rely on hospital admissions and patient visits to drive revenue. Our clinical studies were also impacted, as fewer patients sought elective surgeries and our access to medical facilities was substantially limited. We carefully monitored our supply chain, including the flow of raw materials and the batches of finished products emerging from the facilities that manufacture our products.

Several of our brands were negatively impacted by the lockdowns and postponement of physician office visits and elective procedures. However, we are fortunate to have a diversified product portfolio that includes other brands that have delivered a strong performance during the pandemic.

Despite the challenges of operating during a pandemic, Cumberland has remained committed to our mission of providing innovative products that improve the quality of care for patients and address poorly met medical needs. We continued to build our portfolio of innovative and differentiated products through a multifaceted strategy that includes the development of new candidates and acquisition of established brands. Our resulting, diversified product line has enabled us to weather external challenges, while our team has remained responsive to the evolving medical market. We are prepared for and look forward to future opportunities to carry out our mission. Overall, we have been able to continue the delivery of our products while addressing the interests of our shareholders, employees, partners and community.

ESG Report

In July 2021, we released our second annual Sustainability Report (the “2020 Sustainability Report”), which details Cumberland’s activities pertaining to our environmental, social and governance (“ESG”) matters. After issuing our inaugural ESG Report the prior year (the “2019 Sustainability Report”), we remain committed to sustainability and to maintaining transparency of our corporate operations. As the largest biopharmaceutical company founded and headquartered in the Mid-South, we hold ourselves to the highest standards of ethical practices and understand the importance of recognizing and addressing our impact on our constituents, the community and the environment.

The 2020 Sustainability Report notes that during that year we provided nearly 2.5 million patient doses of our products, safely disposed of over 4,000 pounds of expired and damaged products and had no product recalls. We also had no Company brands listed on the FDA’s MedWatch Safety Alerts for Human Medical Products, no Company product issues identified by the FDA’s Adverse Event Reporting System and no clinical trials terminated due to failure to practice good clinical standards.

The 2020 Sustainability Report also highlights our investment in our employees through our continuing education programs, employee development initiatives and employee recognition awards. We reported that women represented 46% of Cumberland’s workforce – and 18% of our employees were minorities.

We were incorporated in 1999 and have been headquartered in Nashville, Tennessee since inception. During 2009, we completed an initial public offering of our common shares and listing on the Nasdaq stock exchange. Our website address is *www.cumberlandpharma.com*. Our Annual Reports (on Form 10-K), Quarterly Reports (on Form 10-Q), Current Reports (on Form 8-K) and all material press releases are available on our website as soon as reasonably practicable after their filing with the U.S. Securities and Exchange Commission, (“SEC”). These filings are also available to the public at *www.sec.gov.*

PRODUCTS

Products	Indication	Status
Acetadote®	Acetaminophen Poisoning	Marketed
Caldolor®	Pain and Fever	Marketed
Kristalose®	Chronic and Acute Constipation	Marketed
Omeclamox®-Pak	H. pylori Infection and Related Duodenal Ulcer Disease	Marketed
RediTrex®	Arthritis and Psoriasis	Marketed
Sancuso®	Nausea and Vomiting Associated with Chemotherapy	Marketed
Vaprisol®	Euvolemic and Hypervolemic Hyponatremia	Marketed
Vibativ®	Serious Bacterial Infections	Marketed

Acetadote®

Acetadote is an intravenous formulation of N-acetylcysteine, indicated for the treatment of liver toxicity associated with acetaminophen poisoning. Cumberland developed and obtained U.S. FDA approval for Acetadote, and then introduced the product through our hospital sales force.

Acetadote is typically used in hospital emergency departments to prevent or lessen potential liver damage resulting from an overdose of acetaminophen, a common ingredient in many over-the-counter and prescription pain relieving and fever-reducing products. Acetaminophen overdose continues to be a leading cause of poisonings reported by hospital emergency departments in the U.S., and Acetadote has become a standard of care for treating this potentially life-threatening condition.

Acetadote received U.S. FDA approval as an orphan drug, which provided seven years of marketing exclusivity from the date of approval. That exclusivity has since expired.

In connection with the FDA's approval of Acetadote, we committed to certain post-marketing activities for the product. Completion of our first Phase IV commitment resulted in the FDA's approval of expanded labeling for the product for use in pediatric patients. Completion of our second Phase IV commitment resulted in further revised labeling for the product with FDA approval of additional safety data.

Completion of our third and final Phase IV commitment culminated in the FDA's approval of a new formulation for the product. The next generation formulation, contains no ethylene diamine tetracetic acid ("EDTA") or other stabilization agent, chelating agent or preservative. Cumberland introduced this new Acetadote formulation replacing the original form of the product which we no longer manufacture.

The FDA subsequently approved updated labeling for Acetadote revising the product's indication and providing new dosing guidance for specific patient populations. As a result, dosing guidance is now included for patients weighing over 100 kg, and new language was added to alert health care providers that, in certain clinical situations, therapy should be extended for some patients.

The United States Patent and Trademark Office (the "USPTO") issued us a series of patents associated with our Acetadote product. These patents are discussed in Part I, Item I – "*Business - Trademarks and Patents*" - of this Form 10-K. The FDA has approved several abbreviated new drug applications (ANDA) filed by various generics companies referencing Acetadote. Those products all possess the old formulation containing EDTA.

We entered into an agreement with Perrigo Company resulting in the distribution of our Authorized Generic acetylcysteine injection (our “Authorized Generic”) product. Both Acetadote and our Authorized Generic utilize the new, EDTA-free formulation.

An Illinois judge issued a final ruling in favor of Cumberland Pharmaceuticals Inc. in a patent case associated with Acetadote. By ruling in Cumberland’s favor, the court upheld the validity of the patent that encompasses our EDTA-free formulation. The court also granted a permanent injunction preventing challengers from marketing a generic version of our proprietary Acetadote product formulation before the expiration of Cumberland’s patent in August 2025. An Appeals Court affirmed the District Court ruling in the Company's favor upholding Cumberland's Acetadote patent and expressly rejected the validity challenge.

During 2021, we continued to distribute our Acetadote brand, however our Authorized Generic product is now distributed through Padagis US LLC (formerly a division of Perrigo Company).

Caldolor®

Caldolor, our intravenous formulation of ibuprofen, was the first injectable product approved in the U.S. for the treatment of both pain and fever. We conducted a series of clinical studies in over 900 adult patients to develop the data to support our FDA submission for the product's registration. Following a priority review, the FDA approved Caldolor for marketing in the U.S..

A non-steroidal anti-inflammatory drug (“NSAID”), the product was indicated for use in adults as a sole treatment for the management of mild to moderate pain and for the management of moderate to severe pain as an adjunct to opioid analgesics. It was also the first FDA approved intravenous therapy for treating fever.

We then launched Caldolor and continue to promote the product in the U.S. through our hospital sales force.

We completed a series of Phase IV studies to gather additional data to support our Caldolor product. Those clinical trials involved another 1,000 adult and pediatric patients. These studies included data on a shortened infusion time and pre-surgical administration of the product. To address our Phase IV commitment to the FDA, these studies also included evaluation of the product for the reduction of fever in hospitalized children and the treatment of pain in children undergoing tonsillectomy surgeries.

We then received FDA approval for the use of Caldolor in pediatric patients 6 months of age and older. Caldolor is the first and only injectable non-steroidal anti-inflammatory drug approved for use in children. We subsequently initiated a study to collect data on the use of Caldolor in children ranging in age from birth up to 6 months of age. Enrollment in that study was completed in 2019.

In early 2018, we completed and filed the application for FDA approval of a next generation Caldolor product featuring an improved presentation and formulation which was approved in January 2019. The new, premixed presentation provides healthcare professionals a formulation that is easy to administer, helping manage the treatment of patient pain and fever, while reducing opioid consumption. It is provided in a pre-mixed bag containing 800 mg of ibuprofen in a 200 mL patented low sodium formulation for injection that is ready to use. It is the first and only FDA-approved pre-mixed bag of ibuprofen. Caldolor is still available as an 800 mg/8mL single–dose vial for dilution in addition to the ready-to-use bag.

In January 2020, we initiated a full-scale launch of this ready-to-use product. Unfortunately, the launch was impacted by the COVID-19 pandemic and the resulting postponement of elective surgeries. Nonetheless, we expect an improved performance of the product after the pandemic abates and more accounts gain access to the new presentation.

During 2021, we distributed both the vial and the ready-to-use premixed bag presentations of Caldolor. In November 2021 the FDA approved our submission to expand the labeling for Caldolor to include administration of the product prior to surgery. During our clinical studies we found that the product delivered its best results when dosed prior to surgery, reducing both patient pain as well as their need for opiates.

Kristalose®

Kristalose is a prescription laxative administered orally for the treatment of acute and chronic constipation. An innovative, dry powder crystalline formulation of lactulose, Kristalose is designed to enhance patient acceptance and compliance. It is the only prescription laxative available in pre-measured powder packets.

Kristalose dissolves easily in 4 ounces of water, offering patients a virtually taste-free, grit-free and essentially calorie-free alternative to lactulose syrups. We conducted a preference study which indicated that 77% of patients surveyed prefer the taste, consistency and portability of Kristalose over similar products in syrup forms.

We acquired the assets and exclusive rights to Kristalose through a series of transactions, then assembled a dedicated field sales force which re-launched the product as a Cumberland brand. We directed our sales efforts to physicians who are the most prolific writers of prescription laxatives, including gastroenterologists and internists. We supplemented this personal promotion with telemarketing campaigns to expand our reach and support of the product. Using preference data as a cornerstone of our marketing efforts, we repositioned the brand, enhancing patient affordability through a coupon program and expanded managed care coverage for the product.

We added a co-promotion partner, Poly Pharmaceuticals, who is promoting Kristalose to physician targets not covered by our field sales forces. We then added another partner, Foxland Pharmaceuticals, Inc., who is repackaging Kristalose and featuring it with additional new physician targets.

During 2021 we continued to support Kristalose through our field sales force as well as our partnerships with Poly Pharmaceuticals and Foxland Pharmaceuticals, Inc.

Omeclamox®-Pak

Many ulcers of the gastrointestinal tract are caused by an infection from the Helicobacter pylori (“H. pylori”) bacterium. Omeclamox-Pak is a branded prescription product used for the treatment of these infections and the related duodenal ulcer disease. This innovative product combines three well-known and widely prescribed medications: omeprazole, clarithromycin, and amoxicillin.

Omeclamox-Pak was the first FDA approved triple therapy combination medication to contain omeprazole as the proton pump inhibitor, which works to decrease the amount of acid the stomach produces. Clarithromycin and amoxicillin are both antibiotic agents that hinder the growth of the H. pylori bacteria. Interaction of these agents allows the stomach lining to heal effectively. The medications are packaged together on convenient daily dosing cards, making it simple to follow the twice a day dosing before meals.

We acquired the assets and exclusive rights to Omeclamox-Pak through a series of transactions and re-launched the product as a Cumberland brand supported by our field sales force.

The packager for Omeclamox-Pak encountered financial difficulties in 2020 due to the impact of COVID-19, and their operations are currently suspended. As a result we depleted our inventory of the product and notified the FDA that the product is currently unavailable. We are awaiting resumption of those operations, while also exploring other alternatives to restart the product’s packaging.

RediTrex®

We have entered into an exclusive license and supply agreement to register and commercialize a methotrexate product line in the United States. RediTrex is a new line of pre-filled syringes specifically designed for ease of handling and dosing accuracy for the subcutaneous administration of methotrexate in patients with arthritis and psoriasis.

RediTrex treats patients with severe, active rheumatoid arthritis, and polyarticular juvenile idiopathic arthritis who have difficulty tolerating or responding to orally delivered methotrexate. It is also approved for symptomatic control of severe, recalcitrant, disabling psoriasis in adults who are not adequately responsive to other forms of therapy.

With more than 54 million Americans living with some form of arthritis, the disease is among the most common causes of work disability in the U.S., according to the CDC. The oral form of methotrexate is typically the first line of treatment for rheumatoid arthritis. As the disease progresses, the dose must be increased to stay effective, often causing intolerable gastrointestinal side effects.

Injectable methotrexate has been proven to be more effective than oral delivery, with fewer gastrointestinal reactions. Because of the increased efficacy and tolerability, injectable methotrexate can delay the need to move to costly biologics, lowering overall patient treatment costs. Once disease progression requires the use of biologics, continuing the treatment of injectable methotrexate along with the biologic has been shown to increase overall efficacy.

Other injectable methotrexate options available may not optimally meet the needs of arthritis patients who are offered either a vial and syringe for self-injection, or the use of an expensive autoinjector. The vial and syringe method can be difficult for a patient to handle due to limited dexterity in their hands. Additionally, obtaining the exact dose needed while preventing skin exposure to the caustic methotrexate can be quite challenging for many patients. The autoinjectors provide a better alternative to the vial and syringe, but they remove injection control from the patient and can be painful to administer. They are also the most expensive methotrexate delivery.

In December 2019, we received FDA approval for RediTrex and began planning for a launch of the product line. In late 2020, we received initial product supplies and then provided shipments of RediTrex to select accounts. Due to the pandemic, we delayed the national launch of the product, which was then implemented during the fourth quarter of 2021.

Sancuso®

At the end of 2021, we entered into an agreement with Kyowa Kirin to acquire the U.S. assets and rights to Sancuso® (granisetron transdermal system), an FDA-approved oncology supportive care medicine. This transaction closed in January 2022.

Sancuso® is the first and only FDA-approved prescription patch for the prevention of nausea and vomiting in patients receiving certain types of chemotherapy treatment for their cancer. The active drug in Sancuso®, granisetron, slowly dissolves in the thin layer of adhesive that sticks to the patient's skin and is released into their bloodstream over several days, working continuously to prevent chemotherapy-induced nausea and vomiting (CINV). It is applied 24 to 48 hours before receiving chemotherapy and can prevent CINV for up to five consecutive days. Alternative oral treatments must be taken several times (day and night) to deliver the same therapeutic doses.

In early 2022 we assumed full commercial responsibility for the product in the U.S. – including its marketing, promotion, distribution, manufacturing, and medical support activities. Kyowa Kirin will retain international rights, continuing to deliver the product to address oncology patients' needs throughout the rest of the world. In January 2022, we began shipments of the product and formed a new sales force, Cumberland Oncology, to support the brand.

Vaprisol®

We acquired the assets and rights to Vaprisol, a prescription brand indicated to raise serum sodium levels in hospitalized patients with euvolemic and hypervolemic hyponatremia. It is one of two branded prescription products indicated for the treatment of hyponatremia, and the only intravenously administered branded treatment.

Hyponatremia, an imbalance of serum sodium to body water, is the most common electrolyte disorder among hospitalized patients. These electrolyte disturbances occur when the sodium ion concentration in the plasma is lower than normal and are often associated with a variety of critical care conditions including congestive heart failure, liver failure, kidney failure and pneumonia. Vaprisol raises serum sodium to appropriate levels and promotes free water secretion. Our Vaprisol product is one of two branded prescription products indicated for the treatment of hyponatremia, and the only intravenously administered branded treatment. It has a proven day-one response rate to normalize serum sodium levels in hyponatremic patients and move them out of the Intensive Care Unit as efficiently as possible.

Vaprisol is supported by our hospital sales division. Demand for the product increased in 2020 during the pandemic, and we worked to support the expanded use of the product in hospitals and clinics during the health care crisis. During 2021, we shipped all remaining inventory of the product and have notified the FDA that supplies of the product are not currently available. We have transferred manufacturing of the product to a new manufacturing facility, and await the submission and FDA approval for the new facility before resuming shipments. We are also exploring alternatives for providing an interim supply to the market while awaiting the needed approval.

Vibativ®

In November 2018, the Company announced an agreement to acquire the Vibativ assets and assume global responsibility for the brand including the related marketing, distribution, manufacturing and regulatory activities. In early 2021 we introduced the Cumberland-packaged product, which is supported by our hospital sales force.

Vibativ is a patented, FDA-approved injectable anti-infective. It is designed to treat serious infections due to *Staphylococcus aureus (S. aureus)* and other Gram-positive bacteria, including *Methicillin-resistant Staphylococcus aureus (MRSA)* and *Methicillin-sensitive Staphylococcus aureus (MSSA*). Vibativ addresses a range of Gram-positive bacterial pathogens, including those that are considered difficult-to-treat and multidrug-resistant.

Vibativ can serve as a potentially life-saving treatment in patients with hospital-acquired and ventilator-associated pneumonia resulting from infections including the flu and COVID-19.

Pneumonia caused by secondary bacterial infections is common among patients with viral respiratory infections. The risk of such infections grows as hospitals see more patients with respiratory symptoms due to COVID-19. Research shows that hospital-acquired pneumonia ("HAP") and ventilator-associated pneumonia ("VAP") have historically accounted for 22% of common hospital-acquired infections. Methicillin-sensitive and methicillin-resistant *S. aureus* ("MSSA" and "MRSA") are important disease-causing pathogens in these cases.

While many recently introduced antibiotics are quickly losing the battle to fight the bacteria they were designed to kill because those bacteria have become drug-resistant, Vibativ was specifically designed to kill drug-resistant bacteria.

The molecule of an existing antibiotic to which bacteria had developed a resistance, vancomycin, was altered by adding a lipophilic (fat-loving) component and a hydrophilic (water-loving) component. The lipophilic addition increases Vibativ's ability to penetrate the cell wall and inhibits the formation of new cell walls (the development of new and/or additional cell walls is the most common way that bacteria become resistant to drugs). The hydrophilic addition increases Vibativ's penetration into tissue – so it is able to attack infections that are not reachable by other antibiotics. In comparison to vancomycin, Vibativ is 32 times more potent against MRSA strains when tested under in vitro conditions. Further, in clinical trials, Vibativ demonstrated superior cure rates of patients with hospital- acquired bacterial pneumonia.

PIPELINE

Ifetroban Clinical Studies

Ifetroban is a selective thromboxane-prostanoid receptor ("TPr") antagonist dosed in nearly 1,400 subjects and found to be safe and well tolerated in healthy volunteers and various patient populations. We are currently sponsoring a series of Phase II clinical programs to evaluate our ifetroban product candidates in 1) *Aspirin-Exacerbated Respiratory Disease*, a severe form of asthma, 2) *Systemic Sclerosis* or scleroderma, a debilitating autoimmune disorder characterized by diffuse fibrosis of the skin and internal organs and 3) patients with cardiomyopathy associated with *Duchenne Muscular Dystrophy*, a genetic neuromuscular disease that results in deterioration of the skeletal, heart and lung muscles.

Enrollment in our clinical studies was interrupted due to the COVID-19 pandemic. However, many of our clinical study sites have reopened and resumed screening of patients for potential participation into our studies during 2021. We also closed unproductive sites and opened qualified replacements during the year. We are awaiting results from the studies underway before deciding on the best development path for the registration of ifetroban, our first new chemical entity.

Follows is more information about the clinical programs in which we are evaluating ifetroban:

Aspirin-Exacerbated Respiratory Disease ("AERD")

We have completed the manufacturing and initiated clinical development of an oral formulation of ifetroban under the brand name Boxaban®. We are evaluating this candidate for patients suffering from *Aspirin-Exacerbated Respiratory Disease* ("AERD"), also known as Samter's Triad, a chronic medical condition that consists of three clinical features: asthma, sinus disease with nasal polyposis and sensitivity to aspirin. AERD is characterized by sharp increases in inflammatory mediators and platelet activity within the respiratory system. Approximately one in 20 asthmatic adults in the U.S. suffer from AERD and awareness of the disease is growing within the medical community. There is no U.S. approved pharmaceutical treatment for AERD.

Preclinical studies at Harvard revealed that ifetroban blocks all features of the asthma reaction triggered by aspirin highlighting the important role of TPr in AERD. Our Harvard collaborators were awarded a $5 million National Institutes of Health grant to evaluate oral ifetroban in approximately 45 AERD patients undergoing aspirin desensitization in a phase II clinical trial. Patient enrollment in this trial is well underway.

We completed an initial Phase II clinical study at several U.S. medical centers led by the Scripps Research Institute entitled, *A Multicenter, Double-blind, Randomized, Placebo-Controlled Trial to Determine the Safety of Oral Ifetroban in Patients with a History of AERD.* That study randomized 16 subjects 3:1 (ifetroban: placebo), demonstrated no safety concerns and provided several signals of efficacy. A follow-on phase II study designed to evaluate the safety and efficacy of eight weeks of oral ifetroban entitled, *A Phase 2 Multicenter, Double-blind, Randomized, Placebo- Controlled Trial to Evaluate Oral Ifetroban in Subjects with Symptomatic Aspirin Exacerbated Respiratory Disease (AERD),* was then initiated. The study is progressing with patient enrollment ongoing at multiple U.S. sites.

Systemic Sclerosis ("SSc")

Next, we initiated the clinical development of ifetroban oral capsules under the brand name Vasculan® for the treatment of *Systemic sclerosis*, also called scleroderma. It's a debilitating autoimmune disorder characterized by diffuse fibrosis of the skin and internal organs, including the heart, as well as vascular dysfunction. SSc has a high morbidity and the highest case-specific mortality of any rheumatic disorder with 50% of patients dying or developing major internal organ complications within three years of diagnosis. Although several medications are used to treat the skin disease associated with SSc, there is no universally effective treatment to improve the function of affected internal organs including the cardiovascular system.

Cardiac involvement associated with SSc is often underestimated due to its subtle and atypical presentation. Despite the cardiovascular events associated with its elevated mortality at later stages of the disease, overt signs are suggestive of advance disease including myocardial or pericardial inflammation, heart failure and pulmonary arterial hypertension (PAH).

Our Vanderbilt collaborators completed preclinical studies demonstrating TPr blockade with ifetroban prevents cardiac fibrosis and can restore cardiac function in animal models of PAH.

The FDA cleared our IND application to evaluate 12 months of oral ifetroban (Vasculan) in a 34-subject phase II trial entitled, A *Phase II Randomized, Double-Blind, Placebo-Controlled Study to Assess the Safety and Efficacy of Ifetroban in Patients with Diffuse Cutaneous Systemic Sclerosis or Systemic Sclerosis-Associated Pulmonary Arterial Hypertension.* Enrollment in this study is also well underway and includes patients with diffuse cutaneous SSc, as well as those with pulmonary arterial hypertension associated with their SSc.

Duchenne Muscular Dystrophy ("DMD")

We also initiated the clinical development of oral ifetroban under the brand name Dyscorban® for the treatment of cardiomyopathy associated with *Duchenne Muscular Dystrophy* ("DMD"), a rare and fatal disease caused by a genetic defect which leads to inexorable muscle damage. Cardiomyopathy is the leading cause of death in DMD patients. TPr and its ligand, isoprostanes, are found to have increased in DMD patients.

Preclinical studies by our Vanderbilt collaborators demonstrated TPr blockade by ifetroban prevented cardiac dysfunction and improved mortality in several animal models of muscular dystrophy. These results published in the *Journal of the American Heart Association* suggest TPr activation contributes to DMD cardiomyopathy and blockade with ifetroban may serve as a novel therapeutic for DMD patients.

The FDA cleared Cumberland's application to evaluate 12 months of oral ifetroban (Dyscorban) in a Phase II study entitled, *A Randomized, Double-Blind, Placebo-Controlled, Multiple Dose Study with an Open-Label Extension to Determine the Safety, Pharmacokinetics and Efficacy of Oral Ifetroban in Subjects with Duchenne Muscular Dystrophy*. With medical centers across the U.S. screening patients, our clinical study is enrolling those with 48 ambulatory and non-ambulatory DMD, 7 years of age and older with stable cardiac function.

Cumberland was awarded just over $1 million in federal funding to support this clinical trial, which is the first DMD clinical study awarded FDA Orphan Product Development funding. As a result of the COVID-19 pandemic and its global impact on clinical research in 2020, the FDA awarded a supplemental grant in support of our Phase II DMD study.

Progressive Fibrosing Interstitial Lung diseases ("PF-ILDs")

In September 2021, our Board of Directors approved a new clinical program for the use of ifetroban to treat *Progressive Fibrosing Interstitial Lung Diseases* ("PF-ILDs"). Nonclinical studies are complete, and the resulting manuscript was prepared and submitted for publication in 2021. A Phase II clinical study is planned and an application to the FDA is in preparation to support this new clinical program.

Other Ifetroban Programs

We have also completed Phase II clinical programs with ifetroban in patients with Hepatorenal Syndrome ("HRS") and patients with Portal Hypertension ("PH"). Additional preclinical and pilot clinical studies of ifetroban are underway, including several investigator-initiated trials.

New Hospital Product Candidate

Cumberland was responsible for the formulation, development and FDA approval of both Acetadote and Caldolor. Our Medical Advisory Board has helped us identify additional opportunities that address unmet or poorly met medical needs. As a result, Cumberland has successfully designed, formulated and completed the preclinical studies for a cholesterol reducing agent for use in the hospital setting.

We have completed a Phase I study which defined the pharmacokinetic properties and provided a favorable safety profile for this new product candidate. The study results and a proposed clinical development plan were discussed with the FDA. A Phase II study has been initiated and patient enrollment is complete. We have also completed the clinical study report, filed it with the FDA and are now determining the next steps for this program.

GROWTH STRATEGY

Cumberland's growth strategy involves maximizing the potential of our existing brands while continuing to build a portfolio of differentiated products. We currently feature eight, including Sancuso, FDA products approved for sale in the United States. Through our international partners, we are also working to bring our medicines to patients in their countries. Additionally, we look for opportunities to expand our products into additional patient populations through clinical trials, new presentations and our support of select, investigator-initiated studies. We actively pursue opportunities to acquire additional marketed products, as well as late-stage development product candidates in our target medical specialties. Our clinical team is developing a pipeline of new product candidates largely to address poorly met medical needs.

We are supplementing these activities with the earlier stage drug development at Cumberland Emerging Technologies ("CET"), our majority-owned subsidiary. CET partners with academic research institutions to identify and support the progress of promising new product candidates, which Cumberland has the opportunity to further develop and commercialize.

Specifically, we are seeking long-term sustainable growth by:

Supporting and expanding the use of our marketed products. We continue to evaluate our products following their FDA approval to determine if additional clinical data could expand their market and use. We will continue to explore opportunities for label expansion to bring our products to new patient populations. As examples, we have secured pediatric approval, expanding the labeling for both our Acetadote and Caldolor brands.

Selectively adding complementary brands. In addition to our product development activities, we are also seeking to acquire products or late-stage development product candidates to continue to build a portfolio of complementary brands. We focus on under-promoted, FDA-approved drugs as well as late-stage development products that address poorly met medical needs. We will continue to target product acquisition candidates that are competitively differentiated, have valuable intellectual property or other protective features, and allow us to leverage our existing infrastructure. Our acquisition of Vibativ and Sancuso are examples of this strategy.

Progressing clinical pipeline and incubate future product opportunities at CET. We believe it is important to build a pipeline of innovative new product opportunities, as we are doing though our ifetroban Phase II development programs. We are also supplementing our acquisitions and late-stage development activities with early-stage drug development activities with CET. CET partners with universities and other research organizations to develop promising, early-stage product candidates, which Cumberland has the opportunity to further develop and commercialize.

Leveraging our infrastructure through co-promotion partnerships. We believe that our commercial infrastructure can help drive prescription volume and product sales. We look for strategic partners that can complement our capabilities and enhance opportunities for our brands. For example, our co-promotion partnerships have allowed us to expand the support for Kristalose across the U.S.

Building an international contribution to our business. We have established our own commercial capabilities, including three sales divisions, to cover the U.S. market for our products. We are also building a network of select international partners to register our products and make them available to patients in their countries. We will continue to develop and expand our network of international partners while supporting our partners' registration and commercialization efforts in their respective territories. The acquisition of Vibativ resulted in several new international partners and market opportunities.

Managing our operations with financial discipline. We continually work to manage our expenses in line with our revenues in order to deliver positive cash flow from operations. We remain in a strong financial position, with favorable gross margins, and a strong balance sheet.

SALES AND MARKETING

Cumberland's sales and marketing team has broad industry experience in selling branded pharmaceuticals. Our sales and marketing executives direct our national marketing campaigns and maintain key national account relationships. They also manage our dedicated hospital, field and oncology sales forces – which are comprised of approximately 60 sales professionals.

Hospital market: We promote Caldolor, Vaprisol, Acetadote, and Vibativ through our dedicated hospital sales division. This organization targets key hospitals across the U.S. and is comprised of sales professionals with substantial experience in the hospital market. Independent market data continues to indicate that the majority of pharmaceutical promotional spending is directed toward large, outpatient markets on drugs intended for chronic use rather than short-term, hospital use.

We believe the hospital market is under-served and highly concentrated, and that it can be penetrated effectively by a small, dedicated sales force without large-scale promotional activity. Our established position in the hospital market provided the rationale for adding Vibativ as our first infectious disease product that complements our hospital product line. Our strategy has been to focus our hospital sales team on select, high priority accounts.

Gastroenterology and rheumatology market: We promote Kristalose, Omeclamox-Pak and RediTrex through a dedicated field sales team addressing a targeted group of physicians who are large prescribers of the products. Because the markets for gastrointestinal and rheumatology diseases are broad in patient scope, yet relatively narrow in physician base, we believe they provide opportunities that can be penetrated with a modest sized sales force. We believe that we can increase market share for these products through our sales and marketing activities.

Oncology market: In early 2022, we formed a new oncology sales force to promote our Sancuso brand. This division is initially comprised of seven individuals who formerly supported Sancuso for Kyowa Kirin. This organization targets key oncologists and clinics across the U.S. and is comprised of both insider and field based sales professionals. This initial group can be expanded through additional personnel or augmented through a co-promotion partner.

Our commercial executives conduct ongoing analyses to evaluate marketing campaigns and promotional programs in support of our brands. The evaluations include development of product profiles, testing of the profiles against the needs of the market, determining what additional product information or development work is needed to effectively market the products and preparing financial forecasts.

We utilize professional branding and packaging as well as promotional items to support our products, including direct mail, sales brochures, journal advertising, educational and reminder leave-behinds, patient educational pieces, coupons, and product sampling. We also regularly attend select medical meetings and trade shows to expand the awareness of our products.

Our national accounts team is responsible for key large buyers and related marketing programs. This team maintains relationships with our wholesaler customers as well as with third-party payors such as group purchasing organizations, pharmacy benefit managers, hospital buying groups, out-patient centers, state and federal government purchasers and health insurance companies.

MATERIAL CUSTOMERS

Our primary customers are wholesale pharmaceutical distributors in the United States. Total revenue by customer for each customer representing 10% or more of consolidated gross revenues are summarized below for the year ended December 31, 2021:

	2021
Customer 1	27%
Customer 2	24%
Customer 3	20%

INTERNATIONAL PARTNERSHIPS

We have established our own capabilities to support the commercialization of our products in the U.S. Our international strategy is to identify and partner with other companies that have the appropriate capabilities to support our products in their respective countries. We have entered into a series of agreements to establish an international network, which is summarized in the table below and includes information on our primary partners:

International Partner	Product(s)	Territory	Status
Phebra Pty Ltd	Acetadote	Australia and New Zealand	Marketed
DB Pharm Korea Co., Ltd.	Caldolor	South Korea	Marketed
Seqirus (a CSL company)	Caldolor	Australia and New Zealand	Marketed
Sandor Medicaids Pvt. Ltd.	Caldolor	India, Pakistan, Bangladesh and Nepal	Marketed
GerminMED	Caldolor	Qatar	Marketed
R-Pharm JSC	Vibativ	Russia	Marketed
SciClone Pharmaceuticals, Inc.	Vibativ	China and Hong Kong	Registration
WinHealth Pharma Group Co.	Caldolor & Acetadote	China and Hong Kong	Development

Our international commercialization agreements include a license to one or more Cumberland products for a specific territory as noted in the table above. We seek partners who have the local infrastructure to support the registration and commercialization of our products in their territory.

Under the terms of our agreements our partners are responsible for:

- Seeking regulatory approvals for the products;
- Launching the brand;
- Managing the ongoing marketing, sales and product distribution;
- Addressing the ongoing regulatory requirements in the international territories;
- Remitting any upfront, regulatory and sales milestone payments;
- Providing the transfer price for supplies of product; and
- Calculating and paying any royalties, as applicable.

Our responsibilities include:

- Providing a dossier of relevant information to support product registration;
- Maintaining our intellectual property associated with the product;
- Sharing our marketing strategy, experience and materials for the brand; and
- Manufacturing and providing finished product for sale.

During 2021, we worked to support our existing international partners, conclude unproductive arrangements and identify new companies to represent our products in select additional territories.

BUSINESS DEVELOPMENT

Since inception, we have had an active business development initiative focused on acquiring rights to marketed products and product candidates that fit our strategy and target markets. We source business development opportunities through our international network of advisory firms and individual pharmaceutical industry and medical advisors. A multi-disciplinary internal management team reviews these opportunities on a regular basis using a group of selection criteria. We have historically focused on product opportunities that are a strategic fit with our commercial organization, development expertise and medical focus, employing a variety of transaction structures.

We have continued to build our product portfolio of complementary, niche brands largely through product acquisitions and late-stage development of product candidates.

Our primary targets are under-promoted, FDA - approved drugs with existing brand recognition and late-stage development product candidates that address unmet or poorly met medical needs in the hospital acute care and gastroenterology, rheumatology and oncology markets. We believe that by focusing mainly on approved or late-stage products, we can minimize the significant risk, cost and time associated with drug development.

We continue to strategically review our brands, pipeline and capabilities, as well as our international partners. We believe that it is prudent to continually evaluate our product portfolio, partners, and organization in order to ensure a proper focus and the needed supporting capabilities.

International Partners

D.B. Pharm Korea Co., Ltd. (“D.B. Pharm”) has licensed our Caldolor product for the South Korean market, and they obtained regulatory approval for Caldolor in their country. During 2021 D.B. Pharm continued to purchase supplies of Caldolor and distributed the brand in South Korea. We have also entered into agreements with D.B. Pharm to register and commercialize our Vaprisol and Vibativ brands in their country. During 2021 we worked with them to prepare the submissions for the approval of each brand there.

We have executed a License and Distribution agreement with HongKong WinHealth Pharma Group Co. Limited (“WinHealth”) for our Caldolor and Acetadote brands in China and Hong Kong. Under the terms of the agreement, WinHealth will provide development milestone payments and purchase supplies of the products following their registration in China.

We also entered into a Strategic Alliance agreement with WinHealth to explore future business opportunities that will further the mission and goals of each organization. Founded in Hangzhou, China and currently headquartered in Hong Kong, WinHealth has developed a wide breadth of capabilities including drug licensing, product development and registration, and has established a strong network of distribution and sales promotional capabilities for the Chinese market. WinHealth has established partnerships with international companies that include Boehringer-Ingelheim, Janssen, Novartis, Pfizer, and Roche, generating several hundred million dollars in sales annually.

In August 2020, we entered into an agreement with WinHealth Investment (Singapore) Ltd creating *WHC Biopharmaceuticals, Pte. Ltd*. The joint venture will focus on acquiring, developing, registering, and commercializing development stage and commercial stage biopharmaceuticals for China, Hong Kong and other Asian markets.

R-Pharma JSC (“R Pharma”) has licensed our Vibativ product for a territory that includes Russia and a number of adjacent countries in Eastern Europe. R-Pharma is one of the leading multinational pharmaceutical organizations based in Russia. Headquartered in Moscow and focusing in a wide breadth of therapeutic areas in the specialty and hospital care markets, R-Pharma generates $1 billion in annual revenue. R-Pharma has registered Vibativ in Russia and during 2021 continued to purchase supplies of the product for that market. In late 2021 we entered into a new agreement with R-Pharma for the terms associated with the supply of Vibativ for greater Russian territory.

SciClone Pharmaceuticals (Holdings) Limited (“SciClone”) has licensed our Vibativ product for sale and distribution in China and several adjacent countries. In February 2021, SciClone completed an initial public offering and listing of their shares on the Hong Kong stock exchange.

In June 2021, SciClone submitted an application to the Chinese regulatory authority for the approval of Vibativ in that country. In October 2021, we were informed by SciClone that the filing was accepted by the regulatory agency for review. SciClone expects a review period of up to twelve months for their application and believes that the potential for Vibativ in China may be significant.

In August 2021, we signed an agreement with Verity Pharmaceuticals International Limited (“Verity”) to license and commercialize our Vibativ product in Puerto Rico. Verity is a specialty pharmaceutical company with commercial operations in the U.S. and Canada. They have a particular strength and experience in the Puerto Rican market.

Poly Co-Promotion Agreement

We entered into a co-promotion arrangement with Poly Pharmaceuticals, Inc. (“Poly”) for our Kristalose product in 2017. Poly is a privately held U.S. specialty pharmaceutical company that is featuring Kristalose to an expanded number of physicians. Poly’s sales organization is more than doubling the number of nationwide physicians that are reached with the Kristalose brand message. During 2019, we extended our co-promotion arrangement with Poly.

2R and Foxland Agreements

During 2018, we entered into another co-promotion arrangement related to our Kristalose product. We have agreements with 2R Investments, LLC and with Foxland Pharmaceuticals, Inc. to package, distribute and promote an authorized generic form of our Kristalose product to physician targets that we do not cover.

Nordic License Agreement

We acquired the exclusive U.S. rights to Nordic Group B.V.'s injectable methotrexate product line. The product line is approved for patient use in various European countries. Cumberland has registered and is commercializing the methotrexate products under the brand name RediTrex. The products are designed for the treatment of active rheumatoid arthritis, juvenile idiopathic arthritis, severe psoriatic arthritis, and severe disabling psoriasis. Following the FDA approval for RediTrex, we began introducing the product line during 2020 and commenced the full national launch in October 2021.

Clinigen Strategic Dissolution Agreement

We previously entered into an agreement with the Clinigen Group plc ("Clinigen"), an international specialty pharmaceutical and services company, to commercialize select Clinigen products in the U.S. In May 2016, we announced an agreement with Clinigen to acquire an exclusive license and commercialize Ethyol® in the U.S. We then announced in January 2017, our second agreement with Clinigen to acquire an exclusive license and launch Totect® in the U.S.

During May 2019, following a strategic review of our partners, products and organization, we entered into a Dissolution Agreement with Clinigen in which Cumberland returned the exclusive rights to commercialize Ethyol and Totect in the United States to Clinigen. Under the final terms of the amended Dissolution Agreement we transitioned from our current arrangement with Clinigen effective December 31, 2019. Under the terms of the agreement, Cumberland was no longer involved directly or indirectly with the distribution, marketing and promotion of either Ethyol or Totect or any competing products. In exchange for the return of these product license rights and not competing with either product, we received $5 million in financial consideration paid over the two- years ending December 31, 2021.

CET University Collaboration Agreements

Through CET, we collaborate with a select group of academic research institutions located in the mid-south region of the U.S. to identify, co-develop and seek grant funding for promising biomedical technologies emerging from those research institutions. CET is collaborating with Vanderbilt University, the University of Mississippi, the University of Tennessee Research Foundation, Louisiana State University, and the Medical University of South Carolina. CET has entered into a series of agreements to access and collaborate on the development of innovative product candidates. These arrangements enable CET to team with university-based researchers to advance their scientific discoveries and breakthroughs by designing new product candidates to improve patient care and address unmet medical needs. CET has been able to help secure federal small business grant funding to support these various projects.

In addition, CET operates a Life Sciences Center in downtown Nashville to house its own research and development activities while providing laboratory space for other biomedical ventures.

CLINICAL AND REGULATORY AFFAIRS

We have in-house capabilities for the management of our clinical, professional and regulatory affairs. Our team develops and manages our clinical trials, prepares regulatory submissions, manages ongoing product-related regulatory responsibilities and manages our medical information call center. Team members have been responsible for devising the regulatory and clinical strategies for all our products as well as obtaining FDA approvals for Acetadote, Caldolor and RediTrex brands.

Clinical Development

Our clinical development personnel are responsible for:

- creating clinical development strategies;
- designing, implementing and monitoring our clinical trials; and
- creating case report forms and other study-related documents.

Regulatory and Quality Affairs

Our internal regulatory and quality affairs team is responsible for:

- preparing and submitting INDs for clearance to begin patient studies;
- preparing and submitting NDAs and fulfilling post-approval marketing commitments;
- maintaining investigational and marketing applications through the submission of appropriate reports;
- submitting supplemental applications for additional label indications, product line extensions and manufacturing improvements;
- evaluating regulatory risk profiles for product acquisition candidates, including compliance with manufacturing, labeling, distribution and marketing regulations;
- monitoring applicable third-party service providers for quality and compliance with current Good Manufacturing Practices ("GMPs"), Good Laboratory Practices ("GLPs"), and Good Clinical Practices ("GCPs"), and performing periodic audits of such vendors; and
- maintaining systems for document control, product and process change control, customer complaint.

PROFESSIONAL AND MEDICAL AFFAIRS

Our medical team provides in-house, medical information support for our marketed products. This includes interacting directly with healthcare professionals to address any product or medical inquiries through our medical information call center and medical science liaisons. In addition to coordinating the call center, our clinical/regulatory group generates medical information letters, provides informational memos to our sales forces and assists with ongoing training for the sales forces.

CLINICAL DEVELOPMENT AND STUDY RESULTS

Vibativ Clinical Manuscripts

Vibativ is a patented, FDA-approved injectable anti-infective for the treatment of certain serious bacterial infections including hospital-acquired and ventilator-associated bacterial pneumonia and complicated skin and skin structure infections. It addresses a range of Gram-positive bacterial pathogens, including those that are considered difficult-to-treat and multidrug-resistant.

In late 2019, we announced a publication in *Infectious Diseases and Therapy*, with study results showing numerically superior cure rates of telavancin compared to vancomycin within a subset of patients who were enrolled in Phase 3 ATTAIN trials and had hospital-acquired pneumonia caused by bacteria with low susceptibility to vancomycin. Additionally, an online publication in *Drugs - Real World Outcomes*, detailed the positive clinical outcomes that resulted from treating multiple infection types with Vibativ, including complicated skin infections, bone and joint infections, bacteremia and endocarditis, and lower respiratory tract infections.

In May 2020, Cumberland announced a new study published in *Drugs - Real World Outcomes*, detailing the positive clinical outcomes that resulted from treating patients with bacteremia or endocarditis with Vibativ. This publication is a sub analysis of The Telavancin Observational Use Registry (TOUR™), a study conducted to record population characteristics, prescription information, and real-world clinical outcomes of patients with Gram-positive infections treated with Vibativ. The analysis suggests Vibativ is a promising and viable option for patients with bacteremia or endocarditis, including those with MRSA or another S. aureus pathogen.

Additionally, in May 2020, we announced the publication of two studies confirming the continued in vitro potency of telavancin. Both publications were part of continued surveillance of telavancin activity since 2011. The first publication tested a global collection of 24,408 Gram-positive clinical isolates, and the second publication tested a U.S. collection of 15,882 S. aureus isolates. Both studies documented the sustained in vitro antimicrobial activity and spectrum of telavancin—many years after its clinical approval—against Gram-positive clinical isolates collected worldwide over seven years, from 2011 through 2017.

Caldolor Clinical Manuscripts

In July 2020, we announced a study published in the *Journal of Orthopedic Trauma*, evaluating the efficacy of Caldolor administration in the management of acute pain in orthopedic trauma patients. The study also measured Caldolor's ability in minimizing opioid use. This single-center, randomized, double-blind, placebo-controlled study found that Caldolor (ibuprofen) Injection reduced the quantity of opioids required to manage pain after a traumatic injury with fracture. In addition, the time to first narcotic medication was longer in the Caldolor group than with hospital standard of care. Pain was also managed better in the Caldolor group compared to standard of care narcotics.

Additionally, in August 2020, we announced the results of a review of nine clinical studies evaluating Caldolor. The comprehensive review was published in the journal *Clinical Therapeutics* and involved 1,062 adult patients, with 757 receiving Caldolor and 305 receiving placebo or a comparator medication. The data noted that the use of Caldolor improved post-surgery recovery, decreased surgical stress, and reduced the use of opioids and over-the-counter medication. The study determined that patients given Caldolor experienced less postoperative pain and decreased opioid use. Study authors also concluded that the rapid administration and preemptive use of Caldolor should be considered in Enhanced Recovery After Surgery protocols for the management of postoperative pain including that of traumatic origin.

Caldolor Newborn Study

We previously received FDA approval for the use of Caldolor in pediatric patients six months of age and older. Caldolor is the first and only injectable NSAID approved for use in children. We then initiated a study to collect data on the use of Caldolor in children ranging in age from birth up to six months of age. Enrollment in that multi-center study was completed in 2019, and topline results were announced in 2020, indicating that Caldolor was well tolerated in this patient population, with no safety concerns noted.

Renal Colic Study

During 2021, we report results from a clinical trial studying the comparison of intravenous ibuprofen with injectable ketorolac in renal colic pain management demonstrated that ibuprofen is the more rapid-acting drug in controlling pain caused by kidney stones. The study also indicated that the complete relief from pain with ibuprofen was twice as much as that of ketorolac. The findings build upon a body of medical evidence supporting the use of our Caldolor product for the treatment of patient pain.

Hyponatremia Publication

During 2021 we also reported on The *Health Outcome Predictive Evaluation* ("HOPE") *COVID-19 Registry Analysis.* It was an international study of over 4,000 patients published in November 2020, found that patients hospitalized with COVID-19 had a high risk of developing hyponatremia. These COVID-19 patients also had a higher incidence of mortality due to their hyponatremia. The study results support the use of an intravenous vaptan to treat hyponatremia in critically ill patients afflicted with COVID-19.

Hyponatremia, an imbalance of serum sodium to body water, is the most common electrolyte disorder among hospitalized patients. Our Vaprisol product is one of two branded prescription products indicated for the treatment of hyponatremia, and the only intravenously administered branded treatment. Vaprisol has a proven day-1 response rate to normalize serum sodium levels in hyponatremic patients and move them out of the Intensive Care Unit as efficiently as possible.

Ifetroban Phase II Studies

We have been evaluating our ifetroban product candidate in a series of clinical studies. We have three Phase II clinical programs underway evaluating our ifetroban product candidates in 1) Aspirin-Exacerbated Respiratory Disease, a severe form of asthma, 2) Systemic Sclerosis or scleroderma, a debilitating autoimmune disorder characterized by diffuse fibrosis of the skin and internal organs and 3) patients with cardiomyopathy associated with *Duchenne Muscular Dystrophy*, a rare, fatal, genetic neuromuscular disease results in deterioration of the skeletal, heart and lung muscles. Investigational New Study applications have been cleared by the FDA enabling us to launch clinical studies in each of these areas.

We have also completed two pilot Phase II studies involving 1) patients suffering from Hepatorenal Syndrome, a life-threatening condition involving liver and kidney failure and 2) patients with Portal Hypertension associated with chronic liver disease. There were no significant safety issues identified with the use of ifetroban in these patients.

Additional pilot studies of ifetroban are underway, including several investigator-initiated trials.

Enrollment in our clinical studies was interrupted during 2021 and 2020 due to the COVID-19 pandemic. Many of our clinical study sites have reopened and resumed screening of patients for potential enrollment into our studies. We are awaiting results from the studies underway before deciding on the best development path for the registration of ifetroban, our first new chemical entity.

New Hospital Product Candidate Study

Cumberland was responsible for the formulation, development and FDA approval of both Acetadote and Caldolor. Our Medical Advisory Board has helped us identify additional opportunities that address unmet or poorly met medical needs. As a result, Cumberland has successfully designed, formulated and completed preclinical studies for a cholesterol reducing agent for use in the hospital setting.

We previously completed a Phase I study which defined the pharmacokinetic properties and provided a favorable safety profile for this new product candidate. The study results and a proposed clinical development plan were discussed with the FDA.

A Phase II study has been initiated and patient enrollment completed. We have completed the study report, filed it with the FDA and are now determining the next steps for this product development program.

Additional Testing Program

Cumberland entered into a non-clinical evaluation agreement, to test one of our products against bacterial strains utilizing the preclinical services program funded by the Division of Microbiology and Infectious Diseases ("DMID"), part of the National Institute of Allergy and Infectious Diseases ("NIAID"), an institute of the National Institutes of Health ("NIH"), which is part of the Department of Health and Human Services ("HHS"), an agency of the U.S. Government.

CORPORATE DEVELOPMENT

Cumberland Foundation

We have formed the *Cumberland Pharma Foundation* (the "Foundation") to provide the ongoing philanthropic endeavors of Cumberland Pharmaceuticals Inc.

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

We initially provided a grant of 50,000 shares of our common stock to the Foundation. The shares will address the ongoing financial needs of the Foundation, with most of the shares expected to be held for the opportunity to realize long term appreciation to support the Foundation's future.

The Foundation maintains independent financial statements and its contributions will not impact the financial statements of Cumberland Pharmaceuticals. Initial annual grants by the Foundation have been and remain consistent with the historic level of contributions made by Cumberland Pharmaceuticals. During 2021, we provided approximately $25,000 in cash contributions to the Foundation.

Cumberland Health and Wellness Political Action Committee

We have also formed the *Cumberland Health and Wellness Political Action Committee* (the "PAC"). The objective of the PAC is to support candidates and policies that are consistent with Cumberland's mission of advancing patient care. The PAC's activities will be at the local, state and federal level and conducted in a bi-partisan manner.

The initial committee membership is comprised of Cumberland Pharmaceuticals employees. The PAC received initial funding from us, and future funding will include voluntary individual contributions from Cumberland Pharmaceuticals directors and employees.

MANUFACTURING AND DISTRIBUTION

Manufacturing

We partner with third parties for certain non-core, capital-intensive capabilities, including the manufacturing and distribution of our products. We manage these third-party relationships and are responsible for the quality review and release of each lot of our products.

Acetadote®

We have an agreement with one manufacturer, who provided commercial supplies of Acetadote in 2021.

Caldolor®

We have agreements with multiple manufacturers for the supply of Caldolor and during 2021 we obtained commercial supplies from three of these manufacturers for our international and domestic Caldolor requirements.

Kristalose®

We have an agreement for the purchase of Kristalose API with an international supplier. We also had manufacturing relationships with two packagers who provided finished supplies of the product for commercial and sampling purposes during 2021. We will continue with one of those facilities in 2022.

Omeclamox-Pak®

During 2020, the packager for Cumberland's Omeclamox-Pak product encountered financial difficulties due to the economic impact of COVID-19, and their operations suspended. Cumberland is awaiting resumption of those operations while also exploring other alternatives to restart the product's packaging. We informed the FDA of a shortage of the Omeclamox-Pak in October 2020, and have not provided a date for the availability of new inventory.

RediTrex®

In 2016, we entered into an agreement to acquire the exclusive U.S. rights to an injectable methotrexate product line of pre-filled syringes. In 2019, we received FDA approval for the product line. Our licensor is responsible for providing us the packaged and labeled commercial supply of the product.

Sancuso®

As part of the acquisition of Sancuso, we obtained an initial supply of finished goods inventory. The agreement with the manufacturer of Sancuso was assigned to us and there are additional lots planned for 2022 which will provide us with additional supplies. The production is in the process of being moved to one of the manufacturer's other facilities. Data is being developed to support the transfer which will require FDA approval.

Vaprisol®

As part of the acquisition of Vaprisol, we obtained a significant existing supply of raw material inventory. We reached an agreement during 2020 with a new manufacturer to provide us with long - term supplies of the product. We subsequently completed the transfer of the product's manufacturing to the new facility in 2021. We informed the FDA that supplies of the product are not currently available and are awaiting approval for that new facility.

Vibativ®

Through our acquisition of Vibativ, we obtained a multi-year supply of raw material, work in process and finished goods inventory. As a result of the agreement, we are now responsible for the future manufacture of the product and completed the transfer of the product's manufacturing activities to a new supplier and received FDA approval for that facility.

Distribution

Like many pharmaceutical companies, we engage a third-party with appropriate facilities and logistical expertise to support the U.S. distribution of our products. In 2021, Cardinal Health Specialty Solutions has exclusively handled our U.S. product logistics activities, including warehousing, shipping, and various other customer activities. Our primary customers are the wholesalers of pharmaceuticals who provide our products to hospitals, clinics and retail pharmacies in the U.S.

PATENTS, TRADEMARKS AND OTHER INTELLECTUAL PROPRIETARY RIGHTS

We own the trademarks for each of our branded pharmaceutical products as well as for our corporate name and logo. We have applied for trademark registration for other various names and logos. Over time, we intend to maintain registrations on trademarks that remain valuable to our business.

We seek to protect our products from competition through a combination of patents, trademarks, trade secrets, FDA exclusivity and contractual restrictions on disclosure. Proprietary rights, including patents, are an important element of our business. We seek to protect our proprietary information by requiring our employees, consultants, contractors and other advisors to execute agreements providing for protection of our confidential information upon commencement of their employment or engagement. We also require confidentiality agreements from entities to which we provide our confidential information or materials.

Acetadote®

We developed a new formulation of Acetadote (acetylcysteine) Injection as part of a Phase IV commitment in response to a request by the FDA to evaluate the reduction of ethylene diamine tetraacetic acid ("EDTA") from the product's formulation. In April 2012, the USPTO issued U.S. Patent number 8,148,356 (the “356 Acetadote Patent”) which is assigned to us. The claims of the 356 Acetadote Patent encompass the new Acetadote formulation and include composition of matter claims. Following its issuance, the 356 Acetadote Patent was listed in the FDA Orange Book. The 356 Acetadote Patent is scheduled to expire in May 2026, which time period includes a 270-day patent term adjustment granted by the USPTO.

Following the issuance of the 356 Acetadote Patent, we received separate Paragraph IV certification notices from InnoPharma, Inc. ("InnoPharma"), Paddock Laboratories, LLC (“Paddock”), Mylan Institutional LLC (“Mylan”), Sagent Agila LLC ("Sagent") and Perrigo Company ("Perrigo") challenging the 356 Acetadote Patent on the basis of non-infringement and/or invalidity. We responded by filing five separate infringement lawsuits, in the appropriate United States District Courts, to contest each of the challenges.

On November 12, 2012, we entered into a Settlement Agreement (the “Settlement Agreement”) with Paddock and Perrigo to resolve the challenges and the pending litigation with those two companies.

On November 1, 2013, the United States District Courts filed opinions granting Sagent’s and InnoPharma’s motions to dismiss our suits and we agreed not to file an appeal or motion to reconsider, thereby resolving the challenges and the pending litigation with those two companies.

Under the Settlement Agreement, Paddock and Perrigo admit that the 356 Acetadote Patent is valid and enforceable and that any Paddock or Perrigo generic version of Acetadote (with or without EDTA) would infringe upon the 356 Acetadote Patent. In addition, Paddock and Perrigo will not challenge the validity, enforceability, ownership or patentability of the 356 Acetadote Patent through its expiration currently scheduled for May 2026. On November 12, 2012, in connection with the execution of the Settlement Agreement, we entered into a License and Supply Agreement with Paddock and Perrigo (the “License and Supply Agreement”).

Under the terms of the License and Supply Agreement, if a third party receives final approval from the FDA for an ANDA to sell a generic Acetadote product and such third party made such generic version available for purchase in commercial quantities in the United States, we are to supply Perrigo with an Authorized Generic version of our Acetadote product.

On May 18, 2012, we also submitted a Citizen Petition to the FDA requesting that the FDA refrain from approving any applications for acetylcysteine injection that contain EDTA, based in part on the FDA's request that we evaluate the reduction or removal of EDTA from our original Acetadote formulation.

On November 7, 2012, the FDA responded to the Citizen Petition denying our request and on November 8, 2012, we learned that the FDA approved the ANDA referencing Acetadote filed by InnoPharma, Inc. We brought suit against the FDA contesting the FDA's decision to approve the InnoPharma generic on November 13, 2012.

On September 30, 2013, the United States District Court filed an opinion granting a summary judgment in favor of the FDA regarding this suit.

As noted above, during 2012 the FDA approved the ANDA referencing Acetadote filed by InnoPharma, Inc. Upon this condition, in accordance with the License and Supply agreement with Perrigo, we began to supply Perrigo with our Authorized Generic. On January 7, 2013, Perrigo announced initial distribution of our Authorized Generic acetylcysteine injection product.

On March 19, 2013, the USPTO issued U.S. Patent number 8,399,445 (the “445 Acetadote Patent”) which is assigned to us. The claims of the 445 Acetadote Patent encompass the use of the 200 mg/ml Acetadote formulation to treat patients with acetaminophen overdose. On April 8, 2013, the 445 Acetadote Patent was listed in the FDA Orange Book. The 445 Acetadote Patent is scheduled to expire in August 2025. Following the issuance of the 445 Acetadote Patent we received separate Paragraph IV certification notices from Perrigo, Sagent Pharmaceuticals, Inc., and Mylan challenging the 445 Acetadote Patent on the basis of non-infringement, unenforceability and/or invalidity.

On June 10, 2013, we became aware of a Paragraph IV certification notice from Akorn, Inc. challenging the 445 Acetadote Patent and the 356 Acetadote Patent on the basis of non-infringement. On July 12, 2013, we filed a lawsuit for infringement of the 356 Acetadote Patent against Akorn, Inc. in United States District Court.

On February 18, 2014, the USPTO issued U.S. Patent number 8,653,061 (the “061 Acetadote Patent”) which is assigned to us. The claims of the 061 Acetadote Patent encompass the use of the 200 mg/ml Acetadote formulation to treat patients with acetaminophen overdose. Following its issuance, the 061 Acetadote Patent was listed in the FDA Orange Book. The 061 Acetadote Patent is scheduled to expire in August 2025.

On May 13, 2014, the USPTO issued U.S. Patent number 8,722,738 (the “738 Acetadote Patent”) which is assigned to us. The claims of the 738 Acetadote Patent encompass administration methods of acetylcysteine injection, without specification of the presence or lack of EDTA in the injection. Following its issuance, the 738 Acetadote Patent was listed in the FDA Orange Book and it is scheduled to expire in April 2032.

On December 11, 2014 and March 3, 2015, we became aware of Paragraph IV certification notices from Aurobindo Pharma Limited and Zydus Pharmaceuticals (USA) Inc., respectively, challenging the 356, 445, 061, and 738 Acetadote Patents on the basis of non-infringement.

On February 10, 2015, the USPTO issued U.S. Patent number 8,952,065 (the “065 Acetadote Patent”) which is assigned to us. The claims of the 065 Acetadote Patent encompass the use of the 200 mg/ml Acetadote formulation to treat patients with acute liver failure. The 065 Acetadote Patent is scheduled to expire in August 2025.

On September 30, 2015, the United States District Court for the Northern District of Illinois, Eastern Division ("District Court") ruled in our favor in our lawsuit against Mylan for infringement of the 445 Acetadote Patent. The opinion upheld our 445 Acetadote Patent and expressly rejected Mylan's validity challenge. The District Court ruled that Mylan is liable to us for infringement of the 445 Acetadote patent in light of Mylan's Abbreviated New Drug Application in which Mylan sought to market a generic version of Acetadote.

On November 17, 2015, the District Court entered an order enjoining Mylan and its affiliates from selling or using its generic version of Acetadote until August 2025, the date of expiration of the 445 Acetadote Patent. On October 30, 2015, Mylan filed a notice of appeal to the U.S. Court of Appeals for the Federal Circuit (the "Appeals Court").

On May 3, 2016, the USPTO issued U.S. Patent number 9,327,028 (the “028 Acetadote Patent”) which is assigned to us. The claims of the 028 Acetadote Patent encompass administration methods of acetylcysteine injection, without specification of the presence or lack of EDTA in the injection. Following its issuance, the 028 Acetadote Patent was listed in the FDA Orange Book and it is scheduled to expire in July 2031.

On January 26, 2017, the Appeals Court affirmed the District Court ruling in our favor in our lawsuit against Mylan for infringement of the 445 Acetadote Patent. The Appeals Court opinion affirmed the District Court’s ruling upholding our 445 Acetadote Patent and expressly rejected Mylan's validity challenge.

On November 3, 2017, we became aware of a Paragraph IV certification notice from Exela Pharma Sciences, LLC challenging the 356, 445, 061, 738, and 028 Acetadote Patents on the basis of non-infringement.

Caldolor®

We have an exclusive, worldwide license to clinical data for intravenous ibuprofen from Vanderbilt University, in consideration for royalty obligations related to Caldolor. During 2014, we obtained additional patents for the brand. On May 27, 2014, the USPTO issued U.S. Patent number 8,735,452 (the “452 Caldolor Patent”) which is assigned to us. The claims of the 452 Caldolor Patent encompass methods of treating pain using intravenous ibuprofen. Following its issuance, the 452 Caldolor Patent was listed in the FDA Orange Book and is scheduled to expire in September 2029.

On October 28, 2014, the USPTO issued U.S. Patent number 8,871,810 (the “810 Caldolor Patent”) which is assigned to us. The claims of the 810 Caldolor Patent encompass methods of treating pain using intravenous ibuprofen. Following its issuance, the 810 Caldolor Patent was listed in the FDA Orange Book and is scheduled to expire in September 2029.

During the third quarter of 2015, we obtained four additional patents for Caldolor. On July 7, 2015, the USPTO issued U.S. Patent number’s 9,072,710 (the “710 Caldolor Patent”) and 9,072,661 (the “661 Caldolor Patent”) which are assigned to us. The claims of the 710 Caldolor Patent and the 661 Caldolor Patent include composition and methods of treating pain, inflammation and fever using intravenous ibuprofen. These Caldolor Patents are listed in the FDA Orange Book and are scheduled to expire in March 2032. On April 21, 2015, the USPTO issued U.S. Patent No. 9,012,508 (the “508 Caldolor Patent”) which is assigned to us.

The claims of the 508 Caldolor Patent include methods of treating pain using intravenous ibuprofen. Following its issuance, the 508 Caldolor Patent was listed in the FDA Orange Book and is scheduled to expire in September 2030. On August 25, 2015, the USPTO issued U.S. Patent number 9,114,068 (the “068 Caldolor Patent”) which is assigned to us. The claims of the 068 Caldolor Patent include methods of treating pain using intravenous ibuprofen.

Following its issuance, the 068 Caldolor Patent was listed in the FDA Orange Book and is scheduled to expire in September 2029. On September 22, 2015, the USPTO issued U.S. Patent number 9,138,404 (the “404 Caldolor Patent”) which is assigned to us.

The claims of the 404 Caldolor Patent include methods of treating pain in critically ill patients with intravenous ibuprofen. Following its issuance, the 404 Caldolor Patent was listed in the FDA Orange Book and is scheduled to expire in September 2029.

On March 29, 2016, the USPTO issued U.S. Patent number 9,295,639 (the "639 Caldolor Patent") which is assigned to us. The claims of the 639 Caldolor Patent include methods of treating pain in critically ill patients with intravenous ibuprofen. Following its issuance, the 639 Caldolor Patent was listed in the FDA Orange Book and is scheduled to expire in September 2029.

On May 16, 2017, the USPTO issued U.S. Patent number 9,649,284 (the "284 Caldolor Patent") which is assigned to us. The claims of the 284 Caldolor Patent include methods of treating pain in critically ill patients with intravenous ibuprofen. Following its issuance, the 284 Caldolor Patent was listed in the FDA Orange Book and is scheduled to expire in September 2029. We also have additional patent applications related to Caldolor which are pending with the USPTO.

Vibativ®

We own numerous U.S. patents and related international patents for Vibativ. These patents were acquired in our November 2018 acquisition of certain product rights, intellectual property and related assets of Vibativ from Theravance. Three Vibativ patents are listed in the FDA Orange Book. U.S. Patent number 7,531,623 (the "623 Vibativ Patent") is scheduled to expire in January 2027 and includes composition of matter claims that encompass the Vibativ drug substance as well as methods for preparing the Vibativ drug substance.

Sancuso®

We are the owner of U.S. Patent number 7,608,282 (the "282 Sancuso Patent") for Sancuso. This patent was acquired in our December 2021 acquisition, that closed in January 2022, of certain product rights, intellectual property and related assets of Sancuso from Kyowa Kirin, Inc. The 282 Sancuso Patent is listed in the FDA Orange Book and is scheduled to expire in January 2025. The 282 Sancuso Patent includes composition of matter claims that encompass the Sancuso drug product as well as methods of using Sancuso for treatment and/or prophylaxis.

Remaining Products

We have no issued patents for our Vaprisol, RediTrex, Omeclamox-Pak and Kristalose products. We have multiple granted patents relating to our ifetroban products and patent applications pending with the USPTO.

COMPETITION

The pharmaceutical industry is characterized by intense competition and rapid innovation. Our continued success in developing and commercializing pharmaceutical products will depend, in part, upon our ability to compete against existing and future products in our target markets. Competitive factors directly affecting our markets include but are not limited to:

- product attributes such as efficacy, safety, ease-of-use and cost-effectiveness;
- brand awareness and recognition driven by sales, marketing and distribution capabilities;
- intellectual property and other exclusivity rights;
- availability of resources to build and maintain developmental and commercial capabilities;
- successful business development activities;
- extent of third-party reimbursements, insurance coverage; and
- establishment of advantageous collaborations to conduct development, manufacturing or commercialization efforts.

A number of our competitors possess research and development and sales and marketing capabilities as well as financial resources greater than ours. These competitors, in addition to emerging companies and academic research institutions, may be developing, or in the future could develop, new technologies that could compete with our current and future products or render our products obsolete.

Our products face competition from other branded products, generics, and alternate medical treatments. Our task is to position each brand to feature its competitive advantages, implement a well thought out marketing plan and provide focused sales and other tactical support.

Acetadote®

Acetadote is our injectable formulation of N-acetylcysteine *("*NAC") for the treatment of acetaminophen overdose. NAC is accepted worldwide as the standard of care for acetaminophen overdose. Our competitors in the acetaminophen overdose market are those companies selling orally administered NAC including, but not limited to, Geneva Pharmaceuticals, Inc., Bedford Laboratories division of Hikma Pharmaceuticals, Roxane Laboratories, Inc., InnoPharma Inc. and Hospira Inc.

In November 2012, InnoPharma Inc. was granted approval by the FDA to distribute their generic form of the old formulation of Acetadote containing EDTA. In late 2012, we entered into the Settlement Agreement with Paddock and Perrigo that included the right to distribute our Authorized Generic Acetadote injection product. Our branded Acetadote now competes with both the EDTA free Authorized Generic Acetadote distributed by Paddock and Perrigo along with generic Acetadote products that contain EDTA.

Manufactures of the old Acetadote formulation include: Akorn, AuroMedics Pharma, Fresenius Kabi and Sagent Pharmaceuticals.

Caldolor®

Caldolor is marketed for the treatment of pain and fever, primarily in a hospital or surgery center setting. A variety of other products address the acute pain market:

- Morphine, the most commonly used product for the treatment of acute, post-operative pain, is manufactured and distributed by several generic pharmaceutical companies;
- Other generic injectable opioids, including fentanyl, meperidine and hydromorphone, address this market;

- Ketorolac tromethamine (brand name Toradol®), an injectable NSAID, is also manufactured and distributed by several generic pharmaceutical companies;
- IV acetaminophen (brand name Ofirmev®), an injectable analgesic product is sold by Mallinckrodt plc, and there are also generic versions from different manufacturers available;
- Bupivacaine injectable suspension (brand name Exparel®), product sold by Pacira Pharmaceuticals, Inc., two additional bupivacaine products, Xaracoll and Posimir, were recently approved; and
- IV meloxicam (brand name Anjeso™), a once a day injectable COX-2 preferential NSAID manufactured by Baudax Bio which was recently approved by the FDA.

We are aware of other product candidates in development to treat acute pain including injectable NSAIDs, novel opioids, new formulations of existing therapies and extended release anesthetics. We believe non-narcotic analgesics for the treatment of post-surgical pain are the primary potential competitors to Caldolor.

In addition to the injectable analgesic products above, many companies are developing analgesics for specific indications such as migraine and neuropathic pain, oral extended-release forms of existing narcotic and non-narcotic products, as well as those with new methods of delivery such as transdermal. We are not aware of any approved injectable products indicated for the treatment of fever in the U.S. other than Caldolor and Ofirmev.

There are, however, numerous drugs available to physicians to reduce fevers in hospital settings via oral administration to the patient, including ibuprofen, acetaminophen, and aspirin. These drugs are manufactured by numerous pharmaceutical companies.

Kristalose®

Kristalose is a dry powder crystalline prescription formulation of lactulose indicated for the treatment of constipation. The U.S. constipation therapy market includes various prescription and over the counter, or OTC, products. The branded prescription products which we believe are our primary competitors are:

- Lubiproston (brand name Amitiza®), an oral product indicated for the treatment of chronic idiopathic constipation, irritable bowel syndrome with constipation in adults, is manufactured and sold by Mallinckrodt Pharmaceuticals.
- Naloxegol (brand name Movantik®), an oral product indicated for the treatment of opioid-induced constipation in adults with chronic non-cancer pain and recently acquired by RedHill Biopharma in the first quarter of 2020.
- Linaclotide (brand name Linzess®), an oral product indicated for the treatment of irritable bowel syndrome with constipation and chronic idiopathic constipation. It is sold by Allergan, Inc. and Ironwood Pharmaceuticals, Inc.
- Plecanatide (brand name Trulance®), an oral product indicated for the treatment of irritable bowel syndrome with constipation and chronic idiopathic constipation. It is sold by Synergy Pharmaceuticals.
- Generic and branded liquid lactulose products are marketed by a number of pharmaceutical companies.
- Lactitol for oral solution (brand name Pizensy), an oral, osmotic laxative indicated for the treatment of chronic idiopathic constipation and distributed by Braintree Laboratories, Inc. was recently approved by the FDA.

There are several hundred OTC products used to treat constipation marketed by numerous pharmaceutical and consumer health companies. MiraLax (polyethylene glycol 3350), previously a prescription product, was indicated for the treatment of constipation and manufactured and marketed by Bayer. MiraLax was converted to an OTC product in February 2007 and recently, the FDA rescinded the approval of the generic prescription polyethylene glycol 3350 products.

Omeclamox®-Pak

Omeclamox-Pak is a branded prescription product used for the treatment of Helicobacter pylori (H. pylori) infection and duodenal ulcer disease. It combines three well-known and widely prescribed medications packaged in a daily dose pack for patient convenience: omeprazole, clarithromycin, and amoxicillin. The three individual components of Omeclamox-Pak are also available from other suppliers through three separate prescriptions.

While there are several competitor products, Omeclamox-Pak is one of the two actively marketed products for this condition. In addition, compared to the competing products, Omeclamox-Pak has the lowest pill burden, fewest days of therapy and convenient twice daily dosing. The prescription combination products, indicated for treatment of H. pylori, which we believe are our primary competitors are:

- PrevPac®, an oral product sold by Takeda Pharmaceutical Company. There are also approved generic versions of PrevPac;
- Pylera®, an oral product manufactured and sold by Allergan plc; and
- Talicia®, an oral product manufactured by RedHill Biopharma which was recently approved by the FDA.

RediTrex®

RediTrex is methotrexate for subcutaneous administration in a unique syringe designed for ease of use, improved accuracy, and enhanced safety. It is indicated for treatment of rheumatoid arthritis, polyarticular juvenile idiopathic arthritis, and severe, recalcitrant, or disabling psoriasis unresponsive to alternative treatments.

This market is highly competitive with drugs from several different therapeutic classes available for treatment. Methotrexate is considered a standard of care especially when patients fail to respond adequately to low dose steroids or non-steroidal anti-inflammatory drugs (NSAIDs). Methotrexate is available in multiple dose forms including oral, subcutaneous, and intra-venous. Methotrexate may be used alone or in combination with drugs from other therapeutic classes to adequately control patient symptoms.

RediTrex competes with other dose forms and delivery systems for methotrexate including, oral tablets, conventional vial and syringe administration, and auto-injector pens. Oral tablets and conventional vials are generic and available from many suppliers. There are two auto-injector pen products available, Rasuvo and Otrexup.

RediTrex also competes with or may be used in combination with drugs from other therapeutic classes including, injectable biologics like Humira and Enbrel and oral JAK inhibitors like Xaljanz. These newer agents are more expensive than the methotrexate products but benefit from significant promotion to patients and doctors.

Sancuso®

Sancuso is the only transdermal patch FDA approved for the management of chemotherapy induced nausea and vomiting (CINV). Each patch delivers up to 5 days of treatment with granisetron, a standard of care for CINV, through the skin. Recommended treatment suggests the patch be applied 24 to 48 hours prior to chemotherapy treatment and remain in place for 5 days.

While there are no other transdermal products available to treat CINV, there are a large number of generic and branded oral products as well as a limited number of injectables. Cumberland considers the oral branded products to be the most important competition including Akynzeo, Emend Oral, Varubi, Zuplenz, and Kytril.

Vaprisol®

Vaprisol is a patented, prescription brand indicated to raise serum sodium levels in hospitalized patients with euvolemic and hypervolemic hyponatremia. The product was developed and registered by Astellas and then launched in 2006. It is one of two branded prescription products indicated for the treatment of hyponatremia, and the first and only intravenously administered branded treatment. The other competing product is Samsca, an oral product sold by Otsuka Pharmaceutical Company.

Vibativ®

Vibativ is a potent, once-daily, injectable antibiotic for the treatment of certain gram-positive infections. Vibativ is approved for the treatment of complicated skin and skin structure infections and hospital-acquired or ventilator-associated bacterial pneumonia caused by susceptible isolates of Staphylococcus aureus when alternative treatments are not suitable. There are several generic and branded antibiotics that compete for these indications.

The major generic competitors are vancomycin, linezolid, and daptomycin. Vancomycin is by far the most widely used agent. Newer branded agents are also available including:

- Ceftaroline fosamil (brand name Teflaro®) an injectable antibiotic manufactured and sold by Allergan
- Dalbavancin (brand name Dalvance®), an injectable antibiotic manufactured and sold by Allergan
- Oritavancin (brand name Orbactiv®), an injectable antibiotic manufactured and sold by Melinta

We are aware of a number of other novel antibiotics which are currently in development.

Antibiotic drug selection is based both on an empiric and susceptibility proven basis. In the hospital setting, cost is an important factor which favors the use of generic agents as long as they are effective. Newer agents are often reserved for two reasons: they are valuable in the treatment of patients that fail to respond to generics and it is considered good practice to conserve the use of these agents to reduce the risk of resistance.

GOVERNMENT REGULATION

The development of new pharmaceutical products can be a long, expensive and risky process. There is no assurance we will obtain successful study results or secure the needed market approvals for our pipeline product candidates. Governmental authorities in the U.S. and other countries extensively regulate the research, development, testing, manufacturing, distribution, marketing and sale of pharmaceutical products. For more information, see *"Risks Relating to Government Regulation"* in Part I, Item 1A of this Form 10K.

In the U.S., the FDA under the Federal Food, Drug, and Cosmetic Act, ("FDCA"), the Public Health Service Act, and other federal statutes and regulations, subjects pharmaceutical products to rigorous review. 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 Application ("NDAs") or biologics license applications, ("BLAs"), warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties, and criminal prosecution.

We, our manufacturers and contract research organizations may also be subject to regulations under other federal, state and local laws, including the Occupational Safety and Health Act, (OSHA), the Resource Conservation and Recovery Act, the Clean Air Act and import, export and customs regulations as well as the laws and regulations of other countries.

FDA Approval Process

The FDA is a regulatory agency within the Department of Health and Human Services. A key responsibility is to regulate the safety and effectiveness of drugs sold in the United States. The FDA manages this responsibility into two phases: pre-approval (premarket) and post approval (post market). The FDA reviews manufacturers' applications to market drugs in the United States; a drug may not be sold unless it has FDA approval. The FDA continues its oversight of drug safety and effectiveness as long as the drug is on the market.

To market a prescription drug in the United States, a manufacturer needs FDA approval. To get that approval, the manufacturer must demonstrate the drug's safety and effectiveness according to criteria specified in law and agency regulations, ensure that its manufacturing plant passes FDA inspection, and obtain FDA approval for the drug's labeling, a term that includes all written material about the drug, including, for example, packaging, prescribing information for physicians and patient brochures.

The progression to drug approval begins before FDA involvement. First, scientists work in the laboratory to discover and develop a new compound. Next, basic questions on safety are answered by nonclinical testing with animals and then, a drug or biotechnology company develops a prototype drug. That company must seek clearance from the FDA by way of an Investigational New Drug ("IND") application to test the product with human subjects.

Those tests, called clinical trials, are carried out sequentially in Phase I, II, and III studies, which involve increasing numbers of subjects. The manufacturer then compiles the resulting data and analyses in an NDA. The FDA reviews the NDA with three major concerns: (1) safety and effectiveness in the drug's proposed use; (2) appropriateness of the proposed labeling; and (3) adequacy of manufacturing methods to assure the drug's identity, strength, quality, and purity.

The FDA and associated regulations detail the requirements at each step. The FDA uses a few special mechanisms to expedite drug development and the review process when a drug might address an unmet need or a serious disease or condition. Those mechanisms include accelerated approval, fast track and priority reviews and the newer designation, breakthrough therapy.

The sponsor of the drug typically conducts human clinical trials in three sequential phases, but the phases may overlap. Phase I clinical trials are generally conducted in a small number of healthy volunteers, primarily to collect and assess pharmacokinetics and safety data at one or more dosages prior to proceeding into patients.

In Phase II clinical trials, the sponsor evaluates the early efficacy of the product in short term trials on the targeted indication and identifies possible adverse effects and safety risks in a patient population.

Phase III clinical trials typically involve testing for patients in long term trials examining safety and clinical efficacy in an expanded population at geographically-dispersed test sites.

The FDA requires that clinical trials be conducted in accordance with the FDA's Good Clinical Practice GCP requirements. The FDA may order the partial, temporary or permanent discontinuation of a clinical trial at any time or impose other sanctions if it believes that the clinical trial is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. The institutional review board ("IRB"), or ethics committee (outside of the U.S.), of each clinical site generally must approve the clinical trial design and patient informed consent and may also require the clinical trial at that site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements, or may impose other conditions.

The results of the nonclinical and clinical trials, together with detailed information on the manufacturing and composition of the product and proposed labeling, are submitted to the FDA in the form of an NDA for marketing approval. The NDA undergoes a 60-day validation review period before it is accepted for filing.

If the NDA is found to be incomplete, it will not be accepted. Once the NDA is validated and accepted for filing, the FDA begins an in-depth review of the NDA.

Under policies agreed to by the FDA under the Prescription Drug User Fee Act, or PDUFA (currently PDUFA VI - effective October 1, 2017), the FDA has a target timeline of 10 months in which to complete its initial review of a standard NDA and respond to the applicant. The review process and the PDUFA goal date may be extended by two months to address deficiencies, or by three months if the FDA requests or the NDA sponsor otherwise provides additional information or clarification regarding information already provided in the submission at any time during the review clock period. If the FDA's evaluations of the NDA and the clinical and manufacturing procedures and facilities are favorable and meet all regulations, the FDA will issue an approval letter. Priority review is reserved for drugs that represent a “significant improvement in safety or efficacy” over existing treatments and FDA endeavors to complete these reviews in six months.

If the NDA meets with FDA approval, a letter will be sent out indicating approval and final labeling recommendations. If not, a complete response letter will be sent to applicants indicating that the review cycle for an application is complete and that the application is not ready for approval.

The complete response letter will describe the specific deficiencies that the agency has identified in an application and what changes must be made before the application can be approved, with no implication regarding whether the application will ultimately be approved. An approval letter authorizes commercial marketing of the drug for the proposed indication(s) under study. While the FDA's PDUFA 2021 Performance Report showed a continued increase in the percentage of first-cycle approval letters for new molecular entities rising from 56% for FY 2009 to preliminary reports of 100% for FY 2021, we cannot be certain that timely first-cycle approvals will be maintained by the FDA.

The time and cost of completing these steps and obtaining FDA approval can vary dramatically depending on the drug. However, to complete these steps for a novel drug can take many years and cost millions of dollars.

Section 505(b) New Drug Applications

An NDA may be submitted under different methods, a 505(b)(1), 505(b)(2) or 505(j). Section 505(b) provides for the submission of an NDA to support the approval of a drug. Upon approval, a drug may be marketed only for the FDA-approved indication(s) in the approved dosage form. Further clinical trials may be necessary to gain approval for the use of the product for any additional indications or dosage forms.

The FDA also requires post market safety surveillance reporting to monitor the side effects of the drug, which may result in withdrawal of approval after marketing begins if significant adverse safety findings are found.

Section 505(b)(1) or the 'full' NDA is used for new chemical entities ("NCEs") and requires full clinical and nonclinical development of a compound. Marketing exclusivity assigned to a 505(b)(1) approval is five years. A 505(b)(2) NDA permits the submission of an NDA where at least some of the information required for approval comes from studies not conducted by or for the applicant using previously reported safety and efficacy data, and for which the applicant has not obtained a right of reference. Generally new studies are required to provide data on the proposed change.

Some examples of products that may be allowed to follow a 505(b)(2) path to approval are drugs which have a new dosage form, strength, route of administration, formulation or indication or combination drugs. Marketing exclusivity for a 505(b)(2) submission is three years.

Both 505 (b)(1) and (b)(2) are eligible for seven years of exclusivity for orphan drugs and/or six months for pediatric exclusivity. Any marketing exclusivity is independent of patent exclusivity. We successfully secured FDA approvals for Acetadote in January 2004, for Caldolor in June 2009 and for RediTrex in 2019 pursuant to the 505(b)(2) pathway.

Orphan drug designation

The Orphan Drug Act of 1983 (the "Orphan Drug Act") encourages manufacturers to seek approval of products intended to treat “rare diseases and conditions” with a prevalence of fewer than 200,000 patients in the U.S. or for which there is no reasonable expectation of recovering the development costs for the product. For products that receive orphan drug designation by the FDA, the Orphan Drug Act provides tax credits for clinical research, FDA assistance with protocol design, eligibility for FDA grants to fund clinical studies, waiver of the FDA application fee, and a period of seven years of marketing exclusivity for the product following FDA marketing approval.

Acetadote received Orphan Drug designation in October 2001 and in 2004 the FDA approved the product to prevent or lessen hepatic injury after ingestion of a potentially hepatotoxic quantity of acetaminophen. Acetadote was entitled to marketing exclusivity until January 2011 for the treatment of this approved indication.

Section 505(j) abbreviated new drug applications

An ANDA is a type of NDA where approval of a generic drug is based on demonstrating comparability to an innovator drug product (the RLD or Reference Listed Drug). Applications are "abbreviated" because they generally don't include preclinical and clinical data to establish safety and effectiveness. Generics must demonstrate that the product is bioequivalent (i.e., performs in the same manner and is comparable to the 'innovator' product in active ingredient, dosage form, strength, route of administration, labeling, quality, performance characteristics and intended use).

Abbreviated applications may be submitted for drug products that are the same as a listed drug and must be identical in active ingredient(s), form, strength, route of administration, and identical in conditions of use (non-exclusive uses). Products are declared suitable based on a suitability petition to the FDA. If the petition is approved, the Sponsor may then submit the ANDA.

The Hatch-Waxman Act

The Drug Price Competition and Patent Term Restoration Act, informally known as the "Hatch-Waxman Act", is a 1984 United States federal law which established the modern system of generic drugs.

Hatch-Waxman amended the Federal Food, Drug, and Cosmetic Act. Section 505(j) 21 U.S.C. 355(j) sets forth the process by which would-be marketers of generic drugs can file ANDAs to seek FDA approval of the generic. Section 505(j)(2)(A)(vii)(IV), the so-called Paragraph IV, allows 180-day exclusivity to companies that are the "first-to-file" an ANDA against holders of patents for branded counterparts.

These Hatch-Waxman amendments grant generic manufacturers the ability to mount a validity challenge without incurring the cost of entry or risking enormous damages flowing from any possible infringement. Hatch-Waxman essentially redistributes the relative risk assessments and explains the flow of settlement funds and their magnitude. Hatch-Waxman gives generics considerable leverage in patent litigation.

Health care legislation

On March 23, 2010, President Obama signed into law the Patient Protection and Affordable Care Act, or PPACA. On March 30, 2010, the Health Care and Education Reconciliation Act of 2010, or HCERA, was enacted into law, which modified the revenue provisions of the PPACA. The PPACA as amended by the HCERA constitutes the healthcare reform legislation. The following highlights certain provisions of the legislation that may affect us.

Pharmaceutical Industry Fee: Beginning in calendar-year 2011, an annual fee was imposed on pharmaceutical manufacturers and importers that sell branded prescription drugs to specified government programs (e.g., Medicare Part D, Medicare Part B, Medicaid, Department of Veterans Affairs programs, Department of Defense programs and TRICARE).

The annual fee is allocated to companies based on their previous calendar-year market share using sales data that the government agencies that purchase the pharmaceuticals will provide to the Treasury Department. Although we participate in governmental programs that subject us to this fee, our sales volume in such programs is less than $10 million, with the first $5 million of sales being exempt from the fee. This fee has not had a material impact and is not expected to have a material impact on our results of operations.

In addition, PDUFA imposes annual program fees. An applicant will be assessed annual prescription drug program fees for prescription drug products, incurring a fee for each strength of a drug product. An applicant may not be assessed more than five prescription drug program fees for a fiscal year for prescription drug products identified in a single approved application.

Physician Payments Sunshine Act: The PPACA also includes provisions known as the Physician Payments Sunshine Act, or Sunshine Act, which require manufacturers of pharmaceuticals and medical devices covered under Medicare and Medicaid to record any transfers of value to physicians and teaching hospitals and to report this data to the Centers for Medicare and Medicaid Services, or CMS, for aggregation and subsequent public disclosure. Under the Sunshine Act, beginning August 1, 2013, we have collected data regarding reportable transfers of value and have reported such data to CMS. Failure to report appropriate data may result in civil or criminal fines and/or

penalties. In addition to the Federal Sunshine Act, similar reporting requirements have also been enacted on the state level requiring transparency of interactions with health care professionals.

Medicaid Rebate Rate: Under the Medicaid Drig Rebate probram we currently are required to provide rebates for covered outpatient drugs that are dispensed to Medicaid beneficiaries. In addition, we also are required to participate in the Public Health Service's 340B drug pricing program, which requires us to agree to charge no more than a designated ceiling price for covered outpatient drugs that are dispensed to community health clinics and other entities that receive health services grants from the Public Health Service, as well as hospitals that serve a disproportionate share of low-income patients.

Product Serialization: In November of 2013, the FDA passed the Drug Supply Chain Security Act (DSCSA). The DSCSA was created to strengthen the security of the drug distribution supply chain by adding controls such as a national pharmaceutical track and trace system and establishing national standards for licensing of prescription drug wholesale distributors and third-party logistics providers. DSCSA requires trading partners, including manufacturers, repackagers, wholesale distributors and dispensers to provide transaction information to subsequent purchasers for certain prescription drugs. We have taken necessary steps to implement this program and are in compliance with all requirements by the November 2018 deadline.

21st Century Cures Act: The 21st Century Cures Act (Cures Act), signed into law on December 13, 2016, is designed to help accelerate medical product development and bring new innovations and advances to patients who need them faster and more efficiently. The law builds on FDA's ongoing work to incorporate the perspectives of patients into the development of drugs, biological products, and devices in FDA's decision-making process. The Cures Act enhances FDA's ability to modernize clinical trial designs and clinical outcome assessments, which will speed the development and review of novel medical products, including medical countermeasures.

Specifically, the Cures Act enables us to work with FDA in the development of new biomarkers, clinical outcome assessments, surrogate endpoints, and patient reported outcomes. It allows for the use of data summaries rather than full clinical trials for approval and the use of real world evidence to support approval of new indications of approved medical products, or to help satisfy post-approval study requirements for marketed products.

Build Back Better Act and Other Proposed Legislation: The Build Back Better Act ("BBBA") was introduced in the 117th Congress and included provisions that were intended to lower the price of prescription drugs, including granting the Medicare program the authority to negotiate prescription drug prices and imposing tax penalties on drug manufacturers if the price of drugs increase too rapidly. Ultimately the BBBA was not enacted, however, future legislative initiatives are likely to include provisions targeted at containing costs in the presccription drug market.

Post Approval Activities

Once a drug is on the U.S. market (following FDA approval of the NDA), the FDA continues to address drug production, distribution, and use. FDA activities are based on ensuring drug safety and effectiveness, and address product integrity, labeling, reporting of research and adverse events, surveillance, drug studies, risk management, information dissemination, off-label use, physician advertising and direct-to-consumer advertising.

If we amend the NDA for an FDA approved product, such as adding safety or efficacy labeling claims, promoting those new claims, making certain manufacturing changes or product enhancements, we will need FDA review and approval before the change can be implemented. While physicians may use products for indications that have not been approved by the FDA, we may not label or promote the product for an indication that has not been approved.

Securing FDA approval for new indications, product enhancements, and manufacturing and labeling changes may require us to conduct additional clinical trials under FDA's IND regulations. Even if such studies are conducted, they are still subject to the same requirements and timelines as an original NDA.

The FDA continuously gathers information about possible adverse reactions to the products it has approved for use. The FDA requires all manufacturers to report adverse events. It also provides a procedure for consumers and physicians to voluntarily report their concerns about drugs. The agency collects those reports through MedWatch and uses its FDA Adverse Event Reporting System (FAERS) to store and analyze them. Because some events may

occur after the use of a drug for reasons unrelated to the product, the FDA reviews the events to assess which ones may indicate a problem with that particular drug.

They then use information gleaned from the surveillance data to determine a course of action. They might recommend a change in drug labeling to alert users to a potential problem, or, perhaps, to require the manufacturer to study the observed association between the drug and the adverse event.

In addition to FDA restrictions on marketing of pharmaceutical products, several other types of state and federal laws have been applied to restrict certain marketing practices in the pharmaceutical industry in recent years. These laws include anti-kickback statutes and false claims statutes.

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 health care programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other. Violations of the anti-kickback statute are punishable by imprisonment, criminal fines, civil monetary penalties and exclusion from participation in federal health care programs.

In addition to these U.S. laws, we are subject to similar laws that govern our marketing practices and financial arrangements with heath care providers and otherwise are intended to prohibit illicit kickbacks and bribery, including the Foreign Corrupt Practices Act.

Federal False Claims Act

The Federal false claims laws prohibit any person 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.

A number of pharmaceutical and other health care 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.

HIPAA and Other Data Protection Laws

In the United States, we and our collaborators are subject to numerous federal and state privacy and security laws and regulations, including the Health Insurance Portability and Accountability Act of 1996. These laws include obligations related to protecting the privacy and security of health-related personal information, including information that we may obtain through the clinical trial process. In addition, similar laws and regulations exist in Europe and other jurisdictions, including the European Union's General Data Protection Regulation.

ICH - International Committee on Harmonization

Outside of the U.S., our ability to market our products will depend on receiving marketing authorizations from the appropriate regulatory authorities. The International Committee on Harmonization (ICH) provides a set of standards that most Regulatory Authorities adhere to (e.g. U.S., Europe, and Japan) allowing greater harmonization in the interpretation and application of technical guidelines and requirements for pharmaceutical product registration, thereby reducing or obviating duplication of testing carried out during the research and development of new human medicines. Regulatory harmonization offers many direct benefits to both regulatory authorities and the pharmaceutical industry with beneficial impact for the protection of public health.

ENVIRONMENTAL MATTERS

We are subject to federal, state and local environmental laws and regulations and we believe that our operations comply with such regulations. We anticipate that the effects of compliance with federal, state and local laws and regulations relating to the discharge of materials into the environment will not have any material effect on our capital expenditures, earnings or competitive position.

SEASONALITY

There are no significant seasonal aspects to our business.

BACKLOG

Due to the relatively short lead-time required to fill orders for our products, backlog of orders is not considered material to our business.

EMPLOYEES

As of December 31, 2021, we had 83 employees. We believe that our future will depend in part on our continued ability to attract, hire, and retain qualified personnel, including hospital and field sales personnel in particular. To that end, we work with qualified search firms to identify talent, we measure and adjust compensation levels to remain competitive and we work closely with team members to support their success.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

We make statements in this Annual Report on Form 10-K that are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements other than statement of historical facts may be forward-looking statements. In particular, forward-looking statements include, among other things, statements regarding our intent, belief or expectations, and can be identified by the use of terminology such as "may," "will," "expect," "believe," "intend," "plan," "estimate," "should," "seek," "anticipate" and other comparable terms or the negative thereof. In addition, we, through our senior management, from time to time make forward-looking oral and written public statements concerning our expected future operations and other developments. While forward-looking statements reflect our good-faith beliefs and best judgment based upon current information, they are not guarantees of future performance and are subject to known and unknown risks and uncertainties, including those mentioned in Item 1A, "Risk Factors," Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this Form 10-K. Accordingly, investors are cautioned not to place undue reliance on any forward-looking statements. Actual results may differ materially from the expectations contained in the forward-looking statements as a result of various factors. Such factors include, but are not limited to:

- The possible or assumed future results of operations, including the accuracy of our estimates regarding expenses, future revenues, capital requirements and needs for additional financing;
- Changes in national or regional economic conditions, including changes in interest rates and the availability and the cost of capital to us;
- The extent of the impact of the novel coronavirus (COVID-19) pandemic, including the duration and any recurrence of the COVID-19 pandemic, the duration and scope of related government orders and restrictions, the impact on our employees, and the extent of the impact of the COVID-19 pandemic on overall demand for our key products;
- The impact of the COVID-19 pandemic on our suppliers, including any disruptions and inefficiencies in the supply chain for our products;
- Our competitive position and competitors, including the size and growth potential of the markets for our products and product candidates;
- The success, cost and timing of our product acquisition and development activities and clinical trials; and our ability to successfully commercialize our product candidates;
- Product efficacy or safety concerns, whether or not based on scientific evidence, resulting in product withdrawals, recalls, regulatory action on the part of the FDA (or international counterparts) or declining sales;
- The performance of our third-party suppliers and manufacturers which impacts our supply chain and could create business shutdowns or product shortages; and the retention of key scientific and management personnel;
- Challenges to our patents and the introduction of generic versions of our products and product candidates, which could negatively impact our ability to commercialize and sell our products and product candidates and decrease sales a result of market exclusivity;
- Changes in reimbursement available to us, including changes in Medicare and Medicaid payment levels and availability of third-party insurance coverage and the effects of future legislation or regulations, including changes to regulatory approval of new products, licensing and patent rights, environmental protection and possible drug re-importation legislation;
- Interruptions and breaches of our computer and communications systems, and those of our vendors, including computer viruses, hacking and cyber-attacks, that could impair our ability to conduct business and communicate internally and with our customers, or result in the theft of trade secrets or

other misappropriation of assets, or otherwise compromise privacy of sensitive information belonging to us, our customers or other business partners; and

- Issuance of new or revised accounting standards by the Financial Accounting Standards Board and the Securities and Exchange Commission.

The list above contains many, but not all, of the factors that could impact our ability to achieve results described in any forward-looking statements. Investors should understand that it is not possible to predict or identify all such factors and should not consider this list to be a complete statement of all potential risks and uncertainties. For more information about the risks, uncertainties, and other factors that could affect our future results, please refer to Item 1A, Risk Factors, included herein.

Item 1A. Risk Factors.

Risk Factor Summary

Investing in our common stock involves a high degree of risk. You should carefully consider all information in this Annual Report on Form 10-K prior to investing in our common stock. These risks are discussed more fully in the section titled "Risk Factors." These risks and uncertainties include, but are not limited to, the following:

- General economic conditions can have a material adverse effect on our business, financial conditions and result of operations.
- The ongoing COVID-19 pandemic may adversely affect our revenues, results of operations and financial condition.
- Failure to implement strategies to enhance our performance could have a material adverse effect on our business, results of operations and financial conditions.
- Our ability to perform depends on keeping and hiring exceptionally talented management and employees, and our failure to do so could have a material adverse effect on our business, revenues, results of operations and financial condition.
- Our success depends, in part, on our ability to successfully obtain or retain high-performing third-party performers on commercially acceptable terms, and the failure to do so can have a material adverse effect on our business, financial conditions and results of operations.
- Our business is subject to stringent government regulations, it must adhere to numerous complex pieces of legislation, and all of our products face regulatory challenges.
- Our business depends on the successful protection of our intellectual property rights and our product candidates becoming approved by regulatory agencies, commercially viable, and accepted by the market.
- Our business faces a serious financial risk if generic products that compete with any of our branded pharmaceutical products are approved and sold because sales of our products will be adversely-affected and our business may not recover the capital costs of bringing that product to market.
- Our business faces an inherent risk of product liability lawsuits related to the testing of our product candidates and the commercial sale of our products, and if we cannot successfully defend ourselves against the product liability claim, we may incur substantial liabilities.
- We may attempt to develop internationally and license our products globally, as well as invest in other businesses or joint ventures, all of which may be unsuccessful, divert our management's attention and harm our operating results and prospects.

The risk factors described below and throughout this report should be carefully considered and could materially affect our business. There are also risks that are not presently known or not presently material, as well as the other information set forth in this report that could materially affect our business. In addition, in our periodic filings with the SEC, press releases and other statements, we discuss estimates and projections regarding our future performance and business outlook. By their nature, such "forward-looking statements" involve known and unknown risks, uncertainties and other factors that in some cases are out of our control. For a further discussion of forward-looking statements, please refer to the section entitled "Special Note Regarding Forward-Looking Statements." These factors could cause our actual results to differ materially from our historical results or our present expectations and projections. These risk factors and uncertainties include, but are not limited to the following:

RISKS RELATED TO OUR BUSINESS

Risks Related to the COVID-19 pandemic, natural disasters, public health epidemics, and other events beyond our control.

Our business has been adversely impacted by the COVID-19 pandemic which has affected more than 200 countries and has significantly disrupted the day-to-day activities of both individuals and companies. We rely on individuals and third-party organizations around the world to supply components, manufacture and distribute our products, and execute our clinical trials. We have and may continue to experience revenue loss, supply interruptions, time delays and incur unplanned expenses as a result of the impact of the ongoing COVID-19 pandemic.

The COVID-19 pandemic's impact on global markets could affect our future access to liquidity and materially adversely affect our results of operations and financial condition.

The ongoing COVID-19 pandemic, and restrictions intended to prevent its spread, have had a significant adverse impact on economic and market conditions around the world, including the United States. The impact of the COVID-19 pandemic continues to evolve. While the economic impact brought by, and the duration of, COVID-19 is difficult to assess or predict, the COVID-19 pandemic could result in additional disruption of global financial markets, reducing our ability to access capital in the future, which could negatively affect our liquidity in the future and in ways that cannot be predicted potentially including a prolonged recessionary environment in the United States. In the longer term, there could be significant new regulatory actions and other events that could limit our activities and investment opportunities or change the functioning of the capital markets, and there is the possibility of a severe worldwide economic downturn. Consequently, we may not be capable of, or successful at, generating positive investment returns or effectively managing risks. Accordingly, we cannot predict the extent to which our results of operations, financial condition and cash flows will be affected.

An adverse development regarding our products could have a material and adverse impact on our future revenues and profitability.

Our product portfolio currently includes eight brands: Acetadote, Caldolor, Kristalose, Vaprisol, Omeclamox-Pak, Vibativ, RediTrex and Sancuso. A product contamination or other safety or regulatory issues, such as a failure to meet certain FDA reporting requirements involving our products, could negatively impact us and possibly lead to a product recall. In addition, changes impacting any of our products in areas such as competition, lack of market acceptance or demand, government regulation, intellectual property, reimbursement and manufacturing could have an adverse impact on our future revenues and profitability including:

- Changes in intellectual property protection available for our products or competing treatments;
- Any unfavorable publicity concerning us, our products, or the markets for these products such as information concerning product contamination or other safety issues in any of our product markets, whether or not directly involving our products;
- Perception by physicians and other members of the healthcare community of the safety or efficacy of our products or competing products;
- Regulatory developments related to our marketing and promotional practices or the manufacture or continued use of our products;
- The prices of our products relative to other drugs or competing treatments;
- The impact of current or additional generic competitors;
- The availability and level of third-party reimbursement for sales of our products;
- The continued availability of adequate supplies of our products to meet demand:
- Weakened demand for our products; and

- Unforeseen or serious adverse effects outside of those specified in current product labeling being attributed to any of our approved products.

Acetadote may be used to treat acetaminophen overdosess. The FDA has previously requested prescribers and manufacturers of prescription combination products that contain acetaminophen to limit the amount of acetaminophen to no more than 325 milligrams (mg) in each tablet or capsule. The FDA requested this action to protect consumers from the risk of severe liver damage which can result from excess acetaminophen which may reduce the number of acetaminophen overdoses which could result in a lower demand for Acetadote. If the demand for Acetadote decreases, it could have an adverse impact on our future revenues and profitability.

The commercial success of Caldolor is dependent on many third-parties, including physicians, pharmacists, hospital pharmacy and therapeutics committees, or P&T committees, suppliers and distributors, all of whom we have little or no control over. We expect Caldolor to continue to be administered primarily to hospital and surgery center patients who are unable to receive oral therapies for the treatment of pain or fever. Before we can distribute Caldolor to any new hospital customers, Caldolor must be approved for addition to the hospitals' formulary lists by their P&T committees. A hospital's P&T committee generally governs all matters pertaining to the use of medications within the institution, including review of medication formulary data and recommendations of drugs to the medical staff. We cannot guarantee that we will be successful in getting the approvals we need from enough P&T committees to be able to optimize hospital sales of Caldolor. Even if we obtain hospital approval for Caldolor, we must still convince individual hospital physicians to prescribe Caldolor repeatedly. The commercial success of Caldolor also depends on our ability to coordinate supply, distribution, marketing, sales and education efforts. As with our other products, if Caldolor is not accepted in the marketplace, it could have an adverse impact on our future revenues and profitability.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to review and approve new products and otherwise affect the FDA's ability to perform routine functions. Disruptions at the FDA and other agencies may also slow the time necessary for new drugs or modifications to approved drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business.

Separately, in response to the continuing COVID-19 pandemic and the spread of the Omicron variant, on December 29, 2021, the FDA announced its intention to again postpone surveillance inspections of most foreign and domestic manufacturing facilities with no definitive target date for resuming routine inspection activities. Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic and emerging variants. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

If any manufacturer or partner we rely upon fails to supply our products in the amounts we require on a timely basis, or fails to comply with stringent regulations applicable to pharmaceutical drug manufacturers, we may be unable to meet demand for our products and may lose potential revenues.

We do not manufacture any of our products, and we do not currently plan to develop any capacity to do so. Our dependence upon third parties for the manufacture of our products could adversely affect our profit margins or our ability to develop and deliver products on a timely and competitive basis. If for any reason we are unable to obtain or retain third-party manufacturers on commercially acceptable terms, we may not be able to sell our products as planned. Furthermore, if we encounter delays or difficulties with contract manufacturers in producing our products, the distribution, marketing and subsequent sales of these products could be adversely affected. A long-term inability to meet demand for our products could result in impairment of our brands overall future and the carrying value of the assets associated with our brands. The recent COVID-19 pandemic has and may continue to create issues for our third party-manufacturers and introduce delays in our manufacturing process.

Acetadote: We have an agreement with one manufacturer to provide commercial supply of Acetadote. If this manufacturer is unable to produce marketable inventory in sufficient quantities, in the agreed upon time period, we could suffer an inability to meet demand for Acetadote.

Caldolor: We have agreements with multiple manufacturers for the supply of Caldolor and during 2021 we obtained commercial supplies from three of these manufacturers for our international and domestic Caldolor requirements. If the manufacturers of Caldolor are unable to produce marketable inventory in sufficient quantities, in the agreed upon time period, we could suffer an inability to meet demand for Caldolor.

Kristalose: The active pharmaceutical ingredient for Kristalose is manufactured at a single facility through a complex process. It would be particularly difficult to find a new manufacturer of the Kristalose active pharmaceutical ingredient on an expedited basis. We also have manufacturing relationships with two packagers who provided finished supplies of Kristalose for commercial and sampling purposes during 2021. We will be continuing the packaging of Kristalose with one of those packagers going forward. If the manufacturing or packaging facilities are unable to produce useable or marketable inventory in sufficient quantities, in the agreed upon time period, we could suffer an inablty to meet demand for Kristalose.

Omeclamox-Pak: Our packager for Omeclamox-Pak encountered financial difficulties due to the impact of COVID-19, and their operations are currently suspended. Cumberland is awaiting resumption of those operations while also exploring other alternatives to restart the product's packaging. In October 2020, we informed the FDA of a shortage of the Omeclamox-Pak which continues. If we are unable to obtain marketable inventory in the future, we could suffer an inability to meet demand for Omeclamox-Pak.

Vaprisol: In 2018, the manufacturer of Vaprisol informed us that they would no longer be able to provide the product following the manufacturing of one final batch which is providing us with a multi-year supply. We are currently working with a new manufacturer to provide us with long term supplies of the product. In February 2022, we notified the FDA of a shortage of Vaprisol If we are unable to produce additional marketable inventory in sufficient quantities, in the required time frame, we could suffer an inability to meet demand for Vaprisol.

Vibativ: Through our acquisition of Vibativ, we acquired a multi-year supply of raw material, work in process and finished goods inventory. In 2020, we completed the transfer of Vibativ manufacturing activities to a new supplier. If we are unable to continue to obtain marketable inventory in sufficient quantities, in the agreed upon time period, we could suffer an inability to meet demand for Vibativ.

RediTrex: Under our licensing and distribution agreement for the product, our licensor is responsible for providing us the packaged and labeled commercial supply of the RediTrex product. If we are unable to obtain marketable inventory in sufficient quantities, in the agreed upon time period, we could suffer an inability to meet demand for RediTrex.

Sancuso: As part of the acquisition of Sancuso in January 2022, we obtained an initial supply of finished goods inventory and work in progress. The continued production of Sancuso is in the process of being moved to one of the current manufacturer's other facilities. Data is being developed to support the transfer which will require FDA approval. If the FDA does not approve the new facility and we are unable to obtain marketable inventory n sufficient quantities, we could suffer an inability to meet demand for Sancuso.

In addition, all manufacturers of our products and product candidates must comply with current good manufacturing practices, ("GMPs"), enforced by the FDA through its facilities inspection program. These requirements include quality control, quality assurance, and the maintenance of records and documentation. Manufacturers of our products must be unable to comply with GMP requirements and with other FDA, state, and foreign regulatory requirements.

We have no control over our manufacturers' compliance with these regulations and standards. If our third-party manufacturers do not comply with these requirements, we could be subject to Fines and civil penalties; suspension of production or distribution; suspension or delay in product approval; product seizure or recall; and withdrawal of product approval.

We are dependent on a variety of other third parties. If these third parties fail to perform as we expect, our operations could be disrupted and our financial results could suffer.

We have a relatively small internal infrastructure. We rely on a variety of third parties, in addition to our manufacturers, to help us operate our business. If these third parties do not continue to provide services to us, or collaborate with us, we might not be able to obtain others who can serve these functions. This could disrupt our business operations, increase our operating expenses or otherwise adversely affect our operating results.

Competitive pressures could reduce our revenues and profits.

The pharmaceutical industry is intensely competitive. Our strategy is to target differentiated products in specialized markets. However, this strategy does not relieve us from competitive pressures and can entail distinct competitive risks. Certain of our competitors do not aggressively promote their products in our markets. An increase in promotional activity in our markets could result in large shifts in market share, adversely impacting us.

Our competitors may sell or develop drugs that are more effective and useful or less costly than ours, and they may be more successful in manufacturing and marketing their products. Many of our competitors have significantly greater financial and marketing resources than we do. Additional competitors may enter our markets.

The pharmaceutical industry is characterized by constant and significant investment in new product development, which can result in rapid technological change. The introduction of new products could substantially reduce our market share or render our products obsolete. The selling prices of pharmaceutical products tend to decline as competition increases, through new product introduction or otherwise, which could reduce our revenues and profitability.

If generic products that compete with any of our branded pharmaceutical products are approved and sold, sales of our products will be adversely affected.

Generic equivalents for branded pharmaceutical products are typically sold at lower costs than the branded products. The regulatory approval process in the United States exempts generic products from costly and time-consuming clinical trials to demonstrate their safety and efficacy and rely instead on the safety and efficacy of prior products, manufacturers of generic products can invest far less in research and development. After the introduction of a competing generic product, a significant percentage of the prescriptions previously written for the branded product are often written for the generic version. In addition, legislation enacted in most U.S. states allows or, in some instances mandates, that a pharmacist dispense an available generic equivalent when filling a prescription for a branded product, in the absence of specific instructions from the prescribing physician. Governmental and private healthcare payors also emphasize substitution of branded pharmaceuticals with less expensive generic equivalents. Pursuant to the provisions of the Hatch-Waxman Act, manufacturers of branded products often bring lawsuits to enforce their patent rights against generic products released prior to the expiration of branded products' patents, but it is possible for generic manufacturers to offer generic products while such litigation is pending. As a result, branded products typically experience a significant loss in revenues following the introduction of a competing generic product, even if subject to an existing patent. Our branded pharmaceutical products are or may become subject to competition from generic equivalents because there is no proprietary protection for some of the branded pharmaceutical products we sell, because our patent protection expires or because our patent protection is not sufficiently broad or enforceable. In addition, we may not be successful in our efforts to extend the proprietary protection afforded our branded products through the development and commercialization of proprietary product improvements. Competition from generic equivalents could result in a decrease in revenues of our branded pharmaceuticals or result in a material impairment of our intangible assets or the acceleration of amortization on our non-impaired intangible assets and may have a material adverse impact on our revenues, financial condition, results of operations and cash flows.

Any attempt by us to expand the potential market for any of our products is subject to limitations.

Expansion of the market for our products may be subject to certain limitations. In the past, these limitations have included FDA required Phase IV commitments. We may also experience delays associated with future required Phase IV clinical studies potentially resulting from, among other factors, difficulty enrolling patients. Such delays

could impact our ability to explore opportunities for label expansion and limit our ability to bring our products to new patient populations.

In addition, we have largely obtained regulatory approval to market our products in the United States. Not all foreign jurisdictions may represent attractive opportunities for our products due to pricing, competitive, regulatory or other factors. In certain foreign jurisdictions, we have licensed the right to market some of our products to third parties. These third parties are responsible for seeking and maintaining regulatory approval for the products in their respective jurisdictions. We have no control over these third parties and cannot be sure that marketing approval for our products will be obtained outside the United States.

Our future growth depends on our ability to identify and acquire rights to products. If we do not successfully identify and acquire rights to products, our growth opportunities may be limited.

We have added six products to our portfolio of brands through acquisitions. Our business strategy is to continue to acquire rights to FDA-approved products as well as pharmaceutical product candidates in the late stages of development. We do not plan to conduct basic research or preclinical product development, except to the extent of our investment in CET. As compared to large multi-national pharmaceutical companies, we have limited resources to acquire third-party products, businesses and technologies and integrate them into our current infrastructure. Many acquisition opportunities involve competition among several potential purchasers including large multi-national pharmaceutical companies and other competitors that have access to greater financial resources than we do. With future acquisitions, we may face financial and operational risks and uncertainties. We may not be able to engage in future product acquisitions, and those we do complete may not be beneficial to us in the long term.

Furthermore, other products in development may encounter unforeseen issues during their clinical trials. Any unforeseen issues or lack of FDA approval will negatively affect marketing and development plans for those products.

Our future growth depends on our ability to successfully integrate acquired product brands into our operations. If we do not successfully integrate acquired product brands into our operations, our growth opportunities may be limited.

If we are unable to successfully integrate the marketing, sale and distribution of any other potential products into our current infrastructure or if they require significantly greater resources than originally anticipated, we may face financial and operational risks and uncertainties. If we are unable to successfully integrate any acquired brands, both current and future, these product acquisitions may not be beneficial to us in the long term.

Our ifetoban product candidates have not been approved for sale and may never be successfully commercialized.

We anticipate that a portion of our future revenue growth may come from sales of our ifetroban product candidates. However, none of these products have been approved by the FDA for marketing, and these product candidates are still subject to risks associated with their development. Drug development is a long, expensive and inherently uncertain process with a high risk of failure at every stage of development, and results of earlier studies and trials may not be predictive of future trial results

The FDA has cleared our IND's for the ifetroban product candidates as we evaluate them as treatments for these conditions. Delays in the enrollment and completion of the clinical studies could significantly delay commercial launch and affect our product development costs. Moreover, results from the clinical studies may not be favorable.

Even if they are eventually developed and approved by the FDA, they may never gain significant acceptance in the marketplace and therefore never generate substantial revenue or profits for us. Physicians may determine that existing drugs are adequate to address patients' needs. The extent to which these product candidates will be reimbursed by the U.S. government or third-party payors is also currently unknown.

As a result of the foregoing and other factors, we do not know the extent to which our product candidates will contribute to our future growth.

If we are unable to maintain, train and build an effective sales and marketing infrastructure, we will not be able to commercialize and grow our products and product candidates successfully.

As we grow, we may not be able to secure sales personnel or organizations that are adequate in number or expertise to successfully market and sell our products. This risk would be accentuated if we acquire products in areas outside of our current focus areas since our sales forces specialize in our existing areas. If we are unable to expand our sales and marketing capability, train our sales force effectively or provide any other capabilities necessary to commercialize our products and product candidates, we will need to contract with third parties to market and sell our products. We must train our employees on proper regulatory compliance, including, but not limited to, "fair balance" promotion of our products and anti-kickback laws. If we are unable to establish and maintain compliant and adequate sales and marketing capabilities, we may not be able to increase our product revenue, may generate increased expenses and may experience regulatory compliance issues.

If governmental or third-party payors do not provide adequate reimbursement for our products, our revenue and prospects for profitability may be limited.

Our financial success depends, in part, on the availability of adequate reimbursement from third-party healthcare payors. Such third-party payors include governmental health programs such as Medicare and Medicaid, managed care providers and private health insurers. Third-party payors are increasingly challenging the pricing of medical products and services, while governments continue to propose and pass legislation designed to reduce the cost of healthcare. Adoption of such legislation could further limit reimbursement for pharmaceuticals. In addition, as part of the Build Back Better Act ("BBBA") proposed legislation, provisions intended to lower the price of prescription drugs, including permitting Medicare to negotiate the price of prescription drugs once they have been on the market for a fixed number of years, and imposing a tax penalty on drug manufacturers if the price of their drugs increase faster than the rate of inflation are possible At this time no assurances can be given that these measures, or subsequent legislative proposals, will not have an adverse effect on our revenues in the future. Future cost control initiatives, legislation, and regulations could decrease the price that we receive for our products, which would limit our revenue and profitability.

Also, reimbursement practices of third-party payors might preclude us from achieving market acceptance for our products or maintaining price levels sufficient to realize an appropriate return on our investment in product acquisition and development. If we cannot obtain adequate reimbursement levels, our business, financial condition and results of operations would be materially and adversely affected.

Our employees have been trained to submit accurate and correct pricing information to payors. If, despite the training, our employees provide incorrect or fraudulent information, then we will be subject to various administrative and judicial investigations and litigation.

"Formulary" practices of third-party payors could adversely affect our competitive position.

Many managed healthcare organizations control the pharmaceutical products included on their formulary lists. Having products listed on these formulary lists creates competition among pharmaceutical companies which, in turn, has created a trend of downward pricing pressure in our industry. In addition, many managed care organizations are pursuing various ways to reduce pharmaceutical costs and are considering formulary contracts primarily with those pharmaceutical companies that can offer a full line of products for a given therapy sector or disease state. Our products might not be included on the formulary lists of managed care organizations, and downward pricing pressure in our industry generally could negatively impact our operations.

Continued consolidation of distributor networks in the pharmaceutical industry as well as increases in retailer concentration may limit our ability to profitably sell our products.

We sell most of our products to large pharmaceutical wholesalers, who in turn sell to hospitals, surgery centers and retail pharmacies. The distribution network for pharmaceutical products has become increasingly consolidated in recent years. Further consolidation or financial difficulties could also cause our customers to reduce the amounts of our products that they purchase, adversely impacting our business, financial condition and results of operations.

Our CET joint initiative may not result in our gaining access to commercially viable products.

Our CET joint initiative with Vanderbilt University, WinHealth and Tennessee Technology Development Corporation is designed to help us investigate, in a cost-effective manner, early-stage products and technologies. However, we may never gain access to commercially viable products from CET for a variety of reasons, including:

- CET investigates early-stage products, which have risk of failure prior to FDA approval and commercialization;
- In some programs, we do not have pre-set rights to product candidates developed by CET. We would need to agree with CET and its collaborators on the terms of any product licensed or acquired by us;
- We rely principally on government grants to fund CET's research and development programs. If these grants were no longer available, we or our co-owners might be unable or unwilling to fund CET operations at current levels or at all;
- We may become involved in disputes with our co-owners regarding CET policy or operations, such as how best to deploy CET assets or which product opportunities to pursue. Disagreement could disrupt or halt product development; and
- CET may disagree with one of the various universities with which CET is collaborating on research. A disagreement could disrupt or halt product development.

We depend on our key personnel, the loss of whom would adversely affect our operations. If we fail to attract and retain the talent required for our business, our business will be materially harmed.

We are a relatively small company, and we depend to a great extent on principal members of our management, scientific staff, and sales representatives and managers. If we lose the services of any key personnel, in particular, A.J. Kazimi, our Chief Executive Officer, or other members of senior management it could have a material adverse effect on our business prospects. Mr. Kazimi, plays a key role in several operational and strategic decisions such that any loss of his services due to death or disability would adversely impact our day-to-day operations. We have a life insurance policy covering the life of Mr. Kazimi. We have entered into agreements with each of our employees that contain restrictive covenants relating to non-competition and non-solicitation of our customers and suppliers for one year after termination of employment. Nevertheless, each of our officers and key employees may terminate his or her employment at any time without notice and without cause or good reason, and so as a practical matter these agreements do not guarantee the continued service of these employees. Our success depends on our ability to attract and retain highly qualified scientific, technical, sales and managerial personnel and research partners. Competition among pharmaceutical companies for qualified employees is intense, and we may not be able to retain existing personnel or attract and retain qualified staff in the future. If we experience difficulties in hiring and retaining personnel in key positions, we could suffer from delays in product development, loss of customers and sales and diversion of management resources, which could adversely affect operating results. The recent COVID-19 pandemic has introduced additional challenges in the retention and hiring of key personnel.

The size of our organization and our potential growth may lead to difficulties in managing operations.

As of December 31, 2021, we had 83 employees. We may need to continue to expand our managerial, operational, financial and other resources in order to increase our marketing efforts with regard to our currently marketed products, continue our business development and product development activities and commercialize our product candidates. We have experienced, and may continue to experience, growth and increased expenses in the scope of our operations in connection with the continued marketing and development of our products. Our financial performance will depend, in part, on our ability to manage any such growth and expenses of the current organization effectively.

We face potential product liability exposure, and if successful claims are brought against us, we may incur substantial liability for a product or product candidate and may have to limit its commercialization.

We face an inherent risk of product liability lawsuits related to the testing of our product candidates and the commercial sale of our products. An individual may bring a liability claim against us if one of our product candidates or products causes, or appears to have caused, an injury. If we cannot successfully defend ourselves against the product liability claim, we may incur substantial liabilities. Liability claims may result in decreased demand for our products; injury to our reputation; withdrawal of clinical trial participants; significant litigation costs; substantial monetary awards to or costly settlement with patients; product recalls; loss of revenue; and the inability to commercialize our product candidates.

We have product liability insurance that covers our clinical trials, the marketing and sale of our products up to a $10 million annual aggregate limit, subject to specified deductibles. Our current or future insurance coverage may prove insufficient to cover any liability claims brought against us.

Because of the increasing costs of insurance coverage, we may not be able to maintain insurance coverage at a reasonable cost or obtain insurance coverage that will be adequate to satisfy any liability that may arise.

Regulatory approval for any approved product is limited by the FDA to those specific indications and conditions for which clinical safety and efficacy have been demonstrated.

Any regulatory approval is limited to those specific diseases and indications for which a product is deemed to be safe and effective by the FDA. In addition to the FDA approval required for new formulations, any new indication for an approved product also requires FDA approval. If we are not able to obtain FDA approval for any desired future indications for our products, our ability to effectively market and sell our products may be reduced and our business may be adversely affected.

Our failure to follow FDA rules and guidelines relating to promotion and advertising may cause the FDA to suspend or withdraw an approved product from the market, require a recall or payment of fines, or could result in disgorgement of money, operating restrictions, injunctions or criminal prosecution, any of which could harm our business.

Our business and operations would suffer in the event of system failures, security breaches, including any cybersecurity incidents, adverse events or other disruptions within our information technology infrastructure at our corporate headquarters; or in the event of intellectual property infringement.

Our business depends on effective, secure and operational information systems which include systems provided by external contractors and other service providers. Despite the implementation of security measures, our computer systems and information technology infrastructure, including those resources at our corporate headquarters, are vulnerable to damage from cyber-attacks, computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Our business is at risk from and may be impacted by information security incidents, including ransomware, malware, phishing, social engineering, and other security events. Such incidents can range from individual attempts to gain unauthorized access to information technology systems to more sophisticated security threats. These events can also result from internal compromises, such as human error or malicious acts. These events can occur on our systems or on the systems of our partners and subcontractors.

In the ordinary course of our business, we store sensitive data, including intellectual property, our proprietary business information and that of our customers. We also maintain personally identifiable information of our employees in our data centers and on our networks. The secure processing and maintenance of this information is critical to our operations. Problems with, or the failure of, our technology and systems or any system upgrades or programming changes associated with such technology and systems would have a substantial and material negative effect on our operations. Furthermore, any system failure, accident or security breach that causes interruptions in our operations could result in a material disruption of our drug development programs.

While we continue to invest in data protection and information technology, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed,

publicly disclosed, lost or stolen. If we are subject to cyber-attacks or security breaches, this could result in business interruptions and delays; the loss, misappropriation, corruption or unauthorized access of data; litigation and potential liability under privacy, security and consumer protection laws or other applicable laws; reputational damage and federal and state governmental inquiries. Any such problems or failures and the costs incurred in correcting any such problems or failures, could have a material adverse effect on our business and financial condition, results of operations and cash flows. To the extent that any disruption or security breach results in a loss or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we may incur liability and the further development of our products or product candidates may be delayed. A failure to restore our information systems after the occurrence of any of these events could have a material adverse effect on our business and financial condition, results of operations and cash flows.

Our information systems and applications also require maintenance, upgrading and enhancement to meet our operational needs. We regularly upgrade and expand our information systems' capabilities. If we experience difficulties with the transition and integration of information systems or are unable to implement, maintain, or expand our systems properly, we could suffer from, among other things, operational disruptions, regulatory problems and increases in administrative expenses.

As cyber threats continue to evolve, we may be required to expend significant capital and other resources to protect against the threat of security breaches or to mitigate and alleviate problems caused by breaches, including unauthorized access to proprietary information and personally identifiable information stored in our information systems, and the introduction of computer viruses or other malicious software programs to our systems. Our security measures may be inadequate to prevent security breaches and our business operations could be materially adversely affected by federal and state fines and penalties, legal claims or proceedings, cancellation of contracts and loss of customers if security breaches are not prevented.

We believe that our subcontractors and vendors take precautionary measures to prevent problems that could affect our business operations as a result of failure or disruption to their information systems. However, there is no guarantee such efforts will be successful in preventing a disruption, and it is possible that we may be impacted by information system failures. The occurrence of any information system failures could result in interruptions, delays, loss or corruption of data and cessations or interruptions in the availability of these systems. All of these events or circumstances, among others, could have an adverse effect on our business, results of operations, financial position and cash flows, and they could harm our business reputation.

We believe we have all the necessary licenses from third parties to use technology and software that we do not own. A third party could, however, allege that we are infringing its rights, which may deter our ability to obtain licenses on commercially reasonable terms from the third party, if at all, or cause the third party to commence litigation against us. In addition, we may find it necessary to initiate litigation to protect our trade secrets, to enforce our intellectual property rights and to determine the scope and validity of any proprietary rights of others. Any such litigation, or the failure to obtain any necessary licenses or other rights, could materially and adversely affect our business.

We license our products globally; therefore, we may have exposure to foreign regulatory requirements and fluctuations in foreign currency exchange rates.

Continued foreign licensure inherently subjects us to a number of risks and uncertainties, including:

- longer payment cycles and difficulties in enforcing agreements and collecting receivables through certain foreign legal systems;
- political and economic instability or sanctions in areas in which we operate;
- potentially adverse tax consequences, tariffs, customs charges, bureaucratic requirements and other trade barriers;
- regulations related to customs and import/export matters (including sanctions);
- tax issues, such as tax law changes and variations in tax laws;

- challenges in collecting accounts receivable from customers in the jurisdictions in which we operate;
- complying with laws, rules and regulations relating to the manufacturing, marketing, distribution and sale of pharmaceutical products in the jurisdictions in which we do or will operate;
- operating under regulations in jurisdictions related to obtaining eligibility for government or private payor reimbursement for our products at the wholesale/retail level;
- competition from local, regional and international competitors;
- difficulties and costs of staffing and managing foreign operations, including cultural and language differences and additional employment regulations, union workforce negotiations and potential disputes in the jurisdictions in which we operate;
- difficulties associated with compliance with a variety of laws and regulations governing international trade, including the Foreign Corrupt Practices Act;
- difficulties protecting or procuring intellectual property rights; and
- fluctuations in foreign currency exchange rates.

Any of these factors may, individually or as a group, have a material adverse effect on our business and results of operations. These or other similar risks could adversely affect our revenue and profitability. As we continue to develop internationally, our exposure to these factors will increase.

We may decide not to commercialize one of our drug candidates once it obtains regulatory approval if we determine that commercialization of that product would require more capital and time than we are willing to invest.

Even if any of our drug candidates receives regulatory approval, it could be subject to matters such as post-regulatory surveillance, additional clinical trials or testing, reformulation, changes in labeling, warnings to the public, recall, competition from similar or superior products, and lack of sufficient payor reimbursement by insurance companies or Medicare. As a result, we may not commercialize or continue to commercialize a product that has obtained regulatory approval.

Any approved drug product that we bring to the market may not gain market acceptance by physicians, patients, healthcare payors and others in the medical community.

Even if we are successful in gaining regulatory approval of any of our drug candidates or acquire rights to approved drug products, we may not generate significant product revenues and we may not become profitable if these drug products do not achieve an adequate level of acceptance. Physicians may not recommend our drug products until longer-term clinical data or other factors demonstrate the safety and efficacy of our drug products as compared to other alternative treatments. Even if the clinical safety and efficacy of our drug products is established, physicians may elect not to prescribe these drug products for a variety of reasons, including the reimbursement policies of government and other third-party payors and the effectiveness of our competitors in marketing their products.

Market acceptance of our drug products, if approved for commercial sale, will depend on a number of factors, including:

- the willingness and ability of patients and the healthcare community to use our drug products;
- the ability to manufacture our drug products in sufficient quantities with acceptable quality and to offer our drug products for sale at competitive prices;
- the perception of patients and the healthcare community, including third-party payors, regarding the safety, efficacy and benefits of our drug products compared to those of competing products or therapies;

- the label and promotional claims allowed by the FDA; and
- the pricing and reimbursement of our drug products relative to existing treatments.

We may acquire businesses or assets, form joint ventures or make investments in other companies that may be unsuccessful, divert our management's attention and harm our operating results and prospects.

As part of our business strategy, we may pursue additional acquisitions of what we believe to be complementary businesses or assets or seek to enter into joint ventures. We also may pursue strategic alliances in an effort to leverage our existing infrastructure and industry experience to expand our product offerings or distribution, or make investments in other companies. The success of our acquisitions, joint ventures, strategic alliances and investments will depend on our ability to identify, negotiate, complete and, in the case of acquisitions, integrate those transactions and, if necessary, obtain satisfactory debt or equity financing to fund those transactions. We may not realize the anticipated benefits of any acquisition, joint venture, strategic alliance or investment. We may not be able to integrate acquisitions successfully into our existing business, maintain the key business relationships of businesses we acquire, or retain key personnel of an acquired business, and we could assume unknown or contingent liabilities or incur unanticipated expenses. Integration of acquired companies or businesses also may require management resources that otherwise would be available for ongoing development of our existing business. Any acquisitions or investments made by us also could result in significant write-offs or the incurrence of debt and contingent liabilities, any of which could harm our operating results. In addition, if we choose to issue shares of our stock as consideration for any acquisition, dilution to our shareholders could result.

The acquisitions we have made or make in the future may make us the subject of lawsuits from either an acquired company's shareholders, an acquired company's previous shareholders, or our current shareholders.

We may be the subject of lawsuits from either an acquired company's shareholders, an acquired company's previous shareholders, or our current shareholders. These lawsuits could result from the actions of the acquisition target prior to the date of the acquisition, from the acquisition transaction itself, or from actions after the acquisition. Defending potential lawsuits could cost us significant expense and distract management's attention from the operation of the business. Additionally, these lawsuits could result in the cancellation of, or the inability to renew, certain insurance coverage that would be necessary to protect our assets.

We may be required to modify our business practices, pay fines and significant expenses or experience other losses due to governmental investigations or other enforcement activities.

We may become subject to litigation or governmental investigations in the United States and foreign jurisdictions that may arise from the conduct of our business. Like many companies in our industry, we have from time to time received inquiries and other types of information requests from government authorities.

While the ultimate outcomes of investigations and legal proceedings are difficult to predict, adverse resolutions or settlements of those matters could result in, among other things:

- significant damage awards, fines, penalties or other payments, and administrative remedies, such as exclusion and/or debarment from government programs, or other rulings that preclude us from operating our business in a certain manner;
- changes and additional costs to our business operations to avoid risks associated with such litigation or investigations;
- product recalls;
- reputational damage and decreased demand for our products; and
- expenditure of significant time and resources that would otherwise be available for operating our business.

RISKS RELATING TO GOVERNMENT REGULATION

Virtually all aspects of our business activities are regulated by government agencies. The manufacturing, processing, formulation, packaging, labeling, distribution, promotion and sampling, advertising of our products, and disposal of waste products arising from such activities are subject to governmental regulation. These activities are regulated by one or more of the FDA, the Federal Trade Commission, ("FTC"), the Consumer Product Safety Commission, the U.S. Department of Agriculture and the U.S. Environmental Protection Agency, ("EPA"), as well as by comparable agencies in foreign countries. These activities are also regulated by various agencies of the states and localities in which our products are sold. For more information, see " *Business—Government Regulation"* in Part I, Item 1 of this Form 10-K.

Like all pharmaceutical manufacturers, we are subject to regulation by the FDA under the Federal Food, Drug and Cosmetic Act ("FDCA"). All new drugs must be the subject of an FDA-approved new drug application, ("NDA"), before they may be marketed in the United States. The FDA has the authority to withdraw existing NDA approvals and to review the regulatory status of products marketed under the enforcement policy. The FDA may require an approved NDA for any drug product marketed under the enforcement policy if new information reveals questions about the drug's safety and effectiveness. All drugs must be manufactured in conformity with GMP, and drug products subject to an approved NDA must be manufactured, processed, packaged, held and labeled in accordance with information contained in the NDA. Since we rely on third parties to manufacture our products, GMP requirements directly affect our third party manufacturers and indirectly affect us. The manufacturing facilities of our third-party manufacturers are continually subject to inspection by such governmental agencies, and manufacturing operations could be interrupted or halted in any such facilities if such inspections prove unsatisfactory. Our third-party manufacturers are subject to periodic inspection by the FDA to assure such compliance.

Even after regulatory approval, certain developments may decrease demand for our products, including the following:

- the re-review of products that are already marketed;
- new scientific information and evolution of scientific theories;
- the recall or loss of marketing approval of products that are already marketed;
- changing government standards or public expectations regarding safety, efficacy or labeling changes; and
- greater scrutiny in advertising and promotion.

Certain regulatory changes or decisions could make it more difficult for us to sell our products and could have a material adverse effect on our business, results of operations, financial condition and cash flows. Manufacturers of drug products and their facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with GMP and other applicable regulations. If we or a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with a facility where the product is manufactured, a regulatory agency may impose restrictions on that product or the manufacturer, including withdrawal of the product from the market or suspension of manufacturing. If we, our partners or the manufacturing facilities for our products fail to comply with applicable regulatory requirements or violate healthcare laws, a regulatory agency may take the following actions, among others:

- issue warning letters or untitled letters;
- impose civil or criminal penalties
- suspend or withdraw regulatory approval;
- suspend any ongoing clinical trials;

- refuse to approve pending applications or supplements to applications submitted by us;
- impose restrictions on operations, including costly new manufacturing requirements; or
- seize or detain products or require us to initiate a product recall.

Any change in the FDA's enforcement policy could have a material adverse effect on our business, financial condition and results of operations. We cannot determine what effect changes in regulations or statutes or legal interpretation, when and if promulgated or enacted, may have on our business in the future. Such changes, or new legislation, could have a material adverse effect on our business, financial condition and results of operations.

Proposed legislation may permit re-importation of drugs from other countries into the U.S., including foreign countries where the drugs are sold at lower prices than in the U.S., which could materially and adversely affect our operating results and our overall financial condition.

In previous years, legislation has been introduced in Congress that, if enacted, would permit more widespread re-importation of drugs from foreign countries into the U.S., which may include re-importation from foreign countries where the drugs are sold at lower prices than in the U.S. Such legislation, or similar regulatory changes, if enacted, could decrease the price we receive for any approved products which, in turn, could materially and adversely affect our operating results and our overall financial condition.

We must comply with the CREATES Act.

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, FDA and FTC have been focused on brand companies' denial of drug supply to potential generic competitors for testing. In December 2019, the Creating and Restoring Equal Access to Equivalent Samples Act, or the CREATES Act, was enacted, which provides a legislatively defined private right of action under which eligible product developers can bring suit against companies who refuse to sell sufficient quantities of their branded products on commercially reasonable, market-based terms to support such eligible product developers' marketing applications. We cannot currently predict the specific outcome or impact on our business of such regulatory and legislative initiatives.

We must comply with the Foreign Corrupt Practices Act.

We are required to comply with the United States Foreign Corrupt Practices Act, which prohibits U.S. companies from engaging in bribery or other prohibited payments to foreign officials for the purpose of obtaining or retaining business. Foreign companies, including some of our competitors, are not subject to these prohibitions. If our competitors engage in these practices, they may receive preferential treatment from officials or agencies in some countries, giving our competitors an advantage in securing business from government officials who might give them priority in obtaining new licenses, which would put us at a disadvantage. We have established formal policies or procedures for prohibiting or monitoring this conduct, but we cannot assure you that our employees or other agents will not engage in such conduct for which we might be held responsible. If our employees or other agents are found to have engaged in such practices, we could suffer severe penalties.

We must comply with the Physician Payment Sunshine Act.

We are required to comply with the United States Physician Payment Sunshine Act, which requires manufacturers of drugs, medical devices and biologicals that participate in U.S. federal healthcare programs to report certain payments and items of value given to physicians and teaching hospitals. Manufacturers are required to report this information annually to The Centers for Medicare & Medicaid Services ("CMS"). In addition, some states require reporting information concerning payments to health care providers or other transfers of value by drug manufacturers beyond the requirements of the Federal Sunshine Act. Cumberland has implemented a series of policies and procedures for every employee involved in the data collection process, and has systems in place to capture the data, which is verified by an outside firm that specializes in reporting the payments. Cumberland has also established a system to ensure that data was reported completely, in the correct format, and on time. Despite these

policies, procedures and systems, we cannot assure you that we will collect and report all data accurately. If we fail to accurately report this information, we could suffer severe penalties.

If we fail to comply with our reporting and payment obligations under the Medicaid Drug Rebate program or other governmental pricing programs, we could be subject to additional reimbursement requirements, penalties, sanctions and fines, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

We participate in the Medicaid Drug Rebate program, the 340B program, and other governmental pricing programs and have obligations to report the average sales price for certain of our drugs to CMS. These programs and rebate calculations vary across products and programs, are complex, and are often subject to interpretation by us, governmental or regulatory agencies and the courts, which can change over time.

In the case of our Medicaid pricing data, if we become aware that our reporting for a prior quarter was incorrect or has changed as a result of recalculation of the pricing data, we are obligated to resubmit the corrected data for up to three years after those data originally were due. Such restatements and recalculations increase our costs for complying with the laws and regulations governing the Medicaid Drug Rebate program and could result in an overage or underage in our rebate liability for past quarters. Price recalculations also may affect the ceiling price at which we are required to offer our products under the 340B program.

Civil monetary penalties can be applied if we are found to have knowingly submitted any false price or product information to the government, if we are found to have made a misrepresentation in the reporting of our average sales price, if we fail to submit the required price data on a timely basis, or if we are found to have charged 340B covered entities more than the statutorily mandated ceiling price. CMS, could also decide to terminate our Medicaid drug rebate agreement, in which case federal payments may not be available under Medicaid or Medicare Part B for our covered outpatient drugs. We cannot assure you that our submissions will not be found by CMS to be incomplete or incorrect. Our failure to comply with our reporting and payment obligations under the Medicaid Drug Rebate program and other governmental programs could negatively impact our financial results.

We may be subject to foreign, federal, and state data privacy and security laws, and failure to protect our information systems against security breaches, service interruptions, or misappropriation of data could disrupt operations, compromise sensitive data, and expose us to liability, possibly causing our business and reputation to suffer.

In the United States, numerous federal and state laws and regulations govern the collection, use, disclosure and protection of health-related and other personal information and could apply to our operations or the operations of our collaborators and third-party providers. Certain of these laws grant individual rights with respect to their information, and we may be required to expend significant resources to comply with these laws. For example, the California Consumer Privacy Act, or CCPA, was enacted in 2020. These laws and regulations are evolving and subject to interpretation and may impose limitations on our activities or otherwise adversely affect our business. Similarly, there are a number of legislative proposals in the European Union, the United States, at both the federal and state level, as well as other jurisdictions that could impose new obligations or limitations in areas affecting our business. These changes may lead to additional costs and increase our overall risk exposure.

RISKS RELATING TO INTELLECTUAL PROPERTY

Our strategy to secure and extend marketing exclusivity or patent rights may provide only limited or no protection from competition.

We seek to secure and extend marketing exclusivity for our products through a variety of means, including FDA exclusivity and patent rights. Additional barriers for competitors seeking to enter the market include the time and cost associated with the development, regulatory approval and manufacturing of a similar product formulation.

As discussed in Part I, Item 1, *Business - Patents, Trademarks, and Other Intellectual Proprietary Rights*, of this report on Form 10-K, we have several patents for formulations of Acetadote, and have previously engaged in litigation to enforce our patent rights.

We intend to continue to vigorously defend and protect our Acetadote product and related intellectual property rights. If we are unsuccessful in protecting our Acetadote intellectual property rights, our competitors may be able to introduce products into the marketplace that reduce the sales and market share of our Acetadote product which may require us to take measures such as reducing prices or increasing our marketing expense, any of which may result in a material adverse effect to our financial condition and results of operations.

While we consider patent protection when evaluating product acquisition opportunities, any products we acquire in the future may not have significant patent protection. Neither the USPTO nor the courts have a consistent policy regarding the breadth of claims allowed or the degree of protection afforded under many pharmaceutical patents. Patent applications in the U.S. and many foreign jurisdictions are typically not published until 18 months following the filing date of the first related application, and in some cases not at all. In addition, publication of discoveries in scientific literature often lags significantly behind actual discoveries. Therefore, neither we nor our licensors can be certain that we or they were the first to make the inventions claimed in our 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. In addition, changes in either patent laws or in interpretations of patent laws in the U.S. and other countries may diminish the value of our intellectual property or narrow the scope of our patent protection. Furthermore, our competitors may independently develop similar technologies or duplicate technology developed by us in a manner that does not infringe our patents or other intellectual property. As a result of these factors, our patent rights may not provide any commercially valuable protection from competing products.

If we are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and products could be adversely affected.

In addition to patents, we rely upon trade secrets, unpatented proprietary know-how and continuing technological innovation where we do not believe patent protection is appropriate or attainable. For example, the manufacturing process for Kristalose involves substantial trade secrets and proprietary know-how. We have entered into confidentiality agreements with certain key employees and consultants pursuant to which such employees and consultants must assign to us any inventions relating to our business if made by them while they are our employees, as well as certain confidentiality agreements relating to the acquisition of rights to products. Confidentiality agreements can be breached, though, and we might not have adequate remedies for any breach. Also, others could acquire or independently develop similar technology.

We may depend on certain licensors for the maintenance and enforcement of intellectual property rights and have limited, if any, control over the amount or timing of resources that our licensors devote on our behalf.

When we license products, we often depend on our licensors to protect the proprietary rights covering those products. We have limited, if any, control over the amount or timing of resources that our licensors devote on our behalf or the priority they place on maintaining patent or other rights and prosecuting patent applications to our advantage. While any such licensor is expected to be contractually obligated to diligently pursue its patent applications and allow us the opportunity to consult, review and comment on patent office communications, we cannot be sure that it will perform as required. If a licensor does not perform and if we do not assume the maintenance of the licensed patents in sufficient time to make required payments or filings with the appropriate governmental agencies, we risk losing the benefit of all or some of those patent rights.

If the use of our technology conflicts with the intellectual property rights of third parties, we may incur substantial liabilities, and we may be unable to commercialize products based on this technology in a profitable manner or at all.

If our products conflict with the intellectual property rights of others, they could bring legal action against us or our licensors, licensees, manufacturers, customers or collaborators. If we were found to be infringing a patent or other intellectual property rights held by a third party, we could be forced to seek a license to use the patented or otherwise protected technology. We might not be able to obtain such a license on terms acceptable to us or at all. If legal action involving an alleged infringement or misappropriation were to be brought against us or our licensors, we would incur substantial costs in defending the action. If such a dispute were to be resolved against us, we could be subject to significant damages, and the manufacturing or sale of one or more of our products could be enjoined.

We may be involved in lawsuits to protect or enforce our patents or the patents of our collaborators or licensors, which could be costly and time consuming.

We have been involved in lawsuits for infringement of the Acetadote Patents as previously described. Because of their nature, these lawsuits can be costly and time-consuming, and we only experience limited benefits and patent protection. A significant adverse ruling in any such lawsuit could put our patents at risk of being invalidated or interpreted narrowly and could compromise the issuance of our existing patent applications.

Competitors may infringe on our patents or the patents of our collaborators or licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that a patent of ours is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceeding could put one or more of our patents at risk of being invalidated or interpreted narrowly and could put our patent applications at risk of not issuing.

Interference proceedings brought by the USPTO may be necessary to determine the priority of inventions with respect to our patent applications or those of our collaborators or licensors. Litigation or interference proceedings may fail and, even if successful, may result in substantial costs and distraction of our management. We may not be able, alone or with our collaborators and licensors, to prevent misappropriation of our proprietary rights, particularly in countries where the laws may not protect such rights as fully as in the United States.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, some of our confidential information could be disclosed during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments.

We may be involved in lawsuits to protect or enforce our trademarks or for allegedly infringing the trademark rights of others, which could be costly and time consuming.

We own certain trademark registrations for each of our branded pharmaceutical products as well as for our corporate name and logo. We have applied for trademark registration for other various names and logos. We also may have common law trademark rights in unregistered names, phrases, and logos under which we market or offer certain products and services. Over time, we intend to obtain and maintain registrations on trademarks that remain valuable to our business.

Third parties may oppose registration of our federal trademark applications. Further, we could be involved in lawsuits for allegedly infringing the rights of others with respect to their prior-existing trademarks. These lawsuits or opposition proceedings can be costly and time-consuming. A significant adverse ruling in any such lawsuit could put our trademarks at risk of being invalidated and could compromise the issuance of our existing trademark applications.

Competitors may infringe on our trademarks or the trademarks of our collaborators or licensors. To counter infringement or unauthorized use, we may be required to file trademark infringement claims, which can be expensive and time-consuming. In addition, in a trademark infringement proceeding, a court may decide that a trademark registration of ours is not valid or is unenforceable, or may refuse to stop the other party from using the mark or a mark that is similar to our registered mark at issue on the grounds that the competitor’s use of the mark is not confusingly similar to our registered trademark. An adverse result in any litigation or defense proceeding could put one or more of our trademark registrations at risk of being invalidated or interpreted narrowly and could put our trademark applications at risk of not registering.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, some of our confidential information could be disclosed during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments.

If we breach any of the agreements under which we license rights to our products and product candidates from others, we could lose the ability to continue commercialization of our products and development and commercialization of our product candidates.

We have exclusive licenses for the marketing and sale of certain products and may acquire additional licenses. Such licenses may terminate prior to expiration if we breach our obligations under the license agreement related to these pharmaceutical products. For example, the licenses may terminate if we fail to meet specified quality control standards, including GMP with respect to the products, or commit a material breach of other terms and conditions of the licenses. Such early termination could have a material adverse effect on our business, financial condition and results of operations.

We may be subject to claims that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.

As is common in the biotechnology and pharmaceutical industry, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that we or these employees have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management. We are subject to stringent government regulation. All of our products face regulatory challenges.

RISKS RELATED TO OUR FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Our operating results are likely to fluctuate from period to period.

We are a company actively seeking to deliver significant growth. As we execute our business strategy of adding new products, increasing market share in our existing growth products and striving to maintain market share in our other products, we anticipate that there may be fluctuations in our future operating results. We may not be able to maintain or improve our current levels of revenue or income. Potential causes of future fluctuations in our operating results may include:

- New product launches, which could increase revenues but also increase sales and marketing expenses;
- Acquisition activity and other charges;
- Increases in research and development expenses resulting from the acquisition of a product candidate that requires significant additional studies and development;
- Ability to utilize unrecognized federal and state net operating loss carryforwards as a result of the exercise of nonqualified options
- Changes in the competitive, regulatory or reimbursement environment, which could drive down revenues or drive up sales and marketing or compliance costs; and
- Unexpected product liability or intellectual property claims and lawsuits.

See also “Management’s discussion and analysis of financial condition and results of operations—Liquidity and capital resources.” Fluctuation in operating results, particularly if not anticipated by investors and other members of the financial community, could add to volatility in our stock price. The COVID-19 coronavirus has negatively impacted the financial markets and may create additional risk for our customers and their ability to pay for our products.

Our focus on acquisitions as a growth strategy has created intangible assets whose amortization could negatively affect our results of operations.

Our total assets include intangible assets related to our acquisitions. As of December 31, 2021, intangible assets relating to products, which are being amortized, represented approximately 28% of our total assets. We may never realize the value of these assets. U.S. Generally Accepted Accounting Principles ("GAAP") require that we evaluate on a regular basis whether events and circumstances have occurred that indicate that all or a portion of the carrying amount of the asset may no longer be recoverable, in which case we would write down the value of the asset and take a corresponding charge to earnings. Any determination requiring the write-off of a significant portion of unamortized intangible assets would adversely affect our results of operations.

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

We may need to raise additional funds in order to meet the capital requirements of running our business and acquiring and developing new pharmaceutical products. If we require additional funding, we may seek to sell common stock or other equity or equity-linked securities, which could result in dilution to our shareholders. We may also seek to raise capital through a debt financing, which would result in ongoing debt-service payments and increased interest expense. Any financings would also likely involve operational and financial restrictions being imposed on us. We might also seek to sell assets or rights in one or more commercial products or product development programs. Additional capital might not be available to us when we need it. We are unable to predict the impact of global credit market trends, and if economic conditions deteriorate, our business, results of operations and ability to raise needed capital could be materially and adversely affected. If we are unable to raise additional capital when needed due to the reasons listed above and lack of creditworthiness, bank failures, or price decline in market investments, we could be forced to scale back our operations to conserve cash.

If we are unable to maintain appropriate internal financial reporting controls and procedures, it could cause us to fail to meet our reporting obligations, result in the restatement of our financial statements, harm our operating results, subject us to regulatory scrutiny and sanction, cause investors to lose confidence in our reported financial information and have a negative effect on the market price for shares of our common stock.

Effective internal controls are necessary for us to provide reliable financial reports and mitigate the risk of fraud. We maintain a system of internal control over financial reporting, which is defined as a process designed by, or under the supervision of, our principal executive officer and principal financial officer, and affected 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 GAAP.

We cannot assure you that we will not, in the future, identify areas requiring improvement in our internal control over financial reporting. We cannot assure you that the measures we will take to improve these controls will be successful or that we will implement and maintain adequate controls over our financial processes and reporting in the future as we continue to expand. If we are unable to establish appropriate internal financial reporting controls and procedures, it could cause us to fail to meet our reporting obligations, result in the restatement of our financial statements, harm our operating results, subject us to regulatory scrutiny and sanction, cause investors to lose confidence in our reported financial information and have a negative effect on the market price for shares of our common stock.

In addition, we maintain a system of internal controls and provide training to employees designed to provide reasonable assurance that unlawful and fraudulent activity, including misappropriation of assets, fraudulent financial reporting, and unauthorized access to sensitive or confidential data is either prevented or timely detected. However, in the event that our employees engage in such fraudulent behavior, we could suffer material adverse consequences.

Changes in, or interpretations of, accounting principles could have a significant impact on our financial position and results of operations.

We prepare our consolidated financial statements in accordance with GAAP. These principles are subject to interpretation by the SEC and various bodies formed to interpret and create appropriate accounting principles. A change in these principles can have a significant effect on our reported results and may even retroactively affect previously reported transactions.

For example, in recent years, the U.S.-based Financial Accounting Standards Board, ("FASB"), has worked together with the International Accounting Standards Board, ("IASB"), on several projects to further align accounting principles and facilitate more comparable financial reporting between companies who are required to follow GAAP under SEC regulations and those who are required to follow International Financial Reporting Standards, ("IFRS"), outside of the U.S. These efforts by the FASB and IASB may result in different accounting principles under GAAP that may result in materially different financial results for us in certain areas.

We may incur losses in the future and we may not achieve or maintain profitability.

We intend to continue to spend significant amounts on our efforts to discover and develop drugs. As a result, we may incur losses in future periods.

We anticipate that our drug discovery and development efforts and related expenditures will increase as we focus on the studies, including clinical trials prior to seeking regulatory approval, that are required before we can sell a drug product.

The development of drug products will require us to spend significant funds on research, development, testing, obtaining regulatory approvals, manufacturing and marketing.

We cannot be certain whether or when we will achieve profitability because of the significant uncertainties relating to our ability to generate commercially successful drug products. Even if we are successful in obtaining regulatory approvals for manufacturing and commercializing additional drug products, we may incur losses if our drug products do not generate significant revenues. If we achieve profitability, we may not be able to sustain or increase profitability.

We may seek to obtain future financing through the issuance of debt or equity, which may have an adverse effect on our shareholders or may otherwise adversely affect our business.

If we raise funds through the issuance of additional equity, whether through private placements or public offerings, such an issuance would dilute ownership of our current shareholders that do not participate in the issuance. If we are unable to obtain any needed additional funding, we may be required to reduce the scope of, delay, or eliminate some or all of, our planned research, development and commercialization activities or to license to third parties the rights to develop and/or commercialize products or technologies that we would otherwise seek to develop and/or commercialize ourselves or on terms that are less attractive than they might otherwise be, any of which could materially harm our business.

Furthermore, the terms of any additional debt securities we may issue in the future may impose restrictions on our operations, which may include limiting our ability to incur additional indebtedness, pay dividends on or repurchase our common shares, or make certain acquisitions or investments. In addition, we may be subject to covenants requiring us to satisfy certain financial tests and ratios, and our ability to satisfy such covenants may be affected by events outside of our control.

Our officers, directors, and principal shareholders, acting as a group, could significantly influence corporate actions.

As of December 31, 2021, our officers and directors control approximately 41.6 percent of our common stock. Acting together, these shareholders could significantly influence any matter requiring approval by our shareholders, including the election of directors and the approval of mergers or other business combinations. The interests of this group may not always coincide with our interests or the interests of other shareholders and may prevent or delay a change in control. This significant concentration of share ownership may adversely affect the

trading price of our common stock because many investors perceive disadvantages to owning stock in companies with controlling shareholders.

Research analysts may not continue to provide or initiate coverage of our common stock or may issue negative reports.

The market for our common stock may be affected by the reports financial analysts publish about us. If one of the analysts covering us downgrades our stock, its price could decline rapidly and significantly. Securities analysts covering our common stock may discontinue coverage. A lack of research coverage may adversely affect our stock's market price.

RISKS RELATED TO OWNING OUR STOCK

The market price of our common stock may fluctuate substantially.

The price for the shares of our common stock sold in our initial public offering was determined by negotiation between the representatives of the underwriters and us. This price may not have reflected the market price of our common stock following our initial public offering. Moreover, the market price of our common stock might decline below current levels. In addition, the market price of our common stock is likely to be highly volatile and may fluctuate substantially. Sales of a substantial number of shares of our common stock in the public market or the perception that these sales may occur could cause the market price of our common stock to decline.

The realization of any of the risks described in these "Risk Factors" could have a dramatic and material adverse impact on the market price of our common stock. In addition, securities class action litigation has often been instituted against companies whose securities have experienced periods of volatility in market price. Any such securities litigation brought against us could result in substantial costs and a diversion of management's attention and resources, which could negatively impact our business, operating results and financial condition. The recent COVID-19 pandemic may cause increased risk to our common stock's liquidity and trading price.

Unstable market conditions may have serious adverse consequences on our business.

Our general business strategy may be adversely affected by unpredictable and unstable market conditions. While we believe we have adequate capital resources to meet current working capital and capital expenditure requirements, a radical economic downturn or increase in our expenses could require additional financing on less than attractive rates or on terms that are dilutive to existing shareholders. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock price and could require us to delay or abandon clinical developments plans. There is a risk that one or more of our current service providers, manufacturers and other partners may encounter difficult economic circumstances, which would directly affect our ability to attain our operating goals on schedule and on budget. The equity and lending markets have been and will most likely continue to be negatively impacted for an unknown period of time due to the COVID-19 pandemic.

We experience costs and regulatory risk as a result of operating as a public company, and our management is required to devote time to compliance initiatives.

We have and will continue to incur costs as a result of operating as a public company, and our management is required to devote time to compliance initiatives. As a public company, we have and will continue to incur legal, accounting and other expenses that we did not incur as a private company. In addition, the Sarbanes-Oxley Act of 2002, or Sarbanes-Oxley Act, Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, and other rules and regulations subsequently implemented by the SEC and Nasdaq, have imposed various requirements on public companies, including the establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. These rules and regulations have and will continue to result in legal and financial compliance costs and render some activities more time-consuming and costly. Despite the internal controls and procedures put in place to maintain compliance with securities laws and regulations, our employees may still fail to comply with all SEC disclosure and reporting requirements. Such failure could lead to administrative and civil penalties, criminal penalties, and private litigation with shareholders. The consequences could have a material effect on our ability to effectively market our products and operate our business.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal controls for financial reporting and disclosure controls and procedures. In particular, we must perform system and process evaluation and testing of our internal controls over financial reporting to allow management to report on the effectiveness of our internal controls over financial reporting. Our testing may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses.

Our compliance with Section 404 of the Sarbanes-Oxley Act requires that we incur substantial accounting expense and expend significant management efforts. Moreover, if we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we identify deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities, which would require additional financial and management resources.

We may not be able to maintain our listing on the NASDAQ Global Select Market ("NASDAQ"), which could have a material adverse effect on us and our stockholders.

The standards for continued listing on NASDAQ include, among other things, that the minimum bid price for the listed securities not fall below $1.00 for a period in excess of thirty consecutive business days. If the closing bid price of our common stock were to fail to meet NASDAQ's minimum closing bid price requirement, or if we otherwise fail to meet any other applicable requirements of NASDAQ and we are unable to regain compliance, NASDAQ may make a determination to delist our common stock. The delisting of our common stock from NASDAQ could negatively impact us by (i) reducing the liquidity and market price of our common stock; (ii) reducing the number of investors willing to hold or acquire our common stock, which could negatively impact our ability to raise equity financing; (iii) impacting our ability to use a registration statement to offer and sell freely tradable securities, thereby preventing or limiting us from accessing the public capital markets; and (iv) impairing our ability to provide equity incentives to our employees.

Some provisions of our third amended and restated charter, bylaws and Tennessee law may inhibit potential acquisition bids that you may consider favorable.

Our corporate documents contain provisions that may enable our board of directors to resist a change in control of our company even if a change in control were to be considered favorable by you and other shareholders. These provisions include:

- The authorization of undesignated preferred stock, the terms of which may be established and shares of which may be issued without shareholder approval;
- Advance notice procedures required for shareholders to nominate candidates for election as directors or to bring matters before an annual meeting of shareholders;
- Limitations on persons authorized to call a special meeting of shareholders;
- A staggered board of directors;
- A restriction prohibiting shareholders from removing directors without cause;
- A requirement that vacancies in directorships are to be filled by a majority of the directors then in office and the number of directors is to be fixed by the board of directors; and
- No cumulative voting.

These and other provisions contained in our third amended and restated charter and bylaws could delay or discourage transactions involving an actual or potential change in control of us or our management, including transactions in which our shareholders might otherwise receive a premium for their shares over then current prices, and may limit the ability of shareholders to remove our current management or approve transactions that our shareholders may deem to be in their best interests and, therefore, could adversely affect the price of our common stock.

In addition, we are subject to control share acquisitions provisions and affiliated transaction provisions of the Tennessee Business Corporation Act, the applications of which may have the effect of delaying or preventing a merger, takeover or other change in control of us and therefore could discourage attempts to acquire our company.

We have never paid cash dividends on our capital stock.

We have never paid cash dividends on our capital stock. The availability of funds for distributions to shareholders will depend on our financial performance and assets. Any future decision to declare or pay dividends will be at the sole discretion of our Board of Directors.

DEBT-RELATED RISKS

Our Revolving Credit Agreement impose restrictive and financial covenants on us. Our failure to comply with these covenants could trigger events that would have a material adverse effect on our business.

Our Revolving Credit Agreement contains covenants that restrict the way we conduct business and require us to satisfy certain financial tests in order to incur debt or take other actions. Additionally, our Revolving Credit Agreement contains financial covenants that, for example, require us to maintain certain financial ratios which are measured at the end of each fiscal quarter.

Our Revolving Credit Agreement contains specified quarterly financial maintenance covenants. As of December 31, 2021, we were in compliance with the Tangible Capital Ratio financial covenant of the Revolving Credit Agreement. However, we can make no assurance that we will be able to comply with the restrictive and financial covenants contained in the Revolving Credit Agreement in the future.

Our inability to comply with the covenants in our debt instruments could lead to a default or an event of default under the terms thereof, for which we may need to seek relief from our lender in order to waive the associated default or event of default and avoid a potential acceleration of the related indebtedness or cross-default or cross-acceleration to other debt. There can be no assurance that we would be able to obtain such relief on commercially reasonable terms or otherwise and we may be required to incur significant additional costs. In addition, the lender under our Revolving Credit Agreement may impose additional operating and financial restrictions on us as a condition to granting any such waiver. If an event of default is not cured or is not otherwise waived, the lender under our Revolving Credit Agreement may accelerate the maturity of the related debt, foreclose upon any collateral securing the debt and terminate any commitments to lend, any of which would have a material adverse effect on our business, financial condition, cash flows and results of operations and would cause the market value of our securities to decline.

We have risks related to interest rates.

Our revolving credit facility bears interest based on variable interest. Thus, a change in the short-term interest rate environment (especially a material change) could have a material adverse effect on our business, financial condition, cash flows and results of operations. As of December 31, 2021, we did not have any outstanding interest rate swap contracts.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

As of December 31, 2021, we leased approximately 25,500 square feet of office space in Nashville, Tennessee for our corporate headquarters. The lease expires in October 2022. On November 15, 2021, we entered into a lease for 16,631 rentable square feet of space at the new Broadwest development in Nashville, Tennessee for our corporate headquarters. The lease commences on the earlier of November 1, 2022, the date on which we take occupancy of the leased premise, or the date on which we receive a temporary or permanent certificate of occupancy for the leased premise. We believe these facilities are adequate to meet our current needs for office space. Manufacturing, packaging or warehousing services are provided to us through contracts with third-party organizations.

The laboratory space at CET, under an agreement amended in July 2012, is leased through April 2023, with an option to extend the lease through April 2028. CET leases approximately 14,200 square feet of office and wet laboratory space in Nashville, Tennessee to operate the CET Life Sciences Center. Cumberland's product formulation and testing laboratories are located at this facility, along with CET's offices. The CET Life Sciences Center also provides laboratory and office space, equipment and infrastructure to early-stage life sciences companies and university spin-outs.

Item 3. Legal Proceedings.

Please see the discussion of our Acetadote patent defense legal proceedings contained in Part 1, Item 1, *Business -Patents, Trademarks and Other Intellectual Proprietary Rights*, of this Form 10-K, which is incorporated by reference herein. Please see discussion of *Melinta Litigation* in Note 22 Commitments and Contingencies contained in the Notes to Consolidated Financial Statements, which is incorporated herein by reference.

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

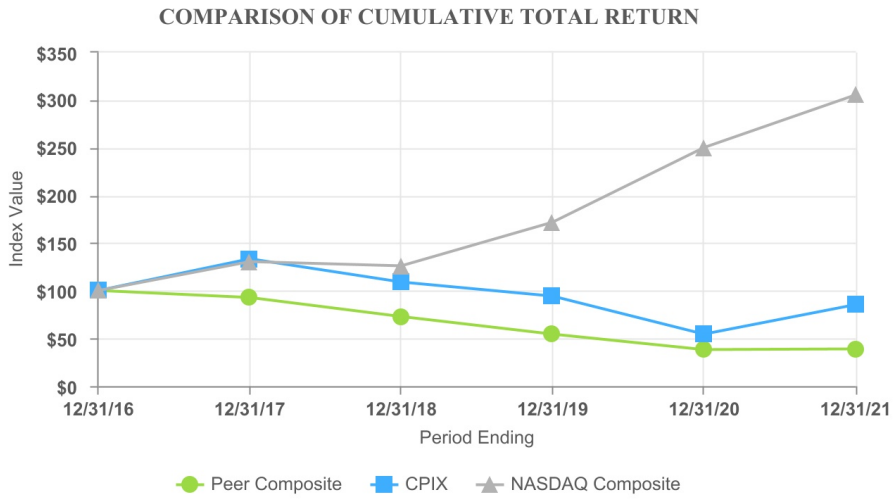
Our common stock, no par value, has been traded on the Nasdaq Global Select Market since August 11, 2009 under the symbol “CPIX.” As of March 7, 2022, we had 84 shareholders of record of our common stock. This excludes shareholders whose shares are held by brokers and other institutions on behalf of shareholders. The closing price of our common stock on the Nasdaq Global Select Market on March 7, 2022 was $2.97 per share.

Dividend Policy

We have not declared or paid any cash dividends on our common stock. Any future decision to declare or pay dividends will be at the sole discretion of our Board of Directors.

Performance Graph

The stock performance graph below illustrates a comparison of the total cumulative stockholder return on our common stock since December 31, 2016 to the Nasdaq Composite and a composite of seven Nasdaq Pharmaceutical and Specialty Pharmaceutical Stocks which most closely compare to our Company. The graph assumes an initial investment of $100 on December 31, 2016, and that all dividends were reinvested.



Purchases of Equity Securities

The Company currently has a share repurchase program to repurchase up to $10.0 million of our common stock pursuant to Rule 10b-18 of the Securities Exchange Act of 1934, as amended. In January 2019, the Company's Board of Directors established the current $10.0 million repurchase program to replace the prior authorizations. We repurchased 438,359 shares, 503,626 shares and 623,478 shares of common stock for approximately $1.4 million, $1.8 million and $3.5 million, and during the years ended December 31, 2021, 2020 and 2019, respectively.

The following table summarizes the activity, by month, during the fourth quarter of 2021:

Period	Total Number of Shares (or Units) Purchased	Average Price Paid per Share (or Unit)	Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
October	33,071	$2.74	33,071	$5,073,858
November	35,095 (1)	$2.56	35,095	$4,984,063
December	43,656	$4.68	43,656	$4,779,633
Total	111,822			

(1) Of this amount, 1,162 shares were repurchased directly in private purchases at the then-current fair market value of common stock.

Item 6. Reserved.

None.

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

The following discussion and analysis of our financial position and results of operations should be read together with our audited consolidated financial statements and related notes appearing elsewhere in this Form 10-K. This discussion and analysis may contain forward-looking statements that involve risks and uncertainties – please refer to the section entitled, "Special Note Regarding Forward-Looking Statements," contained in Part I, Item 1A, "Risk Factors," of this Form 10-K. You should review the "Risk Factors" section of this Form 10-K for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements described in the following discussion and analysis.

EXECUTIVE SUMMARY

We are a specialty pharmaceutical company focused on the acquisition, development and commercialization of branded prescription pharmaceutical products. We are dedicated to providing innovative products that improve the quality of care for patients and address poorly met medical needs.

Our commercial portfolio includes eight branded products approved for marketing by the U.S. Food and Drug Administration ("FDA") - Acetadote®, Caldolor®, Kristalose®, Omeclamox®-Pak, RediTrex®, Sancuso®, Vaprisol® and Vibativ®.

In addition to these commercial brands, we have Phase II clinical programs underway evaluating our ifetroban product candidates for 1) patients with cardiomyopathy associated with *Duchenne Muscular Dystrophy*, a fatal, genetic neuromuscular disease, 2) *Systemic Sclerosis* or scleroderma, a debilitating autoimmune disorder characterized by fibrosis of the skin and internal organs and 3) *Aspirin-Exacerbated Respiratory Disease*, a severe form of asthma.

Our primary target markets are hospital acute care, gastroenterology, rheumatology and oncology. These medical specialties are characterized by relatively concentrated prescriber bases that we believe can be served effectively by small, targeted sales forces. We promote our approved products through our hospital, field and oncology sales divisions in the United States and are establishing a network of international partners to register and provide our medicines to patients in their countries.

We have established the capabilities needed to acquire, develop and commercialize branded pharmaceuticals in the U.S. and believe we can leverage this existing infrastructure to support our expected growth.

Our management team consists of pharmaceutical industry veterans with significant experience in their areas of responsibility. Our business development team identifies, evaluates, and negotiates product acquisition, licensing and co-promotion agreements. Our product development team creates proprietary formulations, manages our clinical studies, prepares our FDA submissions and staffs our medical call center. Our quality and manufacturing professionals oversee the manufacturing, release and shipment of our products. Our marketing and sales organization is responsible for our commercial activities, and we work closely with our distribution partners to ensure the availability of our products.

The following is a summary of our 2021 highlights and recent developments. For more information, please see Part I, Item I, *Business*, of this Form 10-K.

- Agreement to acquire the U.S. rights to Sancuso® (granisetron transdermal patch), an FDA-approved oncology supportive care medicine.
- FDA approval of expanded labeling for our Caldolor® product (intravenously delivered ibuprofen), for use prior to surgery.
- Commencement of the national launch of our RediTrex® product line (prefilled methotrexate syringes).
- Agreement to relocate our corporate headquarters to the new Broadwest campus in the West End/Vanderbilt corridor in Nashville, with a move planned for late 2022.
- Extension of our line of credit with Pinnacle Bank for a new three-year term, and expansion of the facility for up to $20 million.
- Renewal of our At-the-Market facility, for up to $19 million in equity financing.
- Continuation of our share repurchase initiative along with a group of our Board members purchasing shares through trading plans in the market, in order to add to their holdings in the company.
- Publication of a series of study results and patient case studies in support of several of our brands.
- The release of our second annual Sustainability Report, which details the company's activities pertaining to its environmental, social and governance (ESG) matters.

COVID-19 Pandemic

In early 2020, the U.S. declared a health care emergency following the outbreak of SARS-CoV-2, a novel strain of coronavirus that causes COVID-19, a respiratory illness. The company has managed through the resulting pandemic, which included stay-at-home orders, the emergence of new variants, compliance with differing federal, state and local guidelines, among other challenges, to continue to operate our business – keeping facilities open and our organization intact. We moved quickly to ensure the health and safety of our team. We also maintained our ongoing compliance with the many laws and regulations that apply to us as a publicly traded pharmaceutical company.

Throughout the pandemic, Cumberland has faced the same challenges affecting other companies that rely on hospital admissions and patient visits to drive revenue. Our clinical studies were also impacted, as fewer patients sought elective surgeries and our access to medical facilities was substantially limited. We carefully monitored our supply chain, including the flow of raw materials into and the batches of finished products emerging from the facilities that manufacture our products.

Several of our brands were negatively impacted by the lockdowns and postponement of physician office visits and elective procedures. However, we are fortunate to have a diversified product portfolio that includes other brands that have delivered a strong performance during the pandemic.

Despite the challenges of operating during a pandemic, Cumberland has remained committed to our mission of providing innovative products that improve the quality of care for patients. We continued to build our portfolio of innovative and differentiated products through a multifaceted strategy that includes the development of new candidates and acquisition of established brands. Our resulting, diversified product line has enabled us to weather external challenges, while our team has remained responsive to the evolving medical market. We are prepared for and look forward to future opportunities to carry out our mission. Overall, we have been able to deliver our products while addressing the interests of our shareholders, employees, partners and community.

ESG Report

In July 2021, we released our second annual Sustainability Report, which details Cumberland's activities pertaining to our environmental, social and governance ("ESG") matters. After issuing our inaugural ESG Report the prior year, we remain committed to sustainability and to maintaining transparency of our corporate operations. We hold ourselves to the highest standards of ethical practices and understand the importance of recognizing and addressing our impact on our constituents, the community and the environment.

The Sustainability Report notes that during that year we provided nearly 2.5 million patient doses of our products, safely disposed of over 4,000 pounds of expired and damaged products, and had no product recalls. We also had no Company brands listed on the FDA's MedWatch Safety Alerts for Human Medical Products, no Company product issues identified by the FDA's Adverse Event Reporting System and no clinical trials terminated due to failure to practice good clinical standards.

The Sustainability Report also highlights our investment in our employees through our continuing education programs, employee development initiatives and employee recognition awards. We reported that women represented 46% of Cumberland's workforce – and 18% of our employees were minorities.

Cybersecurity

The Company has taken appropriate steps to monitor an adequate level of cybersecurity. The Company is insured against cyber attacks and has appropriate detection and mitigation controls in place.

We were incorporated in 1999 and have been headquartered in Nashville, Tennessee since our inception. The Company's common shares are listed on the Nasdaq stock exchange, our website address is *www.cumberlandpharma.com* and our various filings are available to the public at *www.sec.gov.*

CRITICAL ACCOUNTING POLICIES AND SIGNIFICANT JUDGMENTS AND ESTIMATES

Accounting Estimates and Judgments

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

Revenue Recognition

We recognize revenue in accordance with the Accounting Standards Codification (ASC) Topic 606. Effective January 1, 2018, we adopted the Financial Accounting Standards Board's ("FASB") amended guidance in the form of Accounting Standards Update ("ASU") No. 2014-09, "Revenue from Contracts with Customers," (ASC 606).

Our revenue is derived primarily from the product sales of our FDA approved pharmaceutical brands. Revenue from sales of products is recognized at the point where the customer obtains control of the goods and we satisfy our performance obligation, which occurs upon either shipment of the product or arrival at its destination, depending upon the shipping terms of the transaction. Payment terms typically range from 30 to 60 days from date of shipment. Our net product revenue reflects the reduction from gross product revenue for estimated allowances for chargebacks, and discounts and reflects sales related accruals for rebates, coupons, product returns, and certain administrative and service fees. Significant judgments must be made in determining the transaction price for our sales of products related to these adjustments. Other revenue, which is a component of net revenues, includes non-refundable upfront payments and milestone payments under licensing agreements along with grant and rental income. Other income was approximately 2.6% percent of net revenues in 2021, 4.3% in 2020, and 5.8% in 2019 respectively.

Our financial statements reflect accounts receivable allowances of $0.3 million and $1.0 million at December 31, 2021 and 2020, respectively, for chargebacks and early pay discounts for products.

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

	2021	2020	2019
Balance, January 1	$ 4,063,435	$ 4,593,167	$ 4,961,631
Current provision	12,127,410	13,453,894	13,081,251
Actual product returns and credits issued	(12,510,168)	(13,983,626)	(13,449,715)
Balance, December 31	$ 3,680,677	$ 4,063,435	$ 4,593,167

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

- Each product's historical experience adjusted to reflect known changes in the factors that impact such allowances;
- The contractual terms with direct and indirect customers;
- Analyses of historical levels of chargebacks, discounts and returns of product;
- Communications with customers;

- Purchased information about the rate of prescriptions being written and the level of inventory remaining in the distribution channel, if known; and
- Expectations about the market for each product, including any anticipated introduction of competitive products.

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

The allowances for chargebacks and accruals for rebates and product returns are the most significant estimates used in the recognition of our revenue from product sales. Of the accounts receivable allowances and our sales related accruals, our accrual for fee for services and product returns represents the majority of the balance. Sales related accrued liabilities for rebates, product returns, service fees, and administrative fees totaled $3.7 million, $4.1 million and $4.6 million as of December 31, 2021, 2020 and 2019, respectively. Of these amounts, our estimated liability for fee for services represented $1.0 million, $1.0 million and $1.4 million, respectively, while our accrual for product returns totaled $1.9 million, $1.7 million and $1.9 million, respectively. If the actual amount of cash discounts, chargebacks, rebates, and product returns differs from the amounts estimated by management, material differences may result from the amount of our revenue recognized from product sales. A change in our rebate estimate of one percentage point would have impacted net sales by approximately $0.4 million for the years ended December 31, 2021, 2020 and 2019. A change in our product return estimate of one percentage point would have impacted net sales by $0.4 million for the years ended December 31, 2021, and 2020 and $0.3 million for the year ended December 31, 2019.

Inventories

We record amounts for estimated obsolescence or unmarketable inventory in an amount equal to the difference between the cost of inventory and the net realizable value based upon assumptions about remaining shelf life, future demand and market conditions. The estimated inventory obsolescence amounts are calculated based upon specific review of the inventory expiration dates and the quantity on-hand at December 31, 2021, in comparison to our expected inventory usage. The amount of actual inventory obsolescence and unmarketable inventory could differ (either higher or lower) in the near term from the estimated amounts. Changes in our estimates would be recorded in our statement of operations in the period of the change.

Non-current inventories consist of API which typically has an extended life and selected finished good products with extended life longer than one year.

Income Taxes

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

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

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

Share-Based Payments

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

We issue restricted stock and incentive stock option awards to employees, directors and consultants. Compensation expense for restricted equity awards granted to employees and directors is generally equal to the fair market value of the underlying common stock on the date of grant. If a sufficient disincentive for nonperformance does not exist at the date of grant, the compensation cost is remeasured at each reporting date at the then-current fair market value of the underlying common stock until the award vests.

Research and Development

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

Intangible Assets and Goodwill

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

RESULTS OF OPERATIONS

Year ended December 31, 2021 compared to year ended December 31, 2020

The following table presents the statements of operations for the years ended December 31, 2021 and 2020:

	Years ended December 31,		
	2021	**2020**	**Change**
Net revenues	$ 35,985,043	$ 37,441,134	$ (1,456,091)
Costs and expenses:			
Cost of products sold	8,811,248	8,653,020	158,228
Selling and marketing	15,015,424	14,765,465	249,959
Research and development	5,684,465	5,773,825	(89,360)
General and administrative	9,780,026	10,196,299	(416,273)
Amortization	4,371,300	4,434,120	(62,820)
Total costs and expenses	43,662,463	43,822,729	(160,266)
Operating income (loss)	(7,677,420)	(6,381,595)	(1,295,825)
Interest income	26,081	75,345	(49,264)
Other income	2,187,140	—	2,187,140
Interest expense	(98,031)	(263,627)	165,596
Income (loss) before income taxes	(5,562,230)	(6,569,877)	1,007,647
Income tax (expense) benefit	(34,891)	(55,902)	21,011
Net income (loss) from continuing operations	$ (5,597,121)	$ (6,625,779)	$ 1,028,658

The following table summarizes net revenues for the years presented:

	Years ended December 31,		
	2021	**2020**	**Change**
Products:			
Kristalose	$ 15,993,658	$ 15,567,562	$ 426,096
Vibativ	11,704,062	10,870,990	833,072
Caldolor	4,970,301	5,336,943	(366,642)
Acetadote	850,993	1,874,206	(1,023,213)
Omeclamox-Pak	(388,657)	257,088	(645,745)
Vaprisol	1,859,581	1,077,227	782,354
RediTrex	55,321	856,657	(801,336)
Other	939,784	1,600,461	(660,677)
Total net revenues	$ 35,985,043	$ 37,441,134	$ (1,456,091)

Net revenues. Net revenues for the year ended December 31, 2021 were approximately $36.0 million compared to $37.4 million for the year ended December 31, 2020, representing a decrease of $1.5 million or 3.9%. As detailed in the table above, net revenue increased during the 2021 period for three of our marketed products: Kristalose, Vibativ and Vaprisol. The improvement was led by Vibativ which delivered $0.8 million in revenue growth, followed by Vaprisol, which delivered an additional $0.8 million during 2021 compared to 2020. Our largest product, Kristalose, contributed $0.4 million in incremental revenue.

These increases were offset by decreased net sales of Caldolor, Acetadote, Omeclamox-Pak and RediTrex.

We returned the exclusive rights to commercialize Ethyol and Totect in the United States to Clinigen effective January 1, 2020. In exchange for the return of these product license rights and associated non-compete provision, Cumberland received $5 million in financial consideration paid over the two-years following the return date. The final four installments totaling $2.0 million due from Clinigen were recorded during the year ended December 31, 2021, as discontinued operations. We do not incur expenses associated with these payments from Clinigen.

Kristalose revenue increased by $0.4 million, or 2.7%, compared to December 31, 2020 primarily as a result of improved sales volume for the product.

Vibativ revenue was $11.7 million compared to $10.9 million in the prior year. This $0.8 million or 7.7% increase in net revenue was a result of improved sales volume for the product.

Caldolor revenue experienced a 6.9% decrease to $5.0 million during the year ended December 31, 2021 compared to $5.3 million in the same period last year. This decrease in Caldolor revenue for the year ended December 31, 2021 was the result of lower domestic shipments of the product, significantly impacted by COVID-19 and a reduction in elective surgeries.

Vaprisol revenue increased $0.8 million during the year ended December 31, 2021 compared to the prior year period due primarily to increased sales of the product.

Acetadote revenue included net sales of our branded product and our share of net sales from our Authorized Generic. For the year ended December 31, 2021, the Acetadote net revenue decreased $1.0 million compared to the prior year due to a reduction in sales volume, primarily impacting the Authorized Generic.

Omeclamox-Pak revenue decreased $0.6 million during the year ended December 31, 2021 compared to the prior year. The decrease was due to ownership changes at our packager which resulted in a tempoary out of stock situation.

Reditrex revenue decreased $0.8 million in 2021 compared to 2020. Our wholesale customers initially stocked the product in Q420, but we delayed the launch until October 2021 due to pandemic delays and supply issues.

Cost of products sold. Cost of products sold for the year ended December 31, 2021 were $8.8 million compared to $8.7 million in the prior year. As a percentage of net revenues, cost of products sold were 24.5% compared to 23.1% during the prior year. This change in costs of products sold as a percentage of revenue was attributable to a change in the product sales mix, particularly the increase in sales of Vibativ. The Vibativ inventory sold during the period was acquired and paid for by Cumberland as part of the acquisition of the brand during 2018. The increase in costs of product sold expense was due to the write off of expired inventory.

Selling and marketing. Selling and marketing expense for the year ended December 31, 2021 were $15.0 million compared to $14.8 million in the prior year, which was an increase of $0.2 million. This increase was primarily a result of increases in direct promotional spending.

Research and development. Research and development costs for the year ended December 31, 2021 were $5.7 million, compared to $5.8 million last year, representing a decrease of $0.1 million. A portion of our research and development costs is variable based on the number of trials, study sites, number of patients and the cost per patient in each of our clinical programs. We continue to fund our ongoing clinical initiatives associated with our pipeline products. During 2021, we experienced a decrease in study activity which was partially offset by increases in our annual FDA user fees.

General and administrative. General and administrative expenses for the year ended December 31, 2021 were $9.8 million compared to $10.2 million in the prior year. The decrease resulted from a decrease in legal and professional fees as well as lower stock based compensation during the period partially offset by corporate bonuses.

The components of the statements of operations discussed above reflect the following impacts from Vibativ:

Financial Impact of Vibativ	**Years ended December 31,**	
	2021	**2020**
Net revenue	$ 11,704,062	$ 10,870,990
Cost of products sold [(1)]	4,814,464	3,366,201
Royalty and operating expenses	2,011,458	1,952,348
Vibativ contribution	$ 4,878,140	$ 5,552,441

[(1)] The Vibativ inventory included in the costs of product sold during the period was acquired and paid for by Cumberland as part of the acquisition of the brand during 2018.

Amortization. Amortization expenses represent the ratable use of our capitalized intangible assets including product and license rights, patents, trademarks and patent defense costs. Amortization for 2021 totaled approximately $4.4 million consistent with the prior year.

Income taxes. Income taxes totaled $34,891 for the year ended December 31, 2021 and $55,902 for the year ended December 31, 2020.

Year ended December 31, 2020 compared to year ended December 31, 2019

The following table presents the statements of operations for the years ended December 31, 2020 and 2019:

	Years ended December 31,		
	2020	2019	Change
Net revenues	$ 37,441,134	$ 34,388,295	$ 3,052,839
Costs and expenses:			
Cost of products sold	8,653,020	7,421,316	1,231,704
Selling and marketing	14,765,465	15,277,740	(512,275)
Research and development	5,773,825	6,868,480	(1,094,655)
General and administrative	10,196,299	9,974,384	221,915
Amortization	4,434,120	4,134,557	299,563
Total costs and expenses	43,822,729	43,676,477	146,252
Operating income (loss)	(6,381,595)	(9,288,182)	2,906,587
Interest income	75,345	243,364	(168,019)
Interest expense	(263,627)	(246,186)	(17,441)
Income (loss) before income taxes	(6,569,877)	(9,291,004)	2,721,127
Income tax (expense) benefit	(55,902)	79,316	(135,218)
Net income (loss) from continuing operations	$ (6,625,779)	$ (9,211,688)	$ 2,585,909

The following table summarizes net revenues for the years presented:

	Years ended December 31,		
	2020	2019	Change
Products:			
Kristalose	$ 15,567,562	$ 12,895,120	$ 2,672,442
Vibativ	10,870,990	8,691,550	2,179,440
Caldolor	5,336,943	5,222,282	114,661
Acetadote	1,874,206	3,824,449	(1,950,243)
Omeclamox-Pak	257,088	837,829	(580,741)
Vaprisol	1,077,227	936,615	140,612
RediTrex	856,657	—	856,657
Other	1,600,461	1,980,450	(379,989)
Total net revenues	$ 37,441,134	$ 34,388,295	$ 3,052,839

Net revenues. Net revenues for the year ended December 31, 2020 were approximately $37.4 million compared to $34.4 million for the year ended December 31, 2019, representing an increase of $3.1 million or 8.9%. As detailed in the table above, net revenue increased during the 2020 period for four of our marketed products: Kristalose, Vibativ, Caldolor and Vaprisol. The improvement was led by largest product, Kristalose which delivered $2.7 million in revenue growth, followed by Vibativ, which delivered an additional $2.2 million during 2020 compared to 2019. Our newest product, at the time, RediTrex, contributed $0.9 million in incremental revenue during the year.

These increases were partially offset by decreased net product sales of Acetadote and Omeclamox-Pak.

We returned the exclusive rights to commercialize Ethyol and Totect in the United States to Clinigen effective January 1, 2020. As a result, the 2019 revenues and expenses associated with the products are combined and reclassified into discontinued operations in our financial statements. In exchange for the return of these product license rights and associated non-compete provision, Cumberland is receiving $5 million in financial consideration paid over the two-years following the return date. The first four installments totaling $3.0 million due from Clinigen were recorded during the year ended December 31, 2020, as discontinued operations. We do not incur expenses associated with these payments from Clinigen.

Kristalose revenue increased by $2.7 million, or 20.7%, compared to December 31, 2019 primarily as a result of improved sales volume for the product.

Vibativ revenue was $10.9 million compared to $8.7 million in the prior year. This $2.2 million or 25.1% increase in net revenue was a result of improved sales volume for the product.

Caldolor revenue experienced a 2.2% increase to $5.3 million during the year ended December 31, 2020 compared to $5.2 million in the same period in the prior year. This increase in Caldolor revenue for the year ended December 31, 2020 was the result of an increase in international shipments when compared to the prior year, which were partially offset by lower domestic shipments of the product, significantly impacted by COVID-19 and a reduction in elective surgeries.

Vaprisol revenue increased $0.1 million during the year ended December 31, 2020 compared to the prior year period due primarily to increased sales of the product.

Acetadote revenue included net sales of our branded product and our share of net sales from our Authorized Generic. For the year ended December 31, 2020, the Acetadote net revenue decreased $2.0 million compared to the prior year due to a reduction in sales volume, primarily impacting the Authorized Generic.

Omeclamox-Pak revenue decreased $0.6 million during the year ended December 31, 2020 compared to the prior year. The decrease was largely the result of decreased sales volume, which were negatively impacted by COVID-19.

Cost of products sold. Cost of products sold for the year ended December 31, 2020 were $8.7 million compared to $7.4 million in the prior year. As a percentage of net revenues, cost of products sold were 23.1% compared to 21.6% during the prior year. This change in costs of products sold as a percentage of revenue was attributable to a change in the product sales mix, particularly the increase in sales of Vibativ. The Vibativ inventory sold during the period was acquired and paid for by Cumberland as part of the acquisition of the brand during 2018. The increase in costs of product sold expense was also the result of a step up in the fair value of the inventory over the cost to Theravance, as required under purchase accounting rules.

Selling and marketing. Selling and marketing expense for the year ended December 31, 2020 were $14.8 million compared to $15.3 million in the prior year, which was a decrease of $0.5 million. This decrease was primarily a result of decreases in direct promotional spending, meeting costs and travel expenses. These decreases were partially offset by increases in salaries as well as increases in royalty costs associated with growth in Vibativ sales during the period.

Research and development. Research and development costs for the year ended December 31, 2020 were $5.8 million, compared to $6.9 million in the prior year, representing a decrease of $1.1 million. A portion of our research and development costs is variable based on the number of trials, study sites, number of patients and the cost per patient in each of our clinical programs. We continue to fund our ongoing clinical initiatives associated with our pipeline products. During 2020, we experienced a decrease in study activity which was partially offset by increases in our annual FDA user fees.

General and administrative. General and administrative expenses for the year ended December 31, 2020 were $10.2 million compared to $10.0 million in the prior year. The increase resulted from an increase in legal and professional fees partially offset by lower stock based compensation during the period.

The components of the statements of operations discussed above reflect the following impacts from Vibativ:

Financial Impact of Vibativ	**Years ended December 31,**	
	2020	**2019**
Net revenue	$ 10,870,990	$ 8,691,550
Cost of products sold [1]	3,366,201	2,716,305
Royalty and operating expenses	1,952,348	1,609,564
Vibativ contribution	$ 5,552,441	$ 4,365,681

[1] The Vibativ inventory included in the costs of product sold during the period was acquired and paid for by Cumberland as part of the acquisition of the brand during 2018.

Amortization. Amortization expenses represent the ratable use of our capitalized intangible assets including product and license rights, patents, trademarks and patent defense costs. Amortization for 2020 totaled approximately $4.4 million compared to $4.1 million in the prior year. The increase in expense was attributable to the amortization of additional product rights and capitalized patents.

Income taxes. Income taxes totaled $55,902 for the year ended December 31, 2020 and were an income tax benefit of $79,316 for the year ended December 31, 2019.

LIQUIDITY AND CAPITAL RESOURCES

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

At December 31, 2021 and December 31, 2020, all our investments had original maturities of less than ninety days and as a result were classified as cash equivalents.

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

	2021	2020
Cash and cash equivalents	$ 27,040,816	$ 24,753,796
Total cash and cash equivalents	$ 27,040,816	$ 24,753,796
Working capital (current assets less current liabilities)	$ 26,409,053	$ 24,302,146
Current ratio (multiple of current assets to current liabilities)	2.4	1.9
Revolving line of credit availability	$ 5,000,000	$ —

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

	2021	2020	2019
Cash provided by (used in):			
Operating activities	$ 6,342,443	$ 5,415,061	$ 3,056,356
Investing activities	(501,893)	(1,757,789)	2,297,848
Financing activities	(3,553,530)	(7,116,111)	(5,080,529)
Net (decrease) increase in cash and cash equivalents	$ 2,287,020	$ (3,458,839)	$ 273,675

The net $2.3 million increase in cash and cash equivalents for the year ended December 31, 2021 was attributable to cash provided by operating activities partially offset by cash used by investing and financing activities. Cash provided by operating activities of $6.3 million includes a reduction of inventory of $4.8 million, most of which was Vibativ related, and cash payments received of $2.0 million provided by discontinued operations. Cash used by investing activities of $0.5 million was the result of additions to intangibles of $0.3 million, additions to property and equipment of $0.1 million and the payment of $0.2 million to the WHC joint venture. Our financing activities included payments of $2.2 million of contingent consideration for Vibativ and $1.4 million in cash used to repurchase shares of our common stock.

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

The net $3.5 million decrease in cash and cash equivalents for the year ended December 31, 2020 was attributable to cash used by investing and financing activities partially offset by cash provided by operating activities. Cash provided by operating activities of $5.4 million included non-cash expense add backs for depreciation and amortization and share-based compensation expense totaling $5.8 million and changes in our

working capital that provided net cash of $5.4 million. The cash provided by operating activities included $3.5 million provided by discontinued operations. This increase was partially offset by a net loss for the period of $6.6 million. Cash used by investing activities of $1.8 million was the result of additions to intangibles of $2.0 million, which included the payment of $1.0 million for product rights, additions to property and equipment of $0.1 million and partially offset by proceeds from the surrender of life insurance of $0.5 million. Our financing activities included a net repayment of $3.5 million under our line of credit net, $1.9 million in cash used to repurchase shares of our common stock as well as the $0.8 million used for the repurchase of a portion of CET's shares.

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

Shelf Registration

In November 2017, the Company filed its Shelf Registration on Form S-3 with the SEC associated with the sale of up to $100 million in corporate securities. The Shelf Registration was declared effective in January 2018. It also included an At the Market ("ATM") feature that allows the Company to sell common shares at market prices, along with an agreement with B. Riley FBR Inc. to support such a placement of shares. The Company filed an updated Form S-3 with the SEC in December 2020, which was declared effective in January 2021. The Company intends to continue an ATM feature through B. Riley FBR, Inc. that would allow the Company to issue shares of its common stock. The Company did not issue any shares under this ATM during the year ended December 31, 2021.

On December 27, 2021, the Company filed a related prospectus supplement in connection with the sale and issuance of shares having an aggregate gross sales price of up to $19 million. The Company amended the At the Market Sales Agreement on December 27, 2021, in order to allow the Company to continue using its ATM feature to sell shares at market prices. The Company intends to continue an ATM feature through B. Riley FBR, Inc. which allows the Company to issue shares of its common stock.

Debt Agreement

On December 31, 2021, the Company entered into a Fifth Amendment (“Fifth Amendment”) to the Revolving Credit Note and Sixth Amendment to Revolving Credit Loan Agreement with Pinnacle Bank (the Pinnacle Agreement). The Fifth Amendment increased the principal amount by $5 million to $20 million. On October 28, 2021, the Company entered into a Fourth Amendment to the Revolving Credit Note and Fifth Amendment to Revolving Credit Loan Agreement with Pinnacle Bank. Among other terms, the Fourth Amendment extended the maturity date to October 1, 2024.

Under the Pinnacle Agreement, we were initially subject to one financial covenant, the maintenance of a Funded Debt Ratio. On August 14, 2018, we amended the Pinnacle Agreement ("First Amendment") to replace the single financial covenant with the maintenance of either the Funded Debt Ratio or a Tangible Capital Ratio, as defined in the First Amendment. The Third Amendment modified the definition of the Funded Debt Ratio and the compliance target of the Tangible Capital Ratio. Both Third Amendment modifications were related to the Vibativ transaction. We were in compliance with the Tangible Capital Ratio financial covenant as of December 31, 2021 and we expect to maintain compliance with the Tangible Capital Ratio financial covenant in future periods.

Paycheck Protection Program

On April 20, 2020, Cumberland received the funding of a loan from Pinnacle Bank in the aggregate amount of $2,187,140 pursuant to the Paycheck Protection Program (the “PPP”) under the Federal Coronavirus Aid, Relief, and Economic Security Act ("CARES Act"), which was enacted March 27, 2020.

Under the terms of the PPP, certain amounts of the loan may be forgiven if they are used for qualifying expenses as described in the CARES Act, including qualifying payroll costs, covered rent payments, and covered utilities. From the date of funding we have used the loan amount for such qualifying expenses.

Cumberland elected to account for the proceeds of the loan as a government grant under *International Accounting Standard 20 ("IAS 20"), Accounting for Government Grants and Disclosure of Government Assistance*. The permitted analogous use of IAS 20 outlines a model for the accounting for government assistance, including forgivable loans. As a result, the Company recorded the $2,187,140 as a deferred income liability, which was included as a component of other current liabilities on the condensed consolidated balance sheet at December 31, 2020.

In October 2020, Cumberland submitted a request for the loan’s forgiveness. On June 11, 2021, the Company received a formal notice from the SBA that the full amount of the loan was forgiven. The Company accounted for the forgiveness of the PPP loan under IAS 20 and recorded the $2,187,140 as other income.

Minimum Product Purchase Requirements

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

Contractual cash obligations

The following table summarizes our contractual cash obligations as of December 31, 2021:

		Payments Due by Year				
Contractual obligations[1]	**Total**	**2022**	**2023**	**2024**	**2025**	**2026 and thereafter**
Line of credit[2]	$ 15,000,000	$ —	$ —	$ 15,000,000	$ —	$ —
Estimated interest on debt [2]	1,505,625	547,500	547,500	410,625	—	—
Vibativ contingent consideration liability payments [3]	6,515,627	2,353,789	727,489	636,761	469,455	2,328,133
Sancuso upfront purchase payment	13,500,000	13,500,000	—	—	—	—
Sancuso contingent consideration liability payments [4]	5,814,448	1,071,480	1,746,534	1,200,082	375,267	1,421,085
Operating leases[5]	1,111,791	1,019,313	92,478	—	—	—
Total [1]	$ 43,447,491	$ 18,492,082	$ 3,114,001	$ 17,247,468	$ 844,722	$ 3,749,218

1. The sum of the individual amounts may not agree due to rounding.
2. The line of credit payments represent the estimated unused line of credit payments and the amount due at maturity. The estimated interest on debt represents the interest on the principal outstanding on the line of credit. These amounts are based on the $15.0 million line of credit assuming the current $15.0 million balance outstanding on December 31, 2021 is consistently outstanding through maturity of October 2024. Interest and unused line of credit payments are due and payable quarterly in arrears.
3. The contingent consideration liability represents the fair value of the royalty payments of up to 20% of future net sales as part of the Vibativ acquisition.

4. The contingent consideration liability represents the fair value of the royalty payments of up to 10% of future net sales as part of the Sancuso acquisition.
5. The Broadwest contractual cash obligation will begin upon commencement in Q4 2022.

OFF-BALANCE SHEET ARRANGEMENTS

During 2021, 2020 and 2019, we did not engage in any off-balance sheet arrangements.

RECENT ACCOUNTING PRONOUNCEMENTS

Recent Accounting Pronouncements - Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13, “Financial Instruments-Credit Losses,” which changes the impairment model for most financial assets and certain other instruments. For trade and other receivables, held-to-maturity debt securities, loans and other instruments, companies will be required to use a new forward-looking “expected loss” model that generally will result in the earlier recognition of allowances for losses. For available-for-sale debt securities with unrealized losses, companies will measure credit losses in a manner similar to what they do today, except that the losses will be recognized as allowances rather than as reductions in the amortized cost of the securities. Companies will have to disclose additional information, including information they use to track credit quality by year of origination for most financing receivables. Companies will apply the ASU’s provisions as a cumulative-effect adjustment, if any, to retained earnings as of the beginning of the first reporting period in which the guidance is adopted.

Related to ASU No. 2016-13 discussed above, in May 2019, the FASB issued ASU 2019-05, "Financial Instruments-Credit Losses (Topic 326): Targeted Transition Relief" which provides transition relief for ASU 2016-13 by providing entities with an alternative to irrevocably electing the fair value option for eligible financial assets measured at amortized cost upon adoption of the new credit losses standard. Certain eligibility requirements must be met and the election must be applied on an instrument-by-instrument basis. The election is not available for either available-for-sale or held-to-maturity debt securities. We will adopt both ASU 2016-13 and ASU 2019-05 on January 1, 2023. The adoption of ASU 2016-13 and ASU 2019-05 are not expected to have a material impact on the Company’s consolidated financial statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Interest Rate Risk

We are exposed to market risk related to changes in interest rates on our cash on deposit in highly-liquid money market accounts and revolving credit facility. We do not utilize derivative financial instruments or other market risk-sensitive instruments to manage exposure to interest rate changes. The main objective of our cash investment activities is to preserve principal while maximizing interest income through low-risk investments. Our investment policy focuses on principal preservation and liquidity.

We believe that our interest rate risk related to our cash and cash equivalents is not material. The risk related to interest rates for these accounts would produce less income than expected if market interest rates fall. Based on current interest rates, we do not believe we are exposed to significant downside risk related to a change in interest on our money market accounts. The Company did not have any investments in marketable securities at December 31, 2021.

The interest rate risk related to borrowings under our line of credit is based on LIBOR plus an interest rate spread. There is no LIBOR minimum and the LIBOR pricing provides for an interest rate spread of 1.75% to 2.75% (representing an interest rate of 3.65% at December 31, 2021). When the LIBOR rate is discontinued, the Pinnacle Agreement allows for the LIBOR rate to be replaced by a Benchmark Rate, which may be the Daily Simple SOFR (Secured Overnight Financing Rate). The Benchmark Rage will be determined in consultation with Pinnacle Bank. As of December 31, 2021, we had $15.0 million in borrowings outstanding under our revolving line of credit.

Exchange Rate Risk

While we operate primarily in the U.S., we are exposed to foreign currency risk. A portion of our research and development is performed abroad.

Currently, we do not utilize financial instruments to hedge exposure to foreign currency fluctuations. We believe our exposure to foreign currency fluctuation is minimal as our purchases in foreign currency have a maximum exposure of 90 days based on invoice terms with a portion of the exposure being limited to 30 days based on the due date of the invoice. Foreign currency exchange losses were immaterial for 2021, 2020 and 2019. Neither a five percent increase nor decrease from current exchange rates would have had a material effect on our operating results or financial condition.

Item 8. Financial Statements and Supplementary Data.

See consolidated financial statements, including the reports of the independent registered public accounting firm, starting on page F-1, which is incorporated herein by reference.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Our Chief Executive Officer and Chief Financial Officer, with the participation of other members of management, have evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act") as of December 31, 2021. Based on such evaluations, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective (at the reasonable assurance level) to ensure that the information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized, and reported, within the time periods specified in the SEC's rules and forms and to ensure that such information is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Management's report on internal control over financial reporting is included on page F-1 of this annual report on Form 10-K, and incorporated herein by reference. During our fourth quarter of 2021, there were no changes in

our internal control over financial reporting (as defined in Rule 13a-15(f) or 15d-15(f))that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

None.

Item 9C: Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

PART III

The information called for by Part III of Form 10-K (Item 10 – Directors, Executive Officers and Corporate Governance, Item 11 – Executive Compensation, Item 12 – Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters, Item 13 – Certain Relationships and Related Transactions, and Director Independence, Item 14 – Principal Accountant Fees and Services), is incorporated by reference from our proxy statement related to our 2022 annual meeting of shareholders, which is expected to be filed with the SEC on or around March 11, 2022.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

a. Documents filed as part of this report:

1. Financial Statements

(2) Financial Statement Schedule

b. Exhibits

Exhibit Number	Description
1.1	At Market Issuance Sales Agreement, dated November 7, 2017, by and between Cumberland Pharmaceuticals Inc. and B. Riley FBR, Inc., incorporated herein by reference to the corresponding Exhibit 1.1 of our Registration Statement on Form S-3 (File No. 333-221402) as filed with the SEC on November 7, 2017.
1.2	Amendment No. 1 to At Market Issuance Sales Agreement, dated December 27, 2021, by and between Cumberland Pharmaceuticals Inc. and B. Riley Securities, Inc., incorporated herein by reference to the corresponding exhibit 1.2 of the Registrant's Form 8-K (File No. 001-33637) as filed with the SEC on December 27, 2021
2.1	Asset Purchase Agreement, dated December 31, 2021, by and between Cumberland Pharmaceuticals Inc. and Kyowa Kirin, Inc., incorporated herein by reference to the corresponding exhibit 2.1 of the Registrant's Form 8-K (File No. 001- 001-33637) as filed with the SEC on January 6, 2022
3.1	Third Amended and Restated Charter of Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit to Amendment No. 19 of the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on July 17, 2009
3.2	Second Amended and Restated Bylaws of Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit to Amendment No. 19 of the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on July 17, 2009

4.1	Specimen Common Stock Certificate of Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit to Amendment No. 5 of the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on August 6, 2007
4.2	Preferred Stock Terms, Rights, and Provisions, incorporated herein by reference to the corresponding exhibit to Registrant's Registration Statement Form S-3 (File No. 333-221402) as filed with the SEC on December 19, 2017
4.3	Form of Senior Indenture, incorporated herein by reference to the corresponding exhibit to Registrant's Registration Statement Form S-3 (File No. 333-221402) as filed with the SEC on November 7, 2017
4.4	Form of Subordinated Indenture, incorporated herein by reference to the corresponding exhibit to Registrant's Registration Statement Form S-3 (File No. 333-221402) as filed with the SEC on November 7, 2017
4.5#	Form of Option Agreement under 1999 Stock Option Plan of Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit to the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on May 1, 2007
4.6.1#	Form of Incentive Stock Option Agreement under the Amended and Restated 2007 Long-Term Incentive Compensation Plan of Cumberland Pharmaceuticals Inc. incorporated herein by reference to the corresponding exhibit to the Registrant's Annual Report on Form 10-K (File No. 001-33637) as filed with the SEC on March 12, 2013
4.6.2#	Form of Non-Statutory Stock Option Agreement under the Amended and Restated 2007 Long-Term Incentive Compensation Plan of Cumberland Pharmaceuticals Inc. incorporated herein by reference to the corresponding exhibit to the Registrant's Annual Report on Form 10-K (File No. 001-33637) as filed with the SEC on March 12, 2013
4.7#	Form of Non-Statutory Stock Option Agreement under the Amended and Restated 2007 Directors' Compensation Plan of Cumberland Pharmaceuticals Inc. incorporated herein by reference to the corresponding exhibit to the Registrant's Annual Report on Form 10-K (File No. 001-33637) as filed with the SEC on March 12, 2013
4.8	Warrant to Purchase Common Stock of Cumberland Pharmaceuticals Inc., issued to Bank of America, N.A. on July 22, 2009, incorporated herein by reference to the corresponding exhibit to the Registrant's Annual Report on Form 10-K (File No. 001-33637) as filed with the SEC on March 19, 2010
4.9	Form of Senior Indenture, incorporated herein by reference to the corresponding exhibit to Registrant's Registration Statement Form S-3 (File No. 333-184091) as filed with the SEC on September 25, 2012.
4.10	Form of Subordinated Indenture, incorporated herein by reference to the corresponding exhibit to Registrant's Registration Statement Form S-3 (File No. 333-184091) as filed with the SEC on September 25, 2012
4.11	Description of Cumberland Pharmaceutical's Common Stock
10.7†	Exclusive Distribution Agreement, effective as of July 1, 2010, by and between Cardinal Health 105, Inc. and Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit of the Registrant's Current Report on Form 8-K (File No. 001-33637) as filed with the SEC on August 13, 2010
10.7.1†	First Amendment to Exclusive Distribution Agreement, dated March 31, 2013, by and between Cardinal Health 105, Inc. and Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit of the Registrant's Current Report on Form 8-K (File No. 001-33637) as filed with the SEC on June 3, 2013
10.10†	License Agreement, dated May 28, 1999, by and between Vanderbilt University and Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit to Amendment No. 3 of the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on July 11, 2007

10.11#	Employment Agreement dated March 8, 2021, effective as of January 1, 2021, by and between A.J. Kazimi and Cumberland Pharmaceuticals Inc.
10 .12#	Employment Agreement dated March 8, 2021, effective as of January 1, 2021, by and between Martin E. Cearnal and Cumberland Pharmaceuticals Inc.
10.13#	Employment Agreement dated March 8, 2021, effective as of January 1, 2021, by and between Leo B. Pavliv and Cumberland Pharmaceuticals Inc.
10.14#	Employment Agreement dated March 8, 2021, effective as of January 1, 2021, by and between John M. Hamm and Cumberland Pharmaceuticals Inc.
10.15#	Employment Agreement dated March 8, 2021, effective as of January 1, 2021, by and between James L. Herman and Cumberland Pharmaceuticals Inc.
10.17#	1999 Stock Option Plan of Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit to the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on May 1, 2007
10.18#	Amended and Restated 2007 Long-Term Incentive Compensation Plan of Cumberland Pharmaceuticals Inc., incorporated herein by reference to Appendix A of the Registrant's Schedule 14A as filed with the SEC on March 12, 2012 and approved by the Registrant's shareholders on April 17, 2012
10.19#	Amended and Restated 2007 Directors' Incentive Plan of Cumberland Pharmaceuticals Inc., incorporated herein by reference to Appendix B of the Registrant's Schedule 14A as filed with the SEC on March 12, 2012 and approved by the Registrant's shareholders on April 17, 2012
10.20	Form of Indemnification Agreement between Cumberland Pharmaceuticals Inc. and all members of its Board of Directors, incorporated herein by reference to the corresponding exhibit to the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on May 1, 2007
10.21†	Lease Agreement, dated September 10, 2005, by and between Nashville Hines Development, LLC and Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit to Amendment No. 3 of the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on July 11, 2007
10.21.1†	First Amendment to Office Lease Agreement, dated April 25, 2008, by and between 2525 West End, LLC (successor in interest to Nashville Hines Development LLC) and Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit to Amendment No. 10 of the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on May 21, 2008
10.21.2†	Second Amendment to Office Lease Agreement, dated March 2, 2010, by and between 2525 West End, LLC (successor in interest to Nashville Hines Development LLC) and Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit to the Registrant's Quarterly Report on Form 10-Q (File No. 001-33637) as filed with the SEC on May 17, 2010
10.21.3†	Third Amendment to Office Lease Agreement, dated September 29, 2015, by and between 2525 West End, LLC (successor in interest to Nashville Hines Development LLC) and Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit to the Registrant's Quarterly Report on Form 10-Q (File No. 001-33637) as filed with the SEC on November 6, 2015
10.23†	Amended and Restated Lease Agreement, dated November 11, 2004, by and between The Gateway to Nashville LLC and Cumberland Emerging Technologies, Inc., incorporated herein by reference to the corresponding exhibit to the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on May 1, 2007
10.24	First Amendment to Amended and Restated Lease Agreement, dated August 23, 2005, by and between The Gateway to Nashville LLC and Cumberland Emerging Technologies, Inc., incorporated herein by reference to the corresponding exhibit to the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on May 1, 2007

10.24.1	Second Amendment to Amended and Restated Lease Agreement, dated January 9, 2006, by and between The Gateway to Nashville LLC and Cumberland Emerging Technologies, Inc., incorporated herein by reference to the corresponding exhibit to Amendment No. 10 of the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on May 21, 2008
10.24.2†	Third Amendment to Amended and Restated Lease Agreement, dated July 3, 2012, by and between The Gateway to Nashville LLC and Cumberland Emerging Technologies, Inc., incorporated herein by reference to the corresponding exhibit to the Registrant's Quarterly Report on Form 10-Q (File No. 001-33637) as filed with the SEC on August 9, 2012
10.25†	License and Supply Agreement, dated November 16, 2015, by and between Cumberland Pharmaceuticals Inc. and Gastro-Entero Logic, LLC incorporated herein by reference to the corresponding exhibit of the Registrant's Annual Report on Form 10-K (File No. 001-33637) as filed with the SEC on March 14, 2016
10.28†	Asset Purchase and Royalty Agreement for Kristalose dated November 15, 2011 by and between Mylan Inc. and Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit of the Registrant's Current Report on Form 8-K (File No. 001-33637) as filed with the SEC on November 22, 2011
10.30#	Supplemental Executive Retirement and Savings Plan, incorporated herein by reference to the corresponding exhibit to the Registrant's Current Report on Form 8-K (File No. 001-33637) as filed with the SEC on May 24, 2012
10.31†	Settlement Agreement, dated November 9, 2012, by and between Cumberland Pharmaceuticals Inc., Paddock Laboratories, LLC and Perrigo Company incorporated herein by reference to the corresponding exhibit to the Registrant's Annual Report on Form 10-K (File No. 001-33637) as filed with the SEC on March 12, 2013
10.32†	License and Supply Agreement, dated November 9, 2012, by and between Cumberland Pharmaceuticals Inc., Paddock Laboratories, LLC and Perrigo Company incorporated herein by reference to the corresponding exhibit to the Registrant's Annual Report on Form 10-K (File No. 001-33637) as filed with the SEC on March 12, 2013
10.34	Revolving Credit Loan Agreement, dated July 31, 2017, by and between Cumberland Pharmaceuticals Inc. and Pinnacle Bank incorporated herein by reference to the corresponding exhibit to the Registrant's Quarterly Report on Form 10-Q (File No. 001-33637) as filed with the SEC on November 8, 2017
10.35	Amendment to Revolving Credit Loan Agreement, by and between Pinnacle Bank and Cumberland Pharmaceuticals Inc., dated August 14, 2018, incorporated herein by reference to Exhibit 10.1 to the Registrant's Quarterly Report Form 10-Q (File No. 001-33637) as filed with the SEC on August 14, 2018
10.36	First Amendment to Revolving Credit Note and Second Amendment to Revolving Credit Loan Agreement, dated as of October 17, 2018, by and between Cumberland Pharmaceuticals Inc. and Pinnacle Bank, incorporated herein by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-33637) as filed with the SEC on October 19, 2018
10.37	Second Amendment to Revolving Credit Note and Third Amendment to Revolving Credit Loan Agreement, dated as of May 10, 2019, by and between Cumberland Pharmaceuticals Inc. and Pinnacle Bank, incorporated herein by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-336371) as filed with the SEC on May 15, 2019.
10.38#	Amendment Number 2 to the Amended and Restated 2007 Long-Term Incentive Plan, incorporated herein by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-33637) as filed with the SEC on August 14, 2020
10.39#	Amendment Number 2 to the Amended and Restated 2007 Directors' Incentive Compensation Plan, incorporated herein by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-33637) as filed with the SEC on August 14, 2020

10.40	Payment Protection Program Note dated April 20, 2020, by and between Cumberland Pharmaceuticals Inc. and Pinnacle Bank, incorporated herein by reference to Exhibit 10.3 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-33637) as filed with the SEC on August 14, 2020
10.41	Third Amendment to Revolving Credit Note and Fourth Amendment to Revolving Credit Loan Agreement, dated as of October 7, 2020, by and between Cumberland Pharmaceuticals Inc. and Pinnacle Bank, incorporated herein by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-33637) as filed with the SEC on November 13, 2020
10.42	Fourth Amendment to Revolving Credit Note and Fifth Amendment to Revolving Credit Loan Agreement, dated as of October 28, 2021, by and between Cumberland Pharmaceuticals Inc. and Pinnacle Bank, incorporated herein by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-33637) as filed with the SEC on November 12, 2021
10.43	Fifth Amendment to the Revolving Credit Note and Sixth Amendment to Revolving Credit Loan Agreement, dated as of December 31, 2021, by and between Cumberland Pharmaceuticals Inc. and Pinnacle Bank
10.44	Lease Agreement, dated November 15, 2021, by and between Cumberland Pharmaceuticals Inc. and 1600 West End Avenue Partners, LLC.

21	Subsidiaries of Cumberland Pharmaceuticals Inc., incorporated herein by reference to the corresponding exhibit to the Registrant's Registration Statement on Form S-1 (File No. 333-142535) as filed with the SEC on May 1, 2007
23.1	Consent of BDO USA, LLP
23.2	Consent of BKD, LLP
31.1	Certification of Chief Executive Officer Pursuant to Rule 13-14(a) of the Securities Exchange Act of 1934 as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer Pursuant to Rule 13-14(a) of the Securities Exchange Act of 1934 as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	INLINE XBRL INSTANCE DOCUMENT - THE INSTANCE DOCUMENT DOES NOT APPEAR IN THE INTERACTIVE DATA FILE BECAUSE ITS XBRL TAGS ARE EMBEDDED WITHIN THE INLINE XBRL DOCUMENT.
101.SCH	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	INLINE XBRL TAXONOMY EXTENSION PRESENTATION LINKBASE DOCUMENT
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

#	Indicates a management contract or compensatory plan.
†	Confidential treatment has been granted for portions of this exhibit. These portions have been omitted from the Registration Statement and submitted separately to the Securities and Exchange Commission.
††	Confidential treatment has been requested for portions of this exhibit. These portions have been omitted from the Registration Statement and submitted separately to the Securities and Exchange Commission.
*	Schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule will be furnished supplementally to the U.S. Securities and Exchange Commission upon request, provided, however, that the parties may request confidential treatment pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended for any document so furnished.
**	Furnished herewith.

Item 16. Form 10-K Summary

Registrants may voluntarily include a summary of information required by Form 10-K under this Item 16. The Company has elected not to include such summary information.

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, on March 11, 2022.

Cumberland Pharmaceuticals, Inc.

/s/ A. J. Kazimi
By: A. J. Kazimi
Chief Executive Officer
(Principal Executive Officer)

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.

Signature	Title	Date
/s/ A. J. Kazimi A. J. Kazimi	Chairman and CEO *(Principal Executive Officer and Director)*	March 11, 2022
/s/ John M. Hamm John M. Hamm	Senior Director and CFO *(Principal Financial and Accounting Officer*	March 11, 2022
/s/ Martin E. Cearnal Martin E. Cearnal	Director	March 11, 2022
/s/ Gordon R. Bernard Gordon R. Bernard	Director	March 11, 2022
/s/ James R. Jones James R. Jones	Director	March 11, 2022
/s/ Joey A. Jacobs Joey A. Jacobs	Director	March 11, 2022
/s/ Caroline R. Young Caroline R. Young	Director	March 11, 2022
/s/ Kenneth J. Krogulski Kenneth J. Krogulski	Director	March 11, 2022
/s/ Joseph C. Galante Joseph C. Galante	Director	March 11, 2022

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Cumberland Pharmaceuticals Inc. and its subsidiaries (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control system was designed to provide reasonable assurance to the Company's management and board of directors regarding the preparation and fair presentation of published financial statements. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2021. In making this assessment, it used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control – Integrated Framework (2013)*.

Based on its assessment, management has concluded that, as of December 31, 2021, the Company's internal control over financial reporting was effective based on those criteria.

/s/ A. J. Kazimi
A. J. Kazimi
Chief Executive Officer
March 11, 2022

/s/ John M. Hamm
John M. Hamm
Chief Financial Officer
March 11, 2022

Report of Independent Registered Public Accounting Firm

To the Shareholders, Board of Directors and Audit Committee
Cumberland Pharmaceuticals Inc.
Nashville, Tennessee

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Cumberland Pharmaceuticals Inc. (Company) as of December 31, 2021 and 2020, and the related consolidated statements of operations, equity, and cash flows for each of the years in the two-year period ended December 31, 2021, and the related notes and schedule listed in the accompanying index (collectively referred to as the "financial statements"). In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2021**,** in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's 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 financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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

Critical Audit Matters

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

Customer Allowances for Chargebacks, Discounts and Damaged Goods, and Accruals for Rebates, Coupons, Product Returns, and Certain Fees

As described in Note 2 to the financial statements, revenues from product sales are recorded net of estimated allowances for chargebacks, discounts and damaged goods and reflects sales-related accruals for rebates, coupons, product returns, and certain fees. These allowances and accruals are determined on a product-by-product basis, and are established by management as the Company's best estimate at the time of sale based on each product's historical experience adjusted to reflect known changes in the factors that impact such allowances. Management reviews these allowances on an ongoing basis and adjusts them based on the most recent information available, including actual results since the end of the reporting period. As of December 31, 2021, allowances in accounts receivable for chargebacks, cash discounts, and damaged goods were $0.3 million and the estimated liability for rebates, coupons, product returns, and certain fees were $3.7 million. These provisions are recognized concurrently with the sales of products. Provisions for chargebacks involve estimates of usage by retailers and other indirect buyers with varying contract prices for multiple wholesalers. The provision for chargebacks varies in relation to changes in sales volume, product mix, pricing, and the level of inventory at the wholesalers. Provisions are calculated using historical chargeback experience, and/or expected chargeback levels for new products and anticipated pricing changes. Provisions for rebates are recognized based on contractual obligations in place at the time of sales with consideration given to relevant factors that may affect the payment as well as historical experience for estimated market activity. Provisions for product returns are calculated based on the expiration dates of products sold, the window where customers are permitted to return products and the history of returns for individual products in relation to the sales volume for each product.

The principal consideration for our determination that performing procedures relating to these allowances and accruals is a critical audit matter was the significant judgment by management to estimate the reserves due to the significant measurement uncertainty involved in developing the reserves. Management tracks the various types of allowances on several different schedules, each of which relates to different contracts agreed to with various customers or the interplay with government payors. Management exercises judgment in computing the amount of sales subject to the allowances and tracks the amount of allowances taken over time. All of this in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions.

We identified the estimated sales allowances and accruals as a critical audit matter.

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

- Testing of management's process for calculating the allowances, including a look back analysis of prior year reserves compared to actual experience in the current year.
- Testing completeness and accuracy of underlying data used to estimate the accrual by agreeing sales data used in the calculations to reports that were reconciled to the financial statements, reconciling various allowance percentages to signed customer contracts, tracing allowance amounts used by various customers during the year to supporting documentation.
- Evaluating the reasonableness of significant assumptions used by management in the computation of selected allowances, including comparison to historical results and considering recent changes in factors that could influence the future allowances to be claimed.
- Testing the clerical accuracy of individual customer allowances computed by management and agreeing the total of all estimated allowances to the respective accounts on the financial statements.
- Developing our own independent expectation of the reserve balance for certain allowances and comparing that to the balance recorded on the December 31, 2021 balance sheet.

- Comparing actual allowances reported after December 31, 2021 to estimated reserves and accruals on the December 31, 2021 balance sheet.

/s/ BKD, LLP

We have served as the Company's auditor since 2020.

Nashville, Tennessee
March 11, 2022

Report of Independent Registered Public Accounting Firm

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

Opinion on the Consolidated Financial Statements

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

Basis for Opinion

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

Our audit 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 audit 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 audit provide a reasonable basis for our opinion.

/s/ BDO USA, LLP

We served as the Company's auditor from 2017 to 2020.

Nashville, Tennessee
March 20, 2020, except for the effects of presenting discontinued operations as discussed in Note 19, as to which the date is December 10, 2020.

CUMBERLAND PHARMACEUTICALS INC. AND SUBSIDIARIES

Consolidated Balance Sheets

December 31, 2021 and 2020

	2021	2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 27,040,816	$ 24,753,796
Accounts receivable, net	6,877,346	12,377,713
Inventories, net	8,429,882	10,638,157
Prepaid and other current assets	3,339,969	2,199,926
Total current assets	45,688,013	49,969,592
Non-current inventories	9,048,567	11,656,742
Property and equipment, net	442,635	574,169
Intangible assets, net	23,954,475	28,118,316
Goodwill	882,000	882,000
Operating lease right-of-use assets	1,024,200	2,028,148
Other assets	3,419,908	3,234,338
Total assets	$ 84,459,798	$ 96,463,305
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$ 9,640,980	$ 13,396,286
Operating lease current liabilities	969,677	1,016,779
Other current liabilities	8,668,303	11,254,381
Total current liabilities	19,278,960	25,667,446
Revolving line of credit	15,000,000	15,000,000
Operating lease non-current liabilities	90,016	1,059,693
Other long-term liabilities	7,488,844	7,862,772
Total liabilities	41,857,820	49,589,911
Commitments and contingencies		
Equity:		
Shareholders' equity:		
Common stock – no par value; 100,000,000 shares authorized; 14,742,754 and 14,988,429 shares issued and outstanding as of December 31, 2021 and 2020, respectively	48,452,906	49,121,523
Retained earnings (deficit)	(5,638,600)	(2,131,013)
Total shareholders' equity	42,814,306	46,990,510
Noncontrolling interests	(212,328)	(117,116)
Total equity	42,601,978	46,873,394
Total liabilities and equity	$ 84,459,798	$ 96,463,305

See accompanying notes to consolidated financial statements.

CUMBERLAND PHARMACEUTICALS INC. AND SUBSIDIARIES

Consolidated Statements of Operations

Years ended December 31, 2021, 2020 and 2019

	2021	2020	2019
Revenues:			
Net product revenue	$ 35,045,259	$ 35,840,673	$ 32,407,845
Other revenue	939,784	1,600,461	1,980,450
Net revenues	35,985,043	37,441,134	34,388,295
Costs and expenses:			
Cost of products sold	8,811,248	8,653,020	7,421,316
Selling and marketing	15,015,424	14,765,465	15,277,740
Research and development	5,684,465	5,773,825	6,868,480
General and administrative	9,780,026	10,196,299	9,974,384
Amortization	4,371,300	4,434,120	4,134,557
Total costs and expenses	43,662,463	43,822,729	43,676,477
Operating income (loss)	(7,677,420)	(6,381,595)	(9,288,182)
Interest income	26,081	75,345	243,364
Other income	2,187,140	—	—
Interest expense	(98,031)	(263,627)	(246,186)
Income (loss) before income taxes	(5,562,230)	(6,569,877)	(9,291,004)
Income tax (expense) benefit	(34,891)	(55,902)	79,316
Net income (loss) from continuing operations	(5,597,121)	(6,625,779)	(9,211,688)
Discontinued operations net of tax	1,994,322	3,206,875	5,665,177
Net income (loss)	(3,602,799)	(3,418,904)	(3,546,511)
Net loss at subsidiary attributable to noncontrolling interests	95,212	79,496	8,752
Net income (loss) attributable to common shareholders	$ (3,507,587)	$ (3,339,408)	$ (3,537,759)
Earnings (loss) per share attributable to common shareholders:			
-Continuing operations-basic	$ (0.37)	$ (0.43)	$ (0.60)
-Discontinued operations-basic	0.13	0.21	0.37
Basic	$ (0.24)	$ (0.22)	$ (0.23)
-Continuing operations-diluted	$ (0.37)	$ (0.43)	$ (0.60)
-Discontinued operations-diluted	0.13	0.21	0.37
Diluted	$ (0.24)	$ (0.22)	$ (0.23)
Weighted-average common shares outstanding:			
Basic	14,904,834	15,162,184	15,396,098
Diluted	14,904,834	15,162,184	15,396,098

See accompanying notes to consolidated financial statements.

CUMBERLAND PHARMACEUTICALS INC. AND SUBSIDIARIES

Consolidated Statements of Cash Flows

Years ended December 31, 2021, 2020 and 2019

	2021	2020	2019
Cash flows from operating activities:			
Net income (loss)	$ (3,602,799)	$ (3,418,904)	$ (3,546,511)
Discontinued operations	1,994,322	3,206,875	5,665,177
Net income (loss) from continuing operations	(5,597,121)	(6,625,779)	(9,211,688)
Adjustments to reconcile net income (loss) to net cash flows provided by operating activities:			
Depreciation and amortization expense	4,606,366	4,748,565	4,404,175
Deferred tax expense	—	21,802	65,408
Share-based compensation	741,867	1,046,516	1,485,898
Decrease in non-cash contingent consideration	(1,147,750)	(1,160,202)	(804,167)
Write off of deferred offering costs	—	440,091	—
Increase in cash surrender value of life insurance policies over premiums paid	(282,207)	(154,611)	—
Noncash interest expense	34,053	47,636	47,525
Noncash investment gains	—	—	(26,315)
Gain on forgiveness of debt	(2,187,140)	—	—
Net changes in assets and liabilities affecting operating activities:			
Accounts receivable	5,500,367	(4,518,707)	(1,399,012)
Inventories	4,816,450	2,131,347	1,106,175
Other current assets and other assets	(35,568)	1,210,489	(615,199)
Accounts payable and other current liabilities	(757,591)	6,569,002	3,221,780
Other long-term liabilities	(1,343,605)	(1,859,330)	(729,820)
Net cash provided by (used in) operating activities from continuing operations	4,348,121	1,896,819	(2,455,240)
Discontinued operations	1,994,322	3,518,242	5,511,596
Net cash provided by operating activities	6,342,443	5,415,061	3,056,356
Cash flows from investing activities:			
Additions to property and equipment	(103,532)	(140,817)	(246,202)
Additions to intangible assets	(250,930)	(1,973,110)	(772,944)
Proceeds from surrender of life insurance policies	85,944	460,888	—
Premiums paid for life insurance policies	(33,375)	(104,750)	—
Cash paid for acquisition	—	—	(5,000,000)
Note receivable investment funding	(200,000)	—	—
Proceeds from sale of marketable securities	—	—	20,062,132
Purchases of marketable securities	—	—	(11,745,138)
Net cash provided by (used in) investing activities	(501,893)	(1,757,789)	2,297,848

	2021	2020	2019
Cash flows from financing activities:			
Borrowings on line of credit	59,000,000	59,000,000	76,000,000
Payments on line of credit	(59,000,000)	(62,500,000)	(77,500,000)
Payments made in connection with repurchase of common shares	(1,386,849)	(1,851,526)	(3,494,921)
Cash settlement of contingent consideration	(2,166,681)	(819,180)	(1,033,108)
Repurchase of subsidiary shares from noncontrolling interest	—	(800,000)	—
Sale of subsidiary shares to noncontrolling interest	—	—	1,000,000
Payments of deferred equity offering costs	—	(135,405)	—
Payments of deferred financing costs	—	(10,000)	(52,500)
Net cash provided by (used in) financing activities	(3,553,530)	(7,116,111)	(5,080,529)
Net increase (decrease) in cash and cash equivalents	2,287,020	(3,458,839)	273,675
Cash and cash equivalents, beginning of year	24,753,796	28,212,635	27,938,960
Cash and cash equivalents, end of year	$ 27,040,816	$ 24,753,796	$ 28,212,635
Supplemental disclosure of cash flow information:			
Net cash paid (refunded) during the year for:			
Interest	$ 63,978	$ 215,991	$ 198,661
Income taxes	(327)	(91,486)	16,694
Noncash investing and financing activities:			
Change in unpaid invoices for intangible asset additions	$ (43,471)	$ (340,997)	$ (576,837)
Change in unpaid invoices for offering costs	(90,512)	—	—
Noncash increase in liabilities related to other asset	—	200,000	—
Recognition of operating lease assets and liabilities through adoption of ASC 842	—	—	3,629,320
Vesting of shares related to RediTrex approval	—	—	862,200
Repurchase of subsidiary shares from noncontrolling interests	—	—	(800,000)
Additions to intangible assets from final purchase price allocation	—	—	148,000

See accompanying notes to consolidated financial statements

CUMBERLAND PHARMACEUTICALS INC. AND SUBSIDIARIES

Consolidated Statements of Equity

Years ended December 31, 2021, 2020 and 2019

	Cumberland Pharmaceuticals Inc. Shareholders				
	Common stock		Retained earnings (deficit)	Non-controlling interest	Total equity
	Shares	Amount			
Balance, December 31, 2018	15,481,497	$ 51,098,613	$ 4,746,154	$ (274,266)	$ 55,570,501
Net income (loss)	—	—	(3,537,759)	(8,752)	(3,546,511)
Repurchase of subsidiary shares to noncontrolling interest	—	(685,805)	—	(114,195)	(800,000)
Sale of subsidiary shares to noncontrolling interest	—	640,407	—	359,593	1,000,000
Vesting of common stock	180,000	862,200	—	—	862,200
Share-based compensation	225,536	1,485,898	—	—	1,485,898
Repurchase of common shares	(623,478)	(3,486,835)	—	—	(3,486,835)
Balance, December 31, 2019	15,263,555	$ 49,914,478	$ 1,208,395	$ (37,620)	$ 51,085,253
Net income (loss)	—	—	(3,339,408)	(79,496)	(3,418,904)
Share-based compensation	228,500	1,046,516	—	—	1,046,516
Repurchase of common shares	(503,626)	(1,839,471)	—	—	(1,839,471)
Balance, December 31, 2020	14,988,429	$ 49,121,523	$ (2,131,013)	$ (117,116)	$ 46,873,394
Net income (loss)	—	—	(3,507,587)	(95,212)	(3,602,799)
Share-based compensation	192,684	741,867	—	—	741,867
Repurchase of common shares	(438,359)	(1,410,484)	—	—	(1,410,484)
Balance, December 31, 2021	14,742,754	$ 48,452,906	$ (5,638,600)	$ (212,328)	$ 42,601,978

See accompanying notes to consolidated financial statements

(1) Organization

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

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

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

In April, 2019, CET entered into an agreement with HongKong WinHealth Pharma Group Co. Limited (WinHealth) whereby WinHealth made a $1.0 million investment through the purchase of shares of CET stock. As part of the agreement, WinHealth obtained a Board position at CET and the first opportunity to license CET products for the Chinese market. In connection with WinHealth's investment in CET, Cumberland also made an additional $1.0 million investment in CET. Cumberland purchased additional CET shares through contribution of $0.3 million in cash and a conversion of $0.7 million in intercompany loans payable. Upon completion of the additional investment by WinHealth and Cumberland, Gloria Pharmaceuticals returned its shares in CET in exchange for $0.8 million that was funded during 2020.

The Company's ownership in CET is now 85%. While the remaining interest is owned by WinHealth, Vanderbilt University and the Tennessee Technology Development Corporation. The operating results of CET allocated to noncontrolling interests in the consolidated statements of operations were $95,212, $79,496 and $8,752 for the years ended December 31, 2021, 2020 and 2019, respectively.

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

(2) Significant Accounting Policies

Principles of Consolidation

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

COVID-19 Pandemic

In early 2020, the U.S. declared a health care emergency following the outbreak of SARS-CoV-2, a novel strain of coronavirus that causes COVID-19, a respiratory illness. The Company has managed through the resulting COVID-19 pandemic, continuing to operate our business – keeping facilities open and our organization intact. We moved quickly to ensure the health and safety of our team. We also maintained our ongoing compliance with the many laws and regulations that apply to us as a publicly traded pharmaceutical company.

Throughout the pandemic, Cumberland faced the same challenges affecting other companies that rely on hospital admissions and patient visits to drive revenue. Our business and our clinical studies were impacted, as fewer patients sought elective surgeries and our access to medical facilities was substantially limited. We carefully monitored our supply chain, including the flow of raw materials and the batches of finished products emerging from the facilities that manufacture our products.

Several of our brands were negatively impacted by the lockdowns and postponement of physician office visits and elective procedures. However, we are fortunate to have a diversified product portfolio that includes other brands that have delivered a strong performance during the pandemic. Overall, we have been able to continue the delivery of our products while addressing the interests of our shareholders, employees, partners and community.

Cumberland relies on third-party organizations around the world to supply components, manufacture and distribute its products. The Company is aware that it may experience revenue loss, supply interruptions, time delays and incur unplanned expenses as a result of the impact of the ongoing COVID-19 pandemic. The Company continues to monitor the COVID-19 pandemic situation both in the U.S. and internationally in order to maintain the employees' safety and well-being, while also keeping its business operating. Given the uncertainty, magnitude and impact of such changes, the Company is unable to quantify the impact on the future results as of the date of this filing.

Use of Estimates

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

Segment Reporting

The Company has one operating segment which is specialty pharmaceutical products. Management has chosen to organize the Company based on the type of products sold. Operating segments are identified as components of an enterprise about which separate discrete financial information is evaluated by the chief operating decision maker, or decision-making group, in making decisions regarding resource allocation and assessing performance. The Company, which uses consolidated financial information in determining how to allocate resources and assess performance, evaluated that our specialty pharmaceutical products compete in similar economic markets and similar circumstances. Substantially all of the Company's assets are located in the United States. Total revenues are primarily attributable to U.S. customers. Net revenues from customers outside the United States were approximately $2.2 million, $2.4 million and $1.5 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Fair Value of Financial Instruments

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

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

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

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

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

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

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

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

Cash and Cash Equivalents

Cash and cash equivalents include highly liquid investments with original maturities of three months or less. As of December 31, 2021 and 2020, cash equivalents consist primarily of money market funds.

Accounts Receivable

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

The majority of the Company's products are distributed through independent pharmaceutical wholesalers. The allowances against accounts receivable for chargebacks and discounts are determined on a product-by-product basis, and established by management as the Company's best estimate at the time of sale based on each product's historical experience adjusted to reflect known changes in the factors that impact such allowances. These allowances are established based on the contractual terms with direct and indirect customers and analyses of historical levels of chargebacks and discounts. The allowances in accounts receivable for chargebacks and cash discounts were $0.3 million at December 31, 2021 and $1.0 million at December 31, 2020.

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

Inventories

The Company works closely with third parties to manufacture and package finished goods for sale. Based on the customer relationship with the manufacturer or packager, the Company will either take title to finished goods at the time of shipment or at the time of arrival from the manufacturer. The Company then warehouses such goods until distribution and sale at third party facilities. Periodic inventory counts are made by the warehouse teams and by the Company on a regular basis. In addition, the Company re-tests API inventory prior to use to confirm product expiration. Inventories are stated at the lower of cost or net realizable value with cost determined using the first-in, first-out method.

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

Prepaid and Other Current Assets

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

In November 2017, the Company filed its Shelf Registration on Form S-3 with the SEC associated with the sale of up to $100 million in corporate securities. The Shelf Registration was declared effective in January 2018. It also included an At the Market ("ATM") feature that allows the Company to sell common shares at market prices, along with an agreement with B. Riley FBR Inc. to support such a placement of shares. The Company filed an updated Form S-3 with the SEC in December 2020, which was declared effective in January 2021.

On December 27, 2021, the Company filed a related prospectus supplement in connection with the sale and issuance of shares having an aggregate gross sales price of up to $19 million. The Company amended the At the Market Sales Agreement on December 27, 2021, in order to allow the Company to continue using its ATM feature to sell shares at market prices.

The Company intends to continue an ATM feature through B. Riley FBR, Inc. that would allow the Company to issue shares of its common stock.

The Company has recorded deferred offering costs for payments directly related to the current Shelf Registration on Form S-3 that was completed during December 2020 and 2021. These costs consist of legal and accounting fees that the Company has capitalized. Deferred costs associated with the Shelf Registration will be reclassified to additional paid in capital on a pro-rata basis as the Company completes sales of shares under the Shelf Registration. The Company did not issue any shares under this ATM during the year ended December 31, 2021. During the year ended December 31, 2020, the Company expensed $0.4 million in deferred offering costs associated with the Shelf Registration that was declared effective in January 2018.

Property and Equipment

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

Intangible Assets and Goodwill

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

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

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

Amortization expense is recognized ratably over the following periods:

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

Impairment of Long-Lived Assets

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

Goodwill and other indefinite lived intangible assets that are not subject to amortization are tested at least annually for impairment. The impairment analysis for goodwill requires a comparison of fair value to the carrying value of the reporting unit. The Company's goodwill was acquired in November 2018 with the Vibativ acquisition. As a result, the Vibativ component of the Company is the reporting unit evaluated for goodwill impairment. Cumberland determined the fair value of the reporting unit through current and future estimated revenue and profitability of the product. The Company recorded no impairment charges during 2021, 2020 and 2019.

Joint Venture Agreement

In August 2020, Cumberland entered into an agreement with WinHealth Investment (Singapore) Ltd creating WHC Biopharmaceuticals, Pte. Ltd. The joint venture, as a limited liability company, will focus on acquiring, developing, registering, and commercializing development stage and commercial stage biopharmaceuticals for China, Hong Kong and other Asian markets. The agreement provides for initial investment from WinHealth in the form of a $0.2 million equity contribution and an initial investment from Cumberland in the form of $0.2 million convertible note. The joint venture will seek additional future capital from additional investors and has entered into exclusive option agreements to license intellectual property from both Cumberland Pharmaceuticals Inc. and Cumberland Emerging Technologies.

Net Product Revenue

Revenues from product sales are recognized in the amount that reflects the consideration that we expect to receive for these goods. Depending upon the shipping terms of the transaction, the revenue is recognized at the point where the customer obtains control of the goods and we satisfy our performance obligation. This occurs upon either shipment of the product or arrival at its ship to destination. Payment terms typically range from 30 to 60 days from date of shipment. The Company’s net product revenue reflects the reduction from gross product revenue for estimated allowances for chargebacks, discounts and damaged goods, and reflects sales related accruals for rebates, coupons, product returns, and certain administrative and service fees. Significant judgments must be made in determining the transaction price for our sales of products related to these adjustments.

Sales Rebates and Discounts

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

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

Sales Returns

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

Other Revenues

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

Cost of Products Sold

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

Selling and Marketing Expense

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

Distribution Costs

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

	2021	2020	2019
Distribution costs	$ 806,311	$ 890,686	$ 613,637

Advertising Costs

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

	2021	2020	2019
Advertising costs	$ 1,927,864	$ 2,379,424	$ 2,594,630

Research and Development

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

Income Taxes

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

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

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

Earnings (Loss) per Share

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

Share-Based Payments

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

Collaborative Agreements

The Company is a party to several collaborative arrangements with research institutions to identify and pursue promising pharmaceutical product candidates. The funding for these programs is primarily provided through Federal Small Business Administration (SBIR/STTR) and other grant awards. The Company has determined that these collaborative agreements, with the exception of the collaborative payment discussed in Note 3 do not meet the criteria for accounting under ASC Topic 808, *Collaborative Agreements*. The agreements do not specifically designate each party's rights and obligations to each other under the collaborative arrangements. Except for patent defense costs, expenses incurred by one party are not required to be reimbursed by the other party. Expenses incurred under these collaborative agreements are included in research and development expenses and funding received from grants are recorded as net revenues in the consolidated statements of operations.

Discontinued Operations

As discussed further in Note 20, during May 2019, Cumberland entered into a Dissolution Agreement ("Dissolution Agreement") with Clinigen Healthcare Limited ("Clinigen") in which the Company returned the exclusive rights to commercialize Ethyol® and Totect® in the United States to Clinigen. Under the terms of the Dissolution Agreement, Cumberland is no longer involved directly or indirectly with the distribution, marketing and

promotion of either Ethyol or Totect or any competing products following December 31, 2019. The Company's exit from the products meets the accounting criteria to be reported as discontinued operations and the discontinued operating results have been reclassified in the financial statements and footnotes for all periods presented to reflect the discontinued status of these products. Refer to Note 20, for additional information.

Recent Accounting Guidance

Recent Accounting Pronouncements - Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13, “Financial Instruments-Credit Losses,” which changes the impairment model for most financial assets and certain other instruments. For trade and other receivables, held-to-maturity debt securities, loans and other instruments, companies will be required to use a new forward-looking “expected loss” model that generally will result in the earlier recognition of allowances for losses. For available-for-sale debt securities with unrealized losses, companies will measure credit losses in a manner similar to what they do today, except that the losses will be recognized as allowances rather than as reductions in the amortized cost of the securities. Companies will have to disclose additional information, including information they use to track credit quality by year of origination for most financing receivables. Companies will apply the ASU’s provisions as a cumulative-effect adjustment, if any, to retained earnings as of the beginning of the first reporting period in which the guidance is adopted.

Related to ASU No. 2016-13 discussed above, in May 2019, the FASB issued ASU 2019-05, "Financial Instruments-Credit Losses (Topic 326): Targeted Transition Relief" which provides transition relief for ASU 2016-13 by providing entities with an alternative to irrevocably electing the fair value option for eligible financial assets measured at amortized cost upon adoption of the new credit losses standard. Certain eligibility requirements must be met and the election must be applied on an instrument-by-instrument basis. The election is not available for either available-for-sale or held-to-maturity debt securities. The Company will adopt both ASU 2016-13 and ASU 2019-05 on January 1, 2023. The adoption of ASU 2016-13 and ASU 2019-05 are not expected to have a material impact on the Company’s consolidated financial statements.

(3) RediTrex® and Vibativ®

RediTrex

In November 2016, the Company announced an agreement with the Nordic Group B.V. ("Nordic") to acquire the exclusive U.S. rights to Nordic’s injectable methotrexate product line designed for the treatment of active rheumatoid arthritis, juvenile idiopathic arthritis, severe psoriatic arthritis, and severe disabling psoriasis.

As consideration for the license Cumberland paid a deposit of $0.1 million at closing. The Company provided $0.9 million in consideration through a grant of 180,000 restricted shares of Cumberland common stock to be vested upon the FDA approval of the first Nordic product. Cumberland also agreed to provide Nordic a series of payments tied to the products’ FDA approval, launch and achievement of certain sales milestones. Under the terms of the agreement, Cumberland is responsible for the product registration and commercialization in the U.S. Nordic is responsible for product manufacturing and supply.

On November 27, 2019, Cumberland received FDA approval for the first Nordic injectable product and authorization to market them under the RediTrex brand name. The 180,000 shares of restricted Cumberland common stock previously provided to Nordic vested upon approval and were valued at $0.9 million on the vesting date. The FDA approval also resulted in a $1.0 million milestone payment due to Nordic. This milestone payment was paid in July 2020 and was recorded as an other current liability at December 31, 2019. During December 2020, Cumberland began distributing RediTrex which also resulted in a $1.0 million milestone payment due to Nordic and recorded in accounts payable at December 31, 2020. The full launch of RediTrex occurred in October 2021 and this milestone payment will be paid during 2022.

Cumberland has approximately $2.6 million and $2.8 million in net intangible assets related to RediTrex at December 31, 2021 and 2020, respectively.

Vibativ

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

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

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

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

The contingent consideration liability represents the future net sales royalty payments discussed above. Cumberland prepared the valuations of the contingent consideration liability and the intangible assets utilizing significant unobservable inputs. As a result, the valuations are classified as Level 3 fair value measurements.

The following table presents the changes in the Company's Level 3 contingent consideration liability that is remeasured at fair value on a recurring basis. The contingent consideration earned and accrued in operating expenses is paid to the seller quarterly.

	Contingent consideration liability
Balance at November 12, 2018	$ 9,034,000
Change in fair value of contingent consideration included in operating expenses	(40,000)
Contingent consideration earned and accrued in operating expenses	508,000
Balance at December 31, 2018	$ 9,502,000
Adjustment to initial fair value of the contingent consideration liability	148,000
Cash payment of royalty during the period	(1,033,108)
Change in fair value of contingent consideration included in operating expenses	(804,167)
Contingent consideration earned and accrued in operating expenses	820,864
Balance at December 31, 2019	$ 8,633,589
Cash payment of royalty during the period	(819,180)
Change in fair value of contingent consideration included in operating expenses	(1,160,202)
Contingent consideration earned and accrued in operating expenses	1,546,346
Balance at December 31, 2020	$ 8,200,553
Cash payment of royalty during the period	(2,166,682)
Change in fair value of contingent consideration included in operating expenses	(1,147,750)
Contingent consideration earned and accrued in operating expenses	1,629,506
Balance at December 31, 2021	$ 6,515,627

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

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

The Company's contingent consideration liability is a Level 3 fair value measurement that is updated on a recurring basis at each reporting period using a valuation model. Consistent with Level 3 fair value measurements, there are significant inputs to the valuation model that are unobservable. The current portion of the contingent consideration liability is $2.7 million and the non-current portion is $3.8 million, as of December 31, 2021.

(4) Revenues

Product Revenues

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

	2021	2020	2019
Products:			
Kristalose	$ 15,993,658	$ 15,567,562	$ 12,895,120
Vibativ	11,704,062	10,870,990	8,691,550
Caldolor	4,970,301	5,336,943	5,222,282
Acetadote	850,993	1,874,206	3,824,449
Omeclamox-Pak	(388,657)	257,088	837,829
Vaprisol	1,859,581	1,077,227	936,615
RediTrex	55,321	856,657	—
Total net product revenues	$ 35,045,259	$ 35,840,673	$ 32,407,845

Other Revenues

During 2019, Cumberland executed a License and Distribution agreement with HongKong WinHealth Pharma Group Co. Limited ("WinHealth") for our Caldolor and Acetadote brands in China and Hong Kong. In conjunction with these new arrangements, the Company terminated a previous License and Distribution agreement with Gloria Pharmaceuticals Co ("Gloria Pharmaceuticals") for the two brands. In addition, we also signed a new License and Distribution agreement with DB Pharm Korea Co., Ltd. ("DB Pharm") for Vibativ in South Korea. As a result of these agreements, Cumberland recognized approximately $0.3 million of non-refundable up-front payments as other revenue in the consolidated statement of operations during 2019. There were no payments received in 2020 or 2021.

The Company has agreements with international partners for commercialization of the Company's products with associated payments included in other revenues. Those agreements provide that each of the partners are responsible for seeking regulatory approvals for the product, and following approval, each partner will be responsible for the ongoing distribution and sales in the respective international territories. The Company provides a dossier for product registration and maintains responsibility for the relevant intellectual property. Cumberland is typically entitled to receive a non-refundable, up-front payment at the time each agreement is executed as consideration for the product dossier and for the rights to the distinct intellectual property rights in the respective international territory. These agreements also typically provide for additional payments upon a partner's achievement of a defined regulatory approval and sales milestones. The Company may also be entitled to receive royalties on future sales of the products and a transfer price on supplies. The contractual payments associated with the partner's achievement of regulatory approvals, sales milestones and royalties on future sales are recognized as revenue upon occurrence, or at such time that the Company has a high degree of confidence that the revenue would not be reversed in a subsequent period.

The international agreements provide for $1.0 million in non-refundable up-front payments, milestone payments of up to $2.2 million related to regulatory approvals and up to $4.8 million in payments related to product sales. From 2012 through December 31, 2021, the Company has recognized a cumulative $1.2 million in upfront payments as other revenue and has recognized $0.1 million in revenue related to the milestone payments associated with these international agreements.

Other revenues during 2021, 2020 and 2019 also include funding from federal grant programs including those secured by CET through the Small Business Administration as well as lease income generated by CET's Life Sciences Center. The Life Sciences Center is a research center that provides scientists with access to flexible lab space and other resources to develop biomedical products. Grant revenue from these programs totaled approximately $0.4 million, $0.6 million, and $1.3 million for the years ending December 31, 2021, 2020 and 2019, respectively.

(5) Inventories

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

	2021	2020
Raw materials and work in process, net of reserve	$ 12,374,983	$ 16,223,162
Consigned inventory	164,378	128,005
Finished goods, net of reserve	4,939,088	5,943,732
Total inventories	17,478,449	22,294,899
less non-current inventories	(9,048,567)	(11,656,742)
Total inventories classified as current	$ 8,429,882	$ 10,638,157

The Company works closely with third parties to manufacture and package finished goods for sale. Based on the arrangements with the manufacturer or packager, the Company will either take title to the finished goods at the time of shipment or at the time of arrival at the Company's warehouses. The Company then holds such goods in inventory until distribution and sale. These finished goods inventories are stated at the lower of cost or net realizable value with cost determined using the first-in, first-out method.

The Company continually evaluates inventory for potential losses due to excess, obsolete or slow-moving goods by comparing sales history and projections to the inventory on hand. When evidence indicates that the carrying value may not be recoverable, a charge is taken to reduce the inventory to its current net realizable value. At December 31, 2021 and 2020 the Company had recognized and maintained cumulative net realizable value charges for potential obsolescence and discontinuance losses of approximately $1.4 million and $0.2 million, respectively.

In connection with the acquisition of certain product rights related to the Kristalose brand, the Company is responsible for the purchase of the active pharmaceutical ingredient ("API") for Kristalose and maintains the inventory at the third-party packagers. As the API is consumed in production, the value of the API is transferred from raw materials to finished goods. API for the Company's Vaprisol brand is also included in the raw materials inventory total at December 31, 2021 and 2020. Consigned inventory represents Authorized Generic inventory stored with Perrigo until shipment.

As part of the Vibativ acquisition, Cumberland acquired API and work in process inventories of $15.6 million that were classified as non-current inventories. At December 31, 2021, the Vibativ non-current API inventory was $8.1 million and $11.2 million at December 31, 2020. The Company had Vibativ finished goods included in the non-current inventories at December 31, 2021 of $0.5 million and $2.1 million Vibativ finished goods included at December 31, 2020. At December 31, 2021 and December 31, 2020, Cumberland had $0.4 million in non-current inventory for API related to its ifetroban clinical initiatives.

(6) Property and Equipment

Property and equipment consisted of the following at December 31:

	Range of useful lives	2021	2020
Computer equipment	3 – 5 years	$ 1,352,734	$ 1,275,703
Office equipment	3 – 15 years	820,712	806,906
Furniture and fixtures	5 – 15 years	638,903	638,903
Leasehold improvements	3 – 15 years, or remaining lease term	1,422,439	1,409,744
Total property and equipment, gross		4,234,788	4,131,256
Less: accumulated depreciation and amortization		(3,792,153)	(3,557,087)
Total property and equipment, net		$ 442,635	$ 574,169

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

	2021	2020	2019
Depreciation expense	$ 235,066	$ 314,444	$ 269,619

(7) Intangible Assets and Goodwill

Intangible assets and Goodwill consisted of the following at December 31, 2021 and 2020.

	2021	2020
Product and license rights	$ 38,543,542	$ 38,543,542
Less: accumulated amortization	(18,015,112)	(14,709,824)
Total product and license rights	20,528,430	23,833,718
Patents	10,478,930	10,306,922
Less: accumulated amortization	(7,333,251)	(6,312,460)
Total patents	3,145,679	3,994,462
Trademarks	373,462	338,011
Less: accumulated amortization	(93,096)	(47,875)
Total trademarks	280,366	290,136
Total intangible assets	$ 23,954,475	$ 28,118,316
Goodwill	$ 882,000	$ 882,000

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

As discussed in Note 3, during November 2018, the Company acquired Vibativ from Theravance. This resulted in amortizable intangible assets related to the product rights of $11.8 million and goodwill of $0.9 million. The intangible assets are being amortized through November 2028, the expected useful life of the acquired asset.

During 2021 and 2020, the Company recorded an additional $0.2 million and $0.5 million, respectively, in intangible assets for patents, trademarks and capitalized patent costs, including amounts incurred in the protection of the Company's intellectual property. These costs will be amortized over the remaining expected useful life of the associated patents.

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

	2021	2020	2019
Amortization expense	$ 4,371,300	$ 4,434,120	$ 4,134,557

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

Year ending December 31:	
2022	$ 3,736,647
2023	3,674,355
2024	3,652,566
2025	3,637,002
2026 and thereafter	9,253,905
	$ 23,954,475

(8) Other Current and Other Long-term Liabilities

Other current liabilities consisted of the following at December 31:

Other current liabilities	2021	2020
Rebates, product returns, administrative fees and service fees	$ 3,680,677	$ 4,072,151
Employee wages and benefits	1,340,846	998,064
Current portion of accrued contingent consideration	2,685,531	2,787,741
Accrued inventory purchases	18,211	294,000
Paycheck Protection Program liability	—	2,187,140
Other	943,038	915,285
Total other current liabilities	$ 8,668,303	$ 11,254,381

Other long-term liabilities	2021	2020
Non-current portion of accrued contingent consideration	$ 3,830,096	$ 4,855,363
Deferred compensation	3,433,962	2,702,772
Other	224,786	304,637
Total other long-term liabilities	$ 7,488,844	$ 7,862,772

(9) Debt

On December 31, 2021, the Company entered into a Fifth Amendment to the Revolving Credit Note and Sixth Amendment (the "Sixth Amendment") to Revolving Credit Loan Agreement with Pinnacle Bank (the "Pinnacle Agreement"). The Sixth Amendment increased the principal amount by $5 million to $20 million. On October 28, 2021, the Company entered into a Fourth Amendment to the Revolving Credit Note and Fifth Amendment to Revolving Credit Loan Agreement with Pinnacle Bank. Among other terms, the Fourth Amendment extended the maturity date to October 1, 2024. The Pinnacle Agreement includes specific financial covenants including Debt Ratio and Tangible Capital Ratio.

The Company had $15 million in borrowings under the Pinnacle Agreement at December 31, 2021 and 2020.

The interest rate on the Pinnacle Agreement is based on LIBOR plus an interest rate spread. The pricing under the Fourth Amendment provides for an interest rate spread of 1.75% to 2.75% above LIBOR with a minimum LIBOR of 0.90% (representing an interest rate of 3.65% at December 31, 2021). In addition, a fee of 0.25% per year is charged on the unused line of credit. Interest and the unused line fee are payable quarterly. In 2022, the LIBOR benchmark rate is expected to be discontinued. When the LIBOR rate is no longer available, the Pinnacle Agreement calls for a new Benchmark rate to be used to determine the interest rate for the Agreement.

Borrowings under the line of credit are collateralized by substantially all of our assets.

Paycheck Protection Program Loan

On April 20, 2020, Cumberland received the funding of a loan from Pinnacle Bank in the aggregate amount of $2,187,140 pursuant to the Paycheck Protection Program (the “PPP”) under the Federal Coronavirus Aid, Relief, and Economic Security Act ("CARES Act"), which was enacted March 27, 2020.

The PPP is administered by the U.S. Small Business Administration ("SBA"). The loan was scheduled to mature April 14, 2022, and bears interest at a rate of 1.0% per year, payable monthly. The loan could be prepaid at any time prior to maturity with no prepayment penalties. Funds from the loan are to be used to maintain payroll, continue group health care benefits and pay for rent and utilities.

Under the terms of the PPP, certain amounts of the loan may be forgiven if they are used for qualifying expenses as described in the CARES Act, including qualifying payroll costs, covered rent payments, and covered utilities. From the date of funding the Company has used the loan amount for such qualifying expenses. Cumberland has elected to account for the proceeds of the loan as a government grant under *International Accounting Standard 20 ("IAS 20"), Accounting for Government Grants and Disclosure of Government Assistance.* The permitted analogous use of IAS 20 outlines a model for the accounting for government assistance, including forgivable loans. As a result, the Company has recorded the $2,187,140 as a deferred income liability, which is included as a component of other current liabilities on the consolidated balance sheet as of December 31, 2020.

Cumberland applied for this loan after carefully considering, with its bank, the eligibility criteria to participate in this program, and determining that Cumberland met these criteria. The Company evaluated and provided information on our payroll and other qualifying expenses to determine the amount of PPP funds to apply for.

Cumberland has not laid off or furloughed any employees as a result of the COVID-19 pandemic and, based on assistance from the PPP loan, the Company currently does not foresee doing so. In October 2020, the Company submitted a request for forgiveness of the PPP loan. The request was approved by the lender, Pinnacle Bank, who then submitted it to SBA for the SBA's review and approval.

On June 11, 2021, the Company received a notice from the SBA that the full amount of the loan was forgiven. The Company accounted for the forgiveness of the loan under IAS 20 and recorded the $2,187,140 as other income during the year ended December 31, 2021.

(10) Shareholders' Equity

(a) Initial Public Offering

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

(b) Preferred Stock

The Company is authorized to issue 20,000,000 shares of preferred stock. The Board of Directors is authorized to divide these shares into classes or series, and to fix and determine the relative rights, preferences, qualifications and limitations of the shares of any class or series so established. At December 31, 2021 and 2020, there was no preferred stock outstanding.

(c) Common Stock

During 2021, 2020 and 2019, the Company issued 192,684 shares, 228,500 shares and 225,536 shares of common stock, respectively, as a result of restricted shares vesting as well as other common share issuances. There were no option exercise transactions during 2021, 2020 and 2019.

In November 2017, the Company filed its Shelf Registration on Form S-3 with the SEC associated with the sale of up to $100 million in corporate securities. The Shelf Registration was declared effective in January 2018. It also included an At the Market ("ATM") feature that allows the Company to sell common shares at market prices, along with an agreement with B. Riley FBR Inc. to support such a placement of shares. The Company filed an updated Form S-3 with the SEC in December 2020, which was declared effective in January 2021. On December 27, 2021, the Company filed a related prospectus supplement in connection with the sale and issuance of shares having an aggregate gross sales price of up to $19 million. The Company intends to continue an ATM feature through B. Riley FBR, Inc. that would allow the Company to issue shares of its common stock. The Company did not issue any shares under this ATM during the years ended December 31, 2021 or 2020.

(d) Share Repurchases

The Company currently has a share repurchase program to repurchase up to $10 million of its common stock pursuant to Rule 10b-18 of the Securities Exchange Act, as amended. In January 2019, the Company's Board of Directors established the current $10 million repurchase program to replace the prior authorizations. The Company repurchased 438,359 shares, 503,626 shares and 623,478 shares of common stock for approximately $1.4 million, $1.8 million, and $3.5 million during the years ended December 31, 2021, 2020 and 2019, respectively. There remains $4.8 million available under the current repurchase program available for share repurchases at December 31, 2021.

(e) Cumberland Emerging Technologies

In April 2019, Cumberland Emerging Technologies ("CET"), our majority-owned subsidiary, entered into an agreement whereby Hongkong WinHealth Pharma Group Ltd. ("WinHealth") made a $1 million investment in CET through the purchase of shares of its common stock. As part of the agreement, WinHealth obtained the rights to name an individual for appointment to the CET Board of Directors as well as the first opportunity to license CET products for the Chinese market. In connection with WinHealth's investment in CET, during 2019, Cumberland also made an additional $1 million investment in CET. Cumberland purchased additional CET shares through contribution of $0.3 million in cash and a conversion of $0.7 million in intercompany loans payable. Upon completion of the additional investment by WinHealth and Cumberland, Gloria Pharmaceuticals returned its shares in CET in exchange for consideration of $0.8 million that was funded during 2020. After the additional investment, the Company’s ownership in CET is 85%. As CET is a consolidated subsidiary, the Company reports the operating results of CET and allocates the noncontrolling interests to the non-majority partners.

(f) Cumberland Foundation

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

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

In 2018, Cumberland provided a grant of 50,000 shares of the Company's common stock to the Foundation. The shares will address the ongoing financial needs of the Foundation. The organization also plans to hold a portion of the shares for long-term appreciation. The Foundation maintains separate financial statements and its ongoing operations will not impact the financial statements of Cumberland Pharmaceuticals. Initial annual grants by the Foundation have been and are expected to remain consistent with the historic level of contributions made by Cumberland Pharmaceuticals. During 2019, Cumberland Pharmaceuticals committed approximately $50,000 in cash contributions that were paid to the Foundation during 2020. Likewise, during 2020, the Company committed approximately $25,000 in cash contributions paid to the Foundation during 2021.

(g) Nordic Group B.V.

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

(11) Earnings (Loss) Per Share

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

	2021	2020	2019
Numerator:			
Net income (loss) from continuing operations	$ (5,597,121)	$ (6,625,779)	$ (9,211,688)
Discontinued operations	1,994,322	3,206,875	5,665,177
Net income (loss)	(3,602,799)	(3,418,904)	(3,546,511)
Net loss at subsidiary attributable to noncontrolling interests	95,212	79,496	8,752
Net income (loss) attributable to common shareholders	$ (3,507,587)	$ (3,339,408)	$ (3,537,759)
Denominator:			
Weighted-average shares outstanding – basic	14,904,834	15,162,184	15,396,098
Dilutive effect of restricted stock and stock options	—	—	—
Weighted-average shares outstanding – diluted	14,904,834	15,162,184	15,396,098

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

	2021	2020	2019
Anti-dilutive shares and options	183,300	197,610	4,000

(12) Income Taxes

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

	2021	2020
Deferred Tax Assets		
Net operating loss and tax credits	$ 16,817,070	$ 16,961,650
Property and equipment and intangibles	222,893	227,056
Allowance for accounts receivable	83,931	249,483
Reserve for expired product	457,723	438,235
Inventory	104,824	100,362
Deferred charges	1,303,664	952,711
Cumulative compensation costs incurred on deductible equity awards	834,070	928,638
Total deferred tax assets	19,824,175	19,858,135
Deferred Tax Liabilities		
Intangible assets	(62,253)	(662,014)
Net deferred tax assets, before valuation allowance	19,761,922	19,196,121
Less: deferred tax asset valuation allowance	(19,761,922)	(19,196,121)
Net deferred tax assets	$ —	$ —

The following table summarizes the amount and year of expiration of the Company's federal and state net operating loss carryforwards as of December 31, 2021:

Years of expiration	Federal	State
2022	$ —	$ —
2023 - 2029	—	49,253,796
2030	44,153,819	355,874
2031 - 2039	7,534,351	9,822,440
Indefinite Period	4,345,272	279,025
Total federal and state net operating loss carryforwards	$ 56,033,442	$ 59,711,135

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

	2021	2020	2019
Current:			
Federal	$ —	$ 21,802	$ 65,408
State and other	34,891	(55,902)	79,316
Total current income tax (expense) benefit	34,891	(34,100)	144,724
Deferred:			
Federal	61,678	(21,802)	(65,408)
State	(61,678)	—	—
Total deferred income tax (expense) benefit	—	(21,802)	(65,408)
Total income tax (expense) benefit	$ 34,891	$ (55,902)	$ 79,316

The Company's effective income tax rate for 2021, 2020 and 2019 reconciles with the federal statutory tax rate as follows:

	2021	2020	2019
Federal tax expense at statutory rate	21 %	21 %	21 %
State income tax expense (net of federal income tax benefit)	1 %	4 %	4 %
Permanent differences associated with general business credits	— %	6 %	7 %
Change in valuation allowance	(19)%	(23)%	(31)%
Other permanent differences	(4)%	(7)%	1 %
Other	— %	(3)%	— %
Net income tax expense	(1)%	(2)%	2 %

The Company believes that it is not more likely than not that its net deferred tax assets will be realized. As such, the net deferred tax assets are fully offset with a valuation allowance as of the periods ended December 31, 2021 and December 31, 2020.

As of December 31, 2021, the Company has general business credit carryforwards of $1.7 million. These credit carryforwards will expire in years 2022 through 2041.

Years of expiration	Federal
2022	$ 161,119
2023-2029	461,157
2030-2039	648,120
2040-2041	410,709
Total federal and state credit carryforwards	$ 1,681,105

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

The Company is no longer subject to U.S. federal tax examinations for tax years before 2018, and with few exceptions, the Company is not subject to examination by state tax authorities for tax years which ended before 2018. Loss carryforwards and credit carryforwards generated or utilized in years earlier than 2018 remain subject to examination and adjustment. During 2012, the 2009 federal tax return was examined by the Internal Revenue Service with no significant findings or adjustments. The Company has no unrecognized tax benefits at December 31, 2021 and 2020.

(13) Stock-Based Compensation Plans

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

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

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

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

	2021	2020	2019
Share-based compensation - employees	$ 730,412	$ 1,050,179	$ 1,481,016
Share-based compensation - nonemployees	11,455	(3,663)	4,882
Total share-based compensation	$ 741,867	$ 1,046,516	$ 1,485,898

At December 31, 2021, there was approximately $1.1 million of unrecognized compensation cost related to share-based payments, which is expected to be recognized over a weighted-average period of 2.05 years. This amount relates primarily to unrecognized compensation cost for employee restricted stock and stock options awards.

Stock Options

The Company granted 186,900 incentive stock options during 2021, which vest in four years. There were no options exercised during 2021, 2020 and 2019. As such, there was no intrinsic value of options or weighted-average fair value of options exercised for the periods.

For the incentive stock options issued to date, the weighted average grant price was $3.17, and the weighted average fair value of these stock option grants was $1.52.

The fair value of stock options is calculated using the Black-Scholes (“Black-Scholes-Merton”, or “BSM”) option-pricing model on the date of grant. Since 2012, the Company had been issuing RSA’s (Restricted Share Awards) where the grant date Fair Value (“FV”) equaled the closing share price. The ISO’s required a BSM valuation to approximate FV. The following inputs were used in the creation of the valuation.

- **Volatility** - We estimate volatility in accordance with SAB No. 107, as amended by SAB No. 110. We have been publicly traded since August 2009, so we have sufficient years of trading history and volatility to appropriately evaluate this component of the BSM model. As such, we are using our own historical volatility to value stock options. We have noted no conditions that would indicate the historical volatility would not be an indicator of future volatility, as such we are using historical volatility over the same period as the expected term of the awards (7 years) back to 2017 and believe it to be sufficient. Calculated volatility for the grants issued in 2021 ranges from 31% to 43%. Our average volatility over the life of stock being public is 36% and 38% over the last 6 months. Based on the similar amounts, we believe our volatility estimate for the ISO’s are appropriate.
- **Expected Term** - We estimate the expected life of employee share options based on the simplified method allowed by SAB No. 107, as amended by SAB No. 110. Under this approach, the expected term is presumed to be the average between the weighted-average vesting period and the contractual term. The ISO’s have a 10-year contractual term and the vesting period is 4 years. This results in a calculated expected term of 7 years.
- **Risk Free rate** - The risk-free interest rate is based on the U.S. Treasury Note, on the date of grant with a term equal to the corresponding option’s expected term. So, in this case, we are using the 7 year treasury note as of the date of grant, which ranges from 1.27% and 1.44% at the date of the grants.
- **Dividend yield** - We have never declared or paid any cash dividends and there is currently no expected cash dividend payments as of the date of this grant. As such, dividend yield is zero.

Restricted Stock Awards

Restricted stock activity was as follows:

	Number of shares	Weighted-average grant-date fair value
Nonvested, December 31, 2019	814,949	$ 5.88
Shares granted	231,091	3.56
Shares vested	(228,500)	4.62
Shares forfeited	(38,125)	5.87
Nonvested, December 31, 2020	779,415	5.56
Shares granted	223,750	1.84
Shares vested	(192,684)	6.29
Shares forfeited	(70,750)	4.47
Nonvested, December 31, 2021	739,731	$ 4.34

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

(14) Employee Benefit Plans

The Company sponsors an employee benefit plan that was established on January 1, 2006, the Cumberland Pharmaceuticals 401(k) Plan (the "Plan"), under Section 401(k) of the Internal Revenue Code of 1986, as amended, for the benefit of all employees over the age of 21, having been employed by the Company for at least six months. The Plan provides that participants may contribute up to the maximum amount of their compensation as set forth by the Internal Revenue Service each year. Employee contributions are invested in various investment funds based upon elections made by the employees. During 2021, 2020 and 2019, the Company contributed approximately $50,000 in each year to the Plan as an employer match of participant contributions.

In 2012 and 2013, the Company established non-qualified unfunded deferred compensation plans that allow participants to defer receipt of a portion of their compensation. The liability under the plans, reflected in other long term liabilities in the consolidated balance sheet, was $3.4 million and $2.7 million as of December 31, 2021 and 2020, respectively. The Company had assets consisting of company-owned life insurance contracts generally designated to pay benefits of the deferred compensation plans reflected in other assets in the consolidated balance sheet of $3.2 million and $2.9 million as of December 31, 2021 and 2020, respectively.

(15) Leases

The Company is obligated under long-term real estate leases for corporate office space that was extended during the third quarter of 2015. Prior to this extension, the lease would have expired in October 2016, the lease is now set to expire in October 2022.

On November 15, 2021, Cumberland entered into a lease, pursuant to which the Company will lease approximately 16,631 rentable square feet of space at the new development Broadwest located in Nashville, Tennessee with 1600 West End Avenue Partners, LLC. The Leased Premise will serve as the Company's new corporate headquarters. The initial term of the Lease is one hundred fifty-seven (157) months, with two consecutive options to renew for a period of five years each, and will commence on the earlier of November 1, 2022, the date

which Tenant takes occupancy of the Leased Premise, or the date which Tenant receives a temporary or permanent certificate of occupancy for the Leased Premise.

The Company will be responsible for paying rent to the Landlord under the Lease beginning three months after the Commencement Date. The Company will pay a base rent of $33.06 per square foot of rentable space with a gradual rental rate increase of 2.5% for each year period thereafter of the prior year's base rental. In addition to the monthly base rent, the Company is responsible for its percentage share of the operating expenses of the Building. The Lease also provides for a tenant improvement allowance for the space.

In addition, the research lab space at CET, under an agreement amended in July 2012, is leased through April 2023, with an option to extend the lease through April 2028. The Company also subleases a portion of the space under these leases.

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

	2021	2020	2019
Rent expense	$ 1,209,102	$ 1,166,411	$ 1,246,143
Sublease income*	$ 699,889	$ 680,627	$ 688,020

*Minor amounts due in 2022.

In March 2016, the FASB issued ASU 2016-02. ASU 2016-02's core principle is to increase transparency and comparability among organizations by recognizing lease assets and liabilities on the balance sheet and disclosing key information. The primary effect of adopting ASU 2016-02 to the Company was to record right-of-use assets and obligations for the leases currently classified as operating leases.

The Company's significant operating leases include the lease of approximately 25,500 square feet of office space in Nashville, Tennessee for its corporate headquarters. This lease currently expires in October 2022. The operating leases also include the lease of approximately 14,200 square feet of wet laboratory and office space in Nashville, Tennessee by CET, our majority-owned subsidiary, where it operates the CET Life Sciences Center. This lease currently expires in April 2023.

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

Lease Position

At December 31, 2021 and 2020, the Company recorded the following on the Consolidated Balance Sheet:

Right-of-Use Assets	December 31, 2021	December 31, 2020
Operating lease right-of-use assets	$ 1,024,200	$ 2,028,148

Lease Liabilities	December 31, 2021	December 31, 2020
Operating lease current liabilities	$ 969,677	$ 1,016,779
Operating lease non-current liabilities	90,016	1,059,693
Total	$ 1,059,693	$ 2,076,472

Excluding the Broadwest lease, cumulative future minimum sublease income under non-cancelable operating subleases totals approximately $0.1 million and will be paid through the leases ending in October 2022 and April 2023. Future minimum lease payments under non-cancelable operating leases (with initial or remaining lease terms in excess of one year) are as follows:

Maturity of Leases Liabilities at December 31, 2021	Operating Leases
2022	1,019,313
2023	92,478
Total lease payments	1,111,791
Less: Interest	(52,098)
Present value of lease liabilities	$ 1,059,693

(16) Market Concentrations

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

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

	2021	2020	2019
Customer 1	27%	25%	31%
Customer 2	24%	25%	28%
Customer 3	20%	21%	17%

The Company's accounts receivable, net of allowances, due from the customers representing 10% or more of consolidated revenue was 51% and 60% at December 31, 2021 and 2020, respectively.

(17) Manufacturing and Supply Agreements

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

suppliers could cause a delay in manufacturing or shipment of finished goods and possible loss of sales, which could adversely affect operating results.

(18) Employment Agreements

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

(19) Discontinued Operations

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

Early in 2019, Cumberland announced a strategic review of the Company's brands, capabilities, and international partners. This review followed an accelerated business development initiative, which resulted in a series of transactions. Because of that progress, Cumberland felt that it was prudent to take a fresh look at our product portfolio, partners, and organization to ensure proper focus and capabilities. During May 2019, Cumberland entered into the Dissolution Agreement with Clinigen in which the Company returned the exclusive rights to commercialize Ethyol and Totect (“the Products”) in the United States to Clinigen. This Dissolution Agreement originally targeted a transition from the Company's arrangements with Clinigen effective September 30, 2019, but was then amended to change the transition date to December 31, 2019. Under the terms of the Dissolution Agreement, Cumberland was no longer responsible for the distribution, marketing and promotion of either the Products or any competing products after December 31, 2019. In exchange for the return of these product license rights and the non-compete provisions of the Dissolution Agreement, Cumberland received $5 million in financial consideration paid in quarterly installments over the two-years following the transition date. Cumberland recorded the last four quarterly installments totaling $2.0 million during the year ended December 31, 2021 and the first four quarterly installments totaling $3.0 million during the year ended December 31, 2020.

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

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

	2021	2020	2019
Revenues	$ 1,994,322	$ 3,206,875	$ 13,145,344
Costs of products sold	—	—	1,330,704
Selling, Marketing and other	—	—	6,149,463
Income from discontinued operations	$ 1,994,322	$ 3,206,875	$ 5,665,177

(20) Commitments and Contingencies

Commitments

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

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

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

In connection with the acquisition of Sancuso, the Company is required to pay an upfront payment of $13.5 million to Kyowa Kirin upon closing, up to $3.5 million in milestones and tiered royalties ranging from 10% to 5% on U.S. net product sales for ten years. The Company has reviewed the relevant guidance and sought appropriate feedback from outside accounting and legal experts regarding the application of ASC 805. Based on this review, the Company has concluded the Sancuso acquisition should be accounted for as a Business Combination. The Company has hired an outside expert to prepare the valuation of the assets and liabilities acquired for Sancuso. We expect to receive the valuation sometime in the second quarter of 2022.

Legal Matters

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

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

Melinta Litigation

On February 2, 2022, the Company filed an action for breach of contract against Melinta Therapeutics, LLC and Targanta Therapeutics Corporation (collectively, the “Defendants”) in the United States District Court for the Southern District of New York (Case No. 1:22-cv-00915-VM). The Company and the Defendants are parties to an agreement (the “Agreement”), pursuant to which the Defendants have a license to develop and commercialize products under certain Company patents, in exchange for the Defendants paying the Company certain milestone payments and royalties on net sales of the licensed products.

Specifically, the Agreement requires the Defendants to, among other things, make a $500,000 payment to the Company within 30 days following the first filing of an sNDA in relation to the Product (as defined the Agreement) and a $500,000 payment to the Company following the approval of the first sNDA in relation to the Product.

The complaint alleges that, despite the Defendants filing an NDA and sNDA for the Product and receiving FDA approval for both applications, the Defendants failed to make the required total of $1 million in milestone payments to the Company. The Company is seeking damages in the amount of no less than $1 million, prejudgment interest under N.Y. C.P.L.R. § 5001, costs, and such further relief as the court deems just and proper.

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

(21) Quarterly Financial Information (Unaudited)

The following table sets forth the unaudited operating results for each fiscal quarter of 2021 and 2020:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
2021:					
Net revenues	$ 10,537,159	$ 9,055,483	$ 8,072,540	$ 8,319,861	$ 35,985,043
Operating income (loss)	(324,300)	(1,435,729)	(1,563,395)	(4,353,996)	(7,677,420)
Net income (loss) from continuing operations	(350,749)	724,684	(1,583,480)	(4,387,576)	(5,597,121)
Net income (loss) from discontinued operations	495,410	498,807	496,787	503,318	1,994,322
Net income (loss) attributable to common shareholders	166,828	1,228,560	(1,055,278)	(3,847,697)	(3,507,587)
Earnings (loss) per share attributable to common shareholders [1]					
Continuing operations - basic	$ (0.02)	$ 0.05	$ (0.10)	$ (0.29)	$ 0.37
Discontinued operations - basic	0.03	0.03	0.03	0.03	0.13
Basic	$ 0.01	$ 0.08	$ (0.07)	$ (0.26)	$ (0.24)
Continuing operations - diluted	$ (0.02)	$ 0.05	$ (0.10)	$ (0.29)	$ 0.37
Discontinued operations - diluted	0.03	0.03	0.03	0.03	0.13
Diluted	$ 0.01	$ 0.08	$ (0.07)	$ (0.26)	$ (0.24)
2020:					
Net revenues	$ 8,330,734	$ 9,598,177	$ 9,250,689	$ 10,261,534	$ 37,441,134
Operating income (loss)	(1,846,001)	(1,580,962)	(1,208,686)	(1,745,946)	(6,381,595)
Net income (loss) from continuing operations	(1,883,418)	(1,679,211)	(1,275,620)	(1,787,530)	(6,625,779)
Net income (loss) from discontinued operations	818,273	738,622	777,916	872,064	3,206,875
Net income (loss) attributable to common shareholders	(1,055,620)	(918,275)	(481,737)	(883,776)	(3,339,408)
Earnings (loss) per share attributable to common shareholders [1]					
Continuing operations - basic	$ (0.12)	$ (0.11)	$ (0.08)	$ (0.12)	$ (0.43)
Discontinued operations - basic	0.05	0.05	0.05	0.06	0.21
Basic	$ (0.07)	$ (0.06)	$ (0.03)	$ (0.06)	$ (0.22)
Continuing operations - diluted	$ (0.12)	$ (0.11)	$ (0.08)	$ (0.12)	$ (0.43)
Discontinued operations - diluted	0.05	0.05	0.05	0.06	0.21
Diluted	$ (0.07)	$ (0.06)	$ (0.03)	$ (0.06)	$ (0.22)

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

Schedule II

CUMBERLAND PHARMACEUTICALS INC. AND SUBSIDIARIES

Valuation and Qualifying Accounts

Years ended December 31, 2021, 2020 and 2019

Description	Balance at beginning of period	Charged to costs and expenses	Charged to other accounts	Deductions		Balance at end of period
Allowance for uncollectible amounts, cash discounts, chargebacks, and credits issued for damaged products:						
For the years ended December 31:						
2019	$ 804,420	$ 5,915,066	$ —	$ (5,927,435)	(1)	$ 792,051
2020	792,051	4,940,313	—	(4,747,687)	(1)	984,677
2021	984,677	2,963,279	—	(3,606,992)	(1)	340,964
Valuation allowance for deferred tax assets:						
For the years ended December 31:						
2019	$ 17,382,052	$ 1,129,109	$ —	$ —		$ 18,511,161
2020	18,511,161	684,960	—	—		19,196,121
2021	19,196,121	565,801	—	—		19,761,922

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

Exhibit 4.11

DESCRIPTION OF THE REGISTRANT'S COMMON STOCK
REGISTERED PURSUANT TO SECTION 12 OF THE
SECURITIES EXCHANGE ACT OF 1934

The common stock of Cumberland Pharmaceuticals, Inc. ("we," "our," "us" or the "Company") is registered under Section 12 of the Securities Exchange Act of 1934, as amended.

The following description of our common stock is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to the actual terms and provisions contained in our Third Amended and Restated Charter, as amended (the "Charter"), and our Second Amended and Restated Bylaws (the "Bylaws"), copies of are filed as an exhibit to this Annual Report on Form 10-K and are incorporated herein, and to the applicable provisions of Tennessee law. We encourage you to read our Charter and Bylaws and the applicable provisions of Tennessee law for additional information.

Authorized Capital

We are authorized to issue up to 120,000,000 shares of capital stock, of which 100,000,000 may be shares of common stock, par value $0.00 per share, and 20,000,000 may be shares of preferred stock, par value $0.00 per share. The Company currently has no preferred stock issued and outstanding. All of the Company's outstanding shares of common stock are fully paid and nonassessable.

Voting Rights

Holders of common stock are entitled to one vote for each share registered in his or her name on our books on all matters voted on by our shareholders. Holders of our common stock do not have cumulative voting rights.

Dividends

Subject to any preferences or other rights of any of our preferred stock that may be issued from time to time, each share of our common stock is entitled to share equally with each other share of common stock in dividends from sources legally available therefore, when, as, and if declared by the Board of Directors of the Company.

Absence of Other Rights

Holders of our common stock do not have any preemptive rights to subscribe for or purchase any of our securities of any class or kind. Holders of our common stock do not have any subscription, redemption or conversion privileges.

Liquidation Rights

Upon our liquidation or dissolution, whether voluntary or involuntary, each share of our common stock is entitled to share equally in the assets that are available for distribution to our shareholders, after payment of all debts and liabilities and subject to the prior rights of nay holders of preferred stock then outstanding.

Listing

Our common stock is listed on the Nasdaq Global Select Market under the symbol “CPIX.”

Transfer Agent and Registrar

Continental Stock Transfer & Trust Company is the transfer agent and registrar of our common stock.

Anti-Takeover Effects of our Charter and Bylaws

Our Charter and Bylaws contain certain provisions that could have the effect of delaying, deferring or discouraging another party from acquiring control of the Company. These provisions, which are summarized below, could discourage takeovers, coercive or otherwise. These provisions are also designed, in part, to encourage persons seeking to acquire control of us to negotiate first with our Board of Directors.

Staggered Board. Our Charter divides our Board of Directors into three separate classes, and directors are assigned to each class in accordance by resolution of the Board of Directors. Each class of directors serves for a full term of three years, and the terms of the respective classes expire in succession so that only one class of directors is required to stand for re-election at each annual meeting. This provision prevents our shareholders or a potential acquirer from replacing all of our incumbent directors at a single annual meeting.

Removal of Directors. Under Tennessee law, a director can be removed by the shareholders with or without cause, unless a corporation’s charter provides that the director can only be removed for cause. Our Charter includes this restriction, which could make it more difficult for shareholders to remove incumbent directors.

Advance Notice Provisions. Our Bylaws contain advance notice provisions applicable to shareholder proposals and the nomination of candidates for election as directors by shareholders. These advance notice provisions may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed and may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer’s own slate of directors or otherwise attempt to obtain control of the Company.

Vacancies. Our Charter provides that the Board of Directors, by a majority vote of the remaining directors in office, shall fill any vacant directorships caused by the death, resignation, disqualification, removal of a director. Our Charter also gives the Board of Directors the power to fill any vacancies resulting from the increase in the number of directors serving on the Board. These provisions could make it more difficult for an acquiror to gain control of our Board of Directors.

Calling of Special Meetings. Under Tennessee law, a special meeting of a Tennessee corporation’s shareholders can be called by its board of directors or, unless the charter provides otherwise, the holders of at least 10% of the outstanding voting stock of the corporation. Our Charter provides that a special meeting can be called by our Chairman of the Board or the Chief Executive Officer only when shareholders owning at least two-thirds of the votes entitled to be cast on any issue proposed to be considered at the meeting deliver to the Company a written demand stating the purposes of the special meeting and a certified check in the amount of $50,000.00. This provision may make it harder for our shareholders to call special meetings without the consent of the Board of Directors of the Company.

Undesignated Preferred Stock. Our Board of Directors has the ability to designate and issue preferred stock without shareholder approval, and such preferred stock could have voting or other rights or preferences that could deter hostile takeovers or delay changes in control.

No Cumulative Voting. Our Charter and Bylaws do not allow shareholders to cumulate votes for the election of directors, which may have the effect of deterring our shareholder's ability to replace incumbent directors serving on the Board of Directors.

Tennessee Anti-Takeover Statutes

In addition to the Charter and Bylaws provisions discussed above, Tennessee has adopted a series of statutes which can have an anti-takeover effect and may delay or prevent a tender offer or takeover attempt that a shareholder might consider in its best interest, including those attempts that might result in a premium over the market price for our capital stock.

Tennessee Business Combination Act

The Tennessee Business Combination Act (the "TBCA") governs all Tennessee corporations. It imposes a five-year standstill on transactions such as mergers, share exchanges, sales of assets, liquidations and other interested party transactions between Tennessee corporations and "interested shareholders" and their associates or affiliates, unless the business combination is approved by the board of directors before the interested shareholder goes above the 10% ownership threshold. Thereafter, the transaction either requires a two-thirds vote of the shareholders other than the interested shareholder or satisfaction of certain fair price standards.

The TBCA also provides for additional exculpatory protection for the board of directors in resisting mergers, exchanges and tender offers if a Tennessee corporation's charter specifically opts-in to such provisions. In particular, a Tennessee corporation's charter may specifically authorize the members of a board of directors, in the exercise of their judgment, to give due consideration to factors other than price and to consider whether a merger, exchange, tender offer or significant disposition of assets would adversely affect the corporation's employees, customers, suppliers, the communities in which the corporation operates, or any other relevant factor in the exercise of their fiduciary duty to the shareholders. Our Charter currently does not opt-in to the additional exculpation provisions available under the TBCA. In the future, if we amend our Charter to opt-in to such provisions, it could have the effect of protecting our management and Board of Directors from hostile takeover bids.

Tennessee Control Share Acquisition Act

The Tennessee Control Share Acquisition Act (the "TCSA") limits the voting rights of shares owned by a person above certain percentage thresholds, unless the non-interested shareholders of the corporation approve the acquisition above the designated threshold. However, the TCSA only applies to corporations whose charter or bylaws contain an express declaration that control share acquisitions are to be governed by the TCSA. In addition, the charter or bylaws must specifically provide for the redemption of control shares or appraisal rights for dissenting shareholders in a control share transaction. Neither our Charter nor our Bylaws make the express declarations necessary to opt into the TCSA. In the future, if we amend our Bylaws or our Charter to opt into the TCSA, it will have the general effect of discouraging, or rendering more difficult, acquisition attempts.

Tennessee Investor Protection Act

The Tennessee Investor Protection Act ("TIPA") generally requires the registration, or an exemption from registration, before a person can make a tender offer for shares of a Tennessee corporation which, if successful, will result in the offeror beneficially owning more than 10% of any class of shares. Registration requires the filing with the Tennessee Commissioner of Commerce and Insurance of a registration statement, a copy of which must be sent to the target company, and the public disclosure of the material terms of the proposed offer. Additional requirements are imposed under that act if the offeror beneficially owns 5% or more of any class of equity securities of the target company, any of which was purchased within one year prior to the proposed takeover offer. TIPA also prohibits fraudulent and deceptive practices in connection with takeover offers, and provides remedies for violations.

TIPA does not apply to an offer involving a vote by holders of equity securities of the offeree company, pursuant to its charter, on a share exchange, consolidation or sale of corporate assets in consideration of the issuance of securities of another corporation, or on a sale of its securities in exchange for cash or securities of another corporation. Also exempt from TIPA are tender offers which are open on substantially equal terms to all shareholders, are recommended by the board of directors of the target company, and include full disclosure of all terms.

Tennessee Greenmail Act

The Tennessee Greenmail Act ("TGA") prohibits us from purchasing or agreeing to purchase any of our securities, at a price higher than fair market value, from a holder of 3% or more of any class of its securities who has beneficially owned the securities for less than two years. We can, however, make this purchase if the majority of the outstanding shares of each class of voting stock issued by us approves the purchase or if we make an offer of at least equal value per share to all holders of shares of the same class of securities as those held by the prospective seller.

Exhibit 10.11

March 7, 2022

Mr. AJ Kazimi
2525 West End Avenue, Suite 950
Nashville, TN 37203
Re: Employment of AJ Kazimi as Chief Executive Officer by Cumberland Pharmaceuticals Inc.

Dear AJ,

Effective January 1, 2022, this letter agreement (the "Agreement") will evidence the terms and conditions under which you will be employed by Cumberland Pharmaceuticals Inc. (the "Company") In consideration of your appointment as Chief Executive Officer of the Company, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Compensation. The Company agrees to compensate you as follows:

(a) The Company agrees to pay you on a salary basis for services performed based on an annual rate of six hundred thirty-five thousand dollars ($635,000.00), payable in arrears in equal monthly installments on the 1st day of each calendar month of 2022. For each year, thereafter, you will be paid on a salary basis for services performed based on an annual rate determined by the Company in its sole discretion; provided, however, that any obligation to make payments under this Section 1(a) will cease upon termination of your employment for any reason. Notwithstanding the foregoing, nothing in this Section 1(a) alters or is intended to alter the at-will nature of your employment as described in Section 3 of this Agreement.

(b) You will be eligible to participate in any Company-wide employee benefits as approved by the Board of Directors. The terms of your eligibility and participation will be governed by the provisions of the employee benefit plans, as such plans may be amended from time to time in the discretion of the Company's Board of Directors.

(c) You may be eligible for any Company bonus program, based upon performance in meeting your individual objectives and the Company's overall performance, both as determined and approved by the Board of Directors of the Company. Any such bonus will be discretionary and will be subject to the terms of the applicable bonus program, the terms of which program may be modified from year to year in the sole discretion of the Company's Board of Directors.

(d) You will receive a grant of Cumberland Pharmaceuticals common stock, pursuant to a stock options agreement (SOA). Such shares will be subject to the SOA and the terms set forth in the incentive compensation plan under which they are awarded. You may, at the Company's sole discretion, receive additional awards of Company equity, which will be subject to their designated agreements and the incentive compensation plans under which they are awarded.

(e) Except as set forth in Section 2, the Company shall not be liable to you for any expense incurred by you unless you receive the Company's prior written consent to reimburse you for such expense.

2. Additional Payments. During the term hereof, you shall be entitled to receive prompt reimbursement for all reasonable and documented expenses incurred in the performance of services in accordance with the expense reimbursement policy of the Company. Such reimbursement policy shall require adequate documentation by you of the expenses and payment by the Company of such amounts shall be made within a reasonable period after the close of the year in which the expenses were incurred.

3. Employment at Will. This Agreement is not intended to and shall not be understood in any manner as affecting or modifying the at-will status of your employment with the Company. As an at-will employee either you or the Company may terminate the employment relationship at any time with or without cause or notice. The obligations of Sections 4, 5, 6, 7, 8, 10, 11 and 12 herein shall survive the termination of the employment relationship or of this Agreement.

4. Confidentiality. All knowledge and information, not already available to the public, which you acquire, have acquired, or will acquire in the course of your employment with the Company with respect to the Company's business, work methods, or pending regulatory matters, or other Company matters that are treated by the Company as confidential, shall be regarded by you as trade secrets, whether or not they are classifiable legally as trade secrets, and shall be treated by you as strictly confidential. Such knowledge and information shall not either directly or indirectly be used, disclosed, or made accessible to anyone by you for any purpose, except in the ordinary course of the Company's business under circumstances in which you are authorized to use or disclose such information. No disclosures of such confidential information shall be made outside of those you are authorized to make in the regular and ordinary course of your duties unless and until you receive prior written permission of the Board of Directors of the Company to make such disclosure.

5. Discoveries and Improvements. During the time that you are employed by the Company, all confidential information, trade secrets, or proprietary information and all other discoveries, inventions, software programs, processes, methods and improvements that are conceived, developed, or otherwise made by you , alone or with others, that relate in any way to the Company's present or planned business or products (collectively the "Developments"), whether or not patentable or subject to copyright protection and whether or not reduced to tangible form or reduced to practice, shall be the sole property of the Company. You agree to disclose all Developments promptly, fully and in writing to the Company. You agree to keep and maintain adequate and current dated and witnessed written records of all such Developments, in the form of notes, sketches, drawings, or reports, which records shall be promptly submitted to the Company and shall be and remain the property of the Company at all times. You agree to assign, and hereby do assign, to, the Company all your right, title and interest throughout the world in and to all Developments. You agree that all Developments shall constitute "Works for Hire" (as such are defined under the U.S. Copyright Laws) and hereby assign to the Company all copyrights, patents and other proprietary rights you may have in any Developments without any obligation on the part of the Company to pay royalties or any other consideration to you for such Developments.

6. Publication. All documents and other writings produced by you during the period of your employment, which relate to work you are doing or have done for the Company or to the business of the Company or its affiliates, shall belong to the Company. You will not publish outside of the Company any such writing without the prior written consent of the Board of Directors of the Company. You will, without further compensation, execute at any time (whether or not you are still employed by the Company) all documents requested of you relating to the protection of such rights, including the assignment of such rights to the Company.

7. Litigation. You shall notify the Company within three business days if no longer employed and immediately if still employed by the Company if you are contacted by any person relating to any claim or litigation against the Company. You shall not communicate in any manner with any person related to any claim or litigation against the Company without the prior consent of the Board of Directors of the Company unless compelled to do so by law.

8. Competition. For so long as you are employed by the Company or any Affiliate (as defined below) and for a period of one year after you cease to be employed by the Company or any Affiliate, you shall not, directly or indirectly, engage in any work or other activity--whether as owner, stockholder, partner, officer, consultant, or otherwise--involving a trademark, product, or process that, in the opinion of the Company's Chief Executive Officer, is similar to a trademark, product or process on which you worked for the Company (or any Affiliate) or obtained knowledge about while working for the Company at any time during the period of employment, if such work or other activity is then, or reasonably expected to become, competitive with that of the Company (or any Affiliate). The restriction in the preceding sentence shall not apply if you have disclosed to the Company in writing all the known facts relating to such work or activity and have received a release in writing from the Board of Directors of the Company allowing you to engage in such work or activity. The Company's Chief Executive Officer shall have sole discretion to determine whether your work or activity for another employer involves trademarks, products, or processes that are similar to trademarks, products, or processes that you worked on for the Company. Ownership by you of five percent (5%) or less of the outstanding shares of stock of any company either (i) listed on a national securities exchange, or (ii) having at least one hundred (100) stockholders shall not make you a "stockholder" within the meaning of that term as used in this paragraph. For one year after you cease to work for the Company, you will not engage in any work or activity that will cause you to inevitably disclose to anyone not employed by the Company (or an Affiliate) any trade secret or confidential information that belongs to the Company or one of its Affiliates. Nothing in this paragraph shall limit the rights or remedies of the Company arising, directly or indirectly, from such competitive employment, including, without limitation, claims based upon breach of fiduciary duty, misappropriation, or theft of confidential information. The term "Affiliate" shall mean the Company and any entity controlling, controlled by, or under common control with the Company.

9. Conflicting Contracts. You represent and warrant that you are not now under any obligation resulting from any contract or arrangement, to any person, firm, or corporation, which is inconsistent or in conflict with this Agreement. Likewise you represent and warrant that you are not now under any obligation resulting from any contract or arrangement to any person, firm, or corporation which would prevent, limit, or impair in any way the performance by you of your obligations to the Company.

10. Solicitation. After you cease to be employed by the Company (or a Company affiliate):

(a) You agree not to solicit, directly or indirectly, business related to the development or sales of pharmaceutical products from any entity, organization, or person which is contracted with the Company, which has been doing business with the Company or from which the Company was soliciting at the time of your termination, or a firm which you knew or had reason to know that the Company was going to solicit business at the time you ceased to be employed by the Company. The restriction set forth in the preceding sentence shall not apply if you have disclosed to the Company in writing all the known facts relating to such solicitation and have received a release in writing from the Board of Directors of the Company to engage in such solicitation.

(b) You agree not to solicit, recruit, hire, or assist in the hiring of any employee of the Company to work for you or another person, firm, corporation, or business.

11. Return of Documents. Upon termination of your employment for any reason, you shall immediately return to the Company all documents and things belonging to the Company. This includes, but is not limited to, trade secrets, confidential information, knowledge, data or know-how, and software containing such information, whether or not the documents are marked "Confidential."

12. Remedies. You acknowledge that in the event of breach of this Agreement by you, actual damages to the Company will be impossible to calculate, the Company's remedies at law will be inadequate, and the Company will suffer irreparable harm. Therefore, you agree that any of the covenants contained in this Agreement may be specifically enforced through injunctive relief, but such right to injunctive relief shall not preclude the Company from other remedies which may be available to it. You further agree that should you fail to keep any of the promises made by you in this Agreement, or any way violate this Agreement, the Company shall be entitled to recover all monies the Company is required to spend, including attorneys' fees, to enforce the provisions of this Agreement.

13. Best Efforts and Conflicts of Interest: You are hired with the understanding that Cumberland is your sole employer and you will provide a full-time work effort. You agree to devote your entire professional and business-related time and best efforts t\o the services required of you by the express and implicit terms of this Agreement, to the reasonable satisfaction of Cumberland in its sole and complete discretion. Engaging in activities outside of work that create a conflict of interest, or detract from your ability to perform your assigned responsibilities or meet your defined goals and objectives with Cumberland, is a problem and may lead to disciplinary action up to and including termination of employment. If you believe that you are potentially involved in a situation that could create a conflict of interest and affect your ability to adequately perform your job with Cumberland, you should inform your direct supervisor and Cumberland's Human Resources Department immediately.

14. Standards of Business Conduct and Ethics. Cumberland's commitment to a culture of integrity, ethics and compliance with the law is comprised in this policy, which will be provided to you as part of the conditions of your employment. You will have the opportunity to read, discuss and understand this policy prior to accepting and signing its Letter of Agreement.

15. Debarment. You represent and warrant that you have not been debarred and will notify the Company immediately if you are debarred, pursuant to subsection 306(a) or 306(b) of the Federal Food, Drug, and Cosmetic Act.

16. Notice. Any notice required or permitted to be given under this Agreement shall be sufficient if in writing and if sent by registered or certified mail to your residence or to the Company's principal office in the case of the Company.

17 Waiver. The waiver by either party of any provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach.

18. Entire Agreement. This Agreement contains the entire agreement of the parties and may not be changed orally, but only by an agreement in writing signed by the party against whom enforcement of any waiver, change, modification, extension, or discharge is sought.

19. Governance. This Agreement shall be governed by the laws of the State of Tennessee. Any dispute arising out of this Agreement shall be resolved, at the Company's sole option, by courts sitting in Nashville, Tennessee, and you waive any objection to such venue.

20. Enforceability. In the event that any provision of this Agreement shall be held by a court to be unenforceable, such provision will be enforced to the maximum extent permissible, and the remaining portions of this Agreement shall remain in full force and effect.

21. Survival. Notwithstanding any termination of your employment, this Agreement shall survive and remain in effect in accordance with its terms.

# # # #

This letter agreement may be signed in one or more counterparts, each of which shall be an original and all of which will constitute one and the same instrument.

Sincerely yours,

CUMBERLAND PHARMACEUTICALS INC.

By: Stephanie Smith HRM, MBA
Human Resource Manager

Accepted as to all terms and conditions
as of the 7th of March, 2022:

/s/ A.J. Kazimi
A.J. Kazimi

Exhibit 10.12

March 7, 2022

Mr. Martin E. Cearnal
2525 West End Avenue, Suite 950
Nashville, TN 37203
Re: Employment of Martine E. Cearnal as Executive Vice President, Chief Commercial Officer & President of Cumberland Pharmaceuticals Sales Operations by Cumberland Pharmaceuticals Inc.

Dear Martin,

Effective January 1, 2022, this letter agreement (the "Agreement") will evidence the terms and conditions under which you will be employed by Cumberland Pharmaceuticals Inc. (the "Company") In consideration of your appointment as Chief Executive Officer of the Company, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Compensation. The Company agrees to compensate you as follows:

(a) The Company agrees to pay you on a salary basis for services performed based on an annual rate of three hundred and fifty thousand dollars ($350,000.00), payable in arrears in equal monthly installments on the 1st day of each calendar month of 2022. For each year, thereafter, you will be paid on a salary basis for services performed based on an annual rate determined by the Company in its sole discretion; provided, however, that any obligation to make payments under this Section 1(a) will cease upon termination of your employment for any reason. Notwithstanding the foregoing, nothing in this Section 1(a) alters or is intended to alter the at-will nature of your employment as described in Section 3 of this Agreement.

(b) You will be eligible to participate in any Company-wide employee benefits as approved by the Board of Directors. The terms of your eligibility and participation will be governed by the provisions of the employee benefit plans, as such plans may be amended from time to time in the discretion of the Company's Board of Directors.

(c) You may be eligible for any Company bonus program, based upon performance in meeting your individual objectives and the Company's overall performance, both as determined and approved by the Board of Directors of the Company. Any such bonus will be discretionary and will be subject to the terms of the applicable bonus program, the terms of which program may be modified from year to year in the sole discretion of the Company's Board of Directors.

(d) You will receive a grant of Cumberland Pharmaceuticals common stock, pursuant to a stock options agreement (SOA). Such shares will be subject to the SOA and the terms set forth in the incentive compensation plan under which they are awarded. You may, at the Company's sole discretion, receive additional awards of Company equity, which will be subject to their designated agreements and the incentive compensation plans under which they are awarded.

(e) Except as set forth in Section 2, the Company shall not be liable to you for any expense incurred by you unless you receive the Company's prior written consent to reimburse you for such expense.

2. Additional Payments. During the term hereof, you shall be entitled to receive prompt reimbursement for all reasonable and documented expenses incurred in the performance of services in accordance with the expense reimbursement policy of the Company. Such reimbursement policy shall require adequate documentation by you of the expenses and payment by the Company of such amounts shall be made within a reasonable period after the close of the year in which the expenses were incurred.

3. Employment at Will. This Agreement is not intended to and shall not be understood in any manner as affecting or modifying the at-will status of your employment with the Company. As an at-will employee either you or the Company may terminate the employment relationship at any time with or without cause or notice. The obligations of Sections 4, 5, 6, 7, 8, 10, 11 and 12 herein shall survive the termination of the employment relationship or of this Agreement.

4. Confidentiality. All knowledge and information, not already available to the public, which you acquire, have acquired, or will acquire in the course of your employment with the Company with respect to the Company's business, work methods, or pending regulatory matters, or other Company matters that are treated by the Company as confidential, shall be regarded by you as trade secrets, whether or not they are classifiable legally as trade secrets, and shall be treated by you as strictly confidential. Such knowledge and information shall not either directly or indirectly be used, disclosed, or made accessible to anyone by you for any purpose, except in the ordinary course of the Company's business under circumstances in which you are authorized to use or disclose such information. No disclosures of such confidential information shall be made outside of those you are authorized to make in the regular and ordinary course of your duties unless and until you receive prior written permission of the Board of Directors of the Company to make such disclosure.

5. Discoveries and Improvements. During the time that you are employed by the Company, all confidential information, trade secrets, or proprietary information and all other discoveries, inventions, software programs, processes, methods and improvements that are conceived, developed, or otherwise made by you , alone or with others, that relate in any way to the Company's present or planned business or products (collectively the "Developments"), whether or not patentable or subject to copyright protection and whether or not reduced to tangible form or reduced to practice, shall be the sole property of the Company. You agree to disclose all Developments promptly, fully and in writing to the Company. You agree to keep and maintain adequate and current dated and witnessed written records of all such Developments, in the form of notes, sketches, drawings, or reports, which records shall be promptly submitted to the Company and shall be and remain the property of the Company at all times. You agree to assign, and hereby do assign, to, the Company all your right, title and interest throughout the world in and to all Developments. You agree that all Developments shall constitute "Works for Hire" (as such are defined under the U.S. Copyright Laws) and hereby assign to the Company all copyrights, patents and other proprietary rights you may have in any Developments without any obligation on the part of the Company to pay royalties or any other consideration to you for such Developments.

6. Publication. All documents and other writings produced by you during the period of your employment, which relate to work you are doing or have done for the Company or to the business of the Company or its affiliates, shall belong to the Company. You will not publish outside of the Company any such writing without the prior written consent of the Board of Directors of the Company. You will, without further compensation, execute at any time (whether or not you are still employed by the Company) all documents requested of you relating to the protection of such rights, including the assignment of such rights to the Company.

7. Litigation. You shall notify the Company within three business days if no longer employed and immediately if still employed by the Company if you are contacted by any person relating to any claim or litigation against the Company. You shall not communicate in any manner with any person related to any claim or litigation against the Company without the prior consent of the Board of Directors of the Company unless compelled to do so by law.

8. Competition. For so long as you are employed by the Company or any Affiliate (as defined below) and for a period of one year after you cease to be employed by the Company or any Affiliate, you shall not, directly or indirectly, engage in any work or other activity--whether as owner, stockholder, partner, officer, consultant, or otherwise--involving a trademark, product, or process that, in the opinion of the Company's Chief Executive Officer, is similar to a trademark, product or process on which you worked for the Company (or any Affiliate) or obtained knowledge about while working for the Company at any time during the period of employment, if such work or other activity is then, or reasonably expected to become, competitive with that of the Company (or any Affiliate). The restriction in the preceding sentence shall not apply if you have disclosed to the Company in writing all the known facts relating to such work or activity and have received a release in writing from the Board of Directors of the Company allowing you to engage in such work or activity. The Company's Chief Executive Officer shall have sole discretion to determine whether your work or activity for another employer involves trademarks, products, or processes that are similar to trademarks, products, or processes that you worked on for the Company. Ownership by you of five percent (5%) or less of the outstanding shares of stock of any company either (i) listed on a national securities exchange, or (ii) having at least one hundred (100) stockholders shall not make you a "stockholder" within the meaning of that term as used in this paragraph. For one year after you cease to work for the Company, you will not engage in any work or activity that will cause you to inevitably disclose to anyone not employed by the Company (or an Affiliate) any trade secret or confidential information that belongs to the Company or one of its Affiliates. Nothing in this paragraph shall limit the rights or remedies of the Company arising, directly or indirectly, from such competitive employment, including, without limitation, claims based upon breach of fiduciary duty, misappropriation, or theft of confidential information. The term "Affiliate" shall mean the Company and any entity controlling, controlled by, or under common control with the Company.

9. Conflicting Contracts. You represent and warrant that you are not now under any obligation resulting from any contract or arrangement, to any person, firm, or corporation, which is inconsistent or in conflict with this Agreement. Likewise you represent and warrant that you are not now under any obligation resulting from any contract or arrangement to any person, firm, or corporation which would prevent, limit, or impair in any way the performance by you of your obligations to the Company.

10. Solicitation. After you cease to be employed by the Company (or a Company affiliate):

(a) You agree not to solicit, directly or indirectly, business related to the development or sales of pharmaceutical products from any entity, organization, or person which is contracted with the Company, which has been doing business with the Company or from which the Company was soliciting at the time of your termination, or a firm which you knew or had reason to know that the Company was going to solicit business at the time you ceased to be employed by the Company. The restriction set forth in the preceding sentence shall not apply if you have disclosed to the Company in writing all the known facts relating to such solicitation and have received a release in writing from the Board of Directors of the Company to engage in such solicitation.

(b) You agree not to solicit, recruit, hire, or assist in the hiring of any employee of the Company to work for you or another person, firm, corporation, or business.

11. Return of Documents. Upon termination of your employment for any reason, you shall immediately return to the Company all documents and things belonging to the Company. This includes, but is not limited to, trade secrets, confidential information, knowledge, data or know-how, and software containing such information, whether or not the documents are marked "Confidential."

12. Remedies. You acknowledge that in the event of breach of this Agreement by you, actual damages to the Company will be impossible to calculate, the Company's remedies at law will be inadequate, and the Company will suffer irreparable harm. Therefore, you agree that any of the covenants contained in this Agreement may be specifically enforced through injunctive relief, but such right to injunctive relief shall not preclude the Company from other remedies which may be available to it. You further agree that should you fail to keep any of the promises made by you in this Agreement, or any way violate this Agreement, the Company shall be entitled to recover all monies the Company is required to spend, including attorneys' fees, to enforce the provisions of this Agreement.

13. Best Efforts and Conflicts of Interest: You are hired with the understanding that Cumberland is your sole employer and you will provide a full-time work effort. You agree to devote your entire professional and business-related time and best efforts t\o the services required of you by the express and implicit terms of this Agreement, to the reasonable satisfaction of Cumberland in its sole and complete discretion. Engaging in activities outside of work that create a conflict of interest, or detract from your ability to perform your assigned responsibilities or meet your defined goals and objectives with Cumberland, is a problem and may lead to disciplinary action up to and including termination of employment. If you believe that you are potentially involved in a situation that could create a conflict of interest and affect your ability to adequately perform your job with Cumberland, you should inform your direct supervisor and Cumberland's Human Resources Department immediately.

14. Standards of Business Conduct and Ethics. Cumberland's commitment to a culture of integrity, ethics and compliance with the law is comprised in this policy, which will be provided to you as part of the conditions of your employment. You will have the opportunity to read, discuss and understand this policy prior to accepting and signing its Letter of Agreement.

15. Debarment. You represent and warrant that you have not been debarred and will notify the Company immediately if you are debarred, pursuant to subsection 306(a) or 306(b) of the Federal Food, Drug, and Cosmetic Act.

16. Notice. Any notice required or permitted to be given under this Agreement shall be sufficient if in writing and if sent by registered or certified mail to your residence or to the Company's principal office in the case of the Company.

17 Waiver. The waiver by either party of any provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach.

18. Entire Agreement. This Agreement contains the entire agreement of the parties and may not be changed orally, but only by an agreement in writing signed by the party against whom enforcement of any waiver, change, modification, extension, or discharge is sought.

19. Governance. This Agreement shall be governed by the laws of the State of Tennessee. Any dispute arising out of this Agreement shall be resolved, at the Company's sole option, by courts sitting in Nashville, Tennessee, and you waive any objection to such venue.

20. Enforceability. In the event that any provision of this Agreement shall be held by a court to be unenforceable, such provision will be enforced to the maximum extent permissible, and the remaining portions of this Agreement shall remain in full force and effect.

21. Survival. Notwithstanding any termination of your employment, this Agreement shall survive and remain in effect in accordance with its terms.

# # # #

This letter agreement may be signed in one or more counterparts, each of which shall be an original and all of which will constitute one and the same instrument.

Sincerely yours,

CUMBERLAND PHARMACEUTICALS INC.

/s/ A.J. Kazimi

By: A.J. Kazimi
Chief Executive Officer

Accepted as to all terms and conditions
as of the 7th of March, 2022:

/s/ Martin E. Cearnal

Martin E. Cearnal

Exhibit 10.13

March 7, 2022

Mr. Leo Pavliv
2525 West End Avenue, Suite 950
Nashville, TN 37203
Re: Employment of Leo Pavliv as Executive Vice President, Chief Development & Operations Officer by Cumberland Pharmaceuticals Inc.

Dear Leo,

Effective January 1, 2022, this letter agreement (the "Agreement") will evidence the terms and conditions under which you will be employed by Cumberland Pharmaceuticals Inc. (the "Company") In consideration of your appointment as Chief Executive Officer of the Company, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Compensation. The Company agrees to compensate you as follows:

(a) The Company agrees to pay you on a salary basis for services performed based on an annual rate of four hundred and fifty-five thousand dollars ($455,000.00), payable in arrears in equal monthly installments on the 1st day of each calendar month of 2022. For each year, thereafter, you will be paid on a salary basis for services performed based on an annual rate determined by the Company in its sole discretion; provided, however, that any obligation to make payments under this Section 1(a) will cease upon termination of your employment for any reason. Notwithstanding the foregoing, nothing in this Section 1(a) alters or is intended to alter the at-will nature of your employment as described in Section 3 of this Agreement.

(b) You will be eligible to participate in any Company-wide employee benefits as approved by the Board of Directors. The terms of your eligibility and participation will be governed by the provisions of the employee benefit plans, as such plans may be amended from time to time in the discretion of the Company's Board of Directors.

(c) You may be eligible for any Company bonus program, based upon performance in meeting your individual objectives and the Company's overall performance, both as determined and approved by the Board of Directors of the Company. Any such bonus will be discretionary and will be subject to the terms of the applicable bonus program, the terms of which program may be modified from year to year in the sole discretion of the Company's Board of Directors.

(d) You will receive a grant of Cumberland Pharmaceuticals common stock, pursuant to a stock options agreement (SOA). Such shares will be subject to the SOA and the terms set forth in the incentive compensation plan under which they are awarded. You may, at the Company's sole discretion, receive additional awards of Company equity, which will be subject to their designated agreements and the incentive compensation plans under which they are awarded.

(e) Except as set forth in Section 2, the Company shall not be liable to you for any expense incurred by you unless you receive the Company's prior written consent to reimburse you for such expense.

2. Additional Payments. During the term hereof, you shall be entitled to receive prompt reimbursement for all reasonable and documented expenses incurred in the performance of services in accordance with the expense reimbursement policy of the Company. Such reimbursement policy shall require adequate documentation by you of the expenses and payment by the Company of such amounts shall be made within a reasonable period after the close of the year in which the expenses were incurred.

3. Employment at Will. This Agreement is not intended to and shall not be understood in any manner as affecting or modifying the at-will status of your employment with the Company. As an at-will employee either you or the Company may terminate the employment relationship at any time with or without cause or notice. The obligations of Sections 4, 5, 6, 7, 8, 10, 11 and 12 herein shall survive the termination of the employment relationship or of this Agreement.

4. Confidentiality. All knowledge and information, not already available to the public, which you acquire, have acquired, or will acquire in the course of your employment with the Company with respect to the Company's business, work methods, or pending regulatory matters, or other Company matters that are treated by the Company as confidential, shall be regarded by you as trade secrets, whether or not they are classifiable legally as trade secrets, and shall be treated by you as strictly confidential. Such knowledge and information shall not either directly or indirectly be used, disclosed, or made accessible to anyone by you for any purpose, except in the ordinary course of the Company's business under circumstances in which you are authorized to use or disclose such information. No disclosures of such confidential information shall be made outside of those you are authorized to make in the regular and ordinary course of your duties unless and until you receive prior written permission of the Board of Directors of the Company to make such disclosure.

5. Discoveries and Improvements. During the time that you are employed by the Company, all confidential information, trade secrets, or proprietary information and all other discoveries, inventions, software programs, processes, methods and improvements that are conceived, developed, or otherwise made by you , alone or with others, that relate in any way to the Company's present or planned business or products (collectively the "Developments"), whether or not patentable or subject to copyright protection and whether or not reduced to tangible form or reduced to practice, shall be the sole property of the Company. You agree to disclose all Developments promptly, fully and in writing to the Company. You agree to keep and maintain adequate and current dated and witnessed written records of all such Developments, in the form of notes, sketches, drawings, or reports, which records shall be promptly submitted to the Company and shall be and remain the property of the Company at all times. You agree to assign, and hereby do assign, to, the Company all your right, title and interest throughout the world in and to all Developments. You agree that all Developments shall constitute "Works for Hire" (as such are defined under the U.S. Copyright Laws) and hereby assign to the Company all copyrights, patents and other proprietary rights you may have in any Developments without any obligation on the part of the Company to pay royalties or any other consideration to you for such Developments.

6. Publication. All documents and other writings produced by you during the period of your employment, which relate to work you are doing or have done for the Company or to the business of the Company or its affiliates, shall belong to the Company. You will not publish outside of the Company any such writing without the prior written consent of the Board of Directors of the Company. You will, without further compensation, execute at any time (whether or not you are still employed by the Company) all documents requested of you relating to the protection of such rights, including the assignment of such rights to the Company.

7. Litigation. You shall notify the Company within three business days if no longer employed and immediately if still employed by the Company if you are contacted by any person relating to any claim or litigation against the Company. You shall not communicate in any manner with any person related to any claim or litigation against the Company without the prior consent of the Board of Directors of the Company unless compelled to do so by law.

8. Competition. For so long as you are employed by the Company or any Affiliate (as defined below) and for a period of one year after you cease to be employed by the Company or any Affiliate, you shall not, directly or indirectly, engage in any work or other activity--whether as owner, stockholder, partner, officer, consultant, or otherwise--involving a trademark, product, or process that, in the opinion of the Company's Chief Executive Officer, is similar to a trademark, product or process on which you worked for the Company (or any Affiliate) or obtained knowledge about while working for the Company at any time during the period of employment, if such work or other activity is then, or reasonably expected to become, competitive with that of the Company (or any Affiliate). The restriction in the preceding sentence shall not apply if you have disclosed to the Company in writing all the known facts relating to such work or activity and have received a release in writing from the Board of Directors of the Company allowing you to engage in such work or activity. The Company's Chief Executive Officer shall have sole discretion to determine whether your work or activity for another employer involves trademarks, products, or processes that are similar to trademarks, products, or processes that you worked on for the Company. Ownership by you of five percent (5%) or less of the outstanding shares of stock of any company either (i) listed on a national securities exchange, or (ii) having at least one hundred (100) stockholders shall not make you a "stockholder" within the meaning of that term as used in this paragraph. For one year after you cease to work for the Company, you will not engage in any work or activity that will cause you to inevitably disclose to anyone not employed by the Company (or an Affiliate) any trade secret or confidential information that belongs to the Company or one of its Affiliates. Nothing in this paragraph shall limit the rights or remedies of the Company arising, directly or indirectly, from such competitive employment, including, without limitation, claims based upon breach of fiduciary duty, misappropriation, or theft of confidential information. The term "Affiliate" shall mean the Company and any entity controlling, controlled by, or under common control with the Company.

9. Conflicting Contracts. You represent and warrant that you are not now under any obligation resulting from any contract or arrangement, to any person, firm, or corporation, which is inconsistent or in conflict with this Agreement. Likewise you represent and warrant that you are not now under any obligation resulting from any contract or arrangement to any person, firm, or corporation which would prevent, limit, or impair in any way the performance by you of your obligations to the Company.

10. Solicitation. After you cease to be employed by the Company (or a Company affiliate):

(a) You agree not to solicit, directly or indirectly, business related to the development or sales of pharmaceutical products from any entity, organization, or person which is contracted with the Company, which has been doing business with the Company or from which the Company was soliciting at the time of your termination, or a firm which you knew or had reason to know that the Company was going to solicit business at the time you ceased to be employed by the Company. The restriction set forth in the preceding sentence shall not apply if you have disclosed to the Company in writing all the known facts relating to such solicitation and have received a release in writing from the Board of Directors of the Company to engage in such solicitation.

(b) You agree not to solicit, recruit, hire, or assist in the hiring of any employee of the Company to work for you or another person, firm, corporation, or business.

11. Return of Documents. Upon termination of your employment for any reason, you shall immediately return to the Company all documents and things belonging to the Company. This includes, but is not limited to, trade secrets, confidential information, knowledge, data or know-how, and software containing such information, whether or not the documents are marked "Confidential."

12. Remedies. You acknowledge that in the event of breach of this Agreement by you, actual damages to the Company will be impossible to calculate, the Company's remedies at law will be inadequate, and the Company will suffer irreparable harm. Therefore, you agree that any of the covenants contained in this Agreement may be specifically enforced through injunctive relief, but such right to injunctive relief shall not preclude the Company from other remedies which may be available to it. You further agree that should you fail to keep any of the promises made by you in this Agreement, or any way violate this Agreement, the Company shall be entitled to recover all monies the Company is required to spend, including attorneys' fees, to enforce the provisions of this Agreement.

13. Best Efforts and Conflicts of Interest: You are hired with the understanding that Cumberland is your sole employer and you will provide a full-time work effort. You agree to devote your entire professional and business-related time and best efforts t\o the services required of you by the express and implicit terms of this Agreement, to the reasonable satisfaction of Cumberland in its sole and complete discretion. Engaging in activities outside of work that create a conflict of interest, or detract from your ability to perform your assigned responsibilities or meet your defined goals and objectives with Cumberland, is a problem and may lead to disciplinary action up to and including termination of employment. If you believe that you are potentially involved in a situation that could create a conflict of interest and affect your ability to adequately perform your job with Cumberland, you should inform your direct supervisor and Cumberland's Human Resources Department immediately.

14. Standards of Business Conduct and Ethics. Cumberland's commitment to a culture of integrity, ethics and compliance with the law is comprised in this policy, which will be provided to you as part of the conditions of your employment. You will have the opportunity to read, discuss and understand this policy prior to accepting and signing its Letter of Agreement.

15. Debarment. You represent and warrant that you have not been debarred and will notify the Company immediately if you are debarred, pursuant to subsection 306(a) or 306(b) of the Federal Food, Drug, and Cosmetic Act.

16. Notice. Any notice required or permitted to be given under this Agreement shall be sufficient if in writing and if sent by registered or certified mail to your residence or to the Company's principal office in the case of the Company.

17 Waiver. The waiver by either party of any provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach.

18. Entire Agreement. This Agreement contains the entire agreement of the parties and may not be changed orally, but only by an agreement in writing signed by the party against whom enforcement of any waiver, change, modification, extension, or discharge is sought.

19. Governance. This Agreement shall be governed by the laws of the State of Tennessee. Any dispute arising out of this Agreement shall be resolved, at the Company's sole option, by courts sitting in Nashville, Tennessee, and you waive any objection to such venue.

20. Enforceability. In the event that any provision of this Agreement shall be held by a court to be unenforceable, such provision will be enforced to the maximum extent permissible, and the remaining portions of this Agreement shall remain in full force and effect.

21. Survival. Notwithstanding any termination of your employment, this Agreement shall survive and remain in effect in accordance with its terms.

# # # #

This letter agreement may be signed in one or more counterparts, each of which shall be an original and all of which will constitute one and the same instrument.

Sincerely yours,

CUMBERLAND PHARMACEUTICALS INC.

/s/ A.J. Kazimi

By: A.J. Kazimi
Chief Executive Officer

Accepted as to all terms and conditions
as of the 7th of March, 2022:

/s/ Leo Pavliv

Leo Pavliv

Exhibit 10.14

March 7, 2022

Mr. John Hamm
2525 West End Avenue, Suite 950
Nashville, TN 37203
Re: Employment of John Hamm as Senior Director of Finance & Accounting & Chief Financial Officer Cumberland Pharmaceuticals Inc.

Dear John,

Effective January 1, 2022, this letter agreement (the "Agreement") will evidence the terms and conditions under which you will be employed by Cumberland Pharmaceuticals Inc. (the "Company") In consideration of your appointment as Chief Executive Officer of the Company, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Compensation. The Company agrees to compensate you as follows:

(a) The Company agrees to pay you on a salary basis for services performed based on an annual rate of one hundred and ninety-two thousand dollars ($192,000.00), payable in arrears in equal monthly installments on the 1st day of each calendar month of 2022. For each year, thereafter, you will be paid on a salary basis for services performed based on an annual rate determined by the Company in its sole discretion; provided, however, that any obligation to make payments under this Section 1(a) will cease upon termination of your employment for any reason. Notwithstanding the foregoing, nothing in this Section 1(a) alters or is intended to alter the at-will nature of your employment as described in Section 3 of this Agreement.

(b) You will be eligible to participate in any Company-wide employee benefits as approved by the Board of Directors. The terms of your eligibility and participation will be governed by the provisions of the employee benefit plans, as such plans may be amended from time to time in the discretion of the Company's Board of Directors.

(c) You may be eligible for any Company bonus program, based upon performance in meeting your individual objectives and the Company's overall performance, both as determined and approved by the Board of Directors of the Company. Any such bonus will be discretionary and will be subject to the terms of the applicable bonus program, the terms of which program may be modified from year to year in the sole discretion of the Company's Board of Directors.

(d) You will receive a grant of Cumberland Pharmaceuticals common stock, pursuant to a stock options agreement (SOA). Such shares will be subject to the SOA and the terms set forth in the incentive compensation plan under which they are awarded. You may, at the Company's sole discretion, receive additional awards of Company equity, which will be subject to their designated agreements and the incentive compensation plans under which they are awarded.

(e) Except as set forth in Section 2, the Company shall not be liable to you for any expense incurred by you unless you receive the Company's prior written consent to reimburse you for such expense.

2. Additional Payments. During the term hereof, you shall be entitled to receive prompt reimbursement for all reasonable and documented expenses incurred in the performance of services in accordance with the expense reimbursement policy of the Company. Such reimbursement policy shall require adequate documentation by you of the expenses and payment by the Company of such amounts shall be made within a reasonable period after the close of the year in which the expenses were incurred.

3. Employment at Will. This Agreement is not intended to and shall not be understood in any manner as affecting or modifying the at-will status of your employment with the Company. As an at-will employee either you or the Company may terminate the employment relationship at any time with or without cause or notice. The obligations of Sections 4, 5, 6, 7, 8, 10, 11 and 12 herein shall survive the termination of the employment relationship or of this Agreement.

4. Confidentiality. All knowledge and information, not already available to the public, which you acquire, have acquired, or will acquire in the course of your employment with the Company with respect to the Company's business, work methods, or pending regulatory matters, or other Company matters that are treated by the Company as confidential, shall be regarded by you as trade secrets, whether or not they are classifiable legally as trade secrets, and shall be treated by you as strictly confidential. Such knowledge and information shall not either directly or indirectly be used, disclosed, or made accessible to anyone by you for any purpose, except in the ordinary course of the Company's business under circumstances in which you are authorized to use or disclose such information. No disclosures of such confidential information shall be made outside of those you are authorized to make in the regular and ordinary course of your duties unless and until you receive prior written permission of the Board of Directors of the Company to make such disclosure.

5. Discoveries and Improvements. During the time that you are employed by the Company, all confidential information, trade secrets, or proprietary information and all other discoveries, inventions, software programs, processes, methods and improvements that are conceived, developed, or otherwise made by you , alone or with others, that relate in any way to the Company's present or planned business or products (collectively the "Developments"), whether or not patentable or subject to copyright protection and whether or not reduced to tangible form or reduced to practice, shall be the sole property of the Company. You agree to disclose all Developments promptly, fully and in writing to the Company. You agree to keep and maintain adequate and current dated and witnessed written records of all such Developments, in the form of notes, sketches, drawings, or reports, which records shall be promptly submitted to the Company and shall be and remain the property of the Company at all times. You agree to assign, and hereby do assign, to, the Company all your right, title and interest throughout the world in and to all Developments. You agree that all Developments shall constitute "Works for Hire" (as such are defined under the U.S. Copyright Laws) and hereby assign to the Company all copyrights, patents and other proprietary rights you may have in any Developments without any obligation on the part of the Company to pay royalties or any other consideration to you for such Developments.

6. Publication. All documents and other writings produced by you during the period of your employment, which relate to work you are doing or have done for the Company or to the business of the Company or its affiliates, shall belong to the Company. You will not publish outside of the Company any such writing without the prior written consent of the Board of Directors of the Company. You will, without further compensation, execute at any time (whether or not you are still employed by the Company) all documents requested of you relating to the protection of such rights, including the assignment of such rights to the Company.

7. Litigation. You shall notify the Company within three business days if no longer employed and immediately if still employed by the Company if you are contacted by any person relating to any claim or litigation against the Company. You shall not communicate in any manner with any person related to any claim or litigation against the Company without the prior consent of the Board of Directors of the Company unless compelled to do so by law.

8. Competition. For so long as you are employed by the Company or any Affiliate (as defined below) and for a period of one year after you cease to be employed by the Company or any Affiliate, you shall not, directly or indirectly, engage in any work or other activity--whether as owner, stockholder, partner, officer, consultant, or otherwise--involving a trademark, product, or process that, in the opinion of the Company's Chief Executive Officer, is similar to a trademark, product or process on which you worked for the Company (or any Affiliate) or obtained knowledge about while working for the Company at any time during the period of employment, if such work or other activity is then, or reasonably expected to become, competitive with that of the Company (or any Affiliate). The restriction in the preceding sentence shall not apply if you have disclosed to the Company in writing all the known facts relating to such work or activity and have received a release in writing from the Board of Directors of the Company allowing you to engage in such work or activity. The Company's Chief Executive Officer shall have sole discretion to determine whether your work or activity for another employer involves trademarks, products, or processes that are similar to trademarks, products, or processes that you worked on for the Company. Ownership by you of five percent (5%) or less of the outstanding shares of stock of any company either (i) listed on a national securities exchange, or (ii) having at least one hundred (100) stockholders shall not make you a "stockholder" within the meaning of that term as used in this paragraph. For one year after you cease to work for the Company, you will not engage in any work or activity that will cause you to inevitably disclose to anyone not employed by the Company (or an Affiliate) any trade secret or confidential information that belongs to the Company or one of its Affiliates. Nothing in this paragraph shall limit the rights or remedies of the Company arising, directly or indirectly, from such competitive employment, including, without limitation, claims based upon breach of fiduciary duty, misappropriation, or theft of confidential information. The term "Affiliate" shall mean the Company and any entity controlling, controlled by, or under common control with the Company.

9. Conflicting Contracts. You represent and warrant that you are not now under any obligation resulting from any contract or arrangement, to any person, firm, or corporation, which is inconsistent or in conflict with this Agreement. Likewise you represent and warrant that you are not now under any obligation resulting from any contract or arrangement to any person, firm, or corporation which would prevent, limit, or impair in any way the performance by you of your obligations to the Company.

10. Solicitation. After you cease to be employed by the Company (or a Company affiliate):

(a) You agree not to solicit, directly or indirectly, business related to the development or sales of pharmaceutical products from any entity, organization, or person which is contracted with the Company, which has been doing business with the Company or from which the Company was soliciting at the time of your termination, or a firm which you knew or had reason to know that the Company was going to solicit business at the time you ceased to be employed by the Company. The restriction set forth in the preceding sentence shall not apply if you have disclosed to the Company in writing all the known facts relating to such solicitation and have received a release in writing from the Board of Directors of the Company to engage in such solicitation.

(b) You agree not to solicit, recruit, hire, or assist in the hiring of any employee of the Company to work for you or another person, firm, corporation, or business.

11. Return of Documents. Upon termination of your employment for any reason, you shall immediately return to the Company all documents and things belonging to the Company. This includes, but is not limited to, trade secrets, confidential information, knowledge, data or know-how, and software containing such information, whether or not the documents are marked "Confidential."

12. Remedies. You acknowledge that in the event of breach of this Agreement by you, actual damages to the Company will be impossible to calculate, the Company's remedies at law will be inadequate, and the Company will suffer irreparable harm. Therefore, you agree that any of the covenants contained in this Agreement may be specifically enforced through injunctive relief, but such right to injunctive relief shall not preclude the Company from other remedies which may be available to it. You further agree that should you fail to keep any of the promises made by you in this Agreement, or any way violate this Agreement, the Company shall be entitled to recover all monies the Company is required to spend, including attorneys' fees, to enforce the provisions of this Agreement.

13. Best Efforts and Conflicts of Interest: You are hired with the understanding that Cumberland is your sole employer and you will provide a full-time work effort. You agree to devote your entire professional and business-related time and best efforts t\o the services required of you by the express and implicit terms of this Agreement, to the reasonable satisfaction of Cumberland in its sole and complete discretion. Engaging in activities outside of work that create a conflict of interest, or detract from your ability to perform your assigned responsibilities or meet your defined goals and objectives with Cumberland, is a problem and may lead to disciplinary action up to and including termination of employment. If you believe that you are potentially involved in a situation that could create a conflict of interest and affect your ability to adequately perform your job with Cumberland, you should inform your direct supervisor and Cumberland's Human Resources Department immediately.

14. Standards of Business Conduct and Ethics. Cumberland's commitment to a culture of integrity, ethics and compliance with the law is comprised in this policy, which will be provided to you as part of the conditions of your employment. You will have the opportunity to read, discuss and understand this policy prior to accepting and signing its Letter of Agreement.

15. Debarment. You represent and warrant that you have not been debarred and will notify the Company immediately if you are debarred, pursuant to subsection 306(a) or 306(b) of the Federal Food, Drug, and Cosmetic Act.

16. Notice. Any notice required or permitted to be given under this Agreement shall be sufficient if in writing and if sent by registered or certified mail to your residence or to the Company's principal office in the case of the Company.

17 Waiver. The waiver by either party of any provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach.

18. Entire Agreement. This Agreement contains the entire agreement of the parties and may not be changed orally, but only by an agreement in writing signed by the party against whom enforcement of any waiver, change, modification, extension, or discharge is sought.

19. Governance. This Agreement shall be governed by the laws of the State of Tennessee. Any dispute arising out of this Agreement shall be resolved, at the Company's sole option, by courts sitting in Nashville, Tennessee, and you waive any objection to such venue.

20. Enforceability. In the event that any provision of this Agreement shall be held by a court to be unenforceable, such provision will be enforced to the maximum extent permissible, and the remaining portions of this Agreement shall remain in full force and effect.

21. Survival. Notwithstanding any termination of your employment, this Agreement shall survive and remain in effect in accordance with its terms.

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This letter agreement may be signed in one or more counterparts, each of which shall be an original and all of which will constitute one and the same instrument.

Sincerely yours,

CUMBERLAND PHARMACEUTICALS INC.

/s/ A.J. Kazimi

By: A.J. Kazimi
Chief Executive Officer

Accepted as to all terms and conditions
as of the 7th of March, 2022:

/s/ John Hamm

John Hamm

Exhibit 10.15

March 7, 2022

Mr. James Herman
2525 West End Avenue, Suite 950
Nashville, TN 37203
Re: Employment of James Herman as Executive Vice President, National Accounts and Chief Compliance Officer Cumberland Pharmaceuticals Inc.

Dear John,

Effective January 1, 2022, this letter agreement (the "Agreement") will evidence the terms and conditions under which you will be employed by Cumberland Pharmaceuticals Inc. (the "Company") In consideration of your appointment as Chief Executive Officer of the Company, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Compensation. The Company agrees to compensate you as follows:

(a) The Company agrees to pay you on a salary basis for services performed based on an annual rate of two hundred and ninety-two thousand dollars ($292,000.00), payable in arrears in equal monthly installments on the 1st day of each calendar month of 2022. For each year, thereafter, you will be paid on a salary basis for services performed based on an annual rate determined by the Company in its sole discretion; provided, however, that any obligation to make payments under this Section 1(a) will cease upon termination of your employment for any reason. Notwithstanding the foregoing, nothing in this Section 1(a) alters or is intended to alter the at-will nature of your employment as described in Section 3 of this Agreement.

(b) You will be eligible to participate in any Company-wide employee benefits as approved by the Board of Directors. The terms of your eligibility and participation will be governed by the provisions of the employee benefit plans, as such plans may be amended from time to time in the discretion of the Company's Board of Directors.

(c) You may be eligible for any Company bonus program, based upon performance in meeting your individual objectives and the Company's overall performance, both as determined and approved by the Board of Directors of the Company. Any such bonus will be discretionary and will be subject to the terms of the applicable bonus program, the terms of which program may be modified from year to year in the sole discretion of the Company's Board of Directors.

(d) You will receive a grant of Cumberland Pharmaceuticals common stock, pursuant to a stock options agreement (SOA). Such shares will be subject to the SOA and the terms set forth in the incentive compensation plan under which they are awarded. You may, at the Company's sole discretion, receive additional awards of Company equity, which will be subject to their designated agreements and the incentive compensation plans under which they are awarded.

(e) Except as set forth in Section 2, the Company shall not be liable to you for any expense incurred by you unless you receive the Company's prior written consent to reimburse you for such expense.

2. Additional Payments. During the term hereof, you shall be entitled to receive prompt reimbursement for all reasonable and documented expenses incurred in the performance of services in accordance with the expense reimbursement policy of the Company. Such reimbursement policy shall require adequate documentation by you of the expenses and payment by the Company of such amounts shall be made within a reasonable period after the close of the year in which the expenses were incurred.

3. Employment at Will. This Agreement is not intended to and shall not be understood in any manner as affecting or modifying the at-will status of your employment with the Company. As an at-will employee either you or the Company may terminate the employment relationship at any time with or without cause or notice. The obligations of Sections 4, 5, 6, 7, 8, 10, 11 and 12 herein shall survive the termination of the employment relationship or of this Agreement.

4. Confidentiality. All knowledge and information, not already available to the public, which you acquire, have acquired, or will acquire in the course of your employment with the Company with respect to the Company's business, work methods, or pending regulatory matters, or other Company matters that are treated by the Company as confidential, shall be regarded by you as trade secrets, whether or not they are classifiable legally as trade secrets, and shall be treated by you as strictly confidential. Such knowledge and information shall not either directly or indirectly be used, disclosed, or made accessible to anyone by you for any purpose, except in the ordinary course of the Company's business under circumstances in which you are authorized to use or disclose such information. No disclosures of such confidential information shall be made outside of those you are authorized to make in the regular and ordinary course of your duties unless and until you receive prior written permission of the Board of Directors of the Company to make such disclosure.

5. Discoveries and Improvements. During the time that you are employed by the Company, all confidential information, trade secrets, or proprietary information and all other discoveries, inventions, software programs, processes, methods and improvements that are conceived, developed, or otherwise made by you , alone or with others, that relate in any way to the Company's present or planned business or products (collectively the "Developments"), whether or not patentable or subject to copyright protection and whether or not reduced to tangible form or reduced to practice, shall be the sole property of the Company. You agree to disclose all Developments promptly, fully and in writing to the Company. You agree to keep and maintain adequate and current dated and witnessed written records of all such Developments, in the form of notes, sketches, drawings, or reports, which records shall be promptly submitted to the Company and shall be and remain the property of the Company at all times. You agree to assign, and hereby do assign, to, the Company all your right, title and interest throughout the world in and to all Developments. You agree that all Developments shall constitute "Works for Hire" (as such are defined under the U.S. Copyright Laws) and hereby assign to the Company all copyrights, patents and other proprietary rights you may have in any Developments without any obligation on the part of the Company to pay royalties or any other consideration to you for such Developments.

6. Publication. All documents and other writings produced by you during the period of your employment, which relate to work you are doing or have done for the Company or to the business of the Company or its affiliates, shall belong to the Company. You will not publish outside of the Company any such writing without the prior written consent of the Board of Directors of the Company. You will, without further compensation, execute at any time (whether or not you are still employed by the Company) all documents requested of you relating to the protection of such rights, including the assignment of such rights to the Company.

7. Litigation. You shall notify the Company within three business days if no longer employed and immediately if still employed by the Company if you are contacted by any person relating to any claim or litigation against the Company. You shall not communicate in any manner with any person related to any claim or litigation against the Company without the prior consent of the Board of Directors of the Company unless compelled to do so by law.

8. Competition. For so long as you are employed by the Company or any Affiliate (as defined below) and for a period of one year after you cease to be employed by the Company or any Affiliate, you shall not, directly or indirectly, engage in any work or other activity--whether as owner, stockholder, partner, officer, consultant, or otherwise--involving a trademark, product, or process that, in the opinion of the Company's Chief Executive Officer, is similar to a trademark, product or process on which you worked for the Company (or any Affiliate) or obtained knowledge about while working for the Company at any time during the period of employment, if such work or other activity is then, or reasonably expected to become, competitive with that of the Company (or any Affiliate). The restriction in the preceding sentence shall not apply if you have disclosed to the Company in writing all the known facts relating to such work or activity and have received a release in writing from the Board of Directors of the Company allowing you to engage in such work or activity. The Company's Chief Executive Officer shall have sole discretion to determine whether your work or activity for another employer involves trademarks, products, or processes that are similar to trademarks, products, or processes that you worked on for the Company. Ownership by you of five percent (5%) or less of the outstanding shares of stock of any company either (i) listed on a national securities exchange, or (ii) having at least one hundred (100) stockholders shall not make you a "stockholder" within the meaning of that term as used in this paragraph. For one year after you cease to work for the Company, you will not engage in any work or activity that will cause you to inevitably disclose to anyone not employed by the Company (or an Affiliate) any trade secret or confidential information that belongs to the Company or one of its Affiliates. Nothing in this paragraph shall limit the rights or remedies of the Company arising, directly or indirectly, from such competitive employment, including, without limitation, claims based upon breach of fiduciary duty, misappropriation, or theft of confidential information. The term "Affiliate" shall mean the Company and any entity controlling, controlled by, or under common control with the Company.

9. Conflicting Contracts. You represent and warrant that you are not now under any obligation resulting from any contract or arrangement, to any person, firm, or corporation, which is inconsistent or in conflict with this Agreement. Likewise you represent and warrant that you are not now under any obligation resulting from any contract or arrangement to any person, firm, or corporation which would prevent, limit, or impair in any way the performance by you of your obligations to the Company.

10. Solicitation. After you cease to be employed by the Company (or a Company affiliate):

(a) You agree not to solicit, directly or indirectly, business related to the development or sales of pharmaceutical products from any entity, organization, or person which is contracted with the Company, which has been doing business with the Company or from which the Company was soliciting at the time of your termination, or a firm which you knew or had reason to know that the Company was going to solicit business at the time you ceased to be employed by the Company. The restriction set forth in the preceding sentence shall not apply if you have disclosed to the Company in writing all the known facts relating to such solicitation and have received a release in writing from the Board of Directors of the Company to engage in such solicitation.

(b) You agree not to solicit, recruit, hire, or assist in the hiring of any employee of the Company to work for you or another person, firm, corporation, or business.

11. Return of Documents. Upon termination of your employment for any reason, you shall immediately return to the Company all documents and things belonging to the Company. This includes, but is not limited to, trade secrets, confidential information, knowledge, data or know-how, and software containing such information, whether or not the documents are marked "Confidential."

12. Remedies. You acknowledge that in the event of breach of this Agreement by you, actual damages to the Company will be impossible to calculate, the Company's remedies at law will be inadequate, and the Company will suffer irreparable harm. Therefore, you agree that any of the covenants contained in this Agreement may be specifically enforced through injunctive relief, but such right to injunctive relief shall not preclude the Company from other remedies which may be available to it. You further agree that should you fail to keep any of the promises made by you in this Agreement, or any way violate this Agreement, the Company shall be entitled to recover all monies the Company is required to spend, including attorneys' fees, to enforce the provisions of this Agreement.

13. Best Efforts and Conflicts of Interest: You are hired with the understanding that Cumberland is your sole employer and you will provide a full-time work effort. You agree to devote your entire professional and business-related time and best efforts t\o the services required of you by the express and implicit terms of this Agreement, to the reasonable satisfaction of Cumberland in its sole and complete discretion. Engaging in activities outside of work that create a conflict of interest, or detract from your ability to perform your assigned responsibilities or meet your defined goals and objectives with Cumberland, is a problem and may lead to disciplinary action up to and including termination of employment. If you believe that you are potentially involved in a situation that could create a conflict of interest and affect your ability to adequately perform your job with Cumberland, you should inform your direct supervisor and Cumberland's Human Resources Department immediately.

14. Standards of Business Conduct and Ethics. Cumberland's commitment to a culture of integrity, ethics and compliance with the law is comprised in this policy, which will be provided to you as part of the conditions of your employment. You will have the opportunity to read, discuss and understand this policy prior to accepting and signing its Letter of Agreement.

15. Debarment. You represent and warrant that you have not been debarred and will notify the Company immediately if you are debarred, pursuant to subsection 306(a) or 306(b) of the Federal Food, Drug, and Cosmetic Act.

16. Notice. Any notice required or permitted to be given under this Agreement shall be sufficient if in writing and if sent by registered or certified mail to your residence or to the Company's principal office in the case of the Company.

17 Waiver. The waiver by either party of any provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach.

18. Entire Agreement. This Agreement contains the entire agreement of the parties and may not be changed orally, but only by an agreement in writing signed by the party against whom enforcement of any waiver, change, modification, extension, or discharge is sought.

19. Governance. This Agreement shall be governed by the laws of the State of Tennessee. Any dispute arising out of this Agreement shall be resolved, at the Company's sole option, by courts sitting in Nashville, Tennessee, and you waive any objection to such venue.

20. Enforceability. In the event that any provision of this Agreement shall be held by a court to be unenforceable, such provision will be enforced to the maximum extent permissible, and the remaining portions of this Agreement shall remain in full force and effect.

21. Survival. Notwithstanding any termination of your employment, this Agreement shall survive and remain in effect in accordance with its terms.

# # # #

This letter agreement may be signed in one or more counterparts, each of which shall be an original and all of which will constitute one and the same instrument.

Sincerely yours,

CUMBERLAND PHARMACEUTICALS INC.

/s/ *A.J. Kazimi*

By: A.J. Kazimi
Chief Executive Officer

Accepted as to all terms and conditions
as of the 7th of March, 2022:

/s/ James L. Herman

James L. Herman

FIFTH AMENDMENT TO REVOLVING CREDIT NOTE AND SIXTH AMENDMENT TO REVOLVING CREDIT LOAN AGREEMENT

THIS FIFTH AMENDMENT TO REVOLVING CREDIT NOTE AND SIXTH AMENDMENT TO REVOLVING CREDIT LOAN AGREEMENT (this "**Amendment**") is entered into as of December 31, 2021, by and between CUMBERLAND PHARMACEUTICALS INC., a Tennessee corporation ("**Borrower**"), and PINNACLE BANK, a Tennessee banking corporation (the "**Lender**").

RECITALS:

A. Borrower issued to the order of Lender that certain $12,000,000.00 Revolving Credit Note dated July 31, 2017, as amended by that certain First Amendment to Revolving Credit Note and Second Amendment to Revolving Credit Loan Agreement dated October 17, 2018 whereby among other changes the principal amount thereof was increased to up to $20,000,000.00, as amended by that certain Second Amendment to Revolving Credit Note and Third Amendment to Revolving Credit Loan Agreement dated May 10, 2019, as amended by that certain Third Amendment to Revolving Credit Note and Fourth Amendment to Revolving Credit Loan Agreement dated October 7, 2020 whereby among other changes the principal amount thereof was decreased to up to $15,000,000.00, and as amended by that certain Fourth Amendment to Revolving Credit Note and Fifth Amendment to Revolving Credit Loan Agreement dated as of October 28, 2021 (the "**Note**").

B. Borrower and the Lender entered into that certain Revolving Credit Loan Agreement dated as of July 31, 2017, as amended by that certain First Amendment to Revolving Credit Loan Agreement dated August 14, 2018, as amended by that certain First Amendment to Revolving Credit Note and Second Amendment to Revolving Credit Loan Agreement dated October 17, 2018, as amended by that certain Second Amendment to Revolving Credit Note and Third Amendment to Revolving Credit Loan Agreement dated May 10, 2019, as amended by that certain Third Amendment to Revolving Credit Note and Fourth Amendment to Revolving Credit Loan Agreement dated October 7, 2020, and as amended by that certain Fourth Amendment to Revolving Credit Note and Fifth Amendment to Revolving Credit Loan dated as of October 28, 2021 (the "**Loan Agreement**"). Capitalized terms not otherwise defined therein have the same meaning as set forth in the Loan Agreement.

C. Borrower and the Lender desire to amend the Note and Loan Agreement as provided herein.

NOW, THEREFORE, in consideration of the premises and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties hereto agree as follows:

1. The principal amount of the Note, as set forth in the upper right-hand corner and within the first paragraph of the Note, is hereby increased by $5,000,000.00 to a principal amount of u to $20,000,000.00 (the "**Increase**"). The Loan Documents are hereby generally amended to incorporate the Increase, including without limitation Section 1.1(a) of the Loan Agreement and the definition of "**Note**" set forth within Section 9.1 thereof. In connection with the Increase, the Incremental Facility described within Section 1.7 of the Loan Agreement is hereby considered exercised and deleted from the Loan Agreement on a going forward basis.

2. The Note and Loan Agreement are not amended in any other respect.

3. Borrower reaffirms the terms and provisions of the Loan Documents and agrees that such terms and provisions are valid and binding, enforceable in accordance with its terms and provisions, subject to no defense, counterclaim, or objection.

[signatures commence on following page]

ENTERED INTO as of the date first written above.

BORROWER:

CUMBERLAND PHARMACEUTICALS INC.

By: _____
A.J. Kazimi, Chief Executive Officer

LENDER:

PINNACLE BANK

By: _____
Mark D. Mattson, Senior Vice President

[Signature Page to Fifth Amendment to Revolving Credit Loan Note and Sixth Amendment to Revolving Credit Loan Agreement]

GUARANTOR ACKNOWLEDGEMENT

The undersigned Guarantor joins in the execution of this Amendment to acknowledge and agree that the guarantee of payment and performance of the obligations evidenced by the Note and Loan Agreement, as amended hereby (including the Increase), under that certain Guaranty dated as of July 31, 2017 (the "**Guaranty**"), remains in full force and effect and all obligations evidenced by the Guaranty continues to be binding upon the Guarantor.

GUARANTOR:

CUMBERLAND PHARMA SALES CORP.

By: _____
A.J. Kazimi,
President

Designation of Individual or Joint Credit - Business

Application Taken By: _____

Financial Advisor: Mark Mattson Application Date: 12/20/2021

Borrower(s) Name: Cumberland Pharmaceuticals Inc.

Application/Loan Number: 90016513 Amount applied for: $20,000,000.00

☐ Borrower is applying for individual credit in the name of the business entity/borrower only. Only the income and assets of the business entity / borrower are being relied upon in the credit decision.

☐ Borrowers are applying for joint credit.

☒ Borrower is applying for individual credit, but the income or assets of other sources are being relied upon in the credit decision such as from guarantors or cosigners.

TO BE COMPLETED BY APPLICANTS AND GUARANTORS

CLIENT ATTESTATION – DESIGNATION OF INDIVIDUAL OR JOINT CREDIT – COMMERCIAL

I agree that at the time of my original application for credit, I intended to apply in the form listed above and I instructed Pinnacle to structure the credit as listed.

Cumberland Pharmaceuticals Inc.

Type/Print Name of Entity Above

☐ Individual Borrower
☐ Guarantor
☒ Signer on Behalf of Entity
(Please indicate title above)

A.J. Kazimi

Type/Print Name Above

Signature

CEO

Title

Rev. 8/2017

Cumberland Pharma Sales Corp.

Type/Print Name of Entity Above

☐ Individual Borrower
☒ Guarantor
☒ Signer on Behalf of Entity
(Please indicate title above)

A.J. Kazimi

Type/Print Name Above

Signature

CEO

Title

Type/Print Name of Entity Above

☐ Individual Borrower
☐ Guarantor
☐ Signer on Behalf of Entity
(Please indicate title above)

Type/Print Name Above

Signature

Title

Type/Print Name of Entity Above

☐ Individual Borrower
☐ Guarantor
☐ Signer on Behalf of Entity
(Please indicate title above)

Type/Print Name Above

Signature

Title

Rev. 8/2017

OFFICE LEASE AGREEMENT

between

1600 West End Avenue Partners, LLC,
a Tennessee limited liability company

Landlord

and

Cumberland Pharmaceuticals, Inc.
a Tennessee corporation

Tenant

November 15, 2021

EXECUTION VERSION

OFFICE LEASE SUMMARY
("Lease Summary")

Effective Date: Lease Execution date

Landlord: 1600 West End Avenue Partners, LLC, a Tennessee limited liability company

Tenant: Cumberland Pharmaceuticals Inc., a Tennessee corporation

Leased Premises and Floors: 16,631 rentable square feet of space on the thirteenth floor of the Building (the "Office Space") to be approved by Landlord after review of final space plan.

Right of First Offer: As set forth in Addendum 1 attached to this Lease.

Areas of the Leased Premises (subject to the provisions of Section 1.2):

Portion	Approximate Usable Area	Approximate Rentable Area
Office Space	13,958 square feet	16,631 square feet
Totals (approx.)	13,958 square feet	16,631 square feet

Rentable Area of the Building (subject to the provisions of Section 1.2): Approximately 528,607 square feet. Exhibits F and the Leased Premises floor numbers are subject to the approximate size set forth herein

Common Area Factor (subject to the provisions of Section 1.2): 19.15%% per the final BOMA measurements

Tenant's Percentage Share: The percentage calculated by dividing the Leased Premises Rentable Area by the Building Rentable Area and multiplying the quotient by 100. If either the Leased Premises Rentable Area or the Building Rentable Area changes based on any provision of this Lease, Tenant's Percentage Share shall be recalculated by using the foregoing formula.

Initial Term: One hundred fifty-seven (157) months, *plus* the period from the Commencement Date through the end of the calendar month in which the Commencement Date occurs if the Commencement Date is not the first day of a calendar month, if applicable.

Renewal Options: Two (2) consecutive options to renew for a period of five (5) years each, subject to the terms of this Lease.

Delivery Date: As of the Commencement Date, the Leased Premises is in a condition ready for Tenant to begin construction of the Tenant Improvements (in accordance with and as defined in Exhibit F

attached hereto). If Landlord fails to deliver the other portions of the Project (i.e. the adjacent hotel and residential condominiums and Project Plaza) by May 1, 2022 (such date subject to Force Majeure as provided for in this Lease), Tenant shall have the right on thirty (30) days' notice to Landlord to terminate the Lease.

Commencement Date: The earlier of November 1, 2022 OR the date which Tenant takes occupancy of the Leased Premises OR the date which Tenant receives a temporary or permanent certificate of occupancy for the Leased Premises.

Expiration Date: The date that is the last day of the one hundred fifty-fourth (157th) full calendar month after, as applicable, either (a) the day immediately preceding the Commencement Date if the Commencement Date is the first day of a calendar month, or (b) the Commencement Date if the Commencement Date is not the first day of a calendar month.

Lease Year: Each successive period of 12 consecutive full calendar months of the Term commencing at the expiration of the Free Rent Period (as defined in Section 3.1(D) below).

Building Amenities: Garage, Fitness center and Project Plaza for use by all, retail space and adjacent hotel and residential condominium.

*** Base Rental:**

Initial Term Lease Year	Annual Base Rent Rental Per Square Foot of Rentable Area	Annual Base Rental	Monthly Base Rental
Free Rent Period (3 months)	$33.06	$0	$0
Months 4-12	$33.06	$549,820.86	$45,818.41
Year 2	$33.89	$563,566.38	$46,963.87
Year 3	$34.73	$577,655.54	$48,137.96
Free Rent Period (1 month)	$35.60	$0	$0
Year 4 (11 months)	$35.60	$592,096.93	$49,341.41
Year 5	$36.49	$606,899.35	$50,574.95
Year 6	$37.40	$622,071.84	$51,839.32
Year 7	$38.34	$637,623.63	$53,135.30
Year 8	$39.30	$653,564.22	$54,463.69
Year 9	$40.28	$669,903.33	$55,825.28
Year 10	$41.29	$686,650.91	$57,220.91
Year 11	$42.32	$703,817.18	$58,651.43
Year 12	$43.38	$721,412.61	$60,117.72
Year 13	$44.46	$739,447.93	$61,620.66
Month 157	$45.57	$757,934.13	$63,161.18

* For purposes of the foregoing schedule of Base Rental, months refer to full calendar months occurring during the Initial Term, and if the Commencement Date is not the first day of a calendar month, Base Rental for the period from the Commencement Date through the last day of the calendar month during which the Commencement Date occurs shall be determined on the basis of a proration of the amount of the Base Rental specified above for the first (1st) full calendar month of the Initial Term. Base Rental shall increase each Lease Year pursuant to the provisions of Section 3.1.

Permitted Use: Office Space dedicated to general corporate office use for Tenant's business, all consistent with a first-class, "Class A" office building.

Parking Spaces: Not less than 3.2 non-reserved parking spaces (or such greater amount as required by applicable laws and regulations) in the Garage for each 1,000 square feet of the Rentable Area of the Leased Premises (the "Base Allocation") for Tenant's employees, and within this Base Allocation, Tenant may reserve parking spaces up to three (3) parking spaces in the Garage for Tenant's employees subject to availability. The number of parking spaces and allocation shall be at Tenant's option within these limits. Standard valet parking at the Building will be available during normal business hours.

Tenant Improvement Allowance:	An amount equal to $62.00 per square foot of the Rentable Area of the Office Space (defined below), which amount includes not only construction costs, low voltage cabling, signage and construction management fees to be paid to construction manager engaged by Tenant to represent Tenant, which shall be selected by Tenant in Tenant's sole but reasonable discretion but approved by Landlord. $0.20 is not part of the Tenant Improvement Allowance but shall be paid separately by the Landlord and shall be used for a test-fit to be performed by an architect of Tenant's choice and shall be paid to Tenant regardless of whether this Lease is executed by Landlord and Tenant so long as the Tenant commissions a space plan with the architect. Landlord shall provide Tenant an additional Tenant Improvement Allowance of $423,880.40.00 (and collectively with the $62.00 per square foot allowance, the "Tenant Improvement Allowance") for a total allowance of $1,455,002.40.

Tenant's Address for	Prior to Commencement Date:

Tenant's Address for Notices:	Prior to Commencement Date:
	Cumberland Pharmaceuticals, Inc. Attn: Mr. A.J. Kazimi 2525 West End Avenue Suite 950 Nashville, TN 37203 With a copy to: Adams and Reese LLP Attn: Fred Russell Harwell 424 Church Street Suite 2700 Nashville, TN 37219 After Commencement Date: Cumberland Pharmaceuticals, Inc. Attn: Mr. A.J. Kazimi 1600 West End Avenue Suite 1300 Nashville, TN 37203 With a copy to: Adams and Reese LLP Attn: Fred Russell Harwell 424 Church Street Suite 2700 Nashville, TN 37219
Landlord's Address for Notices:	1600 West End Avenue Partners, LLC c/o Propst Development, LLC 305 Church Street, Suite 715 Huntsville, Alabama 35801 Attention: Chris Brown
Tenant's Brokers and Addresses:	None

Landlord's Broker and its Address:	Jones Lang LaSalle 1801 West End Avenue, Suite 1200 Nashville, Tennessee 37203 Attention: Bill Adair
Security Deposit:	$ $46,963.87. The deposit includes one month's Base Rent.

TABLE OF CONTENTS

Addendum and Exhibits:

OFFICE LEASE AGREEMENT

THIS OFFICE LEASE AGREEMENT (as it may be amended and/or supplemented from time to time, this "Lease") is made and entered into as of the Effective Date by and between—

(i) 1600 West End Avenue Partners, LLC, a Tennessee limited liability company (together with its successors and assigns, "Landlord"); and

(ii) Cumberland Pharmaceuticals Inc., a Tennessee corporation (together with any permitted successors and permitted assigns, "Tenant").

In consideration of the duties, covenants and obligations of each party under this Lease, Landlord and Tenant hereby agree as follows:

ARTICLE I.
LEASE SUMMARY; LEASED PREMISES AND PROJECT AREA

Section 1.1 LEASE SUMMARY. The foregoing Lease Summary comprises an integral part of the Lease. Unless the context otherwise requires, the terms set forth in the Lease Summary shall have the meanings given them therein and shall be governed and construed in accordance with the terms of the Lease.

Section 1.2 LEASED PREMISES AND PROJECT AREA. Subject to and upon the terms, provisions and conditions hereinafter set forth, Landlord does hereby lease to Tenant and Tenant does hereby lease from Landlord those certain premises more particularly described in the Lease Summary and below (the "Leased Premises" or "Premises") in the building to be known as "BroadWest" (the "Building") in Nashville, Tennessee, and to be constructed on the land (the "Land") described on Exhibit A attached hereto which is part of the development known as "BroadWest" which consists of two office buildings, parking garage, hotel and residential condominium (collectively, the "Project Facilities") (the Building, the Land, the Garage (defined below), and all additional improvements and additional facilities now or hereafter located on the Land that serve the Building or the tenants of the Building, collectively, the "Project"). "Garage" means the Building's parking garage within the Project designated by Landlord for use by tenants and visitors of the Building.

The Leased Premises is described as follows:

(i) A portion of floor 13 of the Building, consisting of approximately the amount of square feet of Rentable Area set forth in the Lease Summary, floor plans of which are attached hereto as Exhibit B-1 (collectively, the "Office Space");

(ii) Landlord agrees that the Building Amenities shall be oriented in the Building and have the access points as reflected in the drawing(s) or rendering(s) attached hereto as Exhibit B-2.

B. The parties mutually agree that the Rentable Area and Usable Area of the Leased Premises for all purposes of this Lease shall be the quantity of square footage so designated in the Lease Summary as determined by the Landlord's architect in accordance with the definitions

set forth below and with ANSI/BOMA standard Z65.1 – 2017 for measuring floor area in office buildings and using applicable common area factor(s) for single-tenant floors and multi-tenant floors (collectively, the "Applicable BOMA Standard"). Tenant, at Tenant's sole cost, shall be allowed to have its architect, engineer or other consultant review and confirm accuracy of such remeasurement. The terms "Rentable Area", "Service Areas", "General Common Areas", "Common Areas", and "Useable Area" shall have the meaning given them in the Applicable BOMA Standard. Unless the Rentable Area or Usable Area of the Leased Premises is contested by the Tenant's architect, engineer or consultant, such Rentable Area and Usable Area of the Leased Premises shall be memorialized in the Commencement Certificate (defined below). Notwithstanding the foregoing, except as set forth in the next sentence, Tenant shall have no right to an adjustment to the Rentable Area or Usable Area of the Leased Premises at any time after the date that is sixty (60) days after substantial completion of the tenant improvements to the Leased Premises. If the Leased Premises shall thereafter be enlarged or reduced by agreement of Landlord and Tenant, or if the Base Building areas shall be expanded by Landlord so as to include additional square footage, then the Landlord shall have its architect or engineer remeasure any such affected spaces using the Applicable BOMA Standard and all such areas and matters determined based on such measurements shall be correspondingly adjusted based on such remeasurement; provided, however, that in the event such remeasurement is solely due to the expansion of the Base Building areas by the Landlord, in no event shall the Rentable Area be increased as a result of such re-

measurement.

ARTICLE II.
TERM

Section 2.1 INITIAL TERM.

A. Subject to and upon the terms and conditions set forth in this Lease, the term of this Lease (the "Initial Term" and together with one or more Renewal Terms (defined below), if any, the "Term") shall commence on the Commencement Date and shall expire at 5:00 p.m. (local Nashville time) on the Expiration Date. The Initial Term of this Lease may be renewed and extended pursuant to Section 2.2 of this Lease. Notwithstanding the foregoing, Landlord agrees that (i) Tenant shall have access to the Leased Premises at least one hundred fifty (150) days prior to the Commencement Date to construct Tenant's improvements of the Leased Premises and for purposes of furniture and fixtures set-up and technology and equipment installation; during such period, Tenant shall owe no Rent, but Tenant acknowledges and agrees that all other provisions of this Lease shall be in effect and Tenant simultaneously therewith shall be responsible for all Additional Rent (defined below).

B. Within fifteen (15) days after the Commencement Date, Landlord shall submit to Tenant a certificate in the form attached as Exhibit C (the "Commencement Certificate") to confirm the date upon which the Commencement Date occurred. The Commencement Certificate may also be used to memorialize the Effective Date of this Lease. Tenant shall have twenty (20) days after receipt of the Commencement Certificate to give written notice to Landlord objecting to the Commencement Certificate, failing which Tenant shall be deemed to have agreed the Commencement Certificate is correct. If Tenant objects to the Commencement Certificate within such twenty (20)-day period, Landlord and Tenant shall work together to resolve their differences. After such differences have been resolved, Landlord and Tenant shall execute the

agreed-upon Commencement Certificate. All payments of Base Rental and all other payments of Rent (defined below) required of Tenant herein shall be made as and when required herein, notwithstanding any unresolved objections to the Commencement Certificate. All such payments shall be based upon Landlord's reasonable determination of the Commencement Date of which Landlord will notify Tenant (however, if such Commencement Date occurs as the result of Tenant's occupancy of such portion of the Leased Premises, such notice shall not be required) until such objections have been finally resolved, whereupon any overpayment or any underpayment, as the case may be, theretofore made shall be adjusted by reducing or increasing, as the case may be, the next installment of Base Rental coming due by the amount of such overpayment or underpayment, as applicable (and no interest or penalty shall be applied thereto).

Section 2.2 RENEWAL OPTION.

A. Provided that no Event of Default exists, either on the date Tenant exercises its Renewal Option (defined below) or as of the effective date of the Renewal Term (defined below) and subject to the process set forth in this section, Tenant shall have the option to extend the Term of this Lease as to all (but not part) of the Leased Premises (including any space added to the Leased Premises pursuant to express provisions of this Lease) for two (2) additional periods (a "Renewal Option") of five (5) years (a "Renewal Term"). The Renewal Option, and Tenant's tenancy under the Renewal Term, shall be subject to all of the terms and conditions contained in the Lease, except that (i) Base Rental shall be at the then-prevailing Market Rate (defined below), but not less than the Base Rental payable during the final year of the Lease Term; (ii) Landlord shall have no obligation to improve the Leased Premises; and (iii) there shall be no further option to extend the Term of the Lease beyond the Renewal Term.

B. "Market Rate" means the base rental rate at the time of such determination, after considering concessions and inducements such as tenant improvement allowances, free rent, and the like for downtown Nashville office buildings of similar age, size, quality, and location, and for leases of similar length with similar credit tenants, determined in accordance with subsection (C) or (D) below for each Lease Year of the subject Renewal Term (which may include escalations).

C. If Tenant desires to renew this Lease, Tenant shall send Landlord a preliminary written notice no later than twelve (12) months prior to the expiration of the then-existing Term (a "Renewal Notice"). Tenant and Landlord shall negotiate in good faith for no more than sixty (60) days (the "Negotiation Period") to determine and mutually agree upon the Market Rate for the Renewal Term. If Landlord and Tenant agree upon the Market Rate for the Renewal Term in writing before expiration of the Negotiation Period, then Tenant shall be deemed to have irrevocably exercised the Renewal Option as of the date of such agreement, subject to the terms and conditions set forth in this section, and Landlord and Tenant shall be irrevocably bound by their agreed-upon determination of Market Rate. Such Renewal Option exercise, subject to the terms and conditions set forth in this section, and Market Rate agreement shall be evidenced by an amendment to this Lease executed by both Landlord and Tenant within ten (10) business days after the last day of the Negotiation Period.

If, however, Landlord and Tenant are unable to agree upon the Market Rate for the Renewal Term before expiration of the Negotiation Period, then Tenant shall, within ten (10) business days

of the last day of the Negotiation Period, notify Landlord either that Tenant elects not to exercise its Renewal Option or that it irrevocably elects to exercise such Renewal Option, subject to the

terms and conditions of this section (each, an "Option Notice"). The Option Notice shall state that Tenant is irrevocably exercising its right to extend the Term pursuant to this section, and Landlord and Tenant shall be irrevocably bound by the determination of Market Rate set forth hereinafter in this section. If Tenant shall fail to deliver the Option Notice on or before ten (10) business days after the last day of the Negotiation Period, then Tenant shall have waived any right to exercise the Renewal Option. In the event Tenant timely delivers the Option Notice to Landlord, Landlord and Tenant shall each simultaneously present to the other party their final determinations of the Market Rate for the applicable Renewal Term (the "Final Offers") within twenty (20) business days following the last day of the Negotiation Period. The Final Offers do not have to be the same determinations made during the Negotiation Period. If the Market Rate reflected by the lower of the two (2) proposed Final Offers is not more than 6% below the higher, then the Market Rate shall be determined by averaging the two (2) Final Offers. If the difference between the lower of the two (2) proposed Final Offers is more than 6% below the higher, then the Market Rate shall be determined by a Baseball-Style Arbitration (defined below) in accordance with the procedure set forth in this section.

D. For purposes of this Lease, "Baseball-Style Arbitration" means the following procedure:

(i) Within twenty (20) business days after Landlord's receipt of the Option Notice, Tenant and Landlord shall each select an arbitrator ("Tenant's Arbitrator" and "Landlord's Arbitrator", respectively) who shall be a qualified and impartial person licensed in the State of Tennessee as a commercial broker with at least fifteen (15) years of experience in brokering office space in the Metropolitan Nashville-Davidson County central business district.

(ii) Landlord's Arbitrator and Tenant's Arbitrator shall name a third arbitrator, similarly qualified, within ten (10) days after the appointment of Landlord's Arbitrator and Tenant's Arbitrator.

(iii) Such third arbitrator shall, after due consideration of the factors to be taken into account under the definition of Market Rate set forth in this section and hearing whatever evidence the arbitrator deems appropriate from Landlord, Tenant and others, and obtaining any other information the arbitrator deems necessary, in good faith, make his or her own determination of the Market Rate for the Leased Premises as of the commencement of the Renewal Term (the "Arbitrator's Initial Determination") and thereafter select either Landlord's Final Offer or the Tenant's Final Offer, but no other, whichever is closest to the Arbitrator's Initial Determination (the "Final Determination"), such determination to be made within thirty (30) days after the appointment of the third arbitrator. The Arbitrator's Initial Determination, Final Determination, and the market information upon which such determinations are based shall be in writing and counterparts thereof shall be delivered to Landlord and Tenant within said thirty (30)-day period. The arbitrator shall have no right or ability to determine the Market Rate in any other manner. The Final Determination shall be binding upon the parties hereto.

(iv) The costs and fees of the third arbitrator shall be paid by Landlord if the Final Determination is Tenant's Final Offer or by Tenant if the Final Determination is Landlord's Final Offer.

(v) If Tenant fails to appoint Tenant's Arbitrator in the manner and within the time specified in this section or Market Rate is not determined for any other reason not the fault of Landlord, then the Market Rate for the applicable Renewal Term shall be the Market Rate contained in the Landlord's Final Offer. If Landlord fails to appoint Landlord's Arbitrator in the manner and within the time specified in this section, then the Market Rate for the applicable Renewal Term shall be the Market Rate contained in the Tenant's Final Offer. If Tenant's Arbitrator and Landlord's Arbitrator fail to appoint the third arbitrator within the time and in the manner

and Landlord's Arbitrator fail to appoint the third arbitrator within the time and in the manner prescribed in this section, then Landlord and Tenant shall jointly and promptly apply to the local office of the American Arbitration Association for the appointment of the third arbitrator.

E. Tenant may not assign a Renewal Option, and no sublessee or assignee of Tenant may exercise a Renewal Option except as may be expressly provided in this Lease.

F. Notwithstanding Item E above, Tenant's option shall be transferable to any Affiliated Entity as long as Landlord can assess and approve credit of the Affiliated Entity and so long as such use of such Affiliated Entity is approved by Landlord. Subleasing or assignment by Tenant shall not affect Tenant's renewal rights as long as Tenant remains obligated for the lease obligations.

Section 2.3 SURRENDER. No act by Landlord shall be deemed an acceptance of a surrender of the Leased Premises, and no agreement to accept a surrender of the Leased Premises shall be valid, unless it is in writing and signed by Landlord. At the expiration or termination of this Lease, Tenant shall deliver to Landlord the Leased Premises with all improvements located therein in good repair and condition, broom-clean, reasonable wear and tear and damage by condemnation and casualty excepted, and shall deliver to Landlord all keys and access cards to the Leased Premises and to the Garage. Provided that Tenant has then performed all of its obligations under this Section 2.3 of the Lease, Tenant shall remove all debris, trash and rubbish and attached or unattached trade fixtures, furniture and personal property placed in the Premises by Tenant and Tenant may remove any wiring or cabling placed in the Premises by Tenant; provided, however, Landlord reserves the right to notify Tenant prior to its vacating the Premises that Landlord shall retain all wiring and cable. Tenant shall repair all damage caused by such removal. All items not so removed shall, at Landlord's option, be deemed to have been abandoned by Tenant and may be appropriated, sold, stored, destroyed, or otherwise disposed of by Landlord by applicable legal process and in no event before the lapse of thirty (30) days following written notice to Tenant of Landlord's intent to dispose of for such items.

Section 2.4 HOLDING OVER. In the event of holding over by Tenant after expiration or earlier termination of this Lease, Tenant shall be deemed a month-to-month tenant-at-will (either party having the right to terminate such tenancy upon thirty (30) days' advance notice) and shall pay, as Base Rental for each month or any part thereof of any such holdover period, (i) 125% of the Base Rental which Tenant was obligated to pay for the month immediately preceding the end of the Term (*plus* Additional Rent provided for under this Lease) for months 1–3 of any such holdover period; and (ii) 150% of the Base Rental which Tenant was obligated to pay for the month

immediately preceding the end of the Term (*plus* Additional Rent provided for under this Lease) for months thereafter of any such holdover period. No holding over by Tenant after the Term shall operate to extend the Term and in all events shall not exceed six (6) months from the end of the Term. Additionally, in the event of any holding over by Tenant, Tenant shall indemnify Landlord against (i) claims for actual damages, incurred by Landlord to any other tenant to whom Landlord has leased all or any part of the Leased Premises covered hereby and (ii) reasonable attorneys' fees and other reasonable actual out of pocket costs and expenses incurred by Landlord as the result of such holding over incurred after the first month of the hold over period. Except as modified by the provisions of this section, all of Tenant's obligations and all of Landlord's rights and remedies under the Lease shall apply to any holdover period.

Section 2.5 SURVIVAL. Unless otherwise specifically set forth in this Lease, any covenant, obligation, claim, cause of action, or liability arising during the Term and under the provisions of this Lease in favor of a party hereto and against or obligating the other party hereto shall survive the expiration or any earlier termination of this Lease for a period of twelve (12) months.

Section 2.6 INTENTIONALLY OMITTED

Section 2.7 NO SUBSTITUTION. Landlord shall have no right to relocate Tenant to

Section 2.7 NO SUBSTITUTION. Landlord shall have no right to relocate Tenant to another premises in the Building or substitute the Office Space.

ARTICLE III.
RENT

Section 3.1 BASE RENTAL AND RENT PAYMENTS, GENERALLY.

A. Following the expiration of the Free Rent Period (as defined below) and continuing thereafter throughout the Term, Tenant agrees to pay Base Rental in 12 equal monthly installments in advance on the first (1st) day of each calendar month during the Term, subject to the provisions of subsection (B) below, and Tenant hereby agrees to so pay such Base Rental and all other Rent to Landlord at Landlord's address as provided herein (or such other address as may be designated by Landlord from time to time). Tenant agrees that (i) Base Rental for the first Lease Year of the Initial Term shall be as set forth in the Lease Summary and (ii) Base Rental shall increase during the Term pursuant to the provisions of this Lease (including this Section 3.1(A), and Section 2.2). Tenant agrees that, during the Initial Term, Base Rental (i) for the second Lease Year of the Initial Term shall increase by an amount equal to 2.5% of the first Lease Year's Base Rental (*i.e.*, to a new Base Rental of $563,566,.38) and (ii) for each Lease Year thereafter during the Initial Term shall increase by an amount equal to 2.5% of the prior Lease Year's Base Rental.

B. If the Commencement Date is other than the first day of a calendar month or if this Lease expires or terminates on other than the last day of a calendar month, then the installments of Base Rental and Parking Rental for such month or months shall be prorated and the installment or installments so prorated shall be paid in advance. Said installments for such prorated month or months shall be calculated by multiplying the equal monthly installment by a

fraction, the numerator of which shall be the number of days of the Term occurring during said commencement or expiration month, as the case may be, and the denominator of which shall be the number of days in said month.

C. Tenant agrees to pay all rent and other sums of money as shall become due from and payable by Tenant to Landlord under this Lease (collectively, and including sums due under Sections 3.2 and 4.7, the "Rent") at the times and in the manner provided in this Lease, without demand by Landlord, unless otherwise expressly required in this Lease and without abatement (except as may be explicitly provided in this Lease to the contrary), notice, demand, set-off, or counterclaim, except as specifically set forth in this Lease. All Rent other than Base Rental shall constitute additional rent ("Additional Rent") under this Lease, and Landlord shall be entitled to exercise the same rights and remedies provided for in this Lease for the nonpayment of any Rent. Any payment of Rent not received by Landlord within five (5) days of the date when due shall be deemed delinquent and Tenant shall pay to Landlord on demand a late charge equal to three percent (3)% of the amount of such delinquent Rent; provided, however, that, notwithstanding the foregoing (i) in the case of any payment other than monthly payments of Base Rental and of estimated Operating Expenses, no such late charge shall apply until any such delinquency is failed to be cured by Tenant within five (5) business days following the date Landlord shall deliver to Tenant notice that the amount in question is delinquent and (ii) in the case of delinquent payments of Base Rental and estimated Operating Expenses, for the first instance of delinquency during each Lease Year (and not for any subsequent instances during such Lease Year), there shall be no late charge due if Tenant shall pay the amount due within three (3) business days following Tenant's receipt of Landlord's written notice that the sum in question is delinquent. Tenant acknowledges that such late charge is not a penalty, but is to compensate Landlord for the additional administrative expenses and other expenses incurred by Landlord in handling delinquent payments (which expenses are not readily ascertainable) and is in addition to, not in lieu of, interest on late payments as provided herein and any other remedies that Landlord may have by virtue of Tenant's failure to make payments when due. All Rent owed by Tenant to Landlord under this Lease shall bear interest from the date five (5) days following the due date until payment is received at the rate (the "Interest Rate") equal to the lesser of (i) 12% per year or (ii) the maximum rate of interest per year allowed by law. In addition, in the event Tenant provides a check in payment of Rent or any other amount due under this Lease, and such check is dishonored for any reason, Tenant shall pay, in addition to any other charge or payment, a dishonored check charge in the amount of $35.00.

D. Notwithstanding anything to the contrary contained in this Lease, Tenant shall owe no Base Rental on the Premises during the first three (3) months of the Term and the first month of the fourth (4th) year of the Term (the "Free Rent Period") and shall be responsible only for Additional Rent during such time. The Free Rent Period shall commence upon the Commencement Date, and shall expire on the last day of the third (3rd) full calendar month following the Commencement Date and the last day of the first month of the fourth (4th) year of the Term.

Section 3.2 OPERATING EXPENSES.

A. In addition to Base Rental, Tenant shall pay to Landlord, as Additional Rent for each calendar year or portion thereof during the Term, Tenant's Percentage Share of the

Operating Expenses of the Building portion of the Project including Common Areas (and not the hotel and residential condominium) for the subject calendar year or portion thereof. The

Additional Rent payable pursuant to this section shall be determined and adjusted in accordance with the following:

(i) On or before the Commencement Date for the First Lease Year and thereafter, during each December of the Term, or as soon thereafter as practicable but in no event later than February 15th of the following year, Landlord shall give Tenant written notice of its estimate of Additional Rent payable under this Section 3.2 for the ensuing calendar year or portion thereof, as applicable. In the event such estimate is given after December 31 of any Lease Year, Tenant shall pay Additional Rent monthly as required under this Lease at rate previously paid until such new estimate is provided in accordance with this section. Such estimated Additional Rent shall be paid in equal monthly installments on or before the first day of each calendar month during such ensuing calendar year or portion thereof, as applicable; provided, however, that any monthly installment for less than a full calendar month shall be prorated as hereinafter provided. The foregoing notwithstanding, if such notice is not given in December, Tenant shall continue to pay monthly installments of Additional Rent required under this Section 3.2 during the ensuing calendar year on the basis of the amounts payable during the calendar year just ended until the month after such notice is given. If at any time or times it appears to Landlord that the actual amount of Additional Rent payable under this Section 3.2 for the current calendar year or portion thereof, as applicable, will vary from Landlord's estimate by more than three percent (3%), Landlord may revise, by notice to Tenant but not more often than once a year, its estimate for such year or portion, and subsequent payments by Tenant for such year or portion shall be based upon such revised estimate. Failure to make a revision contemplated by the immediately preceding sentence shall not prejudice Landlord's right to collect the full amounts of Additional Rent payable under this Section 3.2. Notwithstanding the preceding sentence, if Landlord has not provided Tenant notice of the revised Additional Rent due within twelve (12) months of the year in which such revised Additional Rent was incurred by Landlord, then Tenant shall have no liability for or obligation to pay such revised Additional Rent; provided, however, that the twelve (12) month limitation shall not apply to any amounts that are in dispute or subject to negotiation by Landlord so long as Landlord provides Tenant written notice of the occurrence of such dispute or negotiation with reasonable promptness following the inception of such dispute or negotiation.

(ii) Within one hundred eighty (180) days after the end of each calendar year for which all or any portion of which Additional Rent under this Section 3.2 is payable, Landlord shall deliver to Tenant a statement (an "Operating Expense Statement") of the adjustments to be made pursuant to this section for the calendar year just ended, together with reasonable back-up invoices, bills, or receipts as Tenant may request, and the Operating Expense Statement shall be binding upon Landlord and Tenant absent manifest error, subject to Tenant's audit rights under this section. If, on the basis of the Operating Expense Statement, Tenant owes an amount that is less than the estimated payments previously made by Tenant for the calendar year just ended or portion thereof, as applicable, Landlord shall credit such excess to the next payments of Additional Rent coming due pursuant to this Section 3.2. If the Term is about to expire, Landlord shall refund such excess to Tenant within thirty (30) days if there is then no uncured Event of Default under this Lease. In the instance of an uncured Event of Default, such excess shall be held as security for Tenant's performance, may be applied by Landlord to cure any such Event of Default, and shall not be refunded until any such default is cured. In the case that

Landlord holds such excess, Landlord shall provide written notice of the amount so held and advise Tenant in writing when and how such amount is applied or is to be applied so Tenant can maintain accurate records as to application and disposition of such funds. If, on the basis of the Operating Expense Statement, Tenant owes an amount that is more than the estimated payments previously made by Tenant for the calendar year just ended or portion thereof, as applicable, Tenant shall pay the deficiency to Landlord within thirty (30) days after delivery of the Operating Expense Statement.

(iii) If the Term commences on a day other than the first day of a calendar year or expires on a day other than the last day of a calendar year, the amount of Additional Rent payable pursuant to this Section 3.2 for such partial year shall be the product of (x) Additional

payable pursuant to this Section 3.2 for such partial year shall be the product of (x) Additional Rent that would have otherwise been payable for the full calendar year and (y) a fraction, the numerator of which is the actual number of days of the subject calendar year that are included within the subject portion of the Term, and the denominator of which is 365. The expiration of the Term shall not affect the obligations of Landlord and Tenant under this section that are to be performed subsequent to such expiration of the Term.

(iv) If during any calendar year during the Term the occupancy of Rentable Area of the Building is less than 95%, then Operating Expenses will be adjusted for such calendar year as though at least 95% of the Rentable Area of the Building had been occupied.

(v) Notwithstanding anything in this Section 3.2 to the contrary, Tenant's Percentage Share of Controllable Operating Expenses (defined below) for each of the respective calendar years shall not include the portion of such Controllable Operating Expenses that exceeds four percent (4%) of Controllable Operating Expenses incurred by Landlord, per year calculated on a cumulative compounded basis. For example, the maximum amount of Controllable Expenses that may be included in such calculation for each calendar year shall equal the product of the Controllable Expenses during the initial year and the following percentages for the following calendar years: 104% for the second calendar year; 108.16% for the third calendar year; 112.49% for the fourth calendar year, etc. without any carryover of unrecouped Controllable Expenses. Tenant's Percentage Share of Controllable Operating Expenses for the second full calendar year of the first Renewal Term (if exercised) shall not include the portion of such Controllable Operating Expenses that exceeds four percent (4%) of Controllable Operating Expenses incurred by Landlord for the first full calendar year of such Renewal Term. "Controllable Operating Expenses" are defined to be all Operating Expenses, except for real estate taxes, insurance and utilities, weather related clean-up costs (such as snow removal and wind and rain damage), and expenses incurred because of Tenant's negligent or intentional acts or omissions.

B. "Operating Expenses" means all reasonable and customary expenses and costs calculated in accordance with generally accepted accounting principles consistently applied ("GAAP") (but excluding charges separately paid by other tenants of the Project or other third parties other than through the payment of its share of operating expenses) of every kind and nature that Landlord shall pay or become obligated to pay because of or in connection with the ownership, maintenance, repair, and operation of the Project, including without duplication (but not limited to) the following:

(i) Wages, salaries, fees and all related expenses and benefits (including, without limitation, taxes, insurance and burdens and the costs incurred in providing same) of all (x) on-site personnel to the extent exclusively engaged in the operation, maintenance, repair and/or access control of the Project (and if not exclusively so engaged as may be reasonably allocated by Landlord); (y) off-site personnel, but only to the extent performing services for the Project as reasonably allocated by Landlord; and (z) personnel who provide traffic control relating to ingress and egress to and from the Garage and surrounding public streets (excluding, however, executive personnel of Landlord (but including the pro rata share of time allocated to the Project of the senior property manager, even if an executive of Landlord), employees senior to the senior property manager, and senior controller and senior engineer);

(ii) Cost of all supplies, tools, equipment and materials, whether purchased or leased, to the extent used in the operation, maintenance, repair, and/or access control of the Project;

(iii) Cost of utilities for the Project, including, but not limited to, water, sewer, waste disposal, gas and electricity, and power for heating, lighting, air conditioning and ventilating the Project; provided, however, if, and to the extent, Landlord receives any rate discount, credit, rebate or similar adjustment for any utility charges, Landlord shall reduce Tenant's

charge for such utilities by Tenant's Proportionate Share for such discount, credit, rebate or similar adjustment so Tenant's obligation is based on actual costs incurred by Landlord of such utilities for the Project;

(iv) Reasonable, market-rate fees paid to the property manager for the management of the Project and the cost of all maintenance and service agreements for the Project and the equipment therein, including, but not limited to, access control service, window cleaning, traffic control, janitorial service, trash and recycling removal and services, hardscape and landscape maintenance, and elevator maintenance; provided, however, in no event shall Tenant pay management fees in excess of an amount equal to Tenant's Percentage Share of management fees set at three percent (3%) of Project rent;

(v) Legal and accounting costs for the Project, including a reasonable allocation of off-site costs, together with the costs of annual audits of the Project operating costs by certified public accountants (excluding, however, such audits requested or necessary to comply with requirements of other tenants or required for Landlord's own compliance purposes such as may be required under Landlord's financing documents);

(vi) Cost of all commercially reasonable and/or usual and customary insurance relating to the Project, including but not limited to, fire and extended coverage insurance, rental loss or abatement insurance (which rental loss or abatement insurance relates only to fire or other casualty losses and specifically excludes insurance which pays Landlord rental lost on account of a default by a tenant in paying its rent), and casualty and liability insurance applicable to Landlord's personal property used in connection therewith, *plus* the cost of all commercially reasonable deductible payments made by Landlord in connection therewith;

(vii) Cost of service, operation, repairs, replacements, and general maintenance (excluding repairs, replacements and general maintenance paid for with proceeds of insurance or condemnation or by third parties) of the Project (including any portion thereof);

(viii) Any and all General Common Area, lighting, landscaping, water and utilities related thereto, Common Area, and Service Areas maintenance and operation costs, including Project hardscapes (including sidewalks) and landscapes, lighting, landscaping water and utilities including the approximately 62,000 square feet of plaza space identified on the Building Amenities Floor Plan attached hereto as Exhibit B-2 (as such items are identified and allocated according to the master condominium declaration for the Project);

(ix) All taxes, assessments and governmental charges (including those paid out of an escrow account on Landlord's behalf by the holders of any Encumbrance (defined below)), whether federal, state, county or municipal and whether they be by taxing districts or any Governmental Authority (defined below) presently taxing the Project or by others subsequently created, attributable to the Project or its operation and an allocation to the Project of the taxes, assessments and governmental charges for the service roads which service the Project, but excluding, however, taxes and assessments attributable to the personal property of tenants, federal and state taxes on income, franchise taxes, excise taxes, and any taxes imposed or measured on or by the income of Landlord from the operation of the Project or imposed in connection with any change of ownership of the Project; provided, however, that if at any time during the Term, the method of taxation or assessment in place as of the Commencement Date shall be so changed that the whole or any part of the taxes, assessments, levies, impositions or charges now levied, assessed or imposed on real estate and the improvements thereon shall be discontinued and as a substitute therefor, or in lieu of or in addition thereto, taxes, assessments, levies, impositions or charges shall be levied, assessed or imposed, wholly or partially, as a capital levy or otherwise, on the rents received from the Project or the rents reserved herein or any part thereof, then such substitute or additional taxes, assessments, levies, impositions or charges, to the extent so levied, assessed or imposed with respect to the Project, shall be deemed to be included within Operating Expenses. Reasonable consultation, accounting and legal fees and other fees and costs resulting from any challenge of tax assessments as reasonably allocated by Landlord also shall be included in Operating Expenses. It is agreed that Tenant will be directly responsible for ad valorem taxes on its personal property. All taxes, assessments and governmental charges described above directly or indirectly paid by the Landlord shall be included in Operating Expenses in the calendar year in which such taxes, assessments or governmental charges are levied, assessed or imposed without regard to when such taxes, assessments or governmental charges are payable; provided, however, in the case of special taxes and assessments which may be payable in installments, only the amount of each installment accruing during a calendar year shall be included in the Operating Expenses for such year;

(x) Amortization of the cost, together with reasonable interest charges, of furnishing and installing capital investment items which are for the purpose of reducing Operating Expenses or avoiding increases in Operating Expenses but only to the extent of such reduction as reasonably documented by Landlord. All such costs shall be amortized over the useful life of the capital investment items with the useful life and amortization schedule being determined in accordance with generally accepted accounting principles (in no event to extend beyond the remaining useful life of the Project);

(xi) Ongoing periodic (i.e. annually incurred) costs of licenses, permits and inspection fees related to the Project unrelated to the initial development of the Project; and

(xii) If actually maintained, reasonable, actual cost of space for an office in the Building maintained for management of the Project, to the extent such office is not included as Common Area and such cost is determined based on a fair market value rental rate.

(xiii) All costs and expenses of the Project which benefit the Project Facilities as a whole and which are used or useable by Tenant or otherwise directly benefit the Tenant shall be reasonably and equitably allocated among the Project Facilities as Landlord and as the other owners of the Project Facilities shall determine.

Anything in the foregoing provisions hereof to the contrary notwithstanding, Operating Expenses shall not, directly or indirectly, include the following:

(i) Leasing commissions, attorneys' fees, brokers' fees, costs, disbursements and other expenses incurred in connection with negotiations for leases with tenants, other occupants, or prospective tenants or other occupants of the Project, or similar costs incurred in connection with disputes with tenants, other occupants, or prospective tenants or other occupants of the Project, or similar costs and expenses incurred in connection with negotiations or disputes with consultants, management agents, purchasers or mortgagees of the Project;

(ii) Non-cash items, such as deductions for depreciation or obsolescence of the Project and the Project equipment, or interest on capital invested (except as provided in clause Section 3.2(B)(x) above);

(iii) Payments of principal and interest or other finance charges made on any debt (except as provided in clause Section 3.2(B)(x) above), and rental payments made under any ground or underlying lease or leases, except to the extent that a portion of such payments is expressly for ad valorem taxes or insurance premiums on the Project;

(iv) Costs incurred by Landlord in the sale, financing, refinancing, mortgaging, selling or change of ownership of the Project, including but not limited to, brokerage commissions, attorneys' and accountants' fees, closing costs, title insurance premiums, transfer taxes and interest charges;

(v) Costs and expenses (whether hard or soft costs) attributable to the initial design, construction, equipping and opening of the Project (including permit, license and inspection costs);

(vi) Any penalty charges or interest incurred by Landlord due to Landlord's late payment of taxes, utility bills or other amounts included in Operating Expenses, except to the extent Landlord was contesting the payment of any such item in good faith;

(vii) Allowances and other costs and expenses incurred in fixturing, furnishing, renovating or otherwise improving, decorating or redecorating space for tenants or prospective tenants of the Building, or vacant leasable space in the Building (including permit, license and inspection costs but excluding normal maintenance, repair and replacement costs);

(viii) Costs of repairs, restoration, replacements or other work occasioned by (1) fire, windstorm or other casualty of an insurable nature (whether such destruction be total or partial) and payable (whether paid or not) by insurance required to be obtained by Landlord under this Lease or otherwise paid by insurance then in effect obtained by Landlord, (2) the exercise by any Governmental Authority of the right of eminent domain, whether such taking be partial or total, (3) the gross negligence or willful misconduct of Landlord, or its agents and employees, and (4) the act of any other tenant in the Project or its agents or employees or by any third party, not a Tenant invitee;

(ix) Any costs or expenses reimbursed to the Landlord from any tenant, insurance, or third party, including without limitation, under any lease, or under any contract

and/or similar agreement with a third party such as a warranty, indemnity, bond or similar arrangement;

(x) Costs of repairing, replacing, or otherwise correcting defects (but not the cost of repair for normal wear and tear) in the initial construction of the Project;

(xi) Increased insurance premiums caused by Landlord's or any other Project tenant's extra-hazardous acts;

(xii) Advertising and promotional costs for the Project or related to the leasing of the Project;

(xiii) All amounts which would otherwise be included in Operating Expenses which are paid to Landlord or any affiliate of Landlord to the extent the costs of such services exceed the amount which would have been paid in the absence of such relationship for similar services of comparable quality rendered by persons of similar skill, competence and experience (but excluding any such amounts specifically provided for in this Lease, for which the provisions of this Lease shall control);

(xiv) Landlord's general corporate overhead relating solely to the internal organization, function and operation of Landlord and its affiliates as a business entity (as opposed to directly related maintenance, ownership and operation of the Project);

(xv) Cost of any political, charitable donations or contributions or other voluntary contributions by Landlord or its affiliate;

(xvi) Costs incurred due to Landlord's breach of this Lease or costs incurred due to the violation by Landlord of the terms and conditions of any lease of space in the Building;

(xvii) Executives' salaries and/or bonuses or perks, related compensation expenses, except as set forth above (including as allowed relative to the Project's senior property manager);

(xviii) Costs incurred in performing work or furnishing services or utilities for any tenant, whether at such tenant's or Landlord's expense, to the extent that such work or

service is in excess of any work or service or utilities that Landlord is obligated to furnish to Tenant at Landlord's expense;

(xix) Costs for improvements or services in the Building solely for the benefit of a single party other than Tenant;

(xx) Electricity for which any tenant is separately metered or submetered and pays Landlord directly or pays directly to the public service company (excepting common metered uses in addition to the separate metered usage);

(xxi) Costs for entertainment, gifts and similar gratuities;

(xxii) Costs of sculptures, paintings or other objects of art that are not permanently affixed to the Building;

(xxiii) Any costs associated with Hazardous Materials; and

(xxiv) Costs of defending or prosecuting litigation with any party, including tenants, mortgagees, or others, unless a favorable judgment would reduce or avoid an increase in Operating Expenses, or unless the litigation is to enforce compliance with Building

Rules or other standards or requirements for the general benefit of the tenants in the Building.

(xxv) Costs (excluding payment of reasonable fees for goods or services) of any overhead and profit increment paid to affiliates of Landlord for goods and services;

(xxvi) Costs of any contributions to Operating Expense reserves;

(xxvii) Costs of installing signs in or on the Project identifying the owner of the Project or other tenants occupying space within the Project; and

(xxviii) Costs of any "tap fees" (unless directly related to Tenant's use and occupancy of the Premises) or one-time lump sum sewer or water connection fees for the Property, prior to the Commencement Date.

C. Notwithstanding anything herein, in no event will Landlord have the right to collect (and if collected the right to retain) more than one hundred percent (100%) of actual Operating Expenses incurred in any calendar year. In addition, in no event shall the Tenant have any obligations to pay any amount of Operating Expenses billed more than nine (9) months after the Lease year.

D. Landlord shall keep its books, records and supporting documents in connection with the Operating Expense Statement for each calendar year for a period of at least thirty six (36) months after the expiration of such particular calendar year, and the calculation of Operating Expenses shall be in accordance with GAAP. All miscellaneous categories under such records shall have documentation to substantiate any costs included therein. If any amount under Section 3.2(A)(ii) is due by Tenant to Landlord with respect to the immediately preceding two calendar years, Tenant, at its sole cost and expense, shall have the right (to be exercised by giving written notice to Landlord within one hundred eighty (180) days after receipt of the Operating

Expense Statement for the previous calendar year) once per calendar year to audit and/or inspect Landlord's books and records with its own personnel or through the use of a licensed CPA pertaining only to items affecting Operating Expenses for such preceding calendar year(s), provided that such audit and/or inspection (i) must be commenced and concluded by December 31 of the year following the year to which any such disputed item relates (unless such delay is due, in whole or in part, to Landlord's failure to supply information in its possession or control or otherwise to cooperate reasonably with Tenant's review or audit efforts); (ii) does not unreasonably interfere with the conduct of Landlord's business; and (iii) the audit fee is not calculated on a contingency basis. Tenant will provide to Landlord a copy of any such audit and/or inspection report. Notwithstanding the foregoing, if Tenant elects to audit and/or inspect Landlord's books and records to the extent permitted above and the Operating Expenses for such calendar year do not exceed the Operating Expenses for the calendar year immediately preceding the subject calendar year by more than three percent (3%), then Landlord, in its sole discretion, may elect to furnish Tenant a copy of an audit prepared by a certified public accountant in lieu of Tenant performing the aforementioned audit and/or review. If Tenant's audit and/or inspection conducted by a licensed CPA proves Landlord's calculation of the Operating Expenses was overstated and such excess was actually paid by Tenant, then Landlord, shall credit Tenant the difference or credit same against Base Rental next coming due, or refund such amounts to Tenant if at the end of the Term. If Tenant is shown to have underpaid Landlord for any audited and/or inspected calendar year, Tenant hereby agrees to pay Landlord the difference within thirty (30) days of the completion of the audit and/or inspection. Additionally, if Tenant's audit and/or inspection conducted by a licensed CPA proves that Landlord's calculation of Operating Expenses was overstated by more than three percent (3%), then Landlord shall pay Tenant's actual reasonable audit/inspection out-of-pocket third party costs applicable to the audit/inspection of Operating Expenses for the applicable calendar year.

Section 3.3 SECURITY DEPOSIT. Concurrently with the execution and delivery of this Lease, Tenant shall deposit with Landlord a "Security Deposit" equal to one month's rent for the initial Lease Year, to be held as collateral security for the payment of Rent and for the faithful performance by Tenant of all covenants and conditions herein contained. If at any time during the Term, any of the Rent herein reserved shall be overdue and unpaid, then Landlord may, at its option, appropriate and apply all or any portion of the Security Deposit to the payment of any such overdue Rent. In the event of the failure of Tenant to keep and perform any of the terms, covenants and conditions of this Lease to be kept and performed by Tenant, then Landlord at its option may appropriate and apply all or any portion of the Security Deposit, to compensate Landlord for loss or damage sustained or suffered by Landlord due to such breach on the part of Tenant. Should the entire Security Deposit, or any portion thereof, be appropriated and applied by Landlord, then Tenant shall, upon the written demand of Landlord, forthwith remit to Landlord a sufficient amount to restore said Security Deposit to the original sum deposited, and Tenant's failure to do so within ten (10) days after receipt of such demand shall constitute a default under this Lease. If Tenant fully observes and performs every provision of this Lease to be observed and performed by Tenant, the Security Deposit, or any balance then remaining (less any amount which has been applied as permitted under this Section 3.3 shall be returned to Tenant at Tenant's last known address within ten (10) days after the later of: (a) the termination of this Lease; and (b) the date Tenant has fully satisfied Tenant's surrender obligations hereunder.

ARTICLE IV.
TENANT'S USE AND PROJECT SERVICES

Section 4.1 TENANT'S USE. The Leased Premises are to be used and occupied by Tenant for the Permitted Use and for no other purpose(s). Without limiting the generality of the foregoing, Tenant may maintain in the Leased Premises (for use by Tenant and its employees and business invitees only) a catering kitchen with coffee makers, a lounge or bar area serving alcoholic beverages, a microwave oven, a refrigerator, ice machines, and food, drink or other vending machines, subject, however, to Legal Requirements and to Landlord's reasonable approval of the location, visibility, layout, design, venting and condition of all of the foregoing, such approval not to be unreasonably withheld, conditioned or delayed. Without limiting the foregoing and notwithstanding anything to the contrary in this Lease, the Leased Premises shall not be used for any purpose set forth in Exhibit D. In all events, Tenant shall not engage in any activity which in Landlord's reasonable opinion is not in keeping with the first-class standards of the Project.

Section 4.2 NO NUISANCE AND NO VIOLATIONS OF INSURANCE COVERAGE. Without limiting any other provision of this Lease, Tenant shall (i) conduct its business and control its agents, employees, invitees, contractors and visitors in such a manner as not to create any nuisance, or interfere with, annoy or disturb any other tenant or Landlord in its operation of the Project; (ii) not occupy or use the Leased Premises, or permit any portion of the Leased Premises to be occupied or used, for any business or purpose other than that stated in Section 4.1, or for any business or purpose which is unlawful, disreputable or deemed to be extra-hazardous or which creates noxious or offensive odors emanating from the Leased Premises; and (iii) not use, operate or maintain the Leased Premises in such manner that any of the rates for any insurance carried by Landlord or any other owner or occupant of premises in the Building shall thereby be increased, or in such manner as will affect or cause a cancellation of any such insurance policy.

Section 4.3 LEGAL REQUIREMENTS; RULES OF THE PROJECT.

A. Tenant, at its sole cost and expense, shall comply with, and shall use reasonable best efforts to cause its employees, contractors, agents, customers, visitors, and invitees to comply with, (i) all Legal Requirements (defined below) relating to the use, condition or occupancy of the Leased Premises (including, without limitation, all Legal Requirements applicable to installation and maintenance of the Tenant Improvements and to Tenant's business and operations in the Leased Premises and all orders and requirements imposed by any health officer, fire marshal, building inspector or other Governmental Authority); (ii) all conditions, covenants, and restrictions and other matters of record that bind the Land and/or the rest of the Project; and (iii) the reasonable rules of the Project adopted by Landlord from time to time for the safety, care and cleanliness of the Leased Premises and the Project and for preservation of good order therein (the "Project Rules"). The Project Rules in effect on the Effective Date are attached hereto as Exhibit E. In the event of any conflict between the provisions of this Lease and the Project Rules, the provisions of this Lease shall control. "Legal Requirements" means any applicable law, statute, ordinance, order, rule, regulation, decree or requirement of a Governmental Authority (including, but not limited to, ADA), and "Governmental Authority" means the United States, the state, county, city and political subdivisions in which the Project is located or which

exercise jurisdiction over the Project, and any agency, department, commission, board, bureau or instrumentality of any of them which exercises jurisdiction over the Project.

Without limiting the provisions of the preceding paragraph, Tenant shall comply with all applicable Legal Requirements regarding health, safety, and the environment (collectively, "Environmental Laws") as relates to its use and occupancy of the Leased Premises, including the application for and maintenance of all required permits, the submittal of all notices and reports, proper labeling, training and recordkeeping, and timely and appropriate response to any Release (defined below) or other discharge of a substance governed by Environmental Laws. "Release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or

escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers and other closed receptacles).

B. Without limiting the provisions of subsection (A) above, Tenant shall not cause or permit the use (except for minimal quantities) of any substance which technically could be considered a Hazardous Material (defined below) provided (i) such substance is of a type and is held only in a quantity normally used by tenants in connection with the occupancy or operation of office space in first-class office buildings in Nashville, Tennessee (such as normal office waste, pest control products, and cleaning fluids, and with respect to automobiles parked in the Garage only, motor fuel and oil in such automobiles), (ii) such Hazardous Material does not endanger the health or safety of any person, (iii) Tenant complies with all Legal Requirements applicable to such Hazardous Material, and (iv) it is understood and agreed that with regard to such Hazardous Material, the obligations of Tenant in this section shall apply (including Tenant's obligation to clean up, remove, restore or take other remedial action with respect to any such Hazardous Material even though Tenant is permitted pursuant to this parenthetical to cause such substance to be used in the Leased Premises subject to the limitations set forth above], generation, storage, Release or disposal in or about the Leased Premises, the Building or the Project of any substances, materials or wastes subject to regulation under Environmental Laws from time to time in effect ("Hazardous Materials"), unless Tenant has received Landlord's prior written consent, which consent Landlord may withhold or revoke at any time in its sole discretion. Additionally, Tenant shall not permit to be present upon the Leased Premises, or contained in any transformers or other equipment thereon, any PCB's. "PCB" means any oil or other substance containing polychlorinated biphenyl (defined in 40 CFR 761.3). Tenant shall not permit any asbestos, or any structures, fixtures, equipment or other objects or materials containing asbestos on the Leased Premises. Tenant shall immediately notify Landlord of the presence of any Reportable Quantity (defined below) of a Hazardous Material on or about the Leased Premises. "Reportable Quantity" means an amount defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, the Federal Water Pollution Control Act, as amended, pertinent regulations thereunder or other relevant Environmental Laws.

C. Landlord (i) represents to Tenant that as of the Effective Date, Landlord has not generated, stored or disposed of Hazardous Materials in or on the Land in violation of Legal Requirements in effect at the time of such generation, storage or disposal, (ii) warrants to Tenant that no Hazardous Materials shall be generated, stored or disposed in or on the Land, Building or the Leased Premises in violation of Legal Requirements in connection with the construction of the Building and Garage, and (iii) warrants to Tenant that the Base Building and the Garage shall be constructed in compliance with the ADA and, if applicable, any similar Legal Requirement.

Section 4.4 SERVICES TO BE FURNISHED BY LANDLORD.

A. Landlord shall furnish or cause to be furnished during the Term the following standard services (the "Building Standard Services"), cost of which, based upon Tenant's Percentage Share, shall be charged to Tenant as Operating Expenses:

(i) Common-use restrooms with hot and cold water at locations provided for general use of other tenants in the Building.

(ii) Central heat and air conditioning in season through the Base Building central heating, ventilation, and air conditioning system, subject to curtailment as required by Legal Requirements. Landlord shall furnish such service to Tenant between the hours (the "Building Operating Hours") of 7:00 A.M. and 6:00 P.M., Monday through Friday, and 8:00 A.M. and 1:00 P.M. on Saturday, excluding the following holidays (or the day observed in lieu thereof by national banks): New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day (collectively, the "Holidays"). Upon request of Tenant made in accordance with the Project Rules (defined below), Landlord will furnish such service at times other than Building Operating Hours, in which event, Tenant shall pay Landlord the then-current charges incurred by Landlord to provide such services, without mark-up. As of the Commencement Date, the after-hour charge is anticipated to be $50.00 per hour per floor, with a

Commencement Date, the after-hour charge is anticipated to be $50.00 per hour per floor, with a 2.5% increase each calendar year; however, such charge is subject to the actual cost of providing such after-hours service (as reasonably documented by Landlord) and to increase by Landlord (as reasonably documented by Landlord) based upon such actual costs, from time to time.

(iii) Janitorial services on the schedules (excluding the Holidays) and covering the scope of work contained on the schedule attached hereto as Exhibit G; provided, however, if Tenant's leasehold improvements (including floor coverings) are other than Building Standard Improvements, include a lunchroom, coffee bar or other similar facility for its employees or otherwise require special or additional cleaning in excess of the Building Standard Services, Tenant shall pay the actual additional cleaning cost, if any, incurred by Landlord as the result thereof.

(iv) Sufficient electrical capacity transformed to a panel box located in the core of each floor of the Leased Premises for equipment and accessories normal for commercial office use of low electrical consumption at standard voltage (120 volts, single-phase) and lighting, mechanical, and equipment at high voltage (277 volts, single-phase) to the extent that the total demand load at 100% capacity of the foregoing does not exceed 7 watts per square foot of Usable Area (the "Building Standard Rated Electrical Design Load"). Tenant shall pay to Landlord the cost of electricity consumed in excess of the Building Standard Rated Electrical Design Load as determined by meter, or if not metered, as otherwise reasonably estimated by Landlord (with concurrence of Tenant's electrical engineers or consultants), plus any actual accounting expenses incurred by Landlord in connection with the metering thereof. Landlord or Tenant may cause the entire Leased Premises to be separately metered (at Landlord's expense), including, without limitation, the cost of installing, maintaining, repairing and replacing such meters to the extent necessary), in which event Tenant shall pay the actual cost of electricity consumed by Tenant. Should the provisions set forth in the Exhibits to this Lease differ from this subsection (iv), then the provisions included in the Exhibits shall be controlling.

(v) Tenant shall cause Tenant's electrical system serving any equipment producing non-linear electrical loads to be designed to accommodate such non-linear electrical loads. The Tenant Working Drawings (defined in Exhibit F) shall include a calculation of Tenant's fully connected design load with and without demand factors and shall indicate the number of watts of un-metered and sub-metered loads. Should Tenant's non-linear electrical load (created by equipment such as computers, servers, televisions, printers, copiers and/or other electronic devices connected to the power system) result in harmonic distortion conditions which cause any adverse effects in the Project, including but not limited to, derogation of any transformer, distribution stepdown transformer failures, overheating or melting of neutral conductors, or malfunctioning of various electronic components, Tenant acknowledges that Tenant, at Tenant's sole cost, shall be obligated to eliminate such harmonic distortion conditions and to repair any damage which results from such harmonic distortion within thirty (30) days of Landlord's written request. If Tenant fails to eliminate such harmonic distortion and repair such damage caused thereby within such thirty (30)-day period, Landlord, at its option, may make such corrections deemed necessary by Landlord to eliminate such harmonic distortion and make such repairs, and Tenant shall pay to Landlord on demand Landlord's cost thereof plus a charge equal to five (5%) of such costs for administrative cost recovery. Should the provisions set forth in the Exhibits to this Lease differ from this subsection (v), then the provisions included in the Exhibits shall be controlling.

(vi) If Tenant's electrical and mechanical equipment and lighting require electrical circuits, transformers or other additional equipment in excess of Tenant's Percentage Share of the Building's electrical or HVAC systems (such additional equipment, the "Additional Electrical Equipment"), Tenant may (at Tenant's cost, including the cost to design, install, maintain and replace the Additional Electrical Equipment (including the meters)) install the same, provided such installation is compatible with existing Building systems, will not compromise Landlord's ability to provide services to Tenant or other tenants of the Building and will not be burdensome to the Project or to Landlord, in Landlord's reasonable opinion, and Tenant shall pay all operating costs related to that requirement (including, without limitation, the cost of electricity, water or other services consumed through, or in connection with, the Additional Electrical Equipment). The method of design and installation of any Additional Electrical Equipment (including any related meter) required by Tenant shall be subject to the prior written approval of Landlord and shall be performed by Landlord at Tenant's sole cost, and if Tenant does not install such Additional Electrical Equipment as a part of the installation of the Tenant Improvements, Tenant shall additionally be obligated to pay Landlord a charge equal to five percent (5%) of such cost for the review and installation of such Additional Electrical Equipment for administrative cost recovery. Should the provisions set forth in the Exhibits to this Lease differ from this subsection (vi), then the provisions included in the Exhibits shall be controlling

(vii) Maintenance and repair of restrooms, toilets and drinking fountains available on each floor or partial floor of the Building occupied by Tenant that are provided as a part of the Base Building; the Base Building Systems; and ceiling tiles and the built-in light and plumbing fixtures in or serving the Leased Premises that are a part of the Base Building (including lighting fixture bulb replacement in all areas of the Project not leased by Tenant and all General Common Areas and Service Areas).

(viii) Perimeter access control for the Project during hours other than Building Operating Hours; provided, however, except as may result from the willful misconduct

or gross negligence of Landlord, Landlord shall have no responsibility to prevent, and shall not be liable to Tenant, its agents, employees, contractors, visitors or invitees for, losses due to theft or burglary, or for damages or injury to persons or property done by persons gaining access to the Leased Premises or the Project, and Tenant hereby, except as may result from the willful misconduct or gross negligence of Landlord, releases Landlord from all liability for such losses, damages or injury. Tenant shall cooperate fully in Landlord's efforts to maintain access control in the Building and shall follow all regulations promulgated by Landlord with respect thereto, including any access control for perimeter or General Common Areas or Common Areas as Landlord deems necessary during Building Operating Hours.

(ix) Non-exclusive multiple cab passenger elevator service to the Leased Premises during Building Operating Hours, with passenger elevator service to the Leased Premises by at least 1 cab 24 hours per day, and non-exclusive freight elevator service to the Leased Premises during Building Operating Hours with such freight elevator service available at other times upon reasonable prior notice (however, all of the foregoing shall be subject to temporary cessation for ordinary repair and maintenance and during times when life safety systems override normal Building operating systems).

(x) Window washing of the exterior and interior of all exterior windows of the Building at least once per calendar year.

B. To the extent the services described in this section require electricity, water, gas, or other utility services supplied by public utilities, Landlord's covenants hereunder shall impose on Landlord only the obligation to use its good faith, reasonable efforts to cause the applicable public utilities to furnish the same. Landlord shall not be responsible for, and shall have no liability with respect to, the quality or condition of any services provided by such public utilities.

C. There shall be no abatement or reduction of Rent if Tenant's use of all or a material part of the Leased Premises is untenantable due to any of the causes identified in subparagraphs (1) through (v) below ("Eligible Causes") that Landlord is required to provide to the Leased Premises unless such untenantability is caused by the affirmative act or negligent omission of Landlord or Landlord's employee, contractors, or agents (which, for clarification, do not include utility providers or governmental agencies or any employee or agent thereof) the Leased Premises or any portion thereof are rendered untenantable, for a period in excess of three (3) consecutive business days (which does not include Saturdays, Sundays, or holidays) occurs for more than a period thereafter, Rent, as Tenant's exclusive remedy for such affirmative act or negligent omission, shall abate until such service is fully restored. With respect to those portions of the Leased Premises that are rendered untenantable for the duration of such loss of services, Landlord shall commence corrective steps to eliminate any such interruption or discontinuance caused by such affirmative act or negligent omission promptly after having been notified of same and shall diligently and continually prosecute the cure thereof. For purposes of this sub-section, "material disruption" and "untenantable" shall mean as to any portion of the Leased Premises that Tenant cannot reasonably occupy or conduct its usual business in the Leased Premises as a result of a condition of the Leased Premises. Landlord shall provide a minimum of 72 hours' prior written notice of any planned interruption of services in connection with the repair and

maintenance of the equipment and Building systems of the Leased Premises or the Building. Should any Landlord owned equipment or machinery related to the Leased Premises break down, or for any cause cease to function properly, Landlord shall diligently and promptly repair same or cause the same to be repaired and, if Landlord shall fail to effect such repair within a reasonable time, Tenant may, at its sole option, repair same or cause same to be prepared, and, at its option (a) deduct such amount from the payment next becoming due, or (b) require Landlord to pay to Tenant on demand any expenses and costs together with interest at the highest lawful rate. In the event of an emergency or life threatening situation occurring in the Building or in or about the Project, Landlord shall notify Tenant immediately of such emergency or life threatening situation by means of alarms, sirens, intercom system or other similar means, to assist Tenant in protecting the safety of Tenant's representatives, customers, guests and invitees. "Eligible Causes shall mean (i) an

of Tenant's representatives, customers, guests and invitees. "Eligible Causes shall mean (i) an interruption of utility or mechanical services to the Premises not resulting from the affirmative negligence or misconduct or Tenant or its employees, (ii) a material impairment of access to the Leased Premises or parking areas which Tenant is entitled to use pursuant to this Lease, (iii) entry upon the Leased Premises by Landlord or Landlord's employees, agents or contractors not permitted by this Lease (iv) repairs, maintenance or other work required to be made to the Leased Premises or Building which are the responsibility of Landlord under this Lease or which otherwise are performed by or on behalf of Landlord, (v) Landlord's failure to conduct repairs, maintenance or other work required to be made to the Leased Premises or Building which are the responsibility of Landlord under this Lease or which otherwise are performed by or on behalf of Landlord.

Section 4.5 KEYS AND LOCKS. Landlord shall provide Tenant, without charge, with two (2) keys for each corridor entering the Leased Premises and up to seventy (53) access cards (collectively, the "Access Equipment"); provided, however, that the number of access cards which shall be activated and outstanding at any one time shall be limited to those cards issued to employees who have registered with the Landlord as full or part-time employees of the Tenant. Such number shall be increased or decreased up to a maximum set forth in this section as necessary to accommodate the number of such employees of Tenant, from time to time, at the Leased Premises. Additional Access Equipment may be provided, from time to time, on an order signed by Tenant, at a charge by Landlord equal to the cost of such Access Equipment, plus an additional charge of 5% of such cost for administrative cost recovery.

All such Access Equipment shall remain the property of Landlord. No additional locks shall be allowed on any door of the Leased Premises, except for locks on interior Tenant files and lockers, and Tenant shall not make or permit to be made any duplicate Access Equipment, except those furnished by Landlord. Upon termination of this Lease, Tenant shall surrender to Landlord all Access Equipment to the Leased Premises and give to Landlord the keys and/or combination for all locks for safes, safe cabinets and vault doors, if any, remaining in the Leased Premises after Tenant vacates the Leased Premises.

Section 4.6 TELECOMMUNICATIONS.

A. The following definitions are applicable to this section:

(i) "Telecom Equipment" means telephone, data cabling lines, internet and any other communications equipment, all Connections (as defined below) and any technological evolution or replacement thereof.

(ii) "Connections" means any wires, cables, fiber optic lines, antennas, switches and other equipment or infrastructure located in the Building, but outside the Leased Premises, that are installed by or on behalf of Tenant for, or related to, the operation of other Telecom Equipment. All Connections are also Telecom Equipment.

(iii) "Telecom Provider" means a provider of Telecom Equipment or services using Telecom Equipment.

(iv) "Telecom Services" means services provided by a Telecom Provider using Telecom Equipment.

(v) "Wi-Fi" is a registered name by the Wi-Fi Alliance. It is short for wireless fidelity, which is a term developed by the Wi-Fi Alliance to describe wireless local area network products that are based on the Institute of Electrical and Electronics Engineers ("IEEE") 802.11 standards.

(vi) "WiMax" is short for worldwide interoperability for microwave access, and refers to the IEEE 802.16 standard to provide a wireless coverage without a direct line of sight to a base station.

B. Tenant may not use the services of a Telecom Provider whose equipment is not then-servicing the Building or who is not otherwise reasonably acceptable to Landlord, nor may Tenant require or request that a Telecom Provider materially expand the Telecom Services or Connections it currently provides or has provided in or to the Building, without first securing the prior written approval of Landlord, which approval will not be unreasonably withheld, conditioned or delayed. Without limitation of the foregoing, it will be reasonable for Landlord to refuse to give its approval with respect to a new Telecom Provider, or the material expansion of the Telecom Services or Connections provided by or installed by an existing Telecom Provider in the Building, if Landlord reasonably determines that there is insufficient space in the Building for the placement of the Telecom Provider's Telecom Equipment. Tenant's Telecom Provider must execute and deliver to Landlord a license agreement in form satisfactory to Landlord regarding the installation and/or operation of the Telecom Provider's Telecom Equipment in the Building and outside the Leased Premises prior to such Telecom Provider commencing any installation or other work in the Building. Landlord will bear no responsibility for (and the Commencement Date will not be affected by) delays in installing Telecom Equipment resulting from failure of Tenant's Telecom Provider to execute and deliver such agreement to Landlord prior to the commencement of any installation or other work in the Building. Both Tenant and its Telecom Provider(s) will comply with all reasonable rules, regulations and requirements of Landlord regarding use of the existing Building conduits and pipes or use of contractors.

Notwithstanding the provisions of the immediately preceding paragraph of Section 4.6B, provided Landlord has received all reasonably required information concerning Tenant's proposed Telecommunications facilities to be installed in the Leased Premises (or elsewhere) by February 1, 2022, the Landlord shall use its reasonable best efforts within fifteen (15) days thereafter to approve the Tenant's preferred Telecom Provider, the Telecom Provider's Telecom Equipment, all Connectors and Telecom Services desired by the Tenant.

C. Tenant will not use any Telecom Equipment (other than usual and customary mobile telephones, customary Wi-Fi internet technology and wire-based telephone and internet technology), including WiMax systems, antennae and satellite dishes, within the Leased Premises and/or within or on the Building without Landlord's prior written consent. Such consent shall not be unreasonably withheld, conditioned or delayed, except reasonable conditions may be imposed so as to protect Landlord's financial interests and the interests (including efficient function and aesthetics) of the Building. To the extent that Tenant installs a Wi-Fi network serving the Leased Premises, Tenant will be solely responsible for securing such network against unauthorized use, and Tenant waives any claim against Landlord arising out of any unauthorized use by any party. If such Wi-Fi network causes any interference with the networks or other activities of other tenants or occupants of the Building, promptly after Tenant is aware of such interference, Tenant will take reasonable steps to eliminate such interference. Tenant shall not install any equipment on the Building's roof; provided, however, should Tenant ever want to install any equipment on the Building's roof, Tenant shall request Landlord's permission to install such equipment. Landlord, in its sole discretion, shall either permit or deny such request.

D. Tenant or Tenant's Telecom Provider will provide Landlord with plans and specifications of the installation, modification or removal of the applicable Telecom Equipment, and Landlord will have approved such plans and specifications, before any installation, modification or removal of such Telecom Equipment commences. Within thirty (30) days after installation, modification or removal of any Telecom Equipment, Tenant will, at its expense, prepare or have prepared and delivered to Landlord reproducible as-built plans and drawings (in form and detail reasonably satisfactory to Landlord) of the location of all Telecom Equipment serving the Leased Premises and located in the Building.

E. Tenant acknowledges and agrees that all Telecom Equipment installed and used solely for and by Tenant will be obtained, installed, maintained, repaired, replaced and removed at the sole expense of Tenant, provided, however, that Tenant shall have the right to apply a portion of the tenant improvement allowance to low voltage cabling and other expenses arising from installer's Telecom Equipment provided Landlord approves such allocation. Unless Landlord otherwise requests or consents in writing, all of Tenant's Telecom Equipment (other than any Connections) will be and remain solely in the Leased Premises in accordance with any reasonable and consistently applied rules and regulations adopted by Landlord from time to time. Except as caused as a result from the willful misconduct or gross negligence of Landlord, Landlord will have no responsibility for the operation, maintenance, repair or replacement of Tenant's Telecom Equipment, including, without limitation, Tenant's Connections. Tenant agrees that, to the extent any Telecom Services are interrupted, curtailed or discontinued, Landlord (except in the instance of Landlord's misconduct or negligence) will have no obligation or liability with respect thereto, and it will be the sole obligation of Tenant at its expense to obtain substitute Telecom Services. No approval by Landlord under this section will be deemed any kind of warranty or representation by Landlord, including, without limitation, any warranty or representation as to the suitability, competence or financial strength of any Telecom Provider or the quality or fitness for any particular purpose of any Telecom Equipment or Telecom Services. Landlord does not make, and expressly disclaims, any representation, warranty or endorsement regarding or relating to any Telecom Provider, Telecom Services or Telecom Equipment. Tenant shall be responsible for the security of its network and all data available thereon, and except as caused as a result from the willful misconduct or gross negligence of Landlord, Landlord disclaims all responsibility and liability

therefor and makes no representation or warranty with respect to the extent or efficacy of any Telecom Equipment or Telecom Services.

F. Landlord shall not have the right to interrupt Tenant's Telecom Services or disable Tenant's Telecom Equipment, except in the event of emergency or in a non-emergency situation only following three (3) business days prior notice and with Tenant's consent not to be unreasonably withheld, conditioned or delayed as reasonably necessary in connection with repairs to the Building or installation of Telecom Equipment for other tenants or occupants of the Building provided that Landlord shall take all reasonable steps to minimize the extent and duration of any such interruption. In the event of an emergency, in which case Landlord will provide Tenant as much advance notice as reasonably possible. Landlord will exercise commercially reasonable best efforts to perform any scheduled interruptions during non-business hours.

G. In the event that Telecom Equipment, including, without limitation, wiring, cabling or satellite and antenna equipment of any type installed by or at the request of Tenant within the Leased Premises, on the roof or elsewhere within or on the Building causes interference to equipment (including Telecom Equipment) used by another party, Tenant will be responsible for, and indemnify and defend Landlord against, all liability caused by Tenant (but not to the extent caused by the willful misconduct of Landlord or gross negligence of Landlord) related to such interference. Tenant will use reasonable efforts, and will cooperate with Landlord and other parties, to promptly eliminate such interference. In the event that Tenant is unable to eliminate such interference, Tenant will substitute alternative equipment. If such interference persists after such alternative equipment is installed, Tenant will discontinue or otherwise appropriately limit the use of its Telecom Equipment as necessary to discontinue such interference, and, at Landlord's discretion, remove such Telecom Equipment according to specifications required by Landlord. Landlord covenants that each and every tenant lease in the Building shall contain covenants related to interference arising from Telecom Equipment substantially similar to Tenant's covenants, for the benefit of Tenant.

H. Prior to the expiration or earlier termination of the Term or promptly thereafter, Tenant will remove any and all Telecom Equipment (except that Tenant shall not be required to remove cabling) installed in the Leased Premises or elsewhere in the Building by or on behalf of Tenant, including all Connections once the Telecom Equipment is no longer in use. At Tenant's sole cost, if Tenant fails to remove such equipment, and if Landlord so elects, but only following fifteen (15) days' written notice to Tenant, Landlord may perform such removal at Tenant's sole cost, with the reasonable actual cost thereof to be paid to Landlord as Additional Rent. Landlord will have the right, however, upon written notice to Tenant, given prior to the expiration or earlier termination of the Term, to require Tenant to abandon and leave in place, without additional payment to Tenant or credit against Rent, any and all Connections or selected components thereof, whether located in the Leased Premises or elsewhere in the Building. The terms and conditions of this subsection (H) will survive expiration or earlier termination of this Lease.

Section 4.7 PARKING.

A. At all times during the Term, Tenant may elect to lease (subject to the terms hereinafter set forth) parking rights in an amount up to the Base Allocation (as set forth in the

Lease Summary) twenty-four (24) hours a day / seven (7) days a week (collectively, the "Parking Permits"), and Landlord shall furnish such elected Base Allocation parking rights or portion thereof as elected. Except as expressly set forth herein, no specific spaces in the Garage are to be assigned to Tenant, but Landlord will issue to and as requested by Tenant the aforesaid number of Parking Permits (in the form of parking stickers, placards, and/or cards) authorizing parking in the Garage for a single vehicle per Parking Permit. Landlord may provide any reasonable means of identifying and controlling vehicles authorized to be parked in the Garage and may designate the area within which each such vehicle may be parked, and Landlord, except as expressly set forth herein, may change such designations from time to time, provided such changes are consistently applied to all tenants at the Project. Notwithstanding any term or provision of this Lease to the contrary, Parking Permits shall not be assigned or sublet by Tenant or by any Permitted Transferee

contrary, Parking Permits shall not be assigned or sublet by Tenant or by any Permitted Transferee (defined below) or other assignee or sublessee permitted by Landlord under this Lease independent of Tenant's leasehold interest under this Lease.

B. Against the Base Allocation, Tenant may reserve up to a total of three (3) parking Spaces in the Garage for Tenant's employees (the "Reserved Parking" or "Reserved Parking Spaces"). The initial allocation of total Parking Permits shall be chosen by Tenant in advance of the Commencement Date (and if Tenant fails to do so, Tenant shall initially have no Reserved Parking), but Tenant may change its number and allocation of Parking Permits, subject to the limits of this section, upon no less than sixty (60) days' advance written notice to Landlord; provided, however, that Tenant shall only be required to provide ten (10) business days' advance written notice to Landlord in order to increase or decrease its number of Parking Permits related to the onboarding or off-boarding of employees. For clarification, in no event shall the total number of Parking Permits available to Tenant (and Tenant's employees, agents, visitors and invitees) exceed the Base Allocation.

C. In addition to the Reserved Parking Spaces described in Subsection B above, Tenant and its clients or customers shall also be allowed access to and use of parking spaces in a dedicated area of the parking plaza serving the Project in common with other retail tenant(s) of the Building on terms no less favorable than other such retail tenants. Landlord shall also engage a commercial parking valet service to provide valet parking services for Tenant's clients, customers or other guests in common with other tenants and/or occupants of the Building and/or Project, such valet parking to be available to Tenant's customers on terms no less favorable than terms provided to any other tenants or occupants of the Building and/or Project.

D. As rental for the Parking Permits ("Parking Rental"), Tenant covenants and agrees to pay Landlord, as Additional Rent hereunder, $115 for non-reserved parking per Parking Permit per month during the first calendar year of the Initial Term, and $175 per Parking Permit for Reserved Parking spaces per month during the first calendar year of the Initial Term. Parking Rental may be adjusted periodically after the first calendar year of the Initial Term as determined by the Manager of the Parking Garage. Tenant may convert up to five (5) of its non-reserved Parking Permits to not more than five (5) Reserved Permits. Parking Rental rates (including for Reserved Parking) set forth herein are inclusive of applicable taxes and shall be payable monthly in advance on the first day of each and every month during the Term, and a pro rata portion of such sum shall be payable for any partial calendar month in the event this Lease commences (or ends) on a date other than the first (or last) day of a calendar month. Tenant's obligation to pay the

Parking Rental shall be considered an obligation to pay Rent for all purposes hereunder and shall be secured in like manner as is Tenant's obligation to pay Rent.

E. Landlord's providing of parking in accordance with this Section 4.7 is a material inducement for Tenant's execution and performance of this Lease, and Tenant reserves all rights and remedies available to it at law or in equity in the event such parking is not provided for Tenant.

F. Landlord or the operator of the Garage may make, modify and enforce reasonable rules and regulations relating to the parking of vehicles in the Garage so long as such rules and regulations do not materially impair Tenant's parking privileges described in this Section 4.7, and Tenant shall abide by such rules and regulations and shall cause its employees, agents, invitees, and visitors to abide by such rules and regulations. Additionally, Landlord reserves the right to alter the size of the Garage, provided that such alterations do not decrease the number of Parking Permits Landlord is obligated to provide to Tenant in the Garage and, provided further, that such changes do not materially impair Tenant's parking privileges described in this Section 4.7.

Section 4.8 PEACEFUL ENJOYMENT. Tenant shall, and may peacefully have, hold and enjoy the Leased Premises, and the other rights provided for Tenant under this Lease, subject

to the other terms hereof, provided that Tenant pays the Rent and performs all of Tennant's covenants and agreements contained in this Lease and no Event of Default has occurred beyond all applicable notice and cure periods in the Lease, and Landlord agrees to defend such title to Tenant's interest in the Leased Premises as to any person lawfully claiming the same by, through or under Landlord, but not otherwise. It is understood and agreed that this covenant and any and all other covenants of Landlord contained in this Lease shall be binding upon Landlord and its successors only with respect to breaches occurring during its and their respective ownerships of Landlord's interest hereunder.

Section 4.9 RIGHTS RESERVED BY LANDLORD. Tenant shall permit Landlord and its agents and representatives to enter into and upon any part of the Leased Premises upon at least 24 hours advanced written notice at all reasonable hours (except for emergencies and Tenant approved routine cleaning as set forth in Exhibit "G" for which such entry may be made at any time and without notice) to inspect the same, clean or make repairs, alterations or additions thereto, fulfill any other obligations under this Lease, to avail itself of remedies for an Event of Default, and to show the same to prospective tenants (but as to prospective tenants, only during the last 3 months of the Term), mortgagees, and purchasers as Landlord may deem necessary or desirable. Landlord shall comply with Tenant Security Requirements, as set forth in Section 9.3, below. Additionally, Landlord shall have the right, from time to time, upon at least 24 hours advanced written notice and without unreasonable interference with Tenant's use of the Leased Premises, to decorate, to make repairs, alterations, additions, changes or improvements, whether structural or otherwise, in and about the Project, or any part thereof other than the Leased Premises, and to enter upon the Leased Premises to the extent necessary for such purposes. Landlord shall then, at its sole cost and expense, repair and restore the Project and any affected portion of the Leased Premises to the same condition as existed prior to such work. Landlord shall have the right to alter or relocate entrances, passageways, doors, corridors, elevators, stairs, rest rooms, or other Project common areas, provided such changes shall not have a material detrimental impact, as determined

by Tenant, upon its use and occupancy of the Leased Premises, and during the continuance of such work, to temporarily close doors, entryways, public space and corridors in the Building, provided that in all events Tenant shall have at least one access point to the Leased Premises on all floors of the Leased Premises. Tenant shall not be entitled to any abatement or reduction of any sums due under this Lease by reason of the foregoing activities, nor shall such activities be construed to be an eviction of Tenant, a default by Landlord hereunder, or a breach of the covenant of quiet or peaceful enjoyment.

Section 4.10 NAME OF BUILDING AND PROJECT. Tenant shall not use the name of the Building or the Project for any purpose whatsoever, except to identify the location of the Leased Premises in Tenant's address. Landlord shall have the right to change the name of the Building and/or the Project, provided, however, in no event shall the name of the Building and/or Project nor any signage on the exterior of the Building be used to advertise or otherwise promote a Restricted Use as described in Section 2.6 hereof.

ARTICLE V.
IMPROVEMENTS, MAINTENANCE AND REPAIR, ALTERATIONS, AND SIGNAGE

Section 5.1 INITIAL LEASEHOLD IMPROVEMENTS. Tenant, at Tenant's sole cost and expense (subject to the Tenant Improvement Allowance), shall begin construction and installation of the Tenant Improvements pursuant to the provisions of Exhibit F immediately following the Delivery Date. Landlord and Tenant agree to comply with all of the terms and provisions of Exhibit F, including, without limitation, the obligation of Tenant to pay, as Additional Rent, all amounts due Landlord thereunder according to the payment procedures contained therein. The Tenant Improvements, once made, shall be and become Landlord's property, except, for the avoidance of doubt, the Tenant Improvements, for purposes of this Section 5.1, shall not include Tenant's equipment, personal property, furniture, furnishings, trade fixtures, computers, and information technology equipment.

Section 5.2 MAINTENANCE, REPAIRS AND REPLACEMENT BY LANDLORD. Landlord shall keep, maintain, repair, replace and renovate, as necessary, the Land, Base Building, Garage, Building Standard Improvements (including Building Standard components in the Leased Premises, as well as Service Areas, General Common Areas and/or Common Areas) and all hardscaping, landscaping and other improvements and betterments located on the Land in good, clean and sanitary order and repair and condition consistent with First Class Standards at all times during the Term and otherwise in a fashion consistent with or exceeding similar Class A+ office developments in the Metro-Nashville Davidson County Central Business District; provided however, in no event shall the foregoing require Landlord to install new facilities or building components or systems or reconfigure, reconstruct or replace any building components or systems due to changes in technology or standards after the date of this Lease.

"Base Building" means the Building Structural Components (defined below) and the Base Building Systems (defined below) and specifically excludes any improvements or alterations to the Building installed by or at the request of any tenant (including Tenant) or other occupant of the Building and any leasehold improvements installed in space leased or held for lease in the Building. "Building Structural Components" means the Building's foundation, exterior walls and structural elements and members, basic concrete floor on each floor, exterior windows, curtain

wall, glass and mullions, elevators and stairs, roof and roof membrane. "Base Building Systems" means the sprinkler systems serving the Building and Leased Premises, mechanical, heating, air-

conditioning, electrical, security fire/life safety, interior lighting for common areas and exterior lighting for building and plumbing systems (water and sewage) of the Base Building. All leasehold improvements in the Leased Premises, other than the Base Building improvements, (the "Building Standard Improvements"), which Building Standard Improvements shall be reflected in the Base Building Specifications, will be maintained by Tenant or, at Tenant's request, by Landlord at Tenant's expense which shall be an amount equal to Landlord's actual and reasonable cost plus an additional charge of five percent (5%) of such cost for administrative cost recovery.

Section 5.3 DAMAGE TO PROJECT. Subject to the provisions of Section 6.3, at Tenant's own cost and expense, and by use of a contractor or contractors approved in writing by Landlord (such approval not to be unreasonably withheld, conditional or delayed), Tenant shall repair or replace, in accordance with all Legal Requirements, any damage or injury (other than reasonable wear and tear) done to the Leased Premises or any other portion of the Project caused by Tenant or Tenant's employees, contractors, agents, invitees, or visitors, which repairs or replacements must be made to the same or as good a condition as existed prior to such injury or damage; provided, however, Landlord, at its option, but only following seven (7) business days' written notice to Tenant excluding emergencies, may make such repairs or replacements, and Tenant shall repay Landlord on demand the actual and reasonable cost thereof (plus a charge equal to ten percent (10%) of such costs for administrative cost recovery, in such case Landlord shall submit evidence of such costs to Tenant); further provided, however, if the repairs or replacements are to be made to the Leased Premises and do not affect the Base Building or the Base Building Systems or do not endanger persons or property, Landlord, at its option, shall only be permitted to make such repairs or replacements as provided above if Tenant fails to complete such repair or replacement within thirty (30) days after written demand from Landlord or such longer period as is reasonably necessary to complete such repair or replacement so long as Tenant commences such repair or replacement within such thirty (30)-day period and diligently and continuously thereafter proceeds with such work.

Section 5.4 ALTERATIONS, ADDITIONS, AND IMPROVEMENTS.

A. Subsequent to and separate and apart from the initial Tenant Improvements (other than minor cosmetic changes such as new paint or sign repairs), Tenant shall neither make nor allow to be made any alterations, physical additions or improvements in or to the Leased Premises, or place signs on or in the Leased Premises which are visible from outside the Leased Premises, without first obtaining the prior written consent of Landlord. Notwithstanding the foregoing, Landlord's consent shall not be unreasonably withheld, conditioned or delayed for alterations, physical additions or changes to the Leased Premises provided such alterations, physical additions or changes (i) do not detrimentally affect the Building structural, mechanical, electrical, plumbing, heating, ventilating, air conditioning, life safety or other Base Building components or Base Building Systems, (ii) are not visible from the exterior of the Leased Premises or the Building, (iii) do not affect the exterior of the Building, (iv) do not affect the structure of the Building or any public areas of the Project, (v) do not violate any provision of this Lease, (vi) do not violate any Legal Requirements, (vii) will not interfere with the use and occupancy of any other portion of the Project by any other tenant or occupant of the Project, (viii) are constructed in a good and workmanlike manner using first-class construction materials and in accordance with

this Lease, and (ix) when completed, will not cause the Leased Premises to be unsuitable for general office use.

If Landlord consents to any alterations, improvements, or additions, or placement of signs, (i) Tenant shall deliver to Landlord at least fifteen (15) days prior to commencement of construction, and in all events prior to awarding a construction contract relating thereto, copies of then-current plans and specifications of such alterations, improvements, or additions or placement of signs and (ii) Landlord may impose such conditions with respect thereto as are commercially reasonably, including without limitation, requiring Tenant to furnish Landlord with insurance against liabilities which may arise out of such work, plans and specifications, and permits for such work. Tenant shall furnish to Landlord any documents and information within Tenant's possession

work. Tenant shall furnish to Landlord any documents and information within Tenant's possession or control requested by Landlord in connection with the exercise of its rights hereunder. Landlord may hire outside consultants to review such documents and information furnished to Landlord, and Tenant shall reimburse Landlord for the reasonable cost thereof, upon demand. Notwithstanding the foregoing or anything in this Lease to the contrary, Tenant shall not make any alterations, physical additions or improvements to the common corridors, "Service Areas", "General Common Areas" or "Common Areas" (each as defined in the Applicable BOMA Standard) without the prior written consent of Landlord, which consent may be withheld in Landlord's sole discretion.

B. Without limiting the provisions of Exhibit F, the work necessary to make any permitted alterations, improvements, or additions to the Leased Premises shall be done at Tenant's expense by contractors chosen by Tenant and reasonably approved in writing by Landlord (each such contractor hereinafter referred to as an "Outside Contractor"). All work performed by an Outside Contractor shall be performed in a good and workmanlike manner and in compliance with all Legal Requirements, Landlord's requirements set forth in Exhibit F, and all applicable Project Rules. Tenant shall give Landlord at least ten (10) days' prior written notice before the commencement of any work pursuant to this section. Additionally, it shall be Tenant's responsibility to ensure that the Outside Contractor shall (i) conduct its work in such a manner so as not to unreasonably interfere with any other construction occurring on or in the Project or with the transaction of business in the Project; (ii) comply with such reasonable rules and regulations applicable to all work being performed in the Project as may be promulgated from time to time by Landlord; and (iii) maintain such insurance in full force and effect as may be reasonably requested by Landlord or as required by Legal Requirements; and (iv) be responsible for reaching a commercially reasonable agreement with Landlord as to any other usual and customary terms and conditions for conducting its work. As a condition precedent to Landlord's approving the Outside Contractor pursuant hereto, Tenant and the Outside Contractor shall deliver to Landlord such assurances or instruments as Landlord may reasonably require to evidence the Outside Contractor's compliance or agreement to comply with the provisions of clauses (i), (ii) and (iii) of this subsection (B). Landlord retains the right to make periodic inspections to assure conformity of the work of the Outside Contractor with the aforementioned rules and regulations and with the plans and specifications approved by Landlord. Within thirty (30) days after substantial completion of any work by Tenant involving more than $150,000 or more than 5% of the Rentable Area of the Leased Premises in each instance, Tenant, at Tenant's cost and expense, shall furnish Landlord "as-built" drawings (which drawings shall be provided in both tangible form and electronic form, such as computer-aided design and drafting drawings) of such work and shall cause the architect(s) and/or engineer(s) that performed services in connection with the work to

prepare a report, certifying that the work constructed by any Outside Contractor materially complies with the plans and specifications therefor as previously approved by Landlord. Each Outside Contractor shall not perform and, upon the request of Landlord, (whether written or oral however, Landlord agrees that such request shall be in writing to the extent practicable under the circumstances and provided failure to notify contractor immediately will not result in damage to person or property), shall either (i) cease to perform any activity that is disruptive to the conduct of business within the Project or other tenants or occupants of the Project or (ii) alter its method of performance of such activity as reasonably possible to ameliorate the disruption affect to the Project and other tenants.

Notwithstanding the foregoing, Landlord's consent shall not be required for any cosmetic, decorative or other non-structural alterations or improvements which Tenant intends to make to the interior of the Leased Premises, including, without limitation, power and cabling to work stations, carpet replacement and painting, which do not exceed a cost of $100,000.00 in any lease year or $1,000,000.00 in the aggregate for the Term, and which do not require the issuance of a building permit; provided, however, Tenant shall notify Landlord in writing thirty (30) days prior to commencing any such alterations or improvements. Landlord shall have the right to reasonably inspect and review Tenant's work on a periodic basis to insure compliance with this provision.

C. Except as may otherwise be agreed by Landlord in writing at the time of

C. Except as may otherwise be agreed by Landlord in writing at the time of Landlord's granting its consent, all such work, including additions, fixtures and improvements (but excluding moveable office furniture and equipment and other personal property of Tenant) made or placed in or upon the Leased Premises by either Tenant or Landlord shall be and become Landlord's property at the termination of this Lease by lapse of time or otherwise, all without compensation or payment to Tenant.

D. Subject to Tenant's rights to contest liens filed against the Leased Premises or the Project as set forth in the next paragraph below, Tenant shall not allow any liens to be filed against the Leased Premises or the Project in connection with the installation of Tenant's Improvements in, or any repair or alteration work to, the Leased Premises performed by Tenant or an Outside Contractor. If any such liens shall be filed, Tenant shall cause the same to be released within thirty (30) days after the filing thereof by bonding or other method acceptable to Landlord. Subject to Tenant's rights to contest liens filed against the Leased Premises or the Project as set forth in the Second paragraph below, if Tenant shall fail to timely cancel or discharge said lien or liens as required above, Landlord, at its sole option, after five (5) days written notice of the estimated charges to be discharged, may cancel or discharge the same and Tenant shall pay to Landlord upon demand, Landlord's cost thereof plus a charge equal to 5% of such costs for administrative cost recovery.

Tenant may, at its option, at its own expense and for its sole benefit, in its own name or, if required by law, in the name of the Landlord, as the circumstances may require, before any enforcement action is concluded, contest the validity or amount of any liens upon the Leased Premises or Property by appropriate legal proceedings diligently conducted in good faith. Landlord shall cooperate with Tenant in connection with any such proceedings at no expense or liability to Landlord; provided, however, that in order for Tenant to contest the validity or amount of such liens, Tenant shall have provided a good and sufficient undertaking as may be required or permitted by law to accomplish a stay of any suit to enforce such liens and/or foreclosure of such liens or

shall have deposited into escrow with a trustee (which shall be a title insurance company, bank, or trust company approved by Landlord), as security for the payment of such liens, either cash or a cash substitute or a surety bond, in an amount sufficient to pay the liens, together with all interest that might reasonably arise in connection therewith, and all charges that might reasonably be assessed against or become a charge on the Leased Premises or Property, or any part thereof, in legal proceedings.

If at any time the lien claimant is about to sell or foreclose upon the Leased Premises or Property in an attempt to satisfy its liens, Landlord may make written demand on Tenant to pay the contested liens, and Tenant shall promptly pay the liens. In the event Tenant shall fail to pay the liens, after Landlord's demand, then Landlord may draw upon the undertaking deposited by Tenant pursuant to the preceding paragraph and pay the same. Promptly upon the termination of any such legal proceedings, Tenant shall pay any amounts due in respect of the contested liens. Upon the termination of such legal proceedings, any monies deposited as herein above provided, shall be applied to the payment, removal and discharge of the liens, if any, then payable and the interest in connection therewith, and the charges accruing in such legal proceedings, and the balance, if any, shall be paid to Tenant. In the event of any default by Tenant under this section, Landlord is authorized to use any money deposited under this section to pay such liens.

Upon completion of any such work costing more than $5,000.00 in each instance, Tenant shall deliver to Landlord evidence of payment, contractors' affidavits and full and final waivers of all liens for, labor, services, or material. Tenant shall indemnify and hold harmless Landlord from all losses, costs, damages, claims and expenses (including reasonable attorneys' fees and costs of suits), liabilities or causes of action arising out of or relating to any alterations, additions or improvements that Tenant or any Outside Contractor makes to the Leased Premises, including any occasioned by the filing of any mechanic's, materialman's, construction or other liens or claims (and all reasonable costs or expenses associated therewith) asserted, filed or arising out of any such work. All materialmen, contractors, artisans, mechanics, laborers and other parties hereafter contracting with Tenant for the furnishing of any labor, services, materials, supplies or equipment with respect to any portion of the Leased Premises are hereby charged with notice that they must look solely to Tenant for payment of same, and Tenant's purchase orders, contracts and subcontracts in connection therewith must clearly state this requirement.

Landlord shall have the right at all times to post and keep posted on the Leased Premises any notices permitted or required by Legal Requirements, or that Landlord shall deem proper for the protection of Landlord, the Leased Premises, the Project and any other party having an interest therein, from liens. Tenant acknowledges that Tenant's Improvements are being accomplished for its own account, Landlord having no responsibility or obligation in respect thereof except as otherwise set forth herein and Tenant agreeing that Tenant is not Landlord's agent for purposes of Tenn. Code Ann. § 66-11-102(d), as in effect on the Effective Date. Landlord also may require that Tenant execute and record a "Notice of Non Responsibility," or any equivalent notice which provides that Landlord is not responsible for the payment of any costs or expenses relating to Tenant's Improvements. Without limiting the generality of the foregoing, Tenant shall repair or cause to be repaired at its expense all damage caused by any Outside Contractor, its subcontractors or their employees. Tenant shall reimburse Landlord for any reasonable costs incurred by Landlord to repair any damage caused by any Outside Contractor or any reasonable costs incurred by Landlord in requiring any Outside Contractor's compliance with the rules and regulations.

Additionally, Tenant shall reimburse Landlord for the reasonable out of pocket costs Landlord may incur to have an engineer review all mechanical, structural, electrical, plumbing and life safety

systems installed by any Outside Contractor provided, however, that Landlord shall notify Tenant in advance of the estimated cost for such review(s) prior to the commencement of such review(s).

E. During the Term, Tenant shall have the right, at Tenant's sole cost and expense, to install and maintain signage with Tenant's name, tradename or logo on or immediately adjacent to the entrance door or doors to the Leased Premises and anywhere within any full floor of the Leased Premises that is located entirely on a single floor of the Building; provided, however, that Tenant's right to install and maintain such signage shall be subject to (i) Tenant's review and Landlord's prior written approval with respect to the dimensions, material, content and design of such signage, which approval shall not be unreasonably withheld, conditioned or delayed; and (ii) all applicable Legal Requirements.

Landlord, at Tenant's cost (prorated among all tenants in the directory), shall maintain a physical directory of office tenants in the lobby area of the Building during the Term, and Tenant shall have the right to have its name listed on such directory in a similar style and fashion as allowed other tenants leasing space of similar size. Landlord shall provide space on the ground floor monument sign.

If Tenant grows to occupy four (4) full floors in the Building and "top of building", signage has not been granted to any other tenant, then Landlord will offer Tenant the ability to lease the "top of building" signage. Tenant will pay $100,000 per annum in additional rent for such signage and will be responsible for the cost of fabricating/installing such signage. Landlord has sole discretion and approval rights of the location, size, color, material composition, and plans and specifications of Tenant's signage.

To the extent Landlord maintains a searchable electronic directory of office tenants in the lobby area of the Building during the Term, Tenant shall have the right to have its name listed in prominent fashion as consistent with other tenants occupying a full floor of space and/or leasing space of similar size on such directory and its' executives' names (within thirty (30) days of Tenant's provision of the same to Landlord, from time to time, but not earlier than Landlord's installation of such electronic directory) included in such directory for searching purposes.

ARTICLE VI.
INSURANCE, CASUALTY AND CONDEMNATION

Section 6.1 INSURANCE REQUIREMENTS.

A. Landlord shall maintain fire and extended coverage insurance on the entire Project (excluding leasehold improvements and the personal property of tenants) and on the Building Standard Improvements in an amount not less than the full insurable value (on a replacement cost basis) thereof above the foundation. Such insurance shall be maintained at the expense of Landlord (which expense is to be included in Operating Expenses) with an insurance company authorized to insure properties in the State of Tennessee. All payments for losses thereunder shall be made solely to Landlord. If the annual premiums to Landlord for such casualty insurance exceed the standard premium rates because of the nature of Tenant's operations, contents

or improvements beyond Building Standard Improvements or because the same result in extra-hazardous exposure, then Tenant shall, upon receipt of copies of appropriate premium invoices from the insurance company which properly itemize premium charges and verify the amount of such excess premium attributable specifically and solely to above standard aspects of Tenant's operation, contents or improvements, promptly reimburse Landlord for such increases in such premiums.

B. Landlord shall maintain commercial general liability insurance covering its exposures to third party claims of bodily injury, death or property damage arising out of its ownership and operation of the Project. Subject to any other express provision of this Lease, Landlord will assume no liability for incidents that occur in or upon the Leased Premises, nor from

Landlord will assume no liability for incidents that occur in or upon the Leased Premises, nor from the ingress or egress of guests, suppliers, contractors or others associated with Tenant, unless such injury or damage is the result of the willful misconduct or gross negligence of the Landlord found to be the sole responsibility of Landlord. Landlord will purchase such commercial general liability limits as it deems appropriate for its own business activities, but such limits shall be no less, including the use of an excess or umbrella policy (at Landlord's sole option) than $5,000,000 each claim for bodily injury and/or property damage with an annual aggregate of $5,000,000.

C. Throughout the Term, Tenant, at its sole cost and expense, shall obtain and maintain in force comprehensive property insurance covering loss from any cause, except those causes specifically excluded by a comprehensive business insurance policy and specifically covering fire with extended coverage insurance (including, without limitation, coverage against water damage, sprinkler flow and sprinkler leakage) and specifically insuring Tenant's interest in its improvements (including Tenant Improvements) and betterments to the Leased Premises performed by Tenant or for Tenant's account and any and all furniture, equipment, supplies and other property owned, leased, held or possessed by it and contained therein, such insurance coverage to be in an amount equal to the full insurable value of such improvements and property. Landlord shall not be responsible for and shall not be obligated to insure against any loss of or damage to any of Tenant's property described in this sub-section (B). All insurance required to be maintained by Tenant under this paragraph shall be effected by valid and enforceable policies (i) issued by insurance companies licensed to do business in the State of Tennessee with a general policyholder's ratings of at least A- and a financial rating of at least VIII in the most current Best's Insurance Reports available on the Commencement Date, or if the Best's ratings are changed or discontinued, the parties shall agree to a comparable method of rating insurance companies; and (ii) that state that such insurance shall not be canceled, non-renewed or coverage materially reduced unless thirty (30) days advance written notice is provided to Landlord. On or before the Commencement Date, and upon reasonable request thereafter, Tenant shall provide evidence of the insurance required by this paragraph on a form acceptable to Landlord. If Tenant fails to provide Landlord with such certificates or other evidence of insurance coverage within fifteen (15) days after Landlord's written demand for same, Landlord may obtain such coverage and Tenant shall reimburse the cost thereof on demand.

D. Throughout the Term, Tenant, at its sole cost and expense, shall obtain and maintain in force a policy or policies of (i) worker's compensation insurance satisfying statutory requirements; (ii) Commercial General Liability Insurance (1986 ISO Form or its equivalent including liquor liability provision) in the amount of $2,000,000 per occurrence and $2,000,000 general aggregate, which policy shall insure against claims for bodily injury, death or property

damage occurring in, on or about the Leased Premises; (iii) automobile liability insurance covering owned, hired and non-owned vehicles with liability limits of not less than $2,000,000, coverage for each occurrence and in the aggregate; and (iv) Fire Damage Liability in the amount of $500,000, which policy shall insure against claims for property damage occurring in, on or about the Leased Premises; provided, however, that Tenant shall carry such greater limits of coverage as Landlord or Landlord's mortgagee may reasonably request, from time to time, if such limits are customarily carried by office tenants in first class office buildings in Nashville, Tennessee and does not require payment of rates per thousand of coverage greater than the base rate paid for such coverage. All insurance required to be maintained by Tenant under this paragraph shall (i) be effected by valid and enforceable policies issued by insurance companies licensed to do business in the state in which the Premises are located with a general policyholder's ratings of at least A- and a financial rating of at least VIII in the most current Best's Insurance Reports available on the Commencement Date, or if the Best's ratings are changed or discontinued, the parties shall agree to a comparable method of rating insurance companies, (ii) name Landlord, Landlord's mortgagee, and Landlord's managing agent as additional insureds, (iii) be primary, and any liability insurance policy maintained by Landlord, if any, shall be secondary and contain a severability of interest clause for all additional insured with no cross suits liability exclusion, and (iv) state that such insurance shall not be canceled, non-renewed or coverage materially reduced unless thirty (30) days advance written notice is provided to Landlord. On or before the Commencement Date, and

upon reasonable request thereafter, Tenant shall provide evidence of the insurance required by this paragraph on a form reasonably acceptable to Landlord. If Tenant fails to provide Landlord with such certificates or other evidence of insurance coverage within fifteen (15) days after Landlord's written demand for same, Landlord may obtain such coverage and Tenant shall reimburse the cost thereof on demand.

Section 6.2 HOLD HARMLESS. Landlord, its owners, directors, officers, managers, representatives, agents, servants and employees shall not be liable to Tenant, or to Tenant's owners, directors, officers, managers, agents, servants, employees, customers or invitees, for any damage to person or property caused by any act, omission or neglect of Tenant, its owners, directors, officers, managers, agents, servants and employees, and Tenant agrees to indemnify and hold harmless Landlord from all claims or liability and for any such damage. Tenant, its owners, officers, directors, managers, representatives, agents, servants and employees shall not be liable to Landlord, or to Landlord's owners, directors, officers, managers, agents, servants, employees, customers or invitees, for any damage to person or property caused by any act, omission or neglect of Landlord, its owners, directors, officers, managers, agents, servants and employees, and Landlord agrees to indemnify and hold harmless Tenant from all claims or liability for such damage. The indemnifications granted by each of Landlord and Tenant herein are subject to any express provisions to the contrary in this Lease.

Section 6.3 WAIVER OF SUBROGATION RIGHTS. Anything in this Lease to the contrary notwithstanding, Landlord and Tenant each hereby waive any and all rights of recovery, claim, action or cause of action, against the other, its agents (including partners, both general and limited), officers, directors, shareholders, customers, invitees, or employees, for any loss or damage that may occur to the Leased Premises, or any improvements thereto, or the Project, or any improvements thereon, or any personal property of such party therein, by reason of fire, the elements or any other cause which is or is required to be insured against under this Lease, regardless of cause or origin, including negligence of the other party hereto, its agents, partners,

shareholders, officers, directors, customers, invitees or employees, and covenants that no insurer shall hold any right of subrogation against such other party. Landlord and Tenant shall advise insurers of the foregoing waiver and such waiver shall be a part of each policy maintained by Landlord and Tenant.

Section 6.4 DAMAGES FROM CERTAIN CAUSES. Except for Landlord's willful acts or omissions, or gross negligence, failure to discharge its maintenance, repair or replacement obligations or a breach of Landlord's express warranty obligations hereunder, and subject to the other express provisions of this Lease, Landlord shall not be liable or responsible to Tenant for any loss or damage to any property or person occasioned by theft, fire, casualty, vandalism, acts of God, public enemy, injunction, riot, strike, inability to procure materials, insurrection, war, court order, requisition or order of governmental body or authority, or for any other causes beyond Landlord's reasonable control, or for any damage or inconvenience which may arise through repair or alteration of the Leased Premises, Building, or the Project; provided, however, subject to the provisions of Section 4.4(C) above, Landlord shall not be liable or responsible for any inconvenience or interruption in the conduct of Tenant's business, unless such inconvenience or interruption results from Landlord's willful acts or omissions or negligent acts.

Section 6.5 CASUALTY.

A. In the event of a fire or other casualty in the Leased Premises, Tenant shall promptly give notice thereof to Landlord upon becoming aware thereof. If the Leased Premises is damaged or destroyed by fire or other casualty so as to render the Leased Premises untenantable in whole or in part, Rent shall abate equitably thereafter as to the portion of the Leased Premises rendered untenantable (based upon the square footage of Rentable Area rendered untenantable) until the earlier to occur of (i) the later to occur of (x) the date Landlord substantially completes that portion of the Base Building and the Building Standard Improvements so damaged that is necessary to make the Leased Premises tenantable, or (y) ninety (90) days after the date Tenant is permitted to commence and prosecute repair of its leasehold improvements for the portion of the Leased Premises so damaged without material interference from Landlord, or (ii) the date the Leased Premises are made tenantable. Notwithstanding the foregoing, if the fire or other casualty is the result of Tenant's negligence or willful misconduct or the negligence or willful misconduct of Tenant's agents, employees, contractors, invitees, licensees, sublessees or assignees, Rent shall not abate. Landlord agrees to commence and prosecute repair of the Building Standard Improvements promptly and diligently, and Tenant agrees to commence and prosecute repair of its leasehold improvements promptly and diligently, subject in each case to delays for insurance adjustments and delays caused by Force Majeure events, zoning laws and building codes then in effect, and to the termination rights set forth below. In the event any portion of the Project is damaged by fire or other casualty, and if such damage is such that Landlord cannot reasonably be expected to substantially complete its repair work within one hundred eighty (180) days after the date of casualty, as reasonably estimated by a responsible contractor selected by Landlord, then Landlord shall have the right to terminate this Lease and all Rent owing under this Lease up to the time of such destruction or termination shall be paid by Tenant and thenceforth this Lease shall cease. Landlord shall give Tenant written notice of its decisions, estimates or elections under this section within sixty (60) days after any such damage or destruction (the "Determination Period"). In the event any portion of the Leased Premises is damaged by fire or other casualty, or if any other portion of the Project is damaged as would render the continuance of Tenant's business from the

Leased Premises impracticable (as reasonably determined by Tenant), and if such damage is such that Landlord cannot reasonably be expected to substantially complete its repair work of the

that Landlord cannot reasonably be expected to substantially complete its repair work of the Building Standard Improvements within the Leased Premises within one hundred eighty (180) days after the date of the casualty to the extent necessary to allow Tenant to commence repair of its leasehold improvements, as reasonably estimated by a responsible contractor selected by Landlord, and Landlord has not terminated this Lease as herein provided, then Tenant shall have the right, within thirty (30) days after Landlord delivers the estimate to Tenant of time to restore, to terminate this Lease by giving written notice of termination to Landlord, failing which Tenant shall have waived its right to so terminate the Lease pursuant to this sentence. Notwithstanding anything to the contrary contained in this section, if at the time of any damage to the Leased Premises or to the Project which materially affects Tenant's access to or use of the Leased Premises and requires more than thirty (30) days to repair, less than 1 year remains in the Term, then Landlord or Tenant shall have the right to terminate this Lease. Notwithstanding anything to the contrary in this section, Landlord shall be obligated to restore or rebuild only the portion of the Leased Premises that consists of Building Standard Improvements and only to the condition that existed immediately prior to the casualty, and nothing herein shall be construed to obligate Landlord under any circumstances to repair or restore any of Tenant's leasehold improvements (including the Tenant Improvements) in excess of Building Standard Improvements. Further notwithstanding anything herein to the contrary, in the event the holder of any Encumbrance (defined below) requires that any portion of insurance proceeds be paid to it such that Landlord, in Landlord's sole discretion, would be unable to adequately complete restoration or repair work, then Landlord shall have the right to terminate this Lease by delivering written notice of termination to Tenant within thirty (30) days after such requirement is made by any such holder, whereupon this Lease shall end on the date of the occurrence of such casualty as if the date of the occurrence of such casualty were the date originally fixed in this Lease for the expiration of the Term. If any such casualty stated in this section occurs, Landlord shall not be liable to Tenant for inconvenience, annoyance, loss of profits, expenses or any other type of injury or damage resulting from the repair or restoration of any damage caused by such casualty, from any repair, modification, arranging or rearranging of any portion of the Leased Premises or any part or all of the Project or from the termination of this Lease as provided in this section; provided, however, that Landlord shall use commercially reasonable efforts exercised in good faith to minimize any inconvenience and interference with Tenant's business operations and use and occupancy of the Leased Premises in connection with Landlord's repair or restoration of the Base Building and Building Standard Improvements.

B. Tenant shall promptly report to Landlord in writing any damage to or defective condition in or about the Project or Leased Premises as and when known to Tenant.

Section 6.6 CONDEMNATION.

A. If (i) all or substantially all of the Leased Premises or of the Project is permanently taken or condemned for any public purposes, or (ii) such portion of the Leased Premises or portion of the Building as would render the continuance of Tenant's business from the Leased Premises impracticable, is permanently taken or condemned for any public purpose, then this Lease, at the option of Tenant upon the giving of notice to Landlord within thirty (30) days from the date Tenant received written notice of such condemnation or taking, shall cease and terminate as described in subsection (C) below.

B. If all or substantially all of the Project, or so much thereof as to cause the remainder not to be economically feasible to operate, as reasonably determined by Landlord (including, without limitation a determination based upon Landlord's failure to receive condemnation awards or proceeds sufficient to repair the Project as required by this section, is permanently taken or condemned for any public purpose, then this Lease, at the option of Landlord upon the giving of notice to Tenant within thirty (30) days from the date Landlord received written notice of such condemnation or taking, shall cease and terminate as described in subsection (C) below.

C. If this Lease is terminated pursuant to either subsection (A) or (B) above, this Lease shall cease and expire as if the date of transfer of possession of the Leased Premises

this Lease shall cease and expire as if the date of transfer of possession of the Leased Premises, the Project, or any portion thereof to the condemning authority, was the expiration date of this Lease. In the event that this Lease is not terminated by either Landlord or Tenant as aforesaid, Landlord shall, to the extent practical, restore the Leased Premises or Project (as the case may be) to the condition of same prior to such taking. Landlord shall diligently and continually prosecute such repair and restoration of the Leased Premises, or Project, or both (as the case may be), and endeavor to complete restoration of same as soon as reasonably possible under the circumstances, and Landlord shall restore same to an integrated, architectural whole to the extent of any condemnation award received by Landlord. With respect to that portion of the Leased Premises which is so taken or condemned, Tenant shall pay the Base Rental and all other Rent up to the date of transfer of possession of such portion of the Leased Premises so taken or condemned, and this Lease shall thereupon cease and terminate with respect to such portion of the Leased Premises so taken or condemned as if the date of transfer of possession of the Leased Premises was the expiration date of the Term relating to such portion of the Leased Premises. Thereafter, the Base Rental and Tenant's Percentage Share shall be calculated based on the remaining Rentable Area of the Leased Premises not so taken or condemned.

D. In the event any taking or condemnation for any public purpose of the Leased Premises or any portion thereof occurs for one hundred eighty (180) days or less, then it shall be deemed a temporary taking, and this Lease shall continue in full force and effect, except that Base Rental and Tenant's Percentage Share shall be calculated based on the Rentable Area of the Leased Premises not so taken for the period of time that the Leased Premises are so taken, Landlord shall be entitled to the proceeds of such taking, and Landlord shall be under no obligation to make any repairs or alterations to the portion so taken.

E. If any such taking or condemnation stated in this section occurs, Landlord shall not be liable to Tenant for inconvenience, annoyance, loss of profits, or expenses from any repair, modification, arranging or rearranging of any portion of the Leased Premises or any part or all of the Project or from the termination of this Lease as provided in this section; provided, however, that Landlord shall use commercially reasonable efforts exercised in good faith to minimize any inconvenience and interference with Tenant's business operations and use and occupancy of the Leased Premises in connection with Landlord's repair or restoration of the Base Building and Building Standard Improvements, as applicable.

F. All proceeds from any taking or condemnation of the Premises shall belong to and be paid to Landlord; provided, however, that Tenant shall be entitled to the portion of any award for Tenant's unamortized leasehold improvements (such amortization to be made on a

straight-line basis over the Term) and further provided that Tenant may pursue a separate award from the condemning authority for (i) relocation and moving expenses, (ii) compensation for loss of Tenant's business, and (iii) loss of Tenant's personal property.

G. Notwithstanding anything herein to the contrary, in the event the holder of any Encumbrance requires that any portion of any award to Landlord be paid to it such that Landlord, in Landlord's reasonable discretion, would be unable to adequately complete restoration or repair work, then Landlord shall have the right to terminate this Lease by delivering written notice of termination to Tenant within one hundred twenty (120) days after such requirement is made by any such holder, whereupon this Lease shall end on the date of the occurrence of such taking or condemnation as if the date of the occurrence of such taking or condemnation were the date originally fixed in this Lease for the expiration of the Term.

ARTICLE VII.
ASSIGNMENT AND SUBLETTING

Section 7.1 ASSIGNMENT AND SUBLETTING BY TENANT.

A. Except as expressly set forth in this Section 7.1 and in all events subject to the terms and conditions of this Article VII, Tenant shall not, without Landlord's prior written

the terms and conditions of this Article VII, Tenant shall not, without Landlord's prior written consent (which shall not be unreasonably withheld, conditioned or delayed), (i) assign, convey, mortgage, pledge, encumber, or otherwise transfer (whether voluntarily, by operation of law, or otherwise) this Lease or any interest hereunder; (ii) allow any lien to be placed upon Tenant's interest hereunder; (iii) sublet the Leased Premises or any part thereof; or (iv) permit the use or occupancy of the Leased Premises or any part thereof by anyone other than Tenant. Notwithstanding the preceding subsection (iv), the Tenant shall however be allowed without Landlord consent, to utilize outsourced service vendors which may occupy a portion of the Leased Space (e.g. copy center services) to provide services internally to the Tenant but not to third parties. Any attempt to consummate any of the foregoing without Landlord's consent shall be of no force or effect and shall be an Event of Default under this Lease. For purposes hereof, the transfer of the ownership or voting rights in a controlling interest of the voting stock or ownership interests of Tenant, shall be deemed to be an assignment of this Lease.

Notwithstanding the foregoing provisions of this subsection (A), the consent of Landlord shall not be required for any one of the following (each, a "Permitted Transfer"): (i) an assignment of this Lease made in connection with the reorganization, merger or consolidation of Tenant with and/or into any Affiliate; (ii) an assignment of this Lease made in connection with a sale or transfer of a majority of the assets and liabilities of Tenant to an Affiliate (defined below) (a) where Tenant is not the surviving entity; and (b) Landlord has determined, in its reasonable discretion, that such assignee has sufficient credit and financial ability to fully comply with all of the obligations of Tenant (including the payment of Rent) that such assignee seeks to assume from Tenant.

Any Permitted Transfer assignee, sublessee, or occupant is a "Permitted Transferee". At least thirty (30) days prior to the effective date of any Permitted Transfer, Tenant agrees to furnish Landlord with notice of such transfer, copies of the instruments effecting the same and financial statements (including balance sheets and income statements) certified by any proposed assignee's certified public accountants as true and accurate for the prior two (2) fiscal years and such interim

statements through the then-current fiscal period, all of which shall be in form and substance satisfactory to Landlord in its reasonable discretion. Due to the confidential nature of the information conveyed as required in Sections 7.1 A or B, the Landlord agrees to execute a reasonable Confidentiality Agreement ("CDA") prior to the conveyance of confidential information to the Landlord.

"Affiliate" means any person or entity controlling, controlled by, or under common control with, another person or entity. "Control" means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of such controlled person or entity.

B. If Tenant should desire to assign this Lease or sublet the Leased Premises or any part thereof to a party other than a Permitted Transferee, Tenant shall give Landlord written notice (the "Lease Notice") (which shall specify the proposed economic terms and duration of the proposed sublease or assignment and shall contain information concerning the business, reputation and creditworthiness of the proposed sublessee or assignee as shall be sufficient to allow Landlord to form a commercially reasonable judgment with respect thereto) of Tenant's desire to sublease or assign at least thirty (30) days in advance of the date on which Tenant desires to make such sublease or assignment. Tenant shall provide Landlord with a copy of the proposed sublease or assignment agreement; financial statements (including balance sheets and income statements) certified by any proposed assignee's certified public accountants, to the extent available, as true and accurate for the prior two (2) fiscal years and such interim statements through the then-current fiscal period in the event of a proposed assignment; and any other reasonably relevant information reasonably requested by Landlord, all as soon as possible thereafter (but in no event less than thirty (30) days from Tenant's request contained in the Lease Notice). Landlord may reasonably consider the following factors in connection with Tenant's request to sublease or assign for any sublease or assignment requiring Landlord's consent (i) in connection with an assignment, any such assignee's creditworthiness as reasonably determined by Landlord; (ii) whether the reputation of the proposed assignee or sublessee, and whether the proposed assignee or sublessee is of a kind that, is that customarily found in first-class office buildings in Nashville, Tennessee, as reasonably determined by Landlord; (iii) whether such sublease or assignment violates any lease agreement with any other tenant or potential tenant with which Landlord has entered into a lease or a letter of intent (as applicable) in the Project, and (iv) whether the use of the Leased Premises by such proposed assignee or sublessee is permitted under this Lease. Without limiting the foregoing, the following shall not be considered as suitable assignees or sublessees: any governmental body, agency or bureau (of the United States, any state, county, municipality or any subdivision thereof); any foreign government or subdivision thereof; any health care professional or health care service organization (provided, however, that this is not intended to exclude any health care consulting business, executive or administrative offices of a hospital company or similar healthcare provider, employment by Tenant of any health care professional in connection with Tenant's provision support services to health care professionals or organizations); schools or similar organizations; employment agencies other than executive or professional search and recruiting firms; radio, television or other communication stations; restaurants; and retailers offering retail services from the Leased Premises. Landlord must respond to Tenant's request for a sublease or assignment requiring Landlord's consent hereunder within fifteen (15) business days after receipt of all of the information required to be supplied by Tenant as set forth above. If Landlord disapproves of a sublessee or assignee as permitted above, Tenant shall not be permitted to effect the proposed

sublease or assignment and this Lease shall continue in full force and effect without such sublease or assignment in effect.

C. For any sublease or assignment that is approved by Landlord pursuant to sub-section (A) or (B), the following shall apply and shall be conditions thereto:

(i) Each sublessee or assignee shall agree in writing to observe all covenants of this Lease, and no consent by Landlord to an assignment or sublease shall be deemed in any manner to be a consent to (x) a use other than the Permitted Use or (y) an assignment by Tenant of any rights which are otherwise not assignable pursuant to other provisions of this Lease;

(ii) At the time of any such assignment or subletting, this Lease is in full force and effect and there is no Event of Default under this Lease on the part of Tenant;

(iii) Any such assignment or subletting shall be subject to all the terms, covenants and conditions of this Lease, and any assignee must assume in writing all the rights and obligations of the assignor hereunder;

(iv) If the aggregate rent, bonus, or other consideration paid by the assignee or sublessee pursuant to such space sublease or assignment exceeds the sum of (x) Rent to be paid to Landlord by Tenant for such space during the applicable period and (y) the reasonable out-of-pocket third party costs and expenses actually incurred by Tenant under or in connection with such sublease or assignment (including without limitation, the costs for (1) brokerage commissions paid by Tenant with regard to the transfer, (2) reasonable legal fees with regard to the transfer, and (3) expenses of finishing out or renovation of the space involved (but specifically excluding any charges payable to partners, shareholders or employees of Tenant in connection with such sublease or assignment), and (4) free rent provided to an assignee or sublessee), then 50% of such excess shall be paid to Landlord within fifteen (15) days after receipt by Tenant together with all consideration received in connection with such assignment of any such excess. With any payment made by Tenant to Landlord under this clause (iv), Tenant shall furnish Landlord with an accounting prepared and certified to by Tenant of Tenant's determination of the sums owed to Landlord hereunder, which accounting shall be executed by an officer of Tenant knowledgeable of the facts stated therein that to the best of his or her knowledge such accounting of the sums owed to Landlord under this clause (iv) has been determined in accordance with the provisions hereof;

(v) Except for a Permitted Transfer, no assignment or subletting by Tenant shall relieve Tenant of any obligations or covenants under this Lease, and Tenant shall remain fully liable hereunder, unless Landlord executes and delivers to Tenant a written release. Notwithstanding the foregoing, in no event shall Tenant be released from any obligation with respect to confidentiality or non-disclosure covenants in connection with a Permitted Transfer; and

(vi) A copy of the original sublease or assignment (and all amendments thereto) shall be delivered to Landlord within a reasonable time but not less than fifteen (15) days from the effective date thereof.

If the proposed sublessee or assignee sublease or assignment is approved by Landlord and Tenant fails to enter into the approved sublease or assignment with the approved sublessee or

assignee within one hundred eighty (180) days after the date Tenant submitted its Lease Notice to Landlord, then Landlord's approval of the proposed sublease or assignment shall be deemed null and void and Tenant must comply again with all of the conditions of this section.

D. Notwithstanding the giving by Landlord of its consent to any sublease or assignment with respect to the Leased Premises, except for a Permitted Transferee, no sublessee or assignee may exercise any termination options, renewal options, expansion options, rights of first refusal, or similar rights under this Lease except in accordance with a separate written agreement entered into directly between such sublessee or assignee and Landlord. The voluntary or other surrender of the Leased Premises by Tenant or termination of this Lease by Tenant or Landlord shall not work a merger, but at Landlord's sole option, shall either terminate all existing

Landlord shall not work a merger, but, at Landlord's sole option, shall either terminate all existing subleases or subtenancies or shall operate as an assignment to Landlord of all such subleases or subtenancies.

E. Any attempted assignment or sublease by Tenant in violation of the terms and covenants hereof shall be void and shall be an Event of Default under this Lease. Any consent by Landlord to a particular assignment or sublease shall not constitute Landlord's consent to any other or subsequent assignment or sublease, and any proposed sublease or assignment by a sublessee or assignee of Tenant shall be subject to the provisions hereof as if it were a proposed sublease or assignment by Tenant.

F. Notwithstanding anything to the contrary contained in this section, Tenant shall not be permitted to sublease any portion of the Leased Premises or assign this Lease to any tenant of the Building at the time of such proposed sublease or assignment, unless Landlord is unable to furnish space having the attributes (such as size, term, location within the same elevator bank in the Building, rental rate, etc.) desired by the proposed sublessee or assignee in the Building at the time of the proposed effective date of the proposed sublease or assignment.

G. Any improvements, additions, or alterations to the Building that are required by Legal Requirements or are reasonably deemed necessary or appropriate by Landlord, in order to maintain the floor in a manner consistent with the other floors in the Building and to not adversely affect the feasibility of leasing the remainder portion of such floor resulting from any subletting or assignment hereunder, shall be installed and provided by Tenant without cost or expense to Landlord.

H. If Tenant requests any consent of Landlord to any assignment or sublease, or otherwise requests any consent or other action on the part of Landlord, and Landlord deems it necessary for any documents to be prepared or reviewed by its counsel, Tenant shall pay all reasonable attorney fees and expenses incurred by Landlord in connection therewith not to exceed $4,000; provided however, if the Landlord deems that the nature of the assignment or sublease will require extensive documentation that would cause the attorney fees and expenses to exceed the $4,000 amount then Landlord must notify Tenant in advance with an estimate of the attorney fees and expenses expected to be incurred.

I. Without limiting any term or provision of this Lease, Landlord agrees that it shall not prohibit Tenant from subleasing from another Building Tenant, on terms and conditions that are not inconsistent with this Section 7.1, any Building space that is on a standard office, non-

amenity floor immediately below and adjacent to the lowest Office Space floor, so long as (i) the Building is greater than 95% leased and occupied (by Rentable Area) and (ii) tenancies for no more than 20% of the Building's Rentable Area are subject to natural expiration within three (3) years of such proposed sublease commencement date.

Section 7.2 ASSIGNMENTS BY LANDLORD. Landlord shall have the right to transfer and assign, in whole or in part, all its rights and obligations hereunder or in the Project (or any portion thereof); provided that such assignee has agreed in writing to assume the Lease and Landlord's obligations hereunder and no further liability or obligation, shall thereafter accrue against Landlord under or in connection with this Lease.

ARTICLE VIII.
DEFAULT AND REMEDIES

Section 8.1 DEFAULT BY TENANT. The occurrence of any of the following events and the expiration of any corresponding cure periods hereafter described shall constitute an "Event of Default" under this Lease on the part of Tenant:

(i) Tenant fails to pay any sum when due to be paid by Tenant under this Lease (including any portion of the Tenant Improvement Allowance required to be repaid

this Lease (including any portion of the Tenant Improvement Allowance required to be repaid hereunder) on the due date; provided however, that for the first time per Lease Year, Landlord shall provide written notice of a delinquent payment to Tenant and an Event of Default shall not have occurred if Tenant remits any delinquent amount within three (3) business days following the date of receipt by Tenant of such notice; or

(ii) Tenant fails to cause any contractor's, mechanic's, materialmen's or similar lien filed against the Project or any portion thereof (including the Leased Premises) for any work performed, materials furnished, or obligation incurred by or at the request of Tenant, to be released of record within the time and in the manner required by this Lease unless Tenant posts a bond or other security for such lien acceptable to Landlord; or

(iii) Tenant fails, subject to and within the time and manner required by this Lease, to procure, maintain, and deliver to Landlord evidence of, the insurance policies and coverages as required under Article VI of this Lease; or

(iv) Tenant fails to comply with the provisions of Section 4.3 of this Lease and does not commence cure promptly, diligently pursue such cure and complete such cure in a reasonable period of time not to exceed sixty (60) days; or

(v) Tenant fails, subject to and within the time and manner required by this Lease, to procure, maintain, and deliver to Landlord evidence of, the insurance policies and coverages as required under Article VI of this Lease; or

(vi) Tenant assigns its interest in this Lease or sublets any portion of the Leased Premises, except as expressly permitted in this Lease, or Tenant shall otherwise breach the provisions of Article VII of this Lease; or

(vii) Tenant fails to comply with the provisions of Sections 9.1 or 9.2 of this Lease within ten (10) days after receipt of written notice of non-compliance from Landlord or Tenant fails to comply with the provisions of Sections 9.11 or 9.17 of this; or

(viii) Tenant breaches any of the other covenants or conditions that Tenant is required to observe and to perform (other than those referred to in subsections (i) - (vi) above), and such breach shall continue for thirty (30) days after Tenant's receipt of notice from Landlord of such breach (unless with respect to any default which cannot be cured within thirty (30) days due to causes beyond Tenant's reasonable control, Tenant, in good faith, after receiving such notice, shall have commenced and thereafter shall continue diligently to perform all action necessary to cure such default); or

(ix) Tenant ceases to exist as an entity in good standing in the state of its formation and a successor approved by Landlord is not substituted for Tenant and/or Tenant's qualifications to do business in Tennessee is revoked, terminated or relinquished by the State or Tenant, in each case, which failure of Tenant is not cured within thirty (30) days of written notice from Landlord; or

(x) If the interest of Tenant under this Lease is subjected to any attachment, execution, levy or other judicial seizure pursuant to any order or decree entered against Tenant in any legal proceeding that is not stayed (so as to prevent seizure) pending appeal and such order or decree is not vacated or bonded against so as to prevent seizure upon the earlier to occur of thirty (30) days prior to the sale of such interest pursuant to such order or decree or forty-five (45) days after entry of the order; or

(xi) Tenant fails to continuously occupy the Premises during the term of this Lease and any renewal term.

If an Event of Default shall have occurred under this Lease, then or at any time thereafter while such Event of Default continues, Landlord, at Landlord's option, shall have any one or more of the following described remedies in addition to all other rights and remedies provided at law or in equity:

(i) Landlord, with or without terminating this Lease, may immediately or at any time thereafter re-enter the Leased Premises and correct or repair any condition which shall constitute a failure on Tenant's part to keep, observe, perform, satisfy or abide by any term, condition, covenant, agreement or obligation of this Lease and Tenant shall fully reimburse and compensate Landlord on demand for the actual and reasonable costs incurred by Landlord in doing so.

(ii) Landlord may terminate this Lease and forthwith repossess the Leased Premises and remove all persons or property therefrom, and be entitled to recover forthwith as damages a sum of money equal to the total of (1) the cost of recovering the Leased Premises (including, without limitation, the cost as reasonably estimated to be incurred of attorneys' fees and costs of suit), (2) the cost as reasonably estimated to be incurred by Landlord of any alterations of, or repairs to, the Leased Premises which are necessary or proper to prepare the same for reletting, (3) the unpaid Rent owed at the time of termination, plus interest thereon from due date

at the Interest Rate, (4) the present value of the balance of the Rent for the remainder of the Term less the present value of the fair market rental value (and in computing the fair market rental value

the factors taken into account shall include without limitation the market rental concessions and the time necessary to relet the Leased Premises) of the Leased Premises for said period (in each case using a discount rate of 8% per annum), and (5) any other sum of money and damages owed by Tenant to Landlord.

(iii) Landlord may terminate Tenant's right of possession (but not this Lease) and may repossess the Leased Premises by detainer suit or other peaceful means upon reasonable demand and notice to Tenant and without terminating this Lease, and remove all persons or property therefrom, by process of law, in which event Landlord may (and shall be obligated to the extent necessary to mitigate damages in accordance with Tennessee law), relet the Leased Premises or any part thereof for the account of Tenant for such rent and upon such terms as shall be satisfactory to Landlord (however, to the extent Landlord is so required by law to relet the Leased Premises, Landlord shall be under no obligation to relet the Leased Premises in preference to any other space in the Project or on terms unsatisfactory to Landlord). For the purpose of such reletting Landlord is authorized to decorate or to make any repairs, changes, alterations or additions in or to the Leased Premises, or provide leasing inducements or brokerage commissions that may be necessary or convenient (to the extent consistent with Landlord's obligation to mitigate damages), and (1) if Landlord shall fail or refuse to relet the Leased Premises, or (2) if relet and a sufficient sum shall not be realized from such reletting (after paying the unpaid amounts due hereunder earned but unpaid at the time of reletting plus interest thereon at the Interest Rate, the cost of recovering possession (including, without limitation, reasonable attorneys' fees and costs of suit), all of the costs and expenses of such decorations, repairs, changes, alterations and additions and all other expenses of such reletting (including, without limitation, leasing inducements and brokerage commission) and of the collection of the rent accruing therefrom) to satisfy the Rent provided for in this Lease to be paid, then Tenant shall pay to Landlord as damages a sum equal to the amount of the rental reserved in this Lease for such period or periods or, if the Leased Premises have been relet, Tenant shall satisfy and pay any such deficiency upon demand therefor, from time to time, as the same accrues or becomes due. Tenant agrees that Landlord may file suit to recover any sums falling due under the terms of this section, from time to time, on one or more occasions without Landlord being obligated to wait until expiration of the Term, and no delivery or recovery of any portion due Landlord hereunder shall be any defense in any action to recover any amount not theretofore reduced to judgment in favor of Landlord, nor shall such reletting be construed as an election on the part of Landlord to terminate this Lease, unless a written notice of such intention be given to Tenant by Landlord. Notwithstanding any such reletting without termination, Landlord may at any time thereafter elect to terminate this Lease for such previous breach. No such re-entry or termination shall be considered or construed to be a forcible entry if done in accordance with applicable law. Notwithstanding anything in this section to the contrary, Landlord shall be obligated to make reasonable efforts (including those provided above) to mitigate its damages in accordance with applicable law.

(iv) From and after the entry of a non-appealable order of possession from a court of proper jurisdiction, Landlord is entitled and is hereby authorized, without any notice to Tenant whatsoever, to enter upon the Leased Premises by use of a master key, a duplicate key, picking the locks, or other peaceable means, and to change, alter, and/or modify the door locks

on all entry doors of the Leased Premises, thereby excluding Tenant, and its officers, principals, agents, employees, visitors and representatives therefrom. In the event that Landlord has either terminated Tenant's right of possession to the Leased Premises pursuant to the foregoing provisions of this Lease, or has terminated this Lease by reason of the Event of Default, Landlord shall not thereafter be obligated to provide Tenant with a key to the Leased Premises at any time; provided, however, that in any such instance, during Landlord's normal business hours and at the convenience of Landlord, and upon the written request of Tenant accompanied by such written waivers and releases as Landlord may require, Landlord will escort Tenant or its authorized personnel to the Leased Premises to retrieve any personal belongings or other property of Tenant. If Landlord elects to exclude Tenant from the Leased Premises without permanently repossessing

the Leased Premises or terminating this Lease pursuant to the foregoing provisions of this Lease, then Landlord (at any time prior to permanent repossession or termination) shall not be obligated to provide Tenant a key to re-enter the Leased Premises until such time as all delinquent Rent has been paid in full and all other Events of Default, if any, have been completely cured to Landlord's satisfaction, and Landlord has been given assurance reasonably satisfactory to Landlord evidencing Tenant's ability to satisfy its remaining obligations under this Lease. During any such temporary period of exclusion, Landlord will, during Landlord's regular business hours and at Landlord's convenience, upon written request by Tenant, escort Tenant or its authorized personnel to the Leased Premises to retrieve personal belongings of Tenant or its employees, and such other property of Tenant.

Failure of Landlord to declare any default or Event of Default immediately upon occurrence thereof, or delay in taking any action in connection therewith, shall not waive such default or Event of Default, but Landlord shall have the right to declare any such default or Event of Default at any time and take such action as might be lawful or authorized hereunder, either at law or in equity. All rights and remedies of Landlord are cumulative, and the exercise of any one shall not be an election excluding Landlord at any other time from exercise of a different or inconsistent remedy. No exercise by Landlord of any right or remedy granted herein shall constitute or effect a termination of this Lease unless Landlord shall so elect by notice delivered to Tenant. The failure of Landlord to exercise its rights in connection with this Lease or any breach or violation of any term, or any subsequent breach of the same or any other term, covenant or condition herein contained shall not be a waiver of such term, covenant or condition or any subsequent breach of the same or any other covenant or condition herein contained. No notice to Tenant shall be required prior to the exercise of any right or remedy of Landlord under this Lease except to the extent such notice is expressly required by this Lease or applicable law.

Section 8.2 RESERVED.

Section 8.3 INSOLVENCY OR BANKRUPTCY. The appointment of a receiver to take possession of all or substantially all of the assets of Tenant or any guarantor of any of Tenant's obligations under this Lease, or any general assignment by Tenant for the benefit of creditors, or any action taken or suffered by Tenant or any such guarantor under any insolvency, bankruptcy, or reorganization act, other than an involuntary proceeding that is dismissed or bonded against within sixty (60) days after the filing thereof, shall at Landlord's option, constitute a breach of this Lease by Tenant. Upon the happening of any such event (each being an Event of Default) or at any time thereafter to the extent permitted by applicable law, this Lease shall terminate five (5) days after notice of termination from Landlord to Tenant. In no event shall this Lease be assigned or

assignable in a proceeding in lieu of a bankruptcy and, in no event shall this Lease or any rights or privileges hereunder be an asset of Tenant or any such guarantor under any bankruptcy, insolvency or state law reorganization proceeding.

Section 8.4 LANDLORD DEFAULT. In the event that Landlord breaches or fails to comply with any term, provision, condition or covenant of this Lease applicable to Landlord (including but not limited to the provisions of Article V on improvements, maintenance and repair), and such breach or failure continues for more than thirty (30) days following the date of receipt by Landlord of written notice of such breach or failure from Tenant, Landlord shall be in default of this Lease; provided, however, that if the nature of Landlord's breach or failure to comply is such that more than thirty (30) days is reasonably required to cure such breach or failure to comply due to causes beyond Landlord's reasonable control, Landlord shall not be deemed to be in default if Landlord, in good faith, commences such cure within such thirty (30)-day period and thereafter diligently pursues and diligently performs all actions necessary to cure such default within a reasonable period of time. Notwithstanding the forgoing cure rights, Landlord shall not be afforded any cure period for breach of Landlord's obligations to provide parking in accordance with Section 4.7. Upon the occurrence of any Landlord default, Tenant, at its option, shall have the right to one of the following remedies, except as otherwise expressly set forth in Exhibit F to this Lease: (i) Tenant may cure such Landlord default itself and bill Landlord for all costs incurred

by Tenant supported by paid invoices which Landlord shall pay within thirty (30) days of receipt (after which interest will accrue at the lesser of 12% or the maximum amount allowed by law); provided that prior to Base Rental off-set, Tenant shall provide Landlord written documentation showing such actual costs; (ii) to pursue the remedy of specific performance; or (iii) to seek direct money damages for loss arising from Landlord's failure to discharge its obligations under the Lease. If any final, non-appealable judgment obtained by Tenant against Landlord in a court of competent jurisdiction is not satisfied within forty-five (45) days, Tenant shall have the right, at Tenant's election, to off-set Base Rental against the amount of such judgment. Notwithstanding any term or provision of this section or elsewhere in this Lease to the contrary, Tenant's remedies for Landlord's failure to construct and/or deliver the Base Building, to timely construct and/or deliver the Base Building, or otherwise complete or timely complete Landlord's obligations with respect to construction and completion of the Project shall be limited to the remedies, as may be applicable, expressly set forth in Exhibit F, as the case may be, such remedies being limited to the specific failures or defaults described therein or the sub-parts thereof. Pursuit of any of the above remedies by Tenant after default by Landlord shall not preclude pursuit of any remedy constitute forfeiture or waiver of any payment due to Tenant. No waiver by Tenant of any violation or breach of any of the terms, provision and covenants herein contained shall be deemed or construed to constitute a waiver of any other violation or breach of any of the terms, provisions, and covenants contained herein. Forbearance by Tenant to enforce one or more of the remedies herein provided upon an Event of Default by Landlord shall not be deemed or construed to constitute a waiver of any other violation or default.

Section 8.5 MORTGAGEE PROTECTION. Notwithstanding any other term or provision of this Lease, Tenant agrees to use good faith efforts to give any owner, beneficiary, lessor, or holder of an Encumbrance (defined below) a copy of any notice of default served upon Landlord, provided that prior to such notice Tenant has been notified in writing (by way of notice or assignment of rents and leases, or otherwise) of the address(es) of such Encumbrance owner, beneficiary, lessor, or holder. In no event shall Tenant exercise any right or remedy available to

Tenant by virtue of Landlord's default unless Tenant has given such Encumbrance owners, beneficiaries, lessors, or holders, as the case may be, at least thirty (30) days after receipt of notice of such default, or such other amount of time as may be reasonably required to cure such default, to cure such default. If an Encumbrance owner, beneficiary, lessor, or holder shall succeed to the interest of Landlord under this Lease, such Encumbrance owner, beneficiary, lessor, or holder shall not be: (i) liable for any act or omission of any prior lessor (including Landlord); (ii) bound by any Rent or advance Rent which Tenant might have paid for more than the current month to any prior lessor (including Landlord), and all such Rent shall remain due and owing, notwithstanding such advance payment; (iii) bound by any security or advance deposit made by Tenant which is not delivered or paid over to such Encumbrance owner, beneficiary, lessor, or holder and with respect to which Tenant shall look solely to Landlord for refund or reimbursement; (iv) bound by any termination, amendment or modification of this Lease made without such Encumbrance owner's, beneficiary's, lessor's, or holder's consent and written approval, except for those terminations, amendments and modifications permitted to be made by Landlord without such Encumbrance owner's, beneficiary's, lessor's, or holder's consent pursuant to the express, written agreement(s) between Landlord and such Encumbrance owner, beneficiary, lessor, or holder; (v) subject to the defenses which Tenant might have against any prior lessor (including Landlord), except to the extent that the basis upon which such defense is asserted has arisen after the Encumbrance owner or holder has acquired possession; and (vi) subject to the offsets which Tenant might have against any prior lessor (including Landlord) except for those offset rights which (x) are expressly provided in this Lease, (y) relate to periods of time following the acquisition of the Project (or any portion thereof) by such Encumbrance owner, beneficiary, lessor, or holder, and (z) Tenant has provided written notice to such Encumbrance owner, beneficiary, lessor, or holder and provided such Encumbrance owner, beneficiary, lessor, or holder a reasonable opportunity to cure the event giving rise to such offset event. Except for liabilities, responsibilities and claims arising and accruing during its period of ownership no Encumbrance owner, beneficiary, lessor, or holder shall have any liability or responsibility under or pursuant to the terms of this Lease or otherwise after it ceases to own an interest in the Project. Except as expressly set forth in Section 9.1(E), nothing in this Lease shall be construed to require an Encumbrance owner, beneficiary, lessor, or holder to see to the application of the proceeds of any loan, and Tenant's agreements set forth herein shall not be impaired on account of any modification of the documents evidencing and securing any loan.

Section 8.6 LIABILITY LIMITATION. Tenant specifically agrees to look solely to Landlord's (or its successors') interest in the Project and the Project's accounts for the recovery of any judgment from Landlord, it being agreed that Landlord and Landlord's owners (direct or indirect, general or limited), directors, managers, officers, employees, and representatives shall never be personally liable for any such judgment. The provision contained in the foregoing sentence is not intended to, and shall not, limit any right that Tenant might otherwise have to obtain injunctive relief against Landlord or Landlord's successors in interest, or to maintain any suit or action in connection with enforcement of collection of amounts which may become owing or payable under or on account of insurance maintained by Landlord. In no event shall either party be liable to the other for lost profits, business interruption or any other type of incidental, consequential or special damages for any reason, including in connection with the making of repairs or alterations to the Leased Premises or other portion of the Project; failure to provide or interruption of services; failure to make repairs, injury to person or property; or other exercise of Landlord's rights under this Lease.

ARTICLE IX.
MISCELLANEOUS

Section 9.1 SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT.

A. Except as provided in sub-section (E) below and subject to the Tenant's non-disturbance and other rights expressly set forth in such subsection (herein the "Tenant's Non-disturbance Rights."), this Lease and all rights of Tenant hereunder are and shall be subject and subordinate to (i) the lien, title and interest of any deed of trust, mortgage, deed to secure debt, or other instrument in the nature thereof (including fixture filings) that may now or hereafter affect Landlord's estate or interest in and to the Project (or any portion thereof) and to any other instrument encumbering the fee title of the Project (or any portion thereof) and to all advances thereunder and any modifications, renewals, consolidations, extensions, or replacements thereof; (ii) all ground leases that may now or hereafter affect the Project (or any portion thereof); and (iii) the declaration of condominium for the Building (each, an "Encumbrance").

B. Subsection (A) above shall, subject to the Tenant's Non-disturbance Rights, be self-operative, and no further instrument of subordination shall be required by the holder of any Encumbrance. In confirmation of such subordination, Tenant shall, upon demand, at any time or times, execute, acknowledge and deliver to Landlord, the owner, beneficiary, lessor, or holder under any such Encumbrance, without expense, any and all commercially reasonable instruments consistent with the Tenant's Non-disturbance Rights that may be reasonably requested by Landlord, such owner, beneficiary, lessor, or holder to evidence the subordination of this Lease and all rights hereunder to any such Encumbrance, and each advance thereunder and any such renewal, modification, consolidation, replacement and extension thereof.

C. Tenant shall, upon demand of Landlord, at any time or times, execute, acknowledge and deliver to Landlord, the owner, beneficiary, lessor, or holder of any Encumbrance, without expense, any and all instruments that may be necessary to make this Lease superior to any such Encumbrance and each renewal, modification, consolidation, replacement and extension thereof.

D. If the owner, beneficiary, lessor, or holder of any Encumbrance shall hereafter succeed to the rights of Landlord under this Lease, whether through possession (including deed in lieu of foreclosure) or foreclosure action or exercise of private power of sale or delivery of a new lease, such succession shall be subject to such party recognizing the Tenant as its tenant and honoring the terms of the Lease and subject further to the Tenant's Non-disturbance Rights as more fully described in Section E below. Tenant shall, at the option of such owner, beneficiary, lessor, or holder, attorn to and recognize such successor as Tenant's landlord under this Lease as of the date of such succession to Landlord's interest and shall promptly execute and deliver any commercially reasonable instrument consistent with the Tenant's Non-disturbance Rights that may be necessary to evidence such attornment. Upon such attornment, this Lease shall continue in full force and effect as a direct lease between such successor Landlord and Tenant, subject to all of the terms, covenants, and conditions of this Lease.

E. Tenant's subordination of this Lease to any future Encumbrance (including the Building construction lender's construction deed of trust) is conditioned upon Landlord's

delivering to Tenant a commercially reasonable subordination, non-disturbance and attornment agreement consistent with the Tenant's Non-disturbance Rights signed by any owner, beneficiary, lessor, or holder of any such future Encumbrance on such owner's, beneficiary's, lessor's, or holder's approved form (with appropriate modifications, if appropriate, to recognize the Tenant and its rights under the Lease and consistent with the Tenant's Non-disturbance Rights, provided that Tenant has first signed such agreement within ten (10) days of the provision thereof to Tenant as required by such owner, beneficiary, lessor, or holder. Such agreement shall provide Tenant with an agreement, in recordable form, stating that such owner, beneficiary, lessor, or holder, as the case may be, shall not disturb Tenant's occupancy of the Leased Premises and shall recognize Tenant's rights under this Lease in the event of a foreclosure of such Encumbrance or a transfer in

lieu of foreclosure or a termination of or default under such ground lease (as the case may be), provided that there is not then an Event of Default under this Lease and that such owner, beneficiary, lessor, or holder is not responsible or financially accountable in any way for any default or failure on the part of any prior landlord under this Lease. In addition, with respect to the Building's construction lender (or any other party obligated or becoming obligated to provide or refund funds to the Tenant), such agreement with the applicable party shall require that, in the event of a foreclosure of such Encumbrance or a transfer in lieu of foreclosure before full funding of Tenant's Improvement Allowance and payment of the commission due the Brokers in connection with the Initial Term (or full payment of any other obligations due to or on behalf of Tenant under the Lease), such lender shall assume the obligation to fund such amounts pursuant to the terms and conditions of this Lease and any related commission agreements.

Section 9.2 ESTOPPEL CERTIFICATES. Tenant shall at any time (but no more than once per calendar year), upon not less than twenty (20) days' prior written request, execute and deliver in form and substance reasonably satisfactory to Landlord and any Encumbrance holders or any proposed Encumbrance holders or purchasers of the Project or any interest therein, as directed by Landlord, an estoppel certificate certifying (to the extent known and actually true): (a) the Commencement Date and the Expiration Date; (b) the date to which Rent has been paid; (c) that Tenant has accepted the Leased Premises and that all improvements required to be made by Landlord have been satisfactorily completed (or if not so accepted or completed, the matters objected to by Tenant); (d) that this Lease is in full force and effect and has not been modified or amended (or if modified or amended, a description of same); (e) that there are no defaults by Landlord under this Lease nor any existing condition that with the giving of notice, the passage of time or both, would constitute a default; (f) that any tenant improvement allowance or other concession owed to Tenant has been received; (g) that Tenant has received no notice from any insurance company of any defects of inadequacies in the Leased Premises; (h) that Tenant has no options or rights other than as set forth in this Lease or any amendment hereto; (i) that there are no disputes as to any obligations or monetary requirements under the terms of the Lease; and (j) such other matters as Landlord or the beneficiary of such estoppel certificate may reasonably request. To the extent any such matter is not known or not true as contained in the proposed estoppel form delivered to Tenant, Tenant shall be allowed to so indicate, provide any appropriate explanation and modify such form appropriately to accurately reflect such information. If such estoppel certificate is to be delivered to a purchaser of the Project, provided that it contains provisions whereby such purchaser recognizes Tenant as its tenant and honoring the terms of the Lease and that such purchaser acknowledges and agrees to the Tenant's Non-disturbance Rights, it shall further include the agreement of Tenant to attorn to such purchaser as Landlord under this Lease, and thereafter to pay Rent to the purchaser or its designee in accordance with the terms of this

Lease. Tenant acknowledges that any purchaser or prospective mortgagee of the Project may rely upon such estoppel letter and that Landlord may incur substantial damages by reason of any failure on the part of Tenant to provide such letter in a timely manner.

Section 9.3 SECURITY. "Tenant Security Requirements" shall mean that Tenant requires advance notification of Landlord's intent to enter the Premises, except in emergency situations. At all times, Landlord's representatives shall be prepared to provide proper identification. Non-Landlord parties, including, but not limited to, potential buyers, mortgagees, invitees, guests or potential tenants, shall be accompanied by an employee of Tenant at all times while within the Premises. If Landlord intends to show the Premises to prospective tenants, Landlord shall additionally provide Tenant the name of the prospective tenant, and, if the prospective tenant is determined to be a Competitor of Tenant, Tenant shall, at Tenant's option, have at least 72 hours to make any arrangements to further secure the Premises prior to the tour of the prospective tenant of the Premises. Tenant acknowledges and agrees that Landlord shall not be liable to Tenant or to any owner, employee, contractor, agent, guest, invitee, or customer of Tenant for, and Tenant waives any claim against Landlord with respect to, any loss by theft or any other damage suffered or incurred by Tenant (or any owner, employee, contractor, agent, guest, invitee, or customer of Tenant) in connection with any unauthorized entry into the Leased Premises or any other breach of security with respect to the Leased Premises, unless such unauthorized entry

or other security breach is the result of Landlord's willful acts, omissions or gross negligence.

Section 9.4 PARTY APPROVALS. Tenant represents and warrants that all consents and approvals required (including from its Board of Directors or shareholders, as necessary) for the execution, delivery and performance of this Lease have been obtained and that Tenant has the right and authority to enter into and perform its covenants contained in this Lease. Likewise, Landlord represents and warrants that all consents and approvals for the execution, delivery and performance of this Lease have been obtained and that Landlord has the right and authority to enter into and perform its covenants contained in this Lease.

Section 9.5 SEVERABILITY; USURY SAVINGS CLAUSE. If any term or provision of this Lease, or the application thereof to any person or circumstance shall to any extent be invalid or unenforceable, the remainder of this Lease, or the application of such provision to persons or circumstances other than those as to which it is invalid or unenforceable, shall not be affected thereby. Each provision of this Lease shall be valid and shall be enforceable to the extent permitted by law. Notwithstanding anything to the contrary in this Lease, the effective rate of interest on any sum set forth in this Lease shall not exceed the lawful maximum rate of interest permitted to be accrued or collected. Without limiting the generality of the foregoing, in the event any interest accrued or collected hereunder results in an effective rate of interest higher than that lawfully permitted to be accrued or collected, then such interest rate shall be reduced to the lawful maximum interest rate permitted to be accrued or collected by applicable law, and any amount previously paid or paid in the future which would exceed the highest lawful rate shall be applied to a reduction of Base Rental (without premium or penalty) and not to the payment of interest.

Section 9.6 NON-WAIVER. No failure or delay of Landlord or Tenant in any one instance to exercise any remedy or power given it herein or to insist upon strict performance by the other of any obligation imposed on it herein in any other instance shall constitute a waiver or a modification of the terms hereof by the non-performing party in any one instance or any right it

has herein to demand strict compliance with the terms hereof by the non-performing party in any other instance. Additionally, no express written waiver by Landlord or Tenant shall affect any condition other than the condition specified in such express written waiver and only for the time and in the manner specifically stated. A receipt by Landlord of any Rent with knowledge of the breach of any covenant or agreement contained in this Lease shall not be deemed a waiver of such breach, and no waiver by Landlord or Tenant of any provision of this Lease shall be deemed to have been made unless expressed in writing and signed by the waiving party. No payment by Tenant or receipt by Landlord of a lesser amount than the Rent due under this Lease shall be deemed to be other than an account of the earliest Rent due hereunder, nor shall any endorsement or statement on any check or any letter accompanying any check or payment as Rent be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such Rent or pursue any other remedy in this Lease provided. No course of conduct between Landlord and Tenant, and no acceptance of the keys to or possession of the Leased Premises before the termination of the Term by Landlord or any employee of Landlord shall constitute a waiver of any such breach or of any term, covenant or condition of this Lease or operate as a surrender of this Lease. All of the remedies permitted or available to Landlord or Tenant under this Lease, or at law or in equity, shall be cumulative and not alternative and the exercise of any such right or remedy shall not constitute a waiver or election of remedies with respect to any other permitted or available right or remedy.

Section 9.7 NOTICES. All notices, requests, demands, tenders and other communications under this Lease shall be in writing. Any such notice, request, demand, tender or other communication shall be deemed to have been duly given when actually delivered, or the next business day following delivery to a nationally recognized commercial courier for next business day delivery, to the address for each party set forth in the Lease Summary. Rejection or other refusal to accept, or inability to deliver because of changed address of which no notice was given, shall be deemed to be receipt of such notice, request, demand, tender or other communication. Any party, by written notice to the other party in the manner herein provided, may designate an address different from that stated herein.

Section 9.8 SUCCESSORS. This Lease shall be binding upon and inure to the benefit of Landlord, its successors and assigns, and shall be binding upon and inure to the benefit of Tenant, its successors and, to the extent assignment may be approved by Landlord hereunder, Tenant's assigns.

Section 9.9 EXHIBITS; ENTIRETY; CONSTRUCTION. All exhibits, schedules, and addenda now attached, or hereafter attached, to this Lease, by mutual agreement pursuant to the Special Stipulation or otherwise, are incorporated herein and are made a part of this Lease. Except for that certain letter agreement dated on or about the same date as this Lease pertaining to the Landlord's reimbursement of expenses incurred by Tenant for architectural services pertaining to "test-fit" analysis ("the "Test-Fit" Letter"), this Lease constitutes the entire agreement between Landlord and Tenant. Except for the Test-Fit Letter, no prior or contemporaneous promises, inducements, representations or agreements, oral or otherwise, between the parties hereto not embodied herein shall be binding or have any force or effect. Tenant will make no claim on account of any representations whatsoever, whether made by any renting agent, broker, officer or other representative of Landlord or which may be contained in any circular, prospectus or advertisement relating to the Leased Premises or the Project, or otherwise, unless the same is

explicitly set forth in this Lease. The parties acknowledge that each party to this Lease has been represented by counsel and that such counsel have participated in the negotiation and preparation

of this Lease. This Lease shall be construed without regard to any presumption or rule requiring that it be construed or constructed against the party who has caused the Lease to be drafted. When used herein, (i) the singular shall include the plural, and vice versa, and the use of the masculine, feminine or neuter gender shall include all other genders, as appropriate; and (ii) "include", "includes" and "including" shall be deemed to be followed by "without limitation" regardless of whether such words or words of like import in fact follow the same.

Section 9.10 FINANCIAL STATEMENTS. If Tenant ceases to be a publicly traded company, then Tenant shall have an obligation to provide financial statements to Landlord no less frequently than annually.

Section 9.11 CONFIDENTIALITY; MEDIA. Landlord and Tenant acknowledge that the other party's financial, operational, and other non-public information provided to it by the other party or otherwise obtained by it in connection with the negotiation and preparation of and performance under this Lease is confidential, except to their respective board of directors, legal counsel, financial advisers, professional advisors and other consultants in connection with negotiating and finalizing this Lease. Landlord and Tenant agree not to disclose any such confidential information to any other person, firm, or enterprise or use (directly or indirectly) any such information for its own benefit or the benefit of any other party, except as may be required by any Governmental Authority or any Legal Requirement so long as the non-disclosing party has received written notice of such requirement reasonably in advance of such disclosure. Additionally, no press releases or other announcements shall be made by Landlord or Tenant related to the Lease without the written consent of both Landlord and Tenant as to the timing and content of the same.

Section 9.12 FORCE MAJEURE. Landlord and Tenant (except with respect to the payment of Rent or any other monetary obligation of either Landlord or Tenant under this Lease) shall be excused for the period of any delay and shall not be deemed in default with respect to the performance of any of the terms, covenants and conditions of this Lease when prevented from so doing by a cause or causes beyond Landlord's or Tenant's (as the case may be) reasonable control (each, a "Force Majeure"), which shall include, without limitation, all labor disputes, governmental regulations or controls, fire or other casualty, inability to obtain any material or services, pandemics and acts of God.

Section 9.13 AMENDMENTS. This Lease may not be altered, changed or amended, except by an instrument in writing, signed by both parties hereto.

Section 9.14 BROKERS. Tenant represents and warrants that Tenant did not engage a broker and Landlord agreed to provide Tenant the brokerage fee equivalent as additional Tenant Improvement Allowance set forth in the Lease Summary. Tenant hereby indemnifies and holds harmless Landlord and any broker employed by Landlord from any claims of any other broker(s) claiming a commission in connection with this Lease, or any renewal, extension or any type of option relating to this Lease, resulting from the actions of Tenant. Landlord represents and warrants that Landlord has dealt with and only with the Brokers named in the Lease Summary in connection with this Lease and Landlord hereby indemnifies and holds harmless Tenant from any claims of Brokers and any other broker(s) claiming a commission in connection with this Lease,

or any renewal, extension or any type of option relating to this Lease, resulting from the actions of Landlord.

Section 9.15 PATRIOT ACT. Neither Tenant nor any of Tenant's, directors, officers, or any other constituent or affiliate entities is identified on the list of specially designated nationals and blocked persons subject to financial sanctions that is maintained by the U.S. Treasury Department, Office of Foreign Assets Control and any other similar list maintained by the Office of Foreign Assets Control pursuant to any authorizing United States law, regulation or Executive Order of the President of the United States nor is Tenant subject to trade embargo or economic sanctions pursuant to any authorizing United States law, regulation or Executive Order of the President of the United States. The execution of this Lease by Tenant will not violate the Trading

President of the United States. The execution of this Lease by Tenant will not violate the Trading with the Enemy Act, as amended, or any of the foreign assets control regulations of the United States Treasury Department (31 CFR, Subtitle B, Chapter V, as amended) or any enabling legislation or executive order relating thereto. In addition, Tenant warrants, represents and covenants that Tenant is not an entity or person (i) that is listed in the Annex to, or is otherwise subject to the provisions of Executive Order 13224 issued on September 24, 2001 ("EO13224"), (ii) whose name appears on the United States Treasury Department's Office of Foreign Assets Control ("OFAC") most current list of "Specifically Designed National and Blocked Persons" (which list may be published from time to time in various mediums including, but not limited to, the OFAC website, http:www.treas.gov/ofac/t11sdn.pdf), (iii) who commits, threatens to commit or supports "terrorism", as that term is defined in EO 13224, or (iv) who is otherwise affiliated with any entity or person listed in subparts (i) – (iv) above (any and all parties or persons described in subparts (i) – (iv) above are herein referred to as a "Prohibited Person"). Tenant covenants and agrees that Tenant will not knowingly (i) conduct any business, nor engage in any transaction or dealing, with any Prohibited Person, including, but not limited to, the making or receiving of any contribution of funds, goods, or services, to or for the benefit of a Prohibited Person, or (ii) engage in or conspire to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in EO13224. Tenant further covenants and agrees to deliver (from time to time) to Landlord any such certification or other evidence as may be reasonably requested by Landlord, confirming that Tenant (i) is not a Prohibited Person, (ii) has not knowingly engaged in any business, transaction or dealings with a Prohibited Person, including, but not limited to, the making or receiving of any contribution of funds, goods, or services, to or for the benefit of a Prohibited Person, and (iii) is not, or shall not become, a person or entity whose activities are regulated by the International Money Laundering Abatement and Financial Anti-Terrorism Act of 2001 or the regulations or orders thereunder.

Section 9.16 WAIVER OF JURY TRIAL; COUNTERCLAIMS. TO THE MAXIMUM EXTENT PERMITTED BY LAW, LANDLORD AND TENANT EACH WAIVE ANY RIGHT TO TRIAL BY JURY IN ANY LITIGATION OR TO HAVE A JURY PARTICIPATE IN RESOLVING ANY DISPUTE ARISING OUT OF OR WITH RESPECT TO THIS LEASE OR ANY OTHER INSTRUMENT, DOCUMENT OR AGREEMENT EXECUTED OR DELIVERED IN CONNECTION HEREWITH OR THE TRANSACTIONS RELATED HERETO. IT IS FURTHER MUTUALLY AGREED THAT IN THE EVENT LANDLORD COMMENCES ANY PROCEEDING OR ACTION FOR POSSESSION, INCLUDING A SUMMARY PROCEEDING FOR POSSESSION OF THE PREMISES, TENANT WILL NOT INTERPOSE ANY COUNTERCLAIM OF WHATEVER NATURE OR DESCRIPTION IN ANY SUCH PROCEEDING, EXCEPT FOR STATUTORY MANDATORY COUNTERCLAIMS.

Section 9.17 NO RECORDING AND NON-DISCLOSURE. Landlord and Tenant agree not to record this Lease. Additionally, except as required by Legal Requirements or for financial reporting purposes, Landlord and Tenant shall not disclose the terms of this Lease to any third party; provided, however, without Tenant's prior written consent, Landlord shall be permitted to disclose the terms of this Lease to (i) Landlord's owners, directors, managers, and officers and Landlord's affiliates and property managers, (ii) any current or prospective holder of any Encumbrance or voluntary lien on the Project or any portion thereof or interest therein, (iii) any prospective purchaser or other transferee of the Project or any portion thereof or interest therein, and (iv) Landlord's professional advisors (including legal counsel, accountants, and insurance brokers); provided further, however, without Landlord's prior consent, Tenant shall be permitted to disclose the terms of this Lease to (i) Tenant's professional advisors (including legal counsel, accountants, and insurance brokers); (ii) any prospective or permitted assignee, sublessee or other transferee of Tenant's interest under this Lease; and (iii) Tenant's owners, directors, managers, and officers. Notwithstanding anything to the contrary contained in this Lease, any breach by Landlord or Tenant of the provisions of this section shall not be a default under the terms of this Lease, and the non-defaulting party's sole remedy shall be to commence actions at law or in equity for an injunction (without the necessity for bond) or to recover damages suffered by such party on account of the breach and to recoup all costs and expenses (including attorney fees) incurred by the non-defaulting party in connection with such breach.

Section 9.18 TIME. Time is of the essence in this Lease. Except to the extent expressly provided to the contrary in this Lease, all references to days in this Lease shall refer to calendar days. All references to "Business Days" or "business days" in this Lease mean days that banks are open for business in Nashville, Tennessee. If any date, deadline, milestone, or period provided in this Lease ends on a Saturday, Sunday or legal or bank holiday (as observed in Nashville, Tennessee), the applicable period shall be extended to the first Business Day following such Saturday, Sunday or legal or bank holiday (as observed in Nashville, Tennessee).

Section 9.19 NO RELATIONSHIP OTHER THAN LANDLORD AND TENANT. This Lease shall not be deemed or construed to create or establish any relationship (other than that of landlord and tenant) or partnership or joint venture or similar relationship or agreement between Landlord and Tenant hereunder.

Section 9.20 GOVERNING LAW; ATTORNEY FEES. This Lease is a Tennessee contract, and all of the terms hereof shall be construed according to the laws of the State of Tennessee. In the event Tenant or Landlord defaults in the performance of any of the terms, covenants, agreements or conditions contained in this Lease and the non-defaulting party places the enforcement of this Lease, or any part thereof, or the collection of any sums due, or to become due hereunder, or recovery of the possession of the Leased Premises, in the hands of an attorney, or files suit upon the same, the defaulting party agrees to pay the non-defaulting party all costs and expenses (including reasonable attorney fees and third-party expert fees) actually incurred by the non-defaulting party if the non-defaulting party prevails in connection with such enforcement or, in the event suit is necessary, if such suit is successful.

Section 9.21 COUNTERPARTS. This Lease may be executed in multiple counterparts, by exchange of facsimile or pdf copies, each of which shall constitute an original instrument, but all of which shall constitute one and the same agreement.

Section 9.22 NO RESERVATION OR OPTION. Submission of this instrument for examination or signature by Tenant does not constitute a reservation of or an option for lease, and it is not effective as a lease or otherwise until execution and delivery by both Landlord and Tenant.

[Signature page follows]

IN WITNESS WHEREOF, the parties hereto have executed this Lease as of the Effective Date.

LANDLORD:

1600 West End Avenue Partners, LLC,
a Tennessee limited liability company

By: _____
Name: Christopher A. Brown
Title: President

[Signature page to Office Lease Agreement]

IN WITNESS WHEREOF, the parties hereto have executed this Lease as of the Effective Date.

TENANT:

Cumberland Pharmaceuticals Inc.,
a Tennessee corporation

_____

By: AJ Kazimi
Name: AJ Kazimi
Title: CEO

Addendum 1

Right of First Offer

In order to accommodate Tenant's future expansion of the business, Landlord hereby grants to Tenant throughout the Term of the Lease a right of first offer with respect to any rentable space immediately on the same floor and contiguous to the Office Space (the "Offer Space") not otherwise a part of the Leased Premises at the time of the Offer Notice (defined below), all upon the terms and conditions set forth in this addendum and provided that there is no existing Event of Default at the time the Offer Notice is given or at the time the Offer Space is delivered to Tenant (the "Right of First Offer"). Such Right of First Offer shall be a continuous Right of First Offer for the contiguous floor below Tenant's Leased Premises and, subject to and subordinate to the rights of other tenants, for the contiguous floor above Tenant's Leased Premises. As used herein, "available" means that the space is not subject to any rights of other tenants to lease the same either (i) in effect as of the date of this Lease; or (ii) granted in any lease executed after the date of this Lease where Tenant has not exercised the foregoing right of first offer. Further, space shall not be deemed available if Landlord elects to renew the lease of the tenant then in occupancy. Tenant's Right of First Offer shall terminate upon sublease of the Premises or assignment of the Lease and shall not be assignable to any sublessee or assignee.

Landlord shall notify Tenant in writing within thirty (30) days after the Offer Space becomes available to lease, or at Landlord's option, such earlier time as Landlord shall be in a position to project when the Offer Space will be available to lease, advising Tenant of such projected date. Tenant shall then have fifteen (15) days in which to notify Landlord in writing exercising Tenant's right to lease the Offer Space on the terms described herein. If Tenant exercises the right to lease the Offer Space, said lease and the rent on the Offer Space shall commence the later of thirty (30) days after Tenant's notice exercising the right, or the date the Offer Space is available for occupancy, and shall continue for the duration of the Term of the Lease (including the Renewal Term if the Renewal Option is exercised).

Notwithstanding anything to the contrary contained herein, if Tenant does not exercise its Right of First Offer with respect to any Offer Space offered by Landlord to Tenant pursuant to this addendum, Tenant's Right of First Offer covering such Offer Space is and shall be subject and subordinate to any renewal rights, expansion rights, rights of first offer or similar rights thereafter granted to any tenants of the Building with respect to such Offer Space, as an inducement for such tenants to enter into their leases with Landlord, all of which rights Landlord may give such tenants in its sole discretion.

The Offer Space leased by Tenant pursuant to this addendum shall be leased on and subject to the following terms and conditions: (i) the Offer Space shall be delivered in its as-is, where-is condition, unless otherwise agreed to in writing by Landlord and Tenant, and shall become a part of the Leased Premises and the Term shall commence as to such Offer Space, effective upon the earlier of (x) Tenant's substantial completion of Tenant's improvements to the Offer Space (performed in compliance with the provisions of Exhibit F), (y) Tenant's occupancy of the Offer Space for the Permitted Use, or (z) 120 days from Landlord's delivery of the Offer Space to Tenant; (ii) Tenant's lease of the Offer Space shall be coterminous with the Term; (iii) the Base Rental rate per square foot of Rentable Area of the subject Offer Space shall be the rate set forth in this Lease;

(iv) Tenant's Proportionate Share shall be correspondingly increased and Tenant shall be responsible for any increases in Rent because of such increased Proportionate Share; and (v) Tenant shall be afforded a tenant improvement allowance applicable to the Offer Space of $62.00 per square foot of Rentable Area within the Offer Space as the Tenant Improvement Allowance, reduced in proportion to the then-remaining portion of the Term (excluding, for clarification, any non-available or non-exercised Renewal Terms) (an "Offer Space Improvement Allowance"), which shall be paid in the same fashion and pursuant to the same restrictions as the Tenant Improvement Allowance. Any work required for Tenant's occupancy of the Offer Space shall be subject to the requirements, and completed in the same manner, as the Tenant's Improvements set forth in the Work Letter.

Promptly after the exercise of the Right of First Offer pursuant to the terms hereof, Tenant and Landlord shall execute an amendment to this Lease in form mutually agreed to by Landlord and Tenant, each acting reasonably, which amendment shall delineate and describe the Offer Space added to this Lease thereby and any terms specific thereto.

Tenant may not assign the Right of First Offer, and no sublessee or assignee of Tenant may exercise a Right of First Offer. The Right of First Offer shall terminate upon and Event of Default by Tenant.

Without limiting any term or provision of this addendum (including the terms of Landlord's delivery of Offer Space), Landlord shall not be liable for failure to give possession of any Offer Space by reason of any holding over or retention of possession by any previous tenants or occupants of such Offer Space (or any portion thereof), nor shall such failure impair the validity of this Lease (however, in the event of any such holding over, the Term shall not commence as to the applicable Offer Space until Landlord actually delivers possession). Landlord does agree, however, to use reasonable diligence to deliver possession of the applicable Offer Space in accordance with the provisions of this addendum and, if requested by Tenant, and if (but only if) substitute space is available for Tenant's use in the Building (as reasonably determined by Landlord) containing approximately the same number of square feet of Rentable Area as the Offer Space subject to the holdover, Landlord shall permit Tenant to utilize such space in its as-is condition, and Landlord and Tenant shall not make any alterations or improvements thereto and Tenant shall not be entitled to any allowances with respect thereto) for so long as such space is available (the "Offer Substitute Space"). Tenant shall be obligated to pay Base Rental for the Offer Substitute Space at the lesser of (i) the rate Tenant is obligated to pay for the Offer Space as determined pursuant to this addendum, and (ii) the rate currently being charged by Landlord for a comparable space in the Building. Tenant shall have the Offer Substitute Space until that portion of the Offer Space occupied by the previous tenant is made available to Tenant, at which time Tenant shall relocate (at its cost and expense) to the Offer Space and the Offer Substitute Space shall be returned to Landlord in a broom-clean condition at least comparable to the condition of such Offer Substitute Space upon delivery to Tenant, subject only to reasonable wear and tear.

Description of the Land

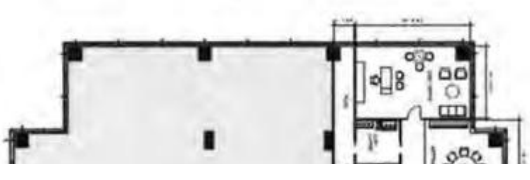
The land on which the "Office Tower" is actually located (which Tenant acknowledges is an approximate, and not exact, location of such land), which land is a portion of the following described parcel on which the Project is located:

Land in Davidson County, Tennessee, being Lot No. 1 on the Plan of West End Summit of record in Instrument Number 20080702-0068641, in the Register's Office for Davidson County, Tennessee, to which Plan reference is hereby made for a more complete description of the property.

EXHIBIT B-1

Premises Floor Plans and Drawings as Existing as of the Date of Execution of this Lease

Floor 13



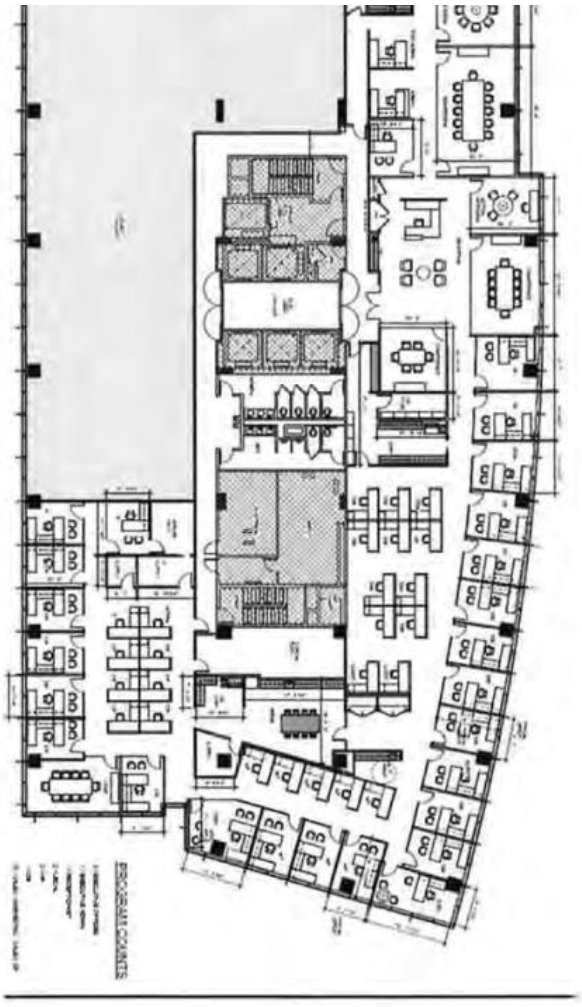


EXHIBIT B-2
Building Amenities Floor Plan

As of the Effective Date, Landlord will provide amenities within the Building as outlined below. Notwithstanding these planned locations for the amenities, Landlord shall have, at its sole discretion, the right to relocate the amenities prior to the commencement of or at any time during the term of the Lease.

Fitness Center (For the use of office tenants)	3rd floorFloor Office Tower
Outdoor Event Space (For the use of office tenants)	3rd Floor Creative Office Building
Common Plaza (for all users)	Central to Broadwest Project

In addition to the Building Amenities outlined above, Landlord commits to construct the following

components as part of the overall Broadwest Project:

- A luxury hotel of approximately 234 rooms (estimated opening date of 1st calendar quarter 2022)
- A luxury residential condominium with approximately 196 units (estimated delivery date of 3rd calendar quarter 2021)
- Approximately 42,000 +/- square feet of retail space demised into 8 or more spaces that is designed to provide restaurant and other service retail to complement the overall Broadwest Project. (delivery date commensurate with office building delivery date)

Should the Landlord fail to deliver these components as part of the normal development timeline for the Broadwest Project (subject to Force Majeure as outlined in this Lease), then Landlord will be deemed to have defaulted under this lease and the Tenant will have the rights and remedies hereunder. Once the Landlord has delivered these components, then this requirement is deemed to have been satisfied and the subsequent operations and/or alterations of such components of the Project shall have no bearing on this Lease.

EXHIBIT C

Form of Commencement Certificate

COMMENCEMENT CERTIFICATE

This Commencement Certificate is made and entered into as of the ____ day of _____, 20___, between 1600 West End Partners, LLC, a Tennessee limited liability company ("Landlord") and _____, a _____ corporation ("Tenant"), and shall be attached to and made a part of that certain Office Lease Agreement between Landlord and Tenant dated _____ (the "Lease"). Pursuant to the provisions of the Lease, Landlord and Tenant intending to be legally bound hereby, agree to the following:

a. The Effective Date of the Lease is _____, 20___.

b. The Commencement Date is _____, 20___.

c. Pursuant to the provisions of Section 1.2 (if and as applicable) and notwithstanding the provisions of the Lease Summary, (i) the Leased Premises' Usable Area is _____ square feet and Rentable Area is _____ square feet and (ii) Tenant's Proportionate Share is ____%. The changes, if any in Tenant's Percentage Share, the Base Rental, the number of parking spaces to be available for lease to the Tenant under this Lease are set forth on Schedule 1 hereto and the Lease shall be and is hereby amended as set forth on such Schedule 1.

d. Except as may be set forth on Schedule 2 hereto, Tenant agrees that, as of and through the date hereof, Landlord has fully and timely complied with and performed each and every of its obligations with respect to delivery of the Base Building as set forth in the Lease.

IN WITNESS WHEREOF, the parties have duly executed this supplement to the Lease as of the day and year first above written.

[Signature page follows]

[Signature page to Commencement Certificate]

LANDLORD:

1600 West End Avenue Partners, LLC,
a Tennessee limited liability company

By: _____
Name: _____
Title: _____

TENANT:

Cumberland Pharmaceuticals Inc.,
a Tennessee corporation

By: _____
Name: _____
Title: _____

EXHIBIT D

Express Non-Permitted Uses

1. Any use that would adversely affect the appearance of the Project;

2. Any use, except for general office or retail use, that would have any "negative" visual affect from the exterior of, or the public areas of, the Project;

3. Any use that would adversely affect ventilation in other areas of the Project (including without limitation, the creation of offensive odors);

4. Any use that would create unreasonable elevator loads or cause structural loads to be exceeded;

5. Any use that would create unreasonable noise levels, otherwise unreasonably interfere with Project operations or other tenants of the Project, or violate Legal Requirements;

6. Any use by a federal, state or municipal government or authority, or any political subdivision of any of them, any agency exercising governmental authority or any agency or entity generally considered by the public to be a governmental agency or entity *(e.g.,* the United States Postal Service);

7. Any "second hand" store, resale shop or "surplus" store;

8. Any fire or bankruptcy sale or auction house operation;

9. Any bowling alley, billiard parlor, theatre, entertainment center, skatingrink or other amusement arcade, game room, or amusement center;

10. Any pet store or any store that involves in a material way the presence on the Leased Premises of any animals, insects or fish (the presence of service animals shall be deemed not to violate this restriction);

11. Any adult bookstore, movie or video store, or other similar store;

12. Any car, truck, equipment or other consumer rental facility;

13. Any hospital, dental office, optician's office, physician's office, clinic or other health care facility for the onsite treatment of patients;

14. Any convenience store or "mom & pop" grocery store;

15. Any discount-oriented uses;

16. Any modeling studio or similar establishment;

17. Any central laundry, dry cleaning plant or laundromat;

18. Any religious, charitable, missionary or social service organizations;

19. Any political, fund raising or advocacy groups;

20. Any automobile showroom of any kind;

21. Any bar, nightclub or other drinking establishment except for a bar that is part of a restaurant or a bar located within the hotel.

22. Any tattoo shop or parlor.

23. Any massage parlor, tanning salon, barber, ladies hair salon, modeling studio or similar establishment, unless located in the retail portion of the development.

All restrictions concerning the above non-permitted uses shall be reasonably enforced by the Landlord for the mutual benefit of all tenants leasing space, from time to time, in the Building.

EXHIBIT E

Project Rules

1. The sidewalks and public portions of the Project, such as entrances, passages, courts, elevators, vestibules, stairways, corridors or halls, and the streets, alleys or ways surrounding or in the vicinity of the Project shall not be obstructed, even temporarily, or encumbered by Tenant or used for any purpose other than ingress and egress to and from the Leased Premises.

2. No awnings or other projections (other than approved Tenant signage) shall be attached to the outside walls of the Project. No curtains, blinds, shades, louvered openings, tinted coating, film or screens shall be attached to or hung in, or used in connection with, any window, glass surface or door of the Premises, without the prior written consent of Landlord, unless installed by Landlord.

3. No sign, advertisement, notice or other lettering shall be exhibited, inscribed, painted or affixed by Tenant on any part of the outside of the Leased Premises (other than approved Tenant signage) or the Project or on corridor walls or windows or other glass surfaces (including without limitation glass storefronts). Landlord will order and provide, at Tenant's expense, building standard suite signs. Signs on doors may, at Tenant's expense, be inscribed, painted or affixed for each tenant by sign makers approved by Landlord. In the event of the violation of the foregoing by Tenant, Landlord may remove same without any liability, and may charge the expense incurred by such removal to Tenant.

4. The sashes, sash doors, skylights, windows, heating, ventilating and air conditioning vents and doors that reflect or admit light and air into the halls, passageways or other public places in the Project shall not be covered or obstructed by Tenant, nor shall any bottles, parcels or other articles be placed on the window sills.

5. No show cases or other articles shall be put in front of or affixed to any part of the exterior of the Project, nor placed in the public halls, corridors or vestibules without the prior written consent of Landlord.

6. The water and wash closets and other plumbing fixtures shall not be used for any purposes other than those for which they were constructed, and no sweepings, rubbish, rags or other substances shall be thrown therein. All damages resulting from any misuse of the fixtures shall be borne by Tenant.

7. Tenant shall not in any way deface any part of the Leased Premises or the Project. If Tenant desires to use linoleum or other similar floor covering, an interlining of builder's deadening felt shall be first affixed to the floor, by a paste or other material, soluble in water; the use of cement or other similar adhesive materials, which are not water soluble, are expressly prohibited.

8. No bicycles, vehicles, or animals of any kind (except for service animals) shall be brought into or kept in or about the Leased Premises. No cooking shall be done or permitted by Tenant on the Leased Premises except in conformity to law and then only in the utility kitchen, if

any, as set forth in Tenant's layout, which is to be primarily used by Tenant's employees for heating beverages and light snacks. Tenant shall not cause or permit any unusual or objectionable

odors to be produced upon or permeate from the Leased Premises.

9. No space in the Project shall be used for manufacturing or distribution, for the storage of merchandise or for the sale of merchandise, goods or property of any kind at auction.

10. Tenant shall not make, or permit to be made, any unseemly or disturbing noises or disturb or interfere with occupants of the Project or neighboring buildings or premises or those having business with them, whether by the use of any musical instrument, radio, talking machine, unmusical noise, whistling, singing, or in any other way. Tenant shall not throw anything out of the doors, windows or skylights or down the passageways. Tenant shall not cause or permit any unseemly or disturbing activity or conduct to be visible through any window, opening, doorway, glass storefront or other glass surface or any other means of visibility that disturbs or interferes with (i) tenants or other occupants of the Project or their licensees or invitees or (ii) neighboring buildings or premises or those having business with them, including without limitation, receptions, parties, recreation and other activities of a social nature not directly related to Tenant's use of the Leased Premises.

11. Neither Tenant, nor any of Tenant's servants, employees, agents, visitors or licensees, shall at any time bring or keep upon the Leased Premises any inflammable, combustible or explosive fluid, or chemical substance, other than reasonable amounts of cleaning fluids or solvents required in the normal operation of Tenant's business offices.

12. No additional locks or bolts of any kind shall be placed upon any of the doors or windows by Tenant, nor shall any changes be made in existing locks or the mechanism thereof, without the prior written approval of Landlord and unless and until a duplicate key is delivered to Landlord. Tenant shall, upon the termination of its tenancy, return to Landlord all keys of stores, offices and toilet rooms, either furnished to, or otherwise procured by, Tenant, and in the event of the loss of any keys so furnished, Tenant shall pay to Landlord the cost thereof.

13. Tenant shall not overload any floor. Tenant shall obtain Landlord's consent before bringing any safes, freight, furniture or bulky articles into the Project, and Landlord can specify to Tenant the location for the placement of such articles. All removals, or the carrying in or out of any safes, freight, furniture or bulky matter of any description must take place during the hours that Landlord or its agent may determine from time to time. Landlord reserves the right to inspect all freight to be brought into the Project and to exclude from the Project all freight that violates any of these Project rules or the Lease of which these Project rules are a part.

14. If Tenant desires any waxing, polishing or other janitorial or maintenance services with respect to the Leased Premises or any of Tenant's furniture, fixtures or equipment that is beyond the scope of Landlord's responsibility under this Lease, Tenant agrees to employ such janitorial or maintenance contractor as Landlord may from time to time designate for such services. Tenant agrees that it shall not employ any other janitorial or maintenance contractor, nor any individual, firm or organization for such purpose without Landlord's prior written consent.

15. Landlord shall have the right to prohibit any advertising by Tenant (other than Tenants approved signage) that, in Landlord's opinion, tends to impair the reputation of the Project or its desirability as a building for offices, and upon written notice from Landlord, Tenant shall refrain from or discontinue such advertising.

16. Landlord reserves the right to exclude from the Project between the hours of 6:00 p.m. and 7:00 a.m. and at all hours on Sundays, legal holidays and after 2:00 p.m. on Saturdays all persons who do not sign in and out on a register in the lobby of the Building, showing the name of the person, the premises visited and the time of arrival and departure. All such persons entering or leaving the Building during such times may be expected to be questioned by the Building

security personnel as to their business in the Building. Unless Landlord is grossly negligent, Landlord shall in no case be liable for damages for any error with regard to the admission to or exclusion from the Project of any person. In the case of invasion, mob, riot, public excitement or other circumstances rendering such action advisable in the Landlord's opinion, Landlord reserves the right to prevent access to the Project during the continuance of the same by such action as Landlord may deem appropriate, including closing doors.

17. The requirements of Tenant will be attended to only upon application at the office of Landlord or its property manager located at the Project. Employees of Landlord or its property manager for the Project shall not perform any work or do anything outside of their regular duties, unless under special instructions from the office of Landlord or its property manager.

18. Canvassing, soliciting and peddling in the Project are prohibited, and Tenant shall cooperate to prevent the same.

19. There shall not be used in any space, or in the public halls of any building, either by Tenant or by its jobbers or others, in the delivery or receipt of merchandise, any hand trucks, except those equipped with rubber tires and side guards. No hand trucks shall be used in passenger elevators.

20. Tenant, in order to obtain maximum effectiveness of the cooling system, shall lower and/or close the blinds or drapes when sun's rays fall directly on windows of the Leased Premises. Tenant shall not remove the standard blinds installed in the Leased Premises without Landlord's prior written consent.

21. All paneling, rounds or other wood products not considered furniture shall be of fire retardant materials. Before installation of any such materials, certification of the materials' fire retardant characteristics shall be submitted to Landlord or its agents, in a manner satisfactory to Landlord.

22. All articles and the arrangement style, color and general appearance thereof, in the interior of the Leased Premises that will be visible from the exterior thereof, including, without limitation, window displays, advertising matter, signs, merchandise, furniture and store fixtures, shall be subject to Landlord's approval, and, in any case, shall be maintained in keeping with the character and standards of the Project.

23. Landlord may waive any one or more of these Project rules for the benefit of any particular tenant or tenants, but no such waiver by Landlord shall be construed as a waiver of such Project rules in favor of any other tenant or tenants, nor prevent Landlord from thereafter enforcing any such Project rules against any or all of the tenants of the Project.

24. Tenant shall abide by no-smoking restrictions in all areas within the Project, other than tenant spaces, designated or posted by Landlord as no-smoking areas.

25. These Project rules are in addition to, and shall not be construed to in any way modify or amend, in whole or part, the terms, covenants, agreements and conditions of the main text of the Lease, which text shall control in the instance of conflict.

26. Landlord reserves the right to make such other commercially reasonable rules and regulations as, in its judgment may, from time to time, be needed for safety, care and cleanliness of the Project, and for the preservation of good order therein. Such other rules and regulations shall be effective upon written notification to Tenant and shall be reasonably enforced by the Landlord for the mutual benefit of all tenants leasing space, from time to time, in the Building.

EXHIBIT F

Work Letter

This Exhibit F (this "Work Letter") sets forth obligations of Landlord and Tenant with regard to construction of the Base Building, delivery of the Leased Premises, construction of the Tenant Improvements, and the Tenant Improvement Allowance.

The elevations and renderings contemplate that the Building shall be a 21-story office building, including one or more amenity levels. Landlord covenants that the Project, inclusive of the Building, shall be constructed in general conformance with the elevations.

1. Construction of the Base Building and Delivery of the Leased Premises.

A. To the extent not already obtained or completed as of the Effective Date, Landlord shall continually and diligently pursue at its sole cost and expense securing all necessary approvals for and construction of the Base Building (including the Base Building components of the Leased Premises). Landlord shall keep Tenant apprised of the progress of Base Building construction, including issuing updated construction schedules with the specific purpose of keeping Tenant advised of when construction of Tenant Improvements will begin and be completed.

B. As of the Effective Date, the Lease Premises is in a condition ready for Tenant to begin construction of the Tenant Improvements ("TI Ready Condition").

C. Intentionally omitted.

D. On the date of commencement of tenant improvements, subject to Base Building warranties, Tenant shall take and accept the Leased Premises "AS IS, WHERE IS", subject to Landlord's Punch List Items (which shall in no event delay or postpone the Delivery Date), sub-section (E) below, and Landlord makes no representations or warranties with respect to the Leased Premises, except as may otherwise be expressly set forth in this Lease. ADDITIONALLY, LANDLORD MAKES NO WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE PROJECT (INCLUDING THE LEASED PREMISES), AND ALL IMPLIED WARRANTIES WITH RESPECT TO THE PROJECT (INCLUDING THE LEASED PREMISES), INCLUDING WITHOUT LIMITATION THOSE OF SUITABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXPRESSLY NEGATED AND WAIVED.

E. With respect to the Base Building components of the Leased Premises, Tenant, Landlord, Tenant's Architect, the Tenant's Representative and general contractor shall jointly conduct a walk-through of the Leased Premises with respect to areas or components of the Base Building which have not previously been completed in accordance with the Base Building Conditions and applicable law and shall jointly prepare a punch list ("Landlord's Punch List") of items, if any, necessary to so complete ("Landlord's Punch List Items"). Landlord shall commence the rectification of the deficiencies noted on Landlord's Punch List within ten (10) business days after finalization of Landlord's Punch List, and shall, within sixty (60) days after Landlord's Punch List is prepared and agreed on by Landlord and Tenant, complete such Landlord's Punch List

Items (provided that such sixty (60)-day period shall be extended as necessary if the work cannot reasonably be completed in such time, so long as Landlord continues to diligently prosecute same

until completion).

2. Certain Definitions. In addition to the terms that are defined elsewhere in the Lease (all of which definitions are incorporated herein except to the extent a different meaning for a specific term is expressly provided herein) or elsewhere in this Exhibit F, the following terms shall have the following meanings:

(i) Base Building Condition. The term "Base Building Condition" means the condition of the Leased Premises described in Exhibit F-1 hereto.

(ii) Building Standard. The terms "Building Standard" and "Building standard" mean the standard of all material, finishes and workmanship established by Landlord for the Building and, in any event, consistent with or better than First Class Standards.

(iii) Drawings and Specifications. The term "Drawings and Specifications" means the final drawings, specifications and finish schedules for the construction of the Tenant Improvements in, on or appurtenant to the Leased Premises, which shall be prepared by Tenant's Architect (defined below) and approved by Landlord pursuant to the provisions of this Exhibit F. The Drawings and Specifications shall include, without limitation, complete, detailed architectural drawings and specifications for Tenant's partition layout, reflected ceiling and other installations and complete, detailed mechanical and electrical plans and specifications for installation of air conditioning systems, fire protection and electrical systems.

(iv) First Class Standards. The term "First Class Standards" means a quality that equals or exceeds the quality of newly constructed first class major office projects of comparable size to the Project that are located in Nashville, Tennessee. Such newly constructed first class buildings include, but are not limited to, the buildings known as Gulch Union, Peabody Plaza and 222 2nd Avenue Building.

(v) Landlord Delays. The term "Landlord Delays" means any actual delay in Substantial Completion of the core and shell of the Base Building and of the Base Building improvements, the Tenant Improvement Work or either that is due, directly or indirectly, to any act or omission of Landlord, its agents, contractors or employees but specifically does not include Force Majeure. Tenant shall use reasonable efforts to notify Landlord of any Landlord Delay within ten (10) business days after becoming actually aware of the occurrence of the event causing such Landlord Delay, but shall not be prejudiced in determination of holdover or other damages due to Tenant from Landlord by its failure to do so. Landlord will have the right to reasonably contest Tenant's assessment of the existence and extent of any Landlord Delay. Both Landlord and Tenant will attempt, at the end of the construction period, to determine whether or not each Landlord Delay caused an actual delay or whether such Landlord Delay can or could be mitigated or alleviated.

(vi) Punch List Items. The term "Punch List Items" means details of construction, decoration and mechanical adjustment that, in the aggregate, are minor in

character and do not interfere materially with Tenant's use or enjoyment of the Leased Premises.

(vii) Substantial Completion. The terms "Substantial Completion", "Substantially Complete" and grammatical variations thereof with respect to the Tenant Improvement Work mean the date when the Tenant Improvement Work within the Leased Premises shall have been completed except for Punch List Items, and Tenant has received a certificate of substantial completion from Tenant's Architect and a conditional use and occupancy permit for the Leased Premises issued by the appropriate Governmental Authority to be replaced within ninety (90) days with an unconditional use and occupancy permit. Landlord and Tenant agree that if they mutually concur, compliance with any of

permit. Landlord and Tenant agree that if they mutually concur, compliance with any of the conditions set forth in this subsection would have occurred earlier but for Tenant Delays, compliance with such conditions, and thus Substantial Completion, shall be deemed to have occurred on the date that such compliance would have occurred but for such Tenant Delays. Landlord must notify Tenant of any Tenant Delay within ten (10) business days after becoming aware of the occurrence of the event causing such Tenant Delay. Tenant shall have the right to reasonably contest Landlord's assessment of Tenant Delay. Notwithstanding anything in the Lease to the contrary, Tenant's occupancy of the Leased Premises for the purpose of conducting business therefrom shall constitute Substantial Completion of the Tenant Improvement Work as to the portion of the Premises used by Tenant for the commencement of its Permitted Use and conduct of business therein.

(viii) Tenant Delays. The term "Tenant Delays" means Tenant's failure to deliver its final plans by February 1, 2022, and any actual delay in Substantial Completion of the Tenant Improvement Work that is due solely to any act or omission of Tenant, its agents, contractors or employees and specifically does not include either Force Majeure or delays caused by the Landlord.. In determining any days or other interval of Tenant Delay, to the extent delay occurs that is, in part of wholly attributable to the Landlord, such days or other time interval shall not be counted or included as Tenant Delay.

(ix) Tenant Improvements. The term "Tenant Improvements" means all improvements constructed or installed in, on or appurtenant to the Leased Premises in accordance with the Drawings and Specifications.

(x) Tenant Improvement Work. The term "Tenant Improvement Work" means all general conditions, labor, equipment, materials and appurtenances necessary to fully complete the construction, finishing and installation of all of the Tenant Improvements, in compliance with all applicable Legal Requirements (including building codes) and at no expense to Landlord (subject to the Allowance), including, without limitation, the following:

(1) Electrical and telephone located within the Leased Premises or outside the Leased Premises to the extent serving only the Leased Premises:

(a) All light switches within the Leased Premises.

(b) All electrical outlets and all conduit and wiring throughout the Leased Premises for electrical power, including connections to the Building Standard electrical panels in the core of the Building.

(c) All telephone and data outlets, conduit and wiring throughout the Leased Premises and any necessary connections in the Building core.

(d) All light fixtures, all panel boards, and all conduit and wiring for lights throughout the Leased Premises and connections to Building Standard electrical panels in the core of the Building, and any increase to the number of or alterations to Building Standard panel boards. All ceiling light fixtures and the spacing thereof shall be subject to the standards established by Landlord therefor and shall run in the direction established by Landlord and as approved by Tenant for the Leased Premises.

(e) Any provision for supplying power to the Leased Premises beyond the Building Standard rated electrical design load or in excess of the capacity provided by per floor, including necessary metering to measure excess electrical usage, excluding any Common Area or Base Building improvements

electrical usage, excluding any Common Area or Base Building improvements.

(f) All exit light fixtures, exit signs and emergency circuits excluding any Common Area or Base Building elements.

(2) Any modification to or deviation from the Building Standard sprinkler system.

(3) Tenant's ceiling construction, including the suspended ceiling system and ceiling tile.

(4) All fire alarm devices, including speakers and lights, required within the Leased Premises by applicable codes.

(5) All plumbing work for facilities such as toilets and sinks in the Leased Premises in addition to the plumbing work, toilets, sinks and related facilities provided in Base Building Condition.

(6) All partitions including finish, the sheetrock and finish of the tenant side of any common corridor walls which are within the Leased Premises and the finish to the inside of the Building's perimeter walls.

(7) All doors, frames and hardware not included in the Base Building Condition.

(8) All floor finish including base, the leveling of any floors to a tolerance in excess of Base Building Standard, any construction work for floor slab penetrations, and any construction work for special floor loading requirements.

(9) Any special construction as shown on the Drawings and Specifications.

(10) Tenant's identification sign(s) conforming to Landlord's standards, at entrances to the Leased Premises.

(11) Tenant's communication and telephone equipment and installation thereof.

(12) Any modifications to or deviations from the Building Standard air conditioning system, including but not limited to (a) materials and installation of components to support the Building Standard system, (b) all additional duct work throughout the Leased Premises, (c) fire dampers as required by Tenant's layout design, (d) provision and installation of thermostats, (e) capacity beyond design standards, including any supplemental HVAC and/or exhaust systems, (f) nonstandard equipment, such as special diffusers and returns, and (g) test and balance work.

(13) Elevator lobbies on all floors fully leased by Tenant, including floor finish and base, wall finish and ceilings.

The Tenant Improvement Work comprises the completed construction and installation required to fully complete the Tenant Improvements required by or shown on the Drawings and Specifications (including any amendments, additions or changes to the Drawings and Specifications) and includes all labor and services (including temporary electricity and water) necessary to timely and fully produce such construction and installation, all materials and equipment incorporated, or to be incorporated, in such construction or installation (including any labor, materials or services furnished pursuant to any change orders or in accordance with any other changes, modifications or additions to construction), and all permits, approvals, inspections and certificates required for the construction of the Tenant Improvements and the approval thereof by any and all Governmental Authorities having jurisdiction in accordance with Legal Requirements.

3. Drawings and Specifications. The Drawings and Specifications shall be prepared by Tenant's Architect and approved by Landlord in accordance with the following procedure:

(i) Within thirty (30) days after the Effective Date, Tenant shall inform Landlord of the identity of the architect whom Tenant desires to use to prepare final working drawings and specifications necessary to commence construction of the Tenant Improvements. Landlord shall have the right of approval, such approval not to be unreasonably withheld, conditioned or delayed, over any architect selected by Tenant. Within five (5) business days after Tenant informs Landlord of the identity of the architect selected by Tenant, Landlord shall advise Tenant of Landlord's decision either approving or disapproving the architect selected by Tenant, and Landlord shall specify the reasons for Landlord's disapproval if Landlord disapproves the architect selected by Tenant.

(ii) The architect selected by Tenant and approved by Landlord pursuant hereto shall be referred to as the "Tenant's Architect". Tenant shall commence working with

Tenant's Architect promptly so that final working drawings and specifications can be prepared for Landlord's approval, and Tenant further agrees that such work shall be performed in accordance with professional standards for design and construction criteria.

(iii) Tenant shall deliver to Landlord not later than February 1, 2022 Tenant's proposed final working Drawings and Specifications and other construction documents for the Tenant Improvements. Landlord shall within fifteen (15) days review and resubmit the same to Tenant, either with Landlord's approval, or with Landlord's approval subject to reasonable comments, or with Landlord's disapproval. Tenant shall resubmit any such drawings and specifications that are returned by Landlord without complete approval as promptly as possible, and such resubmitted drawings and specifications shall contain the information or changes reasonably required by Landlord or other appropriate response and Landlord shall review and resubmit within ten (10) days to Tenant. Once such drawings and specifications or resubmitted drawings and specifications are approved by Landlord, the same shall constitute the Drawings and Specifications for purposes of this Exhibit F.

(iv) Once the Drawings and Specifications have been approved or deemed approved by Landlord, the Drawings and Specifications may not be revised without Landlord's approval, not to be unreasonably withheld or conditioned. If Tenant desires to make revisions to the Drawings and Specifications, Tenant shall deliver to Landlord any such proposed revisions to the Drawings and Specifications. Landlord shall promptly review and resubmit the same to Tenant, either with Landlord's approval, or with Landlord's approval subject to comments, or with Landlord's disapproval. Tenant shall resubmit any such revisions that are returned by Landlord without complete approval as promptly as possible, and such resubmitted revisions shall contain the information or changes reasonably required by Landlord or other appropriate response. If Landlord fails to respond within five (5) days after receiving such resubmitted revisions, Landlord shall be deemed to have given its approval. Once such revisions or resubmitted revisions are approved by Landlord, the drawings and specifications, as revised, shall constitute the Drawings and Specifications for purposes of this Exhibit F.

4. Tenant Improvement Costs.

A. Timely Payments. Subject to Landlord's obligation to remit timely payments to Tenant in accordance with Section 6(G) below, Tenant shall pay all payments of the Tenant Improvement Costs (defined below) in a timely manner and prior to delinquency of any such payments. Such requirement shall not, however, be intentionally interrupted to impair Tenant's rights to dispute the performance of such work in accordance with procedures set forth in the governing documents.

B. Prudent Draw Procedures. Tenant shall process and pay all draw requests for the Tenant Improvement Costs in accordance with prudent construction draw practices, including, without limitation, requiring appropriate lien waivers (including from subcontractors), certificates, affidavits and documentation from the general contractor as proof of payment for each draw request.

C. Draw Requests and Evidence of Payment. Within ten (10) days after receiving any draw request, invoice or statement for any of the Tenant Improvement Costs, Tenant shall provide Landlord with a copy of the same, including all supporting documentation submitted therewith. Within ten (10) days after paying any draw request, invoice or statement for any of the Tenant Improvement Costs or any other payment of the Tenant Improvement Costs, Tenant shall provide Landlord with evidence of such payment.

D. Notice of Disputes. Immediately upon Tenant's becoming aware of any dispute with respect the performance of the Tenant Improvement Work or the payment of the Tenant Improvement Costs between or among any 2 or more of Tenant, Tenant's Architect, Tenant's Contractor (defined below), and any contractor, subcontractor or supplier providing or

Tenant's Contractor (defined below), and any contractor, subcontractor or supplier providing or performing any services, materials, tools or equipment in connection with the performance of the Tenant Improvement Work, Tenant shall provide Landlord with notice of such dispute, and Tenant shall thereafter promptly provide Landlord with such information and documentation with respect to such dispute and the resolution thereof as may be reasonably requested by Landlord.

E. Discharge of Liens. Tenant shall comply with the provisions of Section 5.4(D) relative to liens. Without limiting any provision thereof, subject to Tenant's rights to contest liens in accordance with the provisions of Section 5.4(D), if Tenant shall fail to cause such lien or claim of lien to be so discharged or bonded in accordance with such provisions, then in addition to any other right or remedy it may have, Landlord may, but shall not be obligated to, discharge the same by paying the amount claimed to be due or by procuring the discharge of such lien or claim by deposit in court or bonding, and in any such event, Landlord shall be entitled, if Landlord so elects, to compel the prosecution of any action for the foreclosure of such lien or claim by the claimant and to pay the amount of the judgment, if any, in favor of the claimant, with interest, costs and allowances. Tenant shall pay as Additional Rent on demand, from time to time, any sum or sums so paid by Landlord and all actual and reasonable costs and expenses incurred by Landlord, including, but not limited to, attorneys' fees, in processing such discharge or in defending any such action. If and to the extent Tenant fails to make such payment to Landlord, then in addition to any other right or remedy it may have, Landlord may, at its option, offset all or any portion of such unpaid payment against the Tenant Improvement Allowance.

5. Tenant Improvement Allowance.

A. Tenant Improvement Allowance. Subject to the terms and conditions of the Lease and this Exhibit F, Landlord shall provide Tenant with the Tenant Improvement Allowance. The Tenant Improvement Allowance shall be applied to the hard costs and soft costs of the Tenant Improvement Work (collectively, the "Tenant Improvement Costs") as set forth herein. The Tenant Improvement Allowance may be used for all hard Tenant Improvement Costs. The Tenant Improvement Allowance may be used for the following approved soft Tenant Improvement Costs and the following other approved costs incurred in conjunction with the Tenant Improvement Work: (i) space planning, design and engineering fees and third party project management fees (including cost segregation work); (ii) permits; (iii) acquisition, installation, and refurbishment (as applicable) of built-in furniture systems installed at the time of the Tenant Improvement Work; (iv) cabling; (v) installation of computer, telephone, and other operating systems (including related to HVAC, electrical, plumbing, and other mechanical fees and moving expenses); (vi) movable and modular furniture, emergency power systems, high-density files, audio/visual

teleconferencing systems, and acquisition of computer, telephone and other operating systems (including HVAC); (vii) signage costs; and (viii) to the extent any Tenant Improvement Allowance remains following payment of all hard costs and all other approved soft costs of the Tenant Improvement Work and all of the foregoing (as applicable), such remaining balance of Tenant's Improvement Allowance may, at Tenant's option, be applied to Tenant's moving expenses to the Leased Premises and any expansions that may occur in the Building prior to the Commencement Date. In no event shall Landlord be obligated to pay any portion of the Tenant Improvement Allowance while an Event of Default (following the expiration of all notice and cure periods in the Lease) under the Lease has occurred and is continuing or until such Event of Default is cured.

B. Intentionally Omitted.

C. Tenant Contractor's Fee. Any fee paid by Tenant to Tenant's Contractor shall be payable as a cost of the Tenant Improvement Work and be subject to reimbursement as part of the Tenant Improvement Allowance.

D. Landlord's Construction Management Fee. If Tenant elects to have Landlord oversee the construction of the Tenant Improvements, Tenant shall pay Landlord a construction management fee equal to three percent (3%) of the Tenant Improvement Costs which payment may be funded out of Tenant's Improvement Allowance. If Tenant selects a Tenant

payment may be funded out of Tenant's Improvement Allowance. If Tenant selects a Tenant Contractor with sufficient management and oversight capabilities to complete the Tenant Improvements and such Tenant Contractor is approved by Landlord, then no construction management fee will be due to Landlord.

E. Failure to Pay Tenant's Costs. Failure by Tenant to pay the Tenant Improvement Costs in accordance with this Exhibit F will constitute an Event of Default by Tenant under the Lease.

6. Performance of Tenant Improvement Work By {Tenant/Landlord}.

A. General. {Tenant/Landlord} [to be discussed; and construction manager] shall be obligated diligently to manage and coordinate the performance of the Tenant Improvement Work so as to cause Substantial Completion of the Tenant Improvement Work to occur when contemplated by the Schedule for Planning and Construction of Tenant Improvements to be included with the Drawings and Specifications (the "Approved Schedule"), unless completion of the Tenant Improvement Work is prevented by reason of any {Tenant/Landlord}Delays or Force Majeure events.

B. Approval of Contractors. Tenant shall obtain Landlord's prior approval of the contractor Tenant chooses to perform the Tenant Improvement Work ("Tenant's Contractor") and the mechanical and electrical subcontractors to be engaged in connection with the Tenant Improvement Work, such approval of Landlord not to be unreasonably withheld, conditioned or delayed. Landlord will respond to any request for approval of Tenant's Contractor and the mechanical and electrical subcontractors, stating the reasons for any disapproval, within ten (10) business days after Landlord receives notice from Tenant specifying the proposed Tenant's Contractor and/or mechanical and electrical subcontractors. Landlord shall have no responsibility for any defects or deficiencies in the Tenant Improvement Work performed by Tenant through

Tenant's Contractor, and no approval by Landlord of the identity of Tenant's Contractor or any mechanical or electrical subcontractors to be engaged in connection with the Tenant Improvement Work shall create or give rise to any such responsibility.

C. Approval of Contracts. Tenant shall obtain the prior approval of Landlord of all direct contracts between Tenant and any person or entity providing or performing any services, materials, tools or equipment in connection with the performance of the Tenant Improvement Work, including Tenant's Architect and Tenant's Contractor, such approval of Landlord not to be unreasonably withheld, conditioned or delayed. Landlord will respond to any request for approval of any such direct contract, stating the reasons for any disapproval, within 10 business days after Landlord receives such direct contract and Tenant's request for Landlord's approval for Tenant's Architect and Tenant's Contractor thereof.

D. Coordination. Tenant shall contract directly with Tenant's Contractor for the performance of the Tenant Improvement Work. Landlord shall fully cooperate with Tenant and Tenant's Contractor in the performance of the Tenant Improvement Work, including, but not limited to: (i) furnishing adequate water, electricity, freight elevator service (at scheduled hours as determined by Landlord`), loading dock (but no dumpster facilities) and HVAC (to the extent available); (ii) providing Tenant's Contractor with access to the Leased Premises on a 24-hour basis, if required by Tenant and reasonably necessary for Tenant to complete the Tenant Improvement Work; provided, however, if such access requires additional security or access control personnel, it shall be at the expense of Tenant; and (iii) cooperating in the connection of any of such work to the Base Building Systems. Notwithstanding the foregoing, all access to and use of loading docks, elevators, hoists, electrical systems and other related facilities shall be without charge to Tenant (except as otherwise expressly provided above) and shall be non-exclusive, Tenant hereby acknowledging that Landlord shall have the right to impose and enforce reasonable rules and regulations for the shared use of Project facilities by Tenant, Tenant's Architect, and Tenant's Contractor and its subcontractors, and other persons or entities performing work at the Project.

E. Certain Requirements. Tenant and Tenant's Contractor shall perform the Tenant Improvement Work as follows:

(i) All of Tenant Improvement Work shall be done and installed in a good and workmanlike manner, in a manner equal to or better than Building Standards, and in compliance with all reasonable rules and regulations promulgated by Landlord from time to time and all Legal Requirements. Landlord and its representatives (including its general contractor) shall have the right to inspect the Tenant Improvement Work from time to time to ensure compliance with the foregoing.

(ii) In connection with the Tenant Improvement Work, Tenant shall file all approved plans and specifications and other materials, pay all fees and obtain all permits and applications from any Governmental Entities having jurisdiction, and Tenant shall obtain a certificate of occupancy and all other approvals required for Tenant to use and occupy the Leased Premises. Landlord shall cooperate with Tenant to facilitate the efficient processing of all such permits and applications. Copies of all permits, certificates and approvals shall be forwarded to Landlord promptly after receipt by Tenant.

(iii) No item shall be mounted or hung from the exterior of the Building by Tenant or Tenant's Contractor without Landlord's prior approval, not to be

unreasonably withheld, conditioned or denied.

(iv) Tenant shall be responsible for all waste and trash disposal.

F. Insurance. Tenant shall provide or cause to be provided the following types of insurance during the construction of the Tenant Improvement Work:

(i) At all times during the period between the commencement of construction of the Tenant Improvement Work and the date the Tenant Improvement Work is completed and Tenant commences occupancy of the Leased Premises for business purposes, Tenant shall maintain or cause to be maintained casualty insurance in Builder's Risk Form, covering Landlord, Landlord's lender, Landlord's agents, Landlord's architects, Landlord's contractors and subcontractors, as well as Tenant and Tenant's contractors and subcontractors, as their interests may appear, against loss or damage by fire, vandalism, malicious mischief and such other risks as are customarily covered by the so-called broad form extended coverage endorsement upon all the Tenant Improvement Work in place and all materials stored at the site of the Tenant Improvement Work and all materials, equipment and supplies of all kinds incident to the Tenant Improvement Work and builder's machinery, tools and equipment used in the construction of the Tenant Improvement Work while in or on the Leased Premises or the Project, or when adjacent thereto, all on a completed value basis to the full insurable value at all times. Said Builder's Risk Insurance will also include coverage for loss of rents for a period of 12 months. Said Builder's Risk Insurance shall contain an express waiver of any right of subrogation by the insurer against Landlord, its agents, employees and contractors.

(ii) Liability insurance in amounts not less than as required by Section 6.1 of the Lease. Such liability insurance shall be on a comprehensive basis including:

(1) Leased Premises - Operations (including X-C-U);

(2) Independent contractors protection;

(3) Contractual Liability, including specified provisions for the general contractor's obligations under this Exhibit F and for the general contractor's indemnity obligations under this Exhibit F;

(4) Owned, non-owned and hired motor vehicles; and

(5) Broad form coverage for property damage.

(iii) Statutory Workers' Compensation Insurance as required by the State of Tennessee or local municipality having jurisdiction.

All insurance policies procured and maintained pursuant to this Exhibit F shall name Landlord, Landlord's mortgagee(s) and any additional parties designated by Landlord (which have an insurable interest) as additional insureds and shall be carried with companies licensed to do

business in the State of Tennessee reasonably satisfactory to Landlord. Such policies or duly executed certificates of insurance with respect thereto shall be delivered to Landlord before the commencement of the Tenant Improvement Work, and proof of renewals thereof shall be delivered to Landlord at least thirty (30) days prior to the expiration of each respective policy term.

G. Disbursement of Tenant Improvement Allowance. The Tenant Improvement Allowance shall be disbursed by Landlord to Tenant periodically, but not more frequently than monthly, after receipt by Landlord of a draw request. Each draw request shall be accompanied by evidence in form and content reasonably satisfactory to Landlord (including, but not limited to, certificates and affidavits of Tenant, Tenant's Contractor, and Tenant's Architect) showing and/or providing:

showing and/or providing:

(i) other than matters properly disputed in accordance with applicable construction documents, that all outstanding claims for labor, materials, fixtures and equipment have been paid;

(ii) other than matters properly disputed in accordance with applicable construction documents, that there are no liens outstanding against the Leased Premises or the Project arising out of or in connection with the Tenant Improvement Work, including conditional lien waivers from Tenant's Architect, Tenant's Contractor, and all other contractors and subcontractors providing materials and/or labor under the subject draw request;

(iii) that all construction performed prior to the date of the draw request has been performed substantially in accordance with the Drawings and Specifications; and

(iv) that copies of all bills or statements for expenses for which the disbursement is requested are attached to such draw request.

In the event the projected amount of the Tenant Improvement Costs shall exceed the Tenant Improvement Allowance, then notwithstanding anything in this Exhibit F to the contrary, Tenant shall be required to pay any projected excess, subject to retainage, prior to requesting or receiving a disbursement of any portion of the Tenant Allowance not yet paid as required by this Exhibit F. Tenant agrees that Tenant will provide for retainage of 5% of Tenant Improvement Work costs from Tenant's Contractor, held and maintained in accordance with Legal Requirements and prudent construction draw practices during the prosecution of the Tenant Improvement Work and will not seek disbursement of any portion of the Tenant Improvement Allowance for any amounts retained from Tenant's Contractor until such retainage amounts are due and owing to Tenant's Contractor. Landlord and Tenant agree that the final 5% of the Tenant Improvement Allowance shall not be funded by Landlord until the Tenant Improvement Work has been completed as required by this Exhibit F and Tenant has provided to Landlord the information required by this Exhibit F. Each draw request shall be submitted to Landlord at least fifteen (15) business days prior to the date of the requested advance, and each draw request shall be made at the principal office of Landlord or such other location as Landlord may designate from time to time. If Landlord has obtained a loan to provide funding for, among other things, construction of improvements in, on or to the Project that provides for monthly disbursements thereunder on approximately the same day of each month, payment of installments of the Tenant Improvement Allowance shall be made

to coincide with the scheduled monthly disbursements to Landlord of Landlord's construction draws under its construction loan for the Project, whether or not Landlord actually receives a disbursement under the construction loan on the scheduled date, so long as Landlord has received Tenant's draw request at least fifteen (15) business days prior to the applicable scheduled disbursement date. If any Event of Default under the Lease shall have occurred and shall not have been cured, Landlord shall not be obligated to disburse or apply proceeds of the Tenant Improvement Allowance until such default has been cured. In the event Landlord shall fail to disburse any portion of the Tenant Improvement Allowance as required hereunder after notice of such non-payment and the expiration of thirty (30) days, Tenant shall have the right, but not the obligation, to make such disbursement and offset the amount so paid, along with interest at 10% per annum, against the next payment of Rent due under the Lease.

H. Indemnity. Except in the case of Landlord's willful misconduct or gross negligence, Tenant shall indemnify and hold harmless Landlord and any of Landlord's contractors, agents and employees from and against any and all losses, damages, costs (including costs of suits and reasonable attorneys' fees), liabilities and causes of action arising out of the actions of Tenant, Tenant's Contractor or Tenant's Contractor's subcontractors during the course of the performance of the Tenant Improvement Work, including, but not limited to, mechanics', materialmen's and other liens and claims (and all costs and expenses associated therewith) asserted, filed or arising

as a result of or in connection with the performance of any of the Tenant Improvement Work. ALL MATERIALMEN, CONTRACTORS, ARTISANS, MECHANICS, LABORERS AND OTHER PARTIES HEREAFTER CONTRACTING WITH TENANT OR TENANT'S CONTRACTOR FOR THE FURNISHING OF ANY LABOR, SERVICES, MATERIALS, SUPPLIES OR EQUIPMENT WITH RESPECT TO ANY PORTION OF THE LEASED PREMISES ARE HEREBY CHARGED WITH NOTICE THAT THEY MUST LOOK SOLELY TO TENANT FOR PAYMENT OF SAME. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, TENANT SHALL REPAIR OR CAUSE TO BE REPAIRED AT ITS EXPENSE ALL DAMAGE CAUSED BY TENANT'S CONTRACTOR, ITS SUBCONTRACTORS OR THEIR EMPLOYEES. As set forth in the Lease, Tenant shall promptly pay to Landlord, upon notice thereof from Landlord, any costs incurred by Landlord to repair any damage caused by Tenant's Contractor or any of its subcontractors and any reasonable costs incurred by Landlord in requiring compliance by Tenant's Contractor or any of its subcontractors with Landlord's rules and regulations. Tenant agrees to cause Tenant's Contractor to provide an indemnification and hold harmless agreement providing the protection set forth in this Subsection and to cause Tenant's Contractor to procure, as additional protection, an indemnification and hold harmless agreement from each subcontractor providing for the protection set forth in this subsection. In connection with any and all claims against Landlord or any of its agents, contractors or employees by any employee of Tenant's Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts Tenant's Contractor or any subcontractor may be liable, the indemnification obligations of Tenant's Contractor and any subcontractor under the indemnification and hold harmless agreements required by the foregoing provisions of this Subsection shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Tenant's Contractor or any subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

I. Further Assurances. Upon and following Substantial Completion of the Tenant Improvement Work, at the request of Landlord, Tenant shall, at Tenant's sole cost and

expense, provide evidence in form and content reasonably satisfactory to Landlord (including, but not limited to, certificates and affidavits of Tenant, Tenant's Contractor and, to the extent appropriate, Tenant's Architect) showing and/or providing:

(i) that all outstanding claims for labor, materials and fixtures have been paid;

(ii) that there are no liens outstanding against the Leased Premises or the Project arising out of or in connection with the Tenant Improvement Work and all final lien waivers from all parties providing materials and/or labor in connection with the Tenant Improvement Work; and

(iii) that all construction prior to the date thereof has been done in accordance with the Drawings and Specifications. To the extent there were additions or modifications to the Drawings and Specifications previously provided to and approved by Landlord, Tenant will provide as-built drawings and specifications to Landlord.

J. Excess Tenant Improvement Costs. For avoidance of doubt, in the event the amount of the Tenant Improvement Costs shall exceed the amount of the Tenant Improvement Allowance, such excess shall be borne and paid by Tenant.

7. Approved Schedule. Subject to the terms and conditions of this Exhibit F and the Lease, Tenant and Landlord agree to use their best efforts to comply with the Approved Schedule and to cooperate with one another in the performance of their respective obligations under the Approved Schedule.

8. Tenant's Additional Work.

A. General. The moving into the Leased Premises, the installation of Tenant's furniture, trade fixtures, equipment, computer systems, telephone systems and other communication systems and all other work of a similar nature desired by Tenant, if any, that are not included in the Tenant Improvement Work (collectively, the "Tenant's Additional Work") shall be performed by Tenant or through contractors selected by Tenant and reasonably approved by Landlord and in accordance with this Exhibit F. Tenant and Landlord acknowledge that the performance and installation of certain of the Tenant's Additional Work, such as installation of Tenant's modular furniture, is or may be required to be completed before the applicable Governmental Entity will issue a certificate of occupancy for the Leased Premises, and Tenant hereby agrees that the Tenant's Additional Work that is required to be completed as a condition to the issuance of a certificate of occupancy for the Leased Premises shall be performed and installed promptly and with due diligence and shall be completed so as to enable Tenant to obtain a certificate of occupancy for the Leased Premises. Tenant agrees that Tenant's moving into the Leased Premises shall be undertaken and conducted in accordance with the rules and regulations promulgated by Landlord with respect to the Building.

B. Services During Tenant's Additional Work. Landlord shall furnish water, electricity, elevator service, loading dock and HVAC service to the Leased Premises during the

performance of any of the Tenant's Additional Work at no cost to Tenant, except as otherwise provided in the Lease.

C. Balance of Tenant Improvement Allowance. If less than all of the Tenant Improvement Allowance is applied to the Tenant Improvement Costs, then any remaining balance of the Tenant Improvement Allowance may be applied to the costs of the Tenant's Additional Work, as expressly allowed in Paragraph 5(A) of this Exhibit F.

9. Landlord's Consent. Any approval by Landlord of or consent by Landlord to any plans, specifications or other items to be submitted by Tenant to and/or reviewed by Landlord pursuant to this Exhibit F or the Lease shall be deemed to be strictly limited to an acknowledgment of approval thereof or consent thereto by Landlord, and whether such work is coordinated by Landlord or performed by Tenant, Tenant's Contractor or its subcontractors, such approval or consent shall not constitute an assumption by Landlord of any responsibility for the accuracy, sufficiency or feasibility of any plans, specifications or other such items and shall not imply any representation, acknowledgment or warranty by Landlord that the design is safe, feasible or structurally sound or will comply with any Legal Requirements. Any deficiency in design, although the same had prior approval of Landlord, shall be solely the responsibility of Tenant, and any deficiency in any construction by Tenant, Tenant's Contractor or its subcontractors shall be solely the responsibility of Tenant.

10. Project Representatives. To facilitate effective and timely input, direction and communication to and from Tenant, Tenant and Landlord shall each designate one or more project representatives who shall have the responsibility and authority to act on behalf of Tenant and Landlord, respectively. Landlord's initial designated project representative shall be Nick Foster or, if Nick Foster is unable or fails to serve, another individual reasonably appointed by Landlord. Tenant's initial designated project representative shall be appointed and communicated in writing to Landlord at the time that Tenant delivers Tenant's proposed final working drawings and specifications for the Tenant Improvements, pursuant to Section 3 of this Work Letter. Either party may change such party's designated project representative at any time and from time to time by notice to the other party. Each party shall fully cooperate with the other's designated project representative in connection with the performance of the Tenant Improvement Work, which cooperation shall include, without limitation, the following: (i) allowing Landlord's designated project representative to have access to the Leased Premises in order to inspect and monitor the progress of the Tenant Improvement Work; (ii) permitting Landlord's designated project representative to participate in construction meetings with or among any contractor, subcontractor and/or supplier providing or performing any services, materials, tools or equipment in connection with the performance of the Tenant Improvement Work, including Tenant's Architect and Tenant's Contractor; and (iii) furnishing Landlord's designated project representative with such documents and instruments as may be reasonably requested in order to monitor the progress of the Tenant Improvement Work and the payment of the Tenant Improvement Costs. Notwithstanding anything in the Lease or this Exhibit F to the contrary, Landlord shall have no duty or obligation to Tenant to inspect the Tenant Improvements, to monitor the progress of the performance of the Tenant Improvement Work or to monitor the progress of the payment of the Tenant Improvement Costs in relation to the progress of the performance of the Tenant Improvement Work.

11. Condition; Landlord's Representations and Warranty. Subject to the terms and conditions of this Lease (including this Work Letter), Landlord shall cause the General Contractor constructing the Base Building and other components of the Project to perform such duties and obligations in accordance with the skill, care and diligence of a contractor experienced in constructing comparable "first class" office towers. Landlord hereby represents and warrants to Tenant, which representations and warranty shall survive for the Warranty Period as defined below, that as of substantial completion of the Base Building (i) the materials and equipment furnished by Landlord's contractors in the prosecution of the Base Building improvements will be of good and workmanlike quality and new, (ii) the Base Building improvements will be constructed in a good and workmanlike manner, (iii) the construction as part of Base Building

improvements will be constructed in accordance with applicable law then in effect, but otherwise excepting Tenant's particular use of the Leased Premises, (iv) the Leased Premises shall be delivered to Tenant free of all mechanic's, materialmen's, and contractor's liens resulting from Landlord's construction of the Base Building or any subsequent work performed by or on behalf of Landlord pursuant to Landlord's Warranty; provided, that Landlord may satisfy this requirement by promptly bonding off any such liens; and (v) the Leased Premises (including all improvements) shall be delivered to Tenant free of any Hazardous Materials brought upon the Leased Premises or caused by Landlord or its agents (collectively, "Landlord's Warranty"). Landlord's Warranty shall exclude damages or defects caused by (i) Tenant and Tenant's guests, licensees or invitees, and (ii) improper or insufficient maintenance or improper operations. The "Warranty Period" shall commence on the Commencement Date and expire on the date which is the first (1st) anniversary of the Commencement Date, provided however, that with respect to latent defects, the Landlord's Warranty shall remain in effect as to any such latent defect, so long as the latent defect is reported by Tenant with reasonable promptness after it is discovered by Tenant and so long as Tenant shall not have exacerbated such condition after having discovered such latent defect. As applicable, Landlord shall cause the correction of any item occasioned by a breach of the foregoing Landlord Warranty reported by Tenant to Landlord in writing prior to the expiration of the Warranty Period and, as applicable, Landlord shall cause such correction to be commenced within thirty (30) days after such written notice from Tenant and shall diligently pursue the correction of same. Tenant shall have no other remedy against Landlord with respect to such matters. Tenant must make claims under the Landlord's Warranty by delivering written notice to Landlord on or before the expiration of the Warranty Period. Tenant's making of a claim under the Landlord's Warranty with specificity will toll the running of the Warranty Period with respect to the item that is the subject of that claim and Landlord's Warranty will remain in effect as to that item until, as applicable, Landlord causes the correction of such item even though the Warranty Period would otherwise have expired. Unless otherwise expressly expanded under the terms of this Lease (including damages which may be due to delay in delivery of the Leased Premises to Tenant), Tenant's recourse with respect to any failure by Landlord to have fulfilled its design and construction obligations under this Lease shall be limited to its remedies set forth in this subsection. In addition to the foregoing, Landlord agrees to fully cooperate with Tenant in the exercise of Landlord's rights under any warranties obtained with respect to the portions of the Base Building improvements within the Leased Premises required to be maintained or repaired by Tenant pursuant to this Lease ("Assignable Warranties") as a result of any defects in workmanship or materials.

12. Material Changes to Base Building Condition and Building Standard. Subject to the provisions of the paragraph immediately preceding Section 1 of this Exhibit F, Landlord shall

make no material changes or modifications to the Base Building Condition or Building Standard Improvements that affect the Leased Premises, General Common Areas, or Common Areas reasonably anticipated to be routinely used by Tenant.

EXHIBIT F-1

BASE BUILDING CONDITIONS - OFFICE TOWER

The following is a description of the conditions to be satisfied with respect to the Office Building and the Premises. Unless stated as the responsibility of the Tenant, all delivery conditions defined below are to be provided by the Landlord.

1. GENERAL QUALITY STANDARDS

a. Code Compliance — The Office Building design will adhere to all applicable building codes.

b. LEED Certification —The Office Building will be USGBC "Certified or Better" rating for core and shell.

c. Building Commissioning — The Office Building shall be commissioned in accordance with the USGBC Commissioning Plan and Guide Specifications.

d. Energy Efficiency —The Office Building shall comply with state and local energy codes or ASHRAE 90.1-2010, and shall comply with the Department of Energy's International Performance Measurement and Verification Protocol (IPMVP) for energy consumption. The Office Building shall meet ASHRAE/IES Standard 90.1 — 2010 and subsequent revisions adopted prior to the date design begins.

e. Indoor Air Quality — The Office Building shall comply with ASHRAE Standard 62-2013 with the provision that the ambient air quality standard requirements shall be site specific and not region specific (i.e., ambient air quality at the proposed point of fresh air intake) and the Office Building fresh air intake shall be located away from loading areas, building exhaust fans, cooling towers and other point sources of contamination.

f. Ozone Depletion / CFC — CFC refrigerant systems will not be permitted in the Office Project.

g. Storage and Collection of Recyclables — The Office Project shall include a centralized ground-floor location for collection and storage of materials separated from each other for recycling in accordance with cost-effective services provided by local vendors commonplace in the market.

h. Thermal Comfort —The Office Building design shall comply with ASHRAE Standard

55- 2013.

2. ARCHITECTURAL

a. The Office Building envelop is composed of a high-performance glass and aluminum curtainwall and window system, with composite metal panels, architectural cast stone and natural stone accents, and masonry. The curtainwall and window wall framing system will include some custom extrusions, which will provide solar shading and vertical articulation to the wall.

b. The aluminum framing systems will be thermally improved for energy efficiency

c. The vision glass will be high performance 1" insulated units with a low E coating such as Guardian SNR43 or similar. The spandrel glass will be complimentary in color rendition and insulated with semi-rigid insulation to achieve an R-15 thermal rating.

d. The building floor to floor, ceiling and sill heights are as follows:

   i. Floor 2 is 18' floor to floor providing 14'-0" high ceiling. The 13'-6" tall full height vision glass sits above a raised sill and extends to the ceiling.
   ii. Floors 3-21 are 14' floor to floor, providing for 10' high suspended ceilings with full height vision glass. The window wall at the 20th floor balcony is floor to ceiling.

e. The tenant's ceiling system (i.e. ceiling grid, tile, etc.) will be furnished by the tenant as a part of the Tenant' Work.

f. The typical window module is 5'-0" on center.

g. The window treatments provided by the Tenant at Tenant's cost will be full height, building standard color mecho-shades with manufacturer's standard manual lifting mechanism mounted between vertical mullions.

3. INTERIOR PUBLIC AREAS AND CORE SERVICES

a. Typical base building core conditions are as follows:

   i. Typical elevator lobbies will have exposed concrete floors and structure

above with gypsum board partitions taped, floated and sanded ready to receive tenant's finishes. Elevator doors and frames will be painted the base building color.
   ii. Building standard core walls are to be constructed floor to underside of structure above. Gypsum board is taped, floated and sanded.
   iii. Base building core doors shall be 3'-0" x 9'-0" x 1 -3/4" thick solid core wood stained wood to building standard color.
   iv. Perimeter sill walls will have metal studs and insulation in place, ready for gypsum board installation as a part of Tenant's Work.
   v. Gypsum board cladding at all free standing and perimeter columns shall be installed as a part of Tenant's Work

vi. On Multi-Tenant Floors, the common corridor wall studs and corridor side gypsum board will be installed, taped, floated and painted subject to modification based on tenants approved plans at Landlord's expense. Any demising walls separating Tenant's premises from any adjacent space will be finished floor to underside of structure with sound insulation and one side gypsum board aa a part of Tenant's Work.

b. Restrooms: The restrooms will feature private gypsum board toilet stalls with stained or painted louvered doors. Vanities will be quartz with separate mirrors at each basin. The space will be finished with ceramic tile floors, ceramic tile wet walls and vinyl or paint on the others. Toilet accessories will be brushed stainless steel, recessed and semi-recessed. The ceilings will be painted gypsum board. Lighting will be accomplished with LED decorative wall and ceiling downlights. Men and women's restrooms will be provided on each floor based on the code required minimums.

c. Exit Stairs:
   i. Tenants shall have the right to use the fire stairs connecting the floors of the Premises as convenience stairs.
   ii. Tenants shall have the right to improve the lighting, install code compliant carpet and install an internal card key system as part of this right and shall tie such system into the Tenant's card key system.

4. ELEVATORS

a. Elevator Access

   i. Landlord shall operate all elevators within the elevator banks servicing the Tenants' floors at all times during Building hours, and at all other times, at least 2 passenger elevators in each elevator bank shall be subject to call.
   ii. Tenants shall have the use of the freight elevators during regular hours and for an agreed upon number of overtime hours free of charge.

b. Schedule of Elevators:

   i. Five High-Rise passenger elevators at 3500 lb. capacity and 700 FPM serve the Lobby and Floors 11 -21.
   ii. Five Low-Rise passenger elevators at 3500 lb. capacity and 500 FPM serve the Lobby and floors 2-10
   iii. One 5000lbs Freight elevators connecting all office floors, the service level and parking level 2.
   iv. Passenger elevator cab ceiling height is 9'-0", freight elevators 10'-0" with a dog house and shuttle elevators 7'-4".

5. STRUCTURAL – OFFICE BUILDING

a. The floors will be designed to accommodate an 80 lb. live load

b. Floor levelness: Finish concrete slabs to flatness and levelness tolerances which correspond to FF 25/FL 20 minimum overall for composite of all measured values

correspond to FF 25/FL 20 minimum overall for composite of all measured values per placement and FF 17/FL 15 minimum for any individual floor section. While no direct equivalence between F-numbers and straightedge tolerances exists, the specified Overall FF 25 is roughly equivalent to a single defect of 1/4" in 10 feet, while the Minimum Local FF 17 is roughly equivalent to a single defect of 9/32" in 10 feet. Notwithstanding this Building standard, many interior finish systems (such as glass office fronts) require some amount of floor leveling and any cost of such floor leveling will be the responsibility of Tenant.

6. MECHANICAL

a. HVAC Systems:

i. The refrigeration system will consist of two parallel connected electrically driven hermetic centrifugal water chillers (refer to capacities noted below) and associated chilled water pumps, condenser water pumps, plate & frame heat exchanger (for ground floor retail condenser water), associated controls and two cell induced draft cooling tower. Space for the ground floor condenser water heat exchanger and associated pumps will be provided in central plant design. Condenser water risers with: 2 valved taps for tenant use; and two branch connections with valves and dedicated in-line pumps for each handling unit's precooling/economizer coil will be provided in each office building fan room. Cooling tower and condenser water risers will be sized to accommodate the 24hour loads, special equipment space

loads, ground floor special tenant loads, retail loads, fitness center loads, elevator equipment room loads, and general office tenant loads of 2 watts/sq. ft. Chiller capacity: Building will be provided with two chillers @ 625 tons each with leaving water temperature of 42 degrees F. The water chillers will have a minimum efficiency of 0.58 kW/ton at full load using R-123 or R-134a refrigerant. Cooling tower capacity will be: 3100 gpm (total for 2 cells); 100^/85^@ 78^ambient wet bulb.

ii. Chilled water supply temperature will be 42°F with a range of 12° to 16°F on the return. At the Owner's option, the chillers will be factory tested and certified for part load and full load operation in accordance with American Refrigerant Institute Standards (ARI 550-88). Units will be selected based on a waterside fouling factor of 0.0001 in the evaporator and 0.00025 in the condenser. The starters for each chiller will be unit mounted, provided by the chiller manufacturer.

iii. Chilled water will be supplied to air handling units (one per floor) from the central refrigeration plant. Air handling units will be of the packaged draw central station type. O.A. will be ducted to each fan room through medium pressure main riser and constant volume air valves from a variable speed drive outside air fan (approx.65,000 cfm) located on the roof.

iv. Conditioned air (at 49 degrees db leaving the cooling coil) is supplied to each floor from the air handling units through a medium pressure, medium velocity air distribution system to pressure independent series type fan powered induction units located throughout the floors and/or provided during tenant fit-up. Conditioned air will be supplied to the occupied space at a minimum of 55 degrees db from the fan powered induction units. As a result of the inherent flexibility of the variable volume system, additional zones can be added as required to meet the occupant's needs.

v. The heating requirements for the building will be handled by electric resistance heating coils located integral to the powered induction units located in the ceiling return air plenum in the vicinity of the various zones. Powered induction unit fans take air from the ceiling plenum and distribute air to the occupied space through a duct system. Perimeter heating coils are controlled in sequence with its respective powered induction unit's primary air valve thereby eliminating the need for "reheat".

vi. Ground floor tenants, Lobby, Deli, Retail tenants, Fitness Center and back of the house areas will be conditioned by dedicated variable volume and/or constant volume water cooled self-contained air conditioning units and associated ductwork and variable volume units. Unit serving main Lobby and associated air distribution system will be provided as part of shell and core scope. Water cooled units serving tenant areas will be tenant furnished.

Special equipment spaces will be conditioned by dedicated constant volume water cooled self-contained units with integral heat and low pressure duct

water cooled self-contained units with integral heat and low pressure duct systems. Outside air quantities to the units serving entrance areas will in sufficient quantity to offset infiltration into the building. An outside air loop duct with air valves from the main outside air riser will be provided to the various tenant furnished water cooled A.C. units. A condenser water piping loop with valve taps from the main condenser water risers will be provided for tenant for various tenant furnished water cooled A.C. units.

vii. Telephone, electrical switchgear, and elevator equipment rooms will be conditioned by dedicated water cooled self-contained air handling units or DX split systems.

viii. Toilet room exhaust will be ducted to two exhaust risers up to constant speed fans (approx. 8000 cfm each) located on the roof.

ix. An exhaust riser for tenant use/ building pressurization control will be provided and include a dedicated variable flow fan (approximately 42000 cfm) located on the roof.

x. Stair shafts will be provided with pressurization systems as required by Code using centrifugal fans with variable speed drives.

7. ELECTRICAL

a. Power Distribution

i. The entire electrical distribution system shall comply with local codes and the National Electrical Code as well as any additional applicable code authorities.

ii. Electrical service to the typical floors will be served from 480Y/277 volt building plug-in buss risers. These bus risers will be sized to provide 7.0 watts per usable square foot of electrical connected load capacity for tenant use above and beyond the base building electrical requirements.

1. Tenant's supplemental equipment (24/7 operations, HVAC equipment, etc.) shall be sub-metered.

2. Meters shall be of the digital networked type, with intelligent meter hubs with CT's and transponders, as manufactured by E-mon or equal, interfaced with the base building metering system, all provided by the Tenant.

iii. A 480Y/277 volt lighting panel will be provided at each floor with 2 watts per usable square foot capacity of lighting loads for tenant use above and beyond base building electrical requirements (this capacity is part of the

above described 7.0 watts per usable sq. ft. provided for tenant use at 480Y/277 volts).

1. Tenant lighting shall be designed to be 10% less than the ASHRAE 90.1-2010 allowance of 0.9 w/sf.

2. An emergency circuit per floor will be provided ~~to each tenant space~~ for egress and exit lighting. Such egress and exit lighting shall not exceed 0.1 watts per square foot.

iv. Dry-type transformers will be provided at each floor which will serve two

(2) 84-pole 208Y/120 volt panelboards for tenant receptacle and equipment loads. Transformers, and panelboards will be sized for 5.0 watts per usable square foot capacity for tenant use (this capacity is part of the above described 7.0 watts per usable square foot provided for tenant use at 480Y/277 volts).

1. The two 84 pole panels will include through-feed lugs. These lugs would serve additional 84 pole panels where a tenant exceeds the quantity of breakers provided in base building, but not the 5 watts per useable square foot power allowance. "Load center" type panelboards or panelboards less than 84 poles would not be acceptable products for use in the project. Additional tenant panelboards can be installed on a space available bases in the core electrical room, or if no space is available, in an ancillary room constructed by the tenant within their space.

2. Additional 84 pole panelboards and all on floor distribution shall be a part of the Tenant's Work.

b. Lighting Systems:

i. Lighting for tenant areas shall be a part of Tenant's Work. The design of the Tenant's lighting system shall achieve a typical "color temperature" value of 3500° K or less.

1. Tenant lighting shall be designed to be 10% less than the ASHRAE 90.1-2010 allowance of 0.9 w/sf.

c. Telecommunications:

i. A main telephone point of presence (MPOP) room will be located near the point of service to the Office Building. Space for "punch-down" blocks

(terminations) will be provided in a telephone closet at each typical floor level. A second stacked riser closet with floor sleeves will be provided at each typical floor level for a second route back to the MPOP if desired by tenants. All individual tenant telephone switches and equipment shall be located within the tenant spaces.

d. Stairwell Entrances: The base building stairwell doors are equipped with fail safe electric locks that require Tenant (single tenant floors) install a power supply and card readers to secure the tenant space.

8. PLUMBING

a. Two wet stacks with a capped 4" waste and a 4" vent pipe are provided on each floor adjacent to the each end of the core. A 2" valved and capped cold water pipe at 35 psi pressure will be provided at each floor for future tenant fixtures located at the core.

b. The use of Pro-press fittings is not permitted on any piping systems – domestic or HVAC as part of the Tenant Improvements.

9. **FIRE SUPPRESSION**

a. Branch sprinkler piping will be located near structural slab or deck. Design to be based on NFPA 13 and local code requirements.

b. Sprinkler heads will be turned up in the ceiling plenum area in unfinished tenant spaces in accordance with the authority having jurisdiction. All required drops and/or relocation of heads to the ceiling will be done as part of Tenant's Work.

10. FIRE ALARM SYSTEM:

a. A complete code-complying fully addressable fire alarm system will be provided for the base building.

i. Speakers and visual strobes (ADA compliant) will be provided as necessary for base building.
ii. Smoke detectors will be provided as necessary for the base building.
iii. Additional devices installed in the tenant space required for code compliance shall be furnished as part of Tenant's Work. Where these tenant devices exceed the spare capacity of the base building, the Tenant's Work

shall include all fire alarm system modifications and additional amplifiers and power supplies necessary.

11. Building Management and Control System

a. The Building Management and Control System shall be full electronic based direct digital control microprocessor based system. The Building Management and Control System shall monitor and control all Mechanical, Electrical and Plumbing systems within the Office Building. The BMCS shall meet the following general criteria:

i. Microprocessor based.
ii. Fully networked.
iii. Real time.
iv. Distributed processing.
v. XML Web based operator interface.

12. Building Security System:

a. Landlord, at Landlord's sole cost and expense, shall provide on a 24/7 Building security, which includes on-site security personnel, cardkey access, closed circuit television and other state-of-the-art devices. Monday through Friday, exterior doors unlock at 0700 and lock for card access at 1900. Saturday, exterior doors unlock at 0700 and lock for card access at 1300. Sunday, exterior doors are locked for card access 24/7.

b. The property uses a CCTV system comprising of a combination of black and white and color cameras that monitor key building entrances, exits, and areas. Electronic controls allow security personnel to view different camera images. Images are recorded using a digital video recorder and are stored electronically in the event an image needs to be reviewed.

c. All stairwell doors leading to Tenant spaces are provided with electric locks suitable for installation of card readers to be provided by the Tenant.

d. A card access system will be provided at public entry points. Security with the Tenant's premise shall be by the Tenant and shall not be tied into the Building's security system.

e. A closed circuit TV monitoring system will be provided at public entry points and loading dock.

13. **BUILDING SERVICES/ACCESS**

a. Landlord provides seven (7) days per week, twenty-four (24) hours per day, building access and services. Building recognized holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

b. Landlord shall maintain the building and provide all of services normally associated with a first-class office building including, but not limited to, heating and air conditioning, fuel delivery and elevator service, security, repairs and maintenance, directory service, cleaning, etc.

14. **CHANGES:** Landlord reserves the right to modify the Base Building Outline Specifications without Tenant's consent so long as such changes do not materially affect Tenant's use and design of the Premises.

Janitorial Services

1) OFFICE AREAS (All Floors)

Nightly Services (Five (5) nights per week)

(a) Empty all waste receptacles. Clean and reline when needed. Remove material to designated areas.

(b) Remove recycling material when container is full (see weekly).

(c) Vacuum all carpeted main traffic and use areas, including conference rooms, reception areas, interior stairwells, hallways and corridors with the exception of individual offices (see weekly). Spot vacuum/clean all other areas as needed.

(d) Wash and sanitize all drinking fountains.

(e) Damp mop spillage in uncarpeted office areas.

(f) Assure all designated locked doors are closed after area has been cleaned.

(g) Activate all alarm systems as instructed by occupant (if applicable).

(h) Arrange chairs at desk and conference room tables and turn off lights upon exiting.

(i) Clean conference room tables and remove any remaining food items.

(j) Clean and sweep all lunchroom/eating areas. Wash and wipe tables and counter tops and clean sinks.

Weekly Services

(a) Remove recycling material when container is full.

(b) Vacuum all carpeted areas completely, private offices and cubicle interiors, desk knee area spaces and under waste containers.

(c) Dust and wipe clean with damp or treated cloth all office furniture, files and cubicle partition tops (DO NOT MOVE PAPERS).

(d) Remove all finger marks and smudges from all vertical surfaces, including doors, doorframes, around light switches, private entrance glass, and partitions.

(e) Damp wipe and polish all glass furniture tops. (Conference room tables and task tables only, excluding individual office desks which will be a periodic service.)

(f) Damp mop hard surfaced floors and/or uncarpeted surface floors.

(g) Sweep uncarpeted floors employing dust control techniques with exception of lunchroom (which is to be performed nightly).

(h) Remove scuffmarks on floor as needed.

Monthly Services

(a) Dust and wipe clean chair bases and arms, telephones, cubicle shelves, windowsills and all other horizontal surfaces as needed to maintain clean appearance (DO NOT MOVE PAPERS).

(b) Edge vacuum all carpeted areas, as needed.

(c) Spot clean carpets to remove light spillage. Report large spills and stains to supervisor.

2) RESTROOMS

Nightly service (Five (5) nights per week)

(a) Clean and sanitize all mirrors, brightwork, countertops and enameled surfaces.

(b) Wash and disinfect all basins, urinals, bowls (cleaning underside of rim) and fixtures using scouring powder to remove stains.

(c) Wash both sides of all toilet seats with soap and/or disinfectant.

(d) Clean flushometers, piping, toilet seat hinges, and other metal.

(e) Empty, clean, and damp wipe all waste receptacles.

(f) Sweep, wet mop, and sanitize entire floor, including around toilet seats and under urinals.

(g) Damp wipe all walls, partitions, doors, and outside surfaces of all dispensers, as needed. Fill toilet paper, soap, towels, and sanitary napkin dispensers (if applicable).

(h) Wash and disinfect all showers including shower walls, floors, brightwork and doors (if applicable).

(i) Replace trash liner.

Weekly Services

(a) Flush water through P-trap weekly to ensure elimination of odor.

Monthly Services

(a) Machine scrub floors. (Does not include polishing or honing any floors.)

3) LOBBY, ELEVATOR, CORRIDOR, INTERIOR STAIRWAYS (EXCLUDING EMERGENCY EXIT STAIRWAYS AND ENTRANCE AREAS)

Nightly Service (Five (5) nights per week)

(a) Sweep and spot mop all stone, vinyl or composition lobby floors.

(b) Vacuum all carpeted floor and mats.

(c) Dust and polish all brightwork, including mirrors and elevator call buttons.

(d) Dust and polish all metal surfaces in elevators, including tracks (as needed), and elevator doors.

(e) Vacuum all carpet in elevators.

(f) Clean and polish all trash receptacles.

(g) Dust all fire extinguisher cabinets and/or units.

(h) Spot sweep and/or spot vacuum all interior stairways (excluding emergency exit stairways and landings (if applicable).

(i) Maintain lobby floor as recommended by manufacturer.

(j) All furniture should be cleaned as necessary (including directories).

(k) Wash, disinfect and dry polish water coolers (if applicable).

(l) Clean glass entrance doors, adjacent glass panels and tracks (i.e. side lights, if applicable).

Weekly Services

(a) Wet mop all stone, vinyl or composition lobby floors (daily spot mopping may satisfy this need).

(b) Sweep and/or vacuum all interior stairways (excluding emergency exit stairways) and landings (if applicable).

(c) Spot clean carpeted floors and mats.

(d) Spot clean carpet in elevators.

(e) Spot clean all doors.

4) JANITORIAL ITEMS/AREAS

Nightly Services (Five (5) nights per week)

(a) Keep janitorial rooms in a clean, neat and orderly condition.

(b) Maintain all janitorial carts and equipment in safe and clean condition.

5) FITNESS CENTER

Nightly Services

(a) Vacuum all exposed carpeted floors.

(b) Spot clean all mirrors and walls.

(c) Spray and disinfect fitness center equipment nightly.

(d) Empty trash receptacles.

Weekly Services

(a) Edge vacuum all carpeted areas, as needed.

(b) Dust all ledges, as needed.

(c) Clean mirrors completely.

(d) Stock supplies and towels.

6) LOCKER ROOMS (if applicable)

Nightly Services (Five (5) nights per week)

(a) Perform complete Building restroom cleaning specifications to restroom and locker room areas.

(b) Clean and disinfect showers completely, including walls, doors, floors, and floor drains.

7) LOADING DOCK, VAN PARKING AREAS, TRASH RECYCLING AREAS

Nightly Services (Five (5) Nights per week)

(a) Empty and reline all waste receptacles.

(b) Sweep ramps, loading bays and parking areas for trash and cigarette butts (onsite maintenance staff will take care of this first thing in the morning during "Building rounds.").

8) GENERAL BUILDING COMMON AREA SERVICES

Nightly Services (Five (5) nights per week)

(a) Spot clean and restock, as needed, all janitorial service closets.

(b) Pick up and compact all recycle trash; including boxes in accordance with tenants recycle specifications, as a work order through maintenance staff, the cost of which will be billed back to Tenant.

(c) Vacuum all garage lobbies and elevator carpets.

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

Cumberland Pharmaceuticals Inc.
Nashville, Tennessee

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-251308) and Form S-8 (No. 333-164376) of Cumberland Pharmaceuticals Inc. of our report dated March 20, 2020, (except for the effects of presenting discontinued operations discussed in Note 19, as to which the date is December 10, 2020), relating to the consolidated financial statements and schedule, which appears in this Form 10-K.

/s/ BDO USA, LLP

Nashville, Tennessee
March 11, 2022

Exhibit 23.2

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the registration statement of Cumberland Pharmaceuticals Inc. (Company) on Form S-3 (No. 333-251308) and Form S-8 (No. 333-164376) of our report dated March 11, 2022, on our audits of the consolidated financial statements of the Company as of December 31, 2021 and 2020, and for each of the two years in the period ended December 31, 2021, which report is included in this Annual Report on Form 10-K.

/s/ BKD, LLP

Nashville, Tennessee
March 11, 2022

Exhibit 31.1

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

I, A.J. Kazimi, certify that:

1. I have reviewed this Form 10-K of Cumberland Pharmaceuticals 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 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 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.

March 11, 2022

By: /s/ A.J. Kazimi
A.J. Kazimi
Chief Executive Officer

Exhibit 31.2

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

I, John M. Hamm, certify that:

1. I have reviewed this Form 10-K of Cumberland Pharmaceuticals 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 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 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.

March 11, 2022

By: /s/ John M. Hamm
John M. Hamm
Senior Director and Chief Financial Officer

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
AND 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 Annual Report of Cumberland Pharmaceuticals Inc. (the "Company") on Form 10-K for the fiscal year ended December 31, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, A.J. Kazimi, Chief Executive Officer, and Michael P. Bonner, Senior Director and Chief Financial Officer, of the Company, certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. section 1350), that, based on my 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.

/s/ A.J. Kazimi
A.J. Kazimi
Chief Executive Officer
March 11, 2022

/s/ John M. Hamm
John M. Hamm
Senior Director and Chief Financial Officer
March 11, 2022