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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark one)

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

For the fiscal year ended December 31, 2019

OR

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

For the transition period from: to

Commission File No. 001-37463

GLAUKOS CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**33-0945406**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
229 Avenida Fabricante **San Clemente, California**	**92672**
(Address of principal executive office)	(Zip Code)

(949) 367-9600

(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	GKOS	New York Stock Exchange

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

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files) Yes ☒ No ☐

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

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

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

As of June 28, 2019, the last business day of the registrant's most recently completed second quarter, the aggregate market value of common stock held by non-affiliates of the registrant, based on the closing sales price for the registrant's common stock as reported on The New York Stock Exchange, was $2,679 million.

The number of shares of the Registrant's common stock outstanding as of February 27, 2020 (latest practicable date) was 43,744,455 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement for the 2020 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. Such Proxy Statement will be filed with the Securities and Exchange Commission within 120 days after the close of the registrant's fiscal year ended December 31, 2019.

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We use *Glaukos*, our logo, *iStent*, *iStent inject*, *iStent Infinite*, *iStent SA*, *iPrism*, *iDose*, *MIGS, Avedro*, *Photrexa*, *KXL*, *Mosaic* and other marks as trademarks. This report contains references to our trademarks and service marks and to those belonging to other entities. Solely for convenience, trademarks and trade names referred to in this report, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other entities' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

References throughout this document to the "Company," "we," "us," "our," or "Glaukos" refer to Glaukos Corporation and its consolidated subsidiaries.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS AND INDUSTRY DATA

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (Securities Act), and Section 21E of the Securities Exchange Act of 1934, as amended (Exchange Act). These statements are based on management's beliefs and assumptions and on information currently available to management. Some of the statements under Item 1 - "Business," Item 1A - "Risk Factors," Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this Annual Report on Form 10-K contain forward-looking statements. In some cases, you can identify forward-looking statements by the following words: "may," "will," "could," "would," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "project," "potential," "continue," "ongoing" or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words.

These statements involve risks, uncertainties and other factors that may cause actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained in this Annual Report on Form 10-K, we caution you that these statements are based on a combination of facts and factors currently known by us and our projections of the future, about which we cannot be certain.

In addition, you should refer to the "Risk Factors" section of this Annual Report on Form 10-Kfor a discussion of important factors that may cause actual results to differ materially from those expressed or implied by the forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this Annual Report on Form 10-K will prove to be accurate. Furthermore, if the forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

This Annual Report on Form 10-K contains market data and industry forecasts that were obtained from industry publications. These data involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such information. Although we believe that the industry publications on which the market and industry statements are based are reliable and we are not aware of any misstatements regarding any market data or industry forecasts presented herein, we have not independently verified any of the third party information. Statements in this Annual Report on Form 10-K regarding our market position, market opportunity, market size and our general expectations involve risks and uncertainties and are subject to change based on various factors, including those discussed under Item 1A - "Risk Factors" and Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Annual Report on Form 10-K.

PART I

ITEM 1. BUSINESS

Overview

Glaukos is an ophthalmic medical technology and pharmaceutical company focused on developing novel therapies for the treatment of glaucoma, corneal disorders, and retinal disease. We developed Micro-Invasive Glaucoma Surgery (MIGS) to serve as an alternative to the traditional glaucoma treatment paradigm and launched our first MIGS device commercially in 2012. We have developed a proprietary bio-activated pharmaceutical therapy for the treatment of a corneal disorder, keratoconus, that was approved by the U.S. Food and Drug Administration (FDA) in 2016. We are also developing a pipeline of surgical devices, sustained pharmaceutical therapies, and implantable biosensors intended to treat glaucoma progression, corneal disorders such as keratoconus, dry eye and refractive vision correction, and retinal diseases such as neovascular age-related macular degeneration (AMD) and diabetic macular edema (DME).

Ophthalmic diseases and disorders are a national and global health concern and, as the population ages, the number of individuals with vision impairment and blindness is increasing. Moreover, improving access to cost-effective tools is increasing the diagnosis of sight-threatening ocular diseases globally and driving demand for innovative products, technologies, and therapies that improve clinical outcomes, and provide ease of use and reliability. In response to the significant unmet needs that exist within ophthalmology we have designed commercial and development-stage solutions to provide ophthalmologists with treatment options.

Our commercial solutions and development-stage product candidates include:

- MIGS products that involve the insertion of a micro-scale device or drug delivery system designed to reduce intraocular pressure (IOP) by restoring the natural aqueous humor outflow pathway for patients suffering from glaucoma and MIGS biosensors to measure pressure within the eye;

- topical pharmaceuticals that are bio-activated on the eye by one of our proprietary systems intended to strengthen, stabilize, and reshape the cornea for patients impacted by corneal ectatic disorders or refractive disorders; and

- topical pharmaceuticals that are applied to the eyelid and meant to treat dry eye and other conditions, and

- proprietary micro-invasive, bio-erodible sustained release drug delivery implants that are designed to elute pharmaceuticals over time to improve the vision of patients impacted by retinal diseases such as AMD, DME, retinal vein occlusion (RVO), and diabetic retinopathy (DR).

Material Changes and Transactions

Glaukos was formed in July 1998 with a focus on treating glaucoma progression, initially developing MIGS to serve as an alternative to traditional glaucoma treatment and management paradigms. We launched the *iStent*, our first MIGS device, in the U.S. in July 2012 and our next-generation *iStent inject* device in September 2018 while developing a broader portfolio of development-stage product candidates designed to treat glaucoma progression. In recent years, we began to execute a long-term strategy that leverages our core competencies and extends our focus to include therapies for chronic eye diseases beyond glaucoma into corneal disorders and retinal health. We completed four key transactions in 2019 in furtherance of this strategy.

On April 26, 2019, we announced that we had entered into a multi-year agreement with Santen Inc., the U.S. subsidiary of Santen Pharmaceutical Co., Ltd. (Santen), which appointed us the exclusive U.S. partner for the sale of the Preserflo MicroShunt (Microshunt), which is currently being studied in an FDA pivotal study and has not yet been approved by the FDA. The MicroShunt is an ab-externo device being developed for the treatment of primary open-angle glaucoma where IOP is uncontrolled with maximum tolerated medical therapy or where progression of the disease warrants surgery.

On June 27, 2019, we acquired DOSE Medical Corporation (DOSE), which was previously a wholly-owned subsidiary of the Company but was spun-out as a standalone entity in 2010. As a result of this acquisition, we are developing multiple micro-invasive, bioerodible, sustained-release drug delivery platforms designed to be used in the treatment of various retinal diseases, including AMD and DME.

On July 22, 2019, we announced that we had entered into a global licensing arrangement with Intratus, Inc. (Intratus) to research, develop, manufacture and commercialize Intratus' patented, non-invasive drug delivery platform designed for use in the treatment of dry eye disease and other ocular diseases.

On November 21, 2019, we acquired Avedro, Inc. (Avedro), a hybrid ophthalmic pharmaceutical and medical technology company focused on developing therapies designed to treat corneal diseases and disorders and to possibly correct refractive conditions. Avedro developed bio-activated drug formulations used in combination with proprietary systems for the treatment of progressive keratoconus and corneal ectasia following refractive surgery. The therapy is the first and only minimally invasive anterior segment product offering and only available treatment approved by the FDA shown to halt the progression of keratoconus.

Products and Pipeline

The Company operates in one operating segment as its primary business activity is the development and commercialization of therapies across several end markets within ophthalmology. In an effort to provide greater visibility into our performance and progress, the following discussion is presented based on our three principal franchises: glaucoma, corneal disorders and retinal diseases.

Glaucoma

Glaucoma is a group of eye diseases characterized by progressive, irreversible and largely asymptomatic vision loss in which elevated levels of IOP are often associated with optic nerve damage that can cause blindness. While some glaucoma patients do not experience an increase in IOP, it is widely considered a major risk factor in glaucoma's progression, and reduction in IOP is the only clinically proven treatment. Elevated IOP occurs when aqueous humor is not circulating normally or properly draining from the front part of the eye.

We have two commercialized products designed to treat mild-to-moderate open-angle glaucoma, the *iStent* and the *iStent inject*. The *iStent* and the *iStent inject* are FDA-approved micro-bypass stents that improve aqueous humor outflow inserted through the small corneal incision made during cataract surgery. Our *iStent,* which reduces IOP by restoring the natural physiologic pathways for aqueous humor, was the first commercially available MIGS treatment solution. Our next generation *iStent inject* includes two stents pre-loaded in an auto-injection system designed to allow the surgeon to inject stents through a single corneal entry. The *iStent* and *iStent inject* procedures are currently reimbursed in the U.S. by Medicare and all major national private payors. The *iStent* is commercially available in Japan and both devices are also available in Brazil, Canada, Australia, and certain European Union (EU) and other countries, even though reimbursement may not always be available for all such procedures.

We are also developing several pipeline products: the *iStent Infinite*, *iStent SA, iDose Travoprost* (*iDose*) and MicroShunt, none of which have been commercialized. The *iStent Infinite* consists of three stents that are designed for use as a standalone procedure in patients with refractory glaucoma. In 2019, we completed patient enrollment of an IDE study of *iStent Infinite* in order to pursue FDA clearance through a 510(k) pre-market submission. Similar to the *iStent inject*, the *iStent SA* is a two-stent product that uses a different auto-injection inserter. However, the *iStent SA* is designed for use as a standalone glaucoma procedure. The *iDose* drug delivery system is a targeted injectable implant based on our micro-scale device-platform that is designed to continuously deliver therapeutic levels of medication from within the eye for extended periods of time. We commenced our Phase III IND clinical trial for *iDose* in 2018. Additionally, our glaucoma pipeline includes the extended release *iDose* and the IOP Sensor which are still in a research and development (R&D) stage.

In addition to our organic R&D efforts, in 2019 we entered into a multi-year agreement with Santen, which appointed us to serve as the exclusive U.S. partner for the sale of the MicroShunt, which is currently being studied in an FDA pivotal study and has not yet been approved by the FDA. The MicroShunt is an ab-externo device being developed

for treatment of glaucoma where IOP is uncontrolled with maximum tolerated medical therapy or where progression of the disease warrants surgery.

Corneal Disorders

The cornea, the eye's outermost layer, is a clear, dome-shaped surface that functions best as a lens when the cornea is strong and shaped properly. The cornea is responsible for the majority of the eye's total focusing power and corneal disorders, including ectasia, refractive vision errors and dry eye, among others, can cause vision impairment. Corneal ectatic disorders are comprised of a class of diseases characterized by an ectatic, or misshaped, cornea. Corneal ectasia is typically caused by a weakening of the cornea, which can be due to a number of factors, including genetic causes, adverse side effects from ophthalmic refractive procedures such as LASIK, or excessive eye rubbing. We are currently targeting two primary corneal ectatic disorders with our bio-activated pharmaceuticals: keratoconus and corneal ectasia following refractive surgery and may also offer benefits to individuals with presbyopia and myopia. Keratoconus is mostly a hereditary, degenerative ectatic disease that is often first seen in older children or young adults in which the typically round, dome-shaped cornea progressively thins and weakens, causing a cone-like corneal bulge due to normal internal pressure of the eye. Corneal ectasia following refractive surgery is a serious complication that involves the cornea becoming weakened following a refractive procedure, such as LASIK, with symptoms similar to naturally occurring keratoconus. Refractive vision errors, or the inability of the cornea to properly focus light, are prevalent in the U.S. and abroad and include disorders such as presbyopia and myopia. Presbyopia is a natural part of aging due to the hardening of the eye's crystalline lens over time, resulting in a loss of lens elasticity or the ability of the lens to change shape in order to focus incoming light on the retina. Myopia, or nearsightedness, is a vision condition in which close objects are seen clearly, but objects farther away appear blurred, and is usually caused by an elongation of the eyeball or a cornea having too much curvature. Presbyopia affects nearly everyone over the age of 40 while myopia first occurs in school-age children and typically progresses until about age 20.

Our pharmaceutical therapies, a suite of novel single-use drug formulations that are bio-activated by our proprietary systems, address both keratoconus and corneal ectasia. These therapies, bioactivated upon the delivery of ultraviolet A (UVA) light to the cornea induce a biochemical reaction called corneal collagen cross-linking, or corneal cross-linking (CXL). CXL strengthens, stabilizes and reshapes the cornea to treat corneal ectatic disorders. The KXL System, which delivers UVA light to a large portion of the cornea, is approved by the FDA for use in the U.S. following removal of the epithelium (often referred to as "epi-off"), a procedure familiar to ophthalmologists. In May 2019, patient enrollment in a pivotal Phase 3 clinical trial was completed to evaluate the safety and efficacy of our latest pharmaceutical therapeutic system for the treatment of keratoconus without the removal of the epithelium (often referred to as "epi-on"). Outside the U.S., our pharmaceutical therapies can also be administered with the KXL System to address corneal weakening caused by refractive surgery such as LASIK. Our next generation systems are being developed to provide metered beams of UVA light to a targeted portion of the cornea. Our pharmaceutical products bio-activated by these systems may also offer a means of improving the vision of patients with presbyopia and myopia. In 2019, a Phase 2a clinical trial was initiated outside the U.S. to formally evaluate the safety and efficacy of our pharmaceutical therapies for the treatment of presbyopia.

We have also entered into an exclusive global licensing arrangement with Intratus to research, develop, manufacture and commercialize a patented, non-invasive transdermal drug delivery platform designed for application on the eyelid in the treatment of dry eye disease and other ocular diseases.

Retinal Diseases

Retinal diseases vary widely but universally affect the retina, a thin layer of tissue inside the back wall of the eye containing light-sensitive cells that convert light into neural signals. Most retinal diseases cause visual impairment, including blurred or distorted vision and vision loss. Our R&D efforts in our retinal franchise are focused on treating AMD, DME and other retinal diseases. AMD is a progressive disease that occurs when the macula, the central portion of the retina, is impaired, which can result in severe vision problems. DME is highly prevalent among individuals with type 2 diabetes and is associated with DR, the impairment of small blood vessels in the retina caused by increased glucose levels. Advanced DR can lead to fluid leaking into the macula, which causes DME and severe vision impairment.

We are developing sustained release pharmaceutical retinal platforms leveraging our expanded pharmaceutical and sustained drug delivery R&D capabilities. If commercialized, these platforms would be designed to treat AMD, DME and other retinal diseases. The focus of our retinal research and development efforts is to develop potential treatment options with a longer duration-of-effect than current standards of care products.

Research & Development

We devote significant resources to our R&D efforts, which are focused on developing new products, and enhancing the effectiveness, ease of use, safety, and reliability of our commercialized products. Our R&D objectives are:

- to advance glaucoma patient care through continuous improvement of our MIGS technologies;
- to further enhance treatment options for keratoconus, while expanding CXL indications to include treatment for certain refractive conditions and developing pharmaceutical therapies for dry eye disease and other corneal disorders; and
- to leverage our expertise in sustained pharmaceutical systems to identify and develop viable treatment options for retinal diseases.

A considerable portion of our R&D investment includes clinical trials and the collection of evidence that provide data for use in regulatory submissions and required post-market approval studies involving applications of our products. We expect our R&D and clinical expenditures to increase as we continue to devote significant resources to clinical trials and regulatory approvals of our pipeline products. We currently conduct R&D activities primarily in the U.S. but are expanding our clinical capabilities to sites outside the U.S.

Sales and Marketing

Our global sales efforts and promotional activities are currently aimed at ophthalmic surgeons and other eye care professionals and our primary customers include ambulatory surgery centers, hospitals and physician private practices. In the U.S., we sell our products through a direct sales organization. Outside the U.S., we sell our products through direct sales organizations in sixteen countries and a network of distribution partners in other markets where we do not have a direct commercial presence. In 2019, sales to customers inside and outside the U.S. accounted for 81% and 19% of our net sales, respectively. No single customer or distributor accounted for more than 10% of our total net sales in 2019.

Competition

The medical technology and pharmaceutical industries are highly competitive. We may compete with many companies, including divisions of companies much larger than us that may have greater resources and name recognition, and smaller companies that compete against specific products or in certain geographies. Furthermore, new product development, discoveries, and technological change characterize the areas in which we compete. Our present or future products could be rendered obsolete as a result of advances by one or more of our present or future competitors or by other surgical or pharmaceutical therapy development. We must continue to develop and commercialize new products, technologies, and therapies to remain competitive in the ophthalmology industry. We believe that we compete primarily on the basis of clinical superiority supported by extensive data, and innovative features that enhance patient benefit, product performance, and safety.

The ophthalmic segment of the medical technology and pharmaceutical industries is dynamic and subject to significant change due to cost-of-care considerations, regulatory reform, industry and customer consolidation, and evolving patient needs. The ability to provide products, technologies, and therapies that demonstrate value, are reimbursed through government or third-party payors, improve clinical outcomes and provide ease of use and reliability is becoming increasingly important for companies within ophthalmology.

In glaucoma, our MIGS offerings primarily compete against Ivantis, however there are a considerable number of large and small companies providing more invasive surgical technologies, laser-based therapies, and pharmaceuticals that may provide indirect competition or with whom we may compete should our broad clinical development pipeline be approved and commercialized. In corneal disorders, we have, under an orphan drug designation, the only FDA approved bio-activated pharmaceutical therapy for the treatment of keratoconus, but globally we compete against numerous providers of corneal crosslinking therapies such as PeschkeTrade GmBH. Our corneal disorder pipeline, if approved, would vastly expand our competition to numerous large companies such as Allergan plc, Alcon and Johnson & Johnson, and small companies that provide medical technology and pharmaceutical therapies for several areas including dry eye and refractive conditions. Our retinal health pipeline, if approved, may face substantial competition from large pharmaceutical companies such as Allergan plc, Novartis AG, Genentech/Roche, Regeneron, and Bayer, and there are also a considerable number of large and small companies with development efforts in the field.

Facilities, Manufacturing and Distribution

Our corporate headquarters and our manufacturing operations for the *iStent* and *iStent inject* are located in an approximately 98,000 square foot campus in San Clemente, California which is comprised of two main buildings. Our pharmaceutical therapies for keratoconus are primarily manufactured and supplied by third parties in the U.S. and Germany. We lease approximately 27,000 square feet of office and laboratory space in Waltham, Massachusetts, and our manufacturing operations for the majority of our proprietary systems are located in Burlington, Massachusetts, with some limited manufacturing operations in Dublin, Ireland. In the fourth quarter of 2018, we entered into an office building lease pursuant to which we lease one property containing three existing office buildings, comprising approximately 160,000 rentable square feet of space, located in Aliso Viejo, California (Aliso Facility). The term of the Aliso Facility lease commenced on May 1, 2019 and will continue for thirteen years, with an option to extend the lease for two additional five year periods at market rates. We intend to relocate our corporate administrative headquarters, along with certain laboratory, research and development and warehouse space previously based in San Clemente, to the Aliso Facility. We currently intend to maintain manufacturing facilities for the *iStent* and *iStent inject* at our San Clemente location for the foreseeable future. Our international subsidiaries also lease facilities in Australia, Brazil, Canada, Germany, Japan and the United Kingdom.

Intellectual Property

The strength of our competitive position depends substantially upon our ability to obtain and enforce intellectual property rights protecting our technology both domestically and internationally. We rely on a combination of intellectual property rights, including patents, trademarks, service marks, copyrights, trade secrets and other similar intellectual property, as well as customary contractual protections and security measures used to protect our proprietary, trade secret information.

In the aggregate, our intellectual property assets are of material importance to our business. We are significantly dependent on our patent and other intellectual property rights and the failure to protect such rights could negatively impact our ability to sell current or future products or prohibit us from enforcing our patents or other intellectual property rights against others. For additional information see the section titled *Risks Related to Our Intellectual Property* within Item 1A. Risk Factors of this Annual Report on Form 10-K.

As of December 31, 2019, we owned or exclusively licensed in certain fields of use over 250 issued patents, pending U.S. patent applications, issued foreign patents and pending foreign patent applications. We may, from time to time, choose to acquire or license additional patents and patent applications, or we may choose to abandon, sell, or license certain Company patents and patent applications, depending on our needs. The issued patents that protect our commercial products and current product pipeline expire between 2020 and 2038.

Government Regulation

Our products and operations are subject to extensive and rigorous regulation by federal, state and local authorities, as well as foreign regulatory authorities. These governmental agencies regulate, among other things, the research, development, testing, manufacturing, approval, labeling, storage, recordkeeping, advertising, promotion and marketing, distribution, post approval monitoring and reporting, and import and export of medical devices and drugs (including drug/device products) in their respective jurisdictions to assure the safety and effectiveness of medical products and pharmaceuticals for their intended use. In general, there has been a trend of increased regulation of medical device and drug products, which has resulted in, and will likely continue to result in, increased prices to bring new products to market.

Regulation & Reimbursement in the United States

The FDA has broad regulatory authority over medical devices and drugs in the U.S. The FDA regulates, among other things, product safety, efficacy, manufacturing, advertising, labeling and safety reporting. Our products are subject to strict clinical investigation and pre-market clearance or approval requirements, which can be costly and lengthy, and there is no guarantee that our products will be cleared or approved on the timelines we have established, if at all. Even after the FDA permits a device or drug to enter commercial distribution, numerous regulatory requirements apply, including, but not limited to, regulations regarding registration and listing, labeling and tracking, recordkeeping, product sampling, advertising, distribution, sale and promotion (including a prohibition on "off-label" promoting), and reporting. Failure to comply with the applicable U.S. regulatory requirements could result in, among other things, warning letters, untitled letters, fines, injunctions, consent decrees, civil penalties, unanticipated expenditures, repairs, replacements, refunds, recalls or seizures of products, post-approval clinical trials, operating restrictions, total or partial suspension of production, the FDA's refusal to issue certificates to foreign governments needed to export products for sale in other countries, the FDA's refusal to grant future premarket clearances or approvals, withdrawals or suspensions of current product clearances or approvals and criminal prosecution.

Additional laws and regulations also govern our business operations and products in the U.S., including among others:

- federal, state, and foreign anti-kickback laws and regulations, which generally prohibit the offer, receipt, or payment of remuneration in exchange for or to induce the use of products or services that are paid for in whole or part by Medicare, Medicaid or other federal healthcare programs;
- federal and state laws and regulations that govern the collection, dissemination, security, use, disclosure and confidentiality of patient-identifiable health and other proprietary and personally-identifiable information, in particular, the Health Insurance Portability and Accountability Act of 1996 (HIPAA), as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH);
- the Physician Payments Sunshine Act, which requires us to report annually to the Department of Health and Human Services (HHS) information related to certain investments by, and payments and other transfers of value to, physicians, other healthcare providers, and teaching hospitals; and
- the False Claims Act, which imposes civil liability on persons who, among other things, present or cause to be presented false or fraudulent claims for payment by a federal healthcare program.

In addition, certain states have proposed or enacted legislation that will create new data privacy and security obligations for certain entities, such as the California Consumer Privacy Act that went into effect January 1, 2020.

There has also been a trend of increased federal and state regulation of payments made to physicians and other healthcare providers. The Affordable Care Act (ACA), among other things, imposed new annual reporting requirements on certain device manufacturers for payments made by them to physicians and teaching hospitals, as well as certain ownership and investment interests held by physicians and their immediate family members. Failure to submit required information may result in civil monetary penalties of up to $1 million. Certain states also mandate implementation of commercial compliance programs and/or require the tracking and reporting of gifts, compensation and other remuneration to physicians.

HHS and comparable state agencies also regulate the delivery of our products in the U.S. and are responsible for the reimbursement of health care items and services. Hospitals and doctors providing inpatient care of persons covered by Medicare are reimbursed based on HHS' reimbursement schedules, which amounts are regulated. HHS' Centers for Medicare & Medicaid Services (CMS) is responsible for administering the Medicare program and may also review under what circumstances a procedure or technology is reimbursable for Medicare beneficiaries. Any changes in current coverage and reimbursement levels could negatively impact the demand for our products and their pricing.

Regulation & Reimbursement outside the U.S.

In addition to regulations in the U.S., we are subject to a variety of regulations in other jurisdictions governing clinical trials, commercial sales and distribution of our products and reporting of payments to physicians. Whether or not we obtain FDA approval for a product, we must obtain authorization before commencing clinical trials or obtain marketing authorization or approval of a product under the comparable regulatory authorities of countries outside the U.S. The approval process varies from country to country and the time may be longer or shorter than that required for FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country. In addition, certain countries have adopted transparency legislation that requires us to report contracts with or payments made to physicians in those countries.

Similar to the trend within the U.S., other major international markets are also moving toward more stringent regulatory frameworks for medical device and drug products. For example, in May 2017, the EU adopted a new regulatory scheme for medical devices under the Medical Device Regulation (MDR). The MDR is expected to become fully effective in May 2020 and will bring significant new requirements for many medical devices, including enhanced requirements for clinical evidence and documentation, increased focus on device identification and traceability, and additional post-market surveillance and vigilance, which could result in substantial additional expense.

The EU has also adopted increasingly stringent data protection and privacy rules that have and will continue to have a substantial impact on the use of patient data across the healthcare industry. The EU General Data Protection Regulation, or GDPR, became effective in May 2018 and applies across the EU and includes, among other things, a requirement for prompt notice of data breaches to data subjects and supervisory authorities in certain circumstances and significant fines for non-compliance.

Outside the U.S., reimbursement levels vary significantly by country and by region within some countries. Reimbursement is obtained from a variety of sources, including government-sponsored and private health insurance plans, and combinations of both. Some countries require additional clinical data before granting or expanding coverage and reimbursement for our products. In general, obtaining broad-based reimbursement and adequate payment for new technologies is more difficult in these markets than in the U.S. Many countries require new medical technologies to not only be safe and effective, but also to be able to demonstrate clinical benefits that outweigh the costs when compared to the standard of care. As in the U.S., reimbursement decisions can change, resulting in the elimination or reduction of reimbursement payments, which could adversely affect our financial results and our ability to invest in and grow our business.

Other

Our operations and many of the products we manufacture or sell are subject to extensive regulation by numerous other governmental agencies, both within and outside the U.S. In the U.S., apart from the agencies discussed above, our facilities, operations, employees, products (their manufacture, sale, import and export) and services are regulated by Environmental Protection Agency, the Occupational Health & Safety Administration, the Department of Labor, Customs and Border Protection, the Department of Commerce, the Department of Treasury, the Department of Justice and others. State agencies also regulate our facilities, operations, employees, products and services within their respective states. Government agencies outside the U.S. also regulate public health, product registration, manufacturing, environmental conditions, labor, exports, imports and other aspects of our global operations.

These regulatory agencies and any current or future legislation could impact our business operations, reimbursement for our products, and the healthcare environment generally, which could adversely affect our ability to operate our business and our financial results.

Employees

As of December 31, 2019, we had more than 600 employees. We believe that our future success will depend in part on our continued ability to attract, hire and retain qualified personnel. None of our employees are represented by a labor union. We consider our relationship with our employees to be good.

Available Information

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Exchange Act, are available on our web site at www.glaukos.com, free of charge, as soon as reasonably practicable after the electronic filing of these reports with, or furnishing of these reports to, the Securities and Exchange Commission (SEC). In addition, the SEC maintains a web site at www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including us.

Item 1A. Risk Factors

The risks discussed below are not the only ones facing our business but do represent those risks that we believe are material to us. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also harm our business. Please read the cautionary notice regarding forward-looking statements under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Risks Related to Our Business

We have incurred significant losses since inception and our business requires substantial capital and operating expenditures to operate and grow. There can be no guarantee that we reach sustained profitability.

Since the Company's inception in July 1998, we have incurred significant operating losses. As of December 31, 2019, we had an accumulated deficit of approximately $189.7 million, principally from costs incurred in our clinical trial, research and development programs and from our general and administrative expenses. We have funded our operations to date from the sale of equity securities, including our June 2015 initial public offering (IPO), the issuance of notes payable, cash exercises of stock options and warrants to purchase equity securities and cash generated from commercial operations. To implement our global business strategies we need to, among other things, fund ongoing research and development activities, expand our manufacturing capabilities, grow our sales and marketing organization, enforce or defend our intellectual property rights, acquire companies or in-license products or intellectual property, and obtain regulatory clearance or approval to commercialize our existing products in international markets or to commercialize those currently under development in the U.S. and internationally. As a result, we expect our expenses to continue to increase as we pursue these objectives. While we believe we have sufficient cash to fund our operations for at least the next 12 months from the date our consolidated financial statements for the year ended December 31, 2019 are made publicly available, our ability to fund our operations are uncertain and we may not be able to obtain additional financing on terms that are favorable to us. Additionally, any financing that we are able to obtain may negatively impact current stockholders or our ability to operate the business. Our ability to reach sustained profitability is highly uncertain, especially given our limited commercial history selling our products globally and an increasingly competitive landscape, which makes forecasting our sales more difficult.

Our success depends on our ability to continue to generate sales of our commercialized products and develop and commercialize additional products, which we may not be able to accomplish.

Our primary sales-generating commercial products have been the *iStent*, which we began selling in the U.S. in the third quarter of 2012, the *iStent inject*, which we began selling in the U.S. in the second half of 2018, and our *Photrexa* therapies, which we acquired in connection our acquisition of Avedro, Inc. (Avedro) in November 2019. We expect to continue to derive a significant portion of our net sales from the *iStent,* the *iStent inject* and the *Photrexa* therapies.

As a result, it is important that we continue to build a more complete product offering. Developing additional products is expensive and time-consuming. Even if we are successful in developing our additional pipeline products, including those currently in development, the success of our new product offerings is inherently uncertain and there can be no assurance that our products will produce net sales in excess of the costs of development. Any current or new products could also quickly be rendered obsolete by changing customer preferences or the introduction by our competitors of products embodying superior technologies or features. Additionally, our research programs, which are expensive and time-intensive, may initially show promise in identifying potential products, yet fail to yield product candidates for clinical development. If we are unable to successfully commercialize additional products, our business prospects would be materially affected.

If we are not able to obtain market acceptance of our products globally or effectively grow our global sales and marketing organization, our business prospects, results of operations and financial condition could be adversely affected.

Because of the numerous risks and uncertainties associated with our global commercialization efforts, our products may not obtain wide-spread market acceptance outside of the United States, which would adversely impact the overall utilization of our products. International markets differ significantly from the U.S. market, including as a result of differences in payor systems, reimbursement, competitive dynamics, market size, regulations and patient treatment regimens. Additionally, our future success will depend largely on our ability to train, retain and motivate skilled regional sales managers and direct sales representatives and distributors around the world with significant technical knowledge of our products. Because of the competition for their services, we may not be able to retain such representatives on favorable or commercially reasonable terms, if at all. If we are unable to grow our global sales and marketing organization, we may not be able to effectively commercialize our products globally, which would adversely affect our business prospects, results of operations and financial condition.

If the supply and/or manufacture of our principal revenue-producing products, the iStent, the iStent inject and our Photrexa therapies, is materially disrupted, it may adversely affect our ability to manufacture products and could reduce our gross margins and negatively affect our operating results. Disruptions to our other commercialized products could also materially impact our business.

Our corporate headquarters and the manufacturing operations for our *iStent* products are currently located in an approximately 98,000 square foot campus located in San Clemente, California. This location serves as our sole manufacturing location where we manufacture, inspect, package, release and ship nearly all of our *iStent* and *iStent inject* products. This is also the location where we currently conduct substantially all of our research and development (R&D) activities, customer and technical support, and management and administrative functions. We intend to relocate our corporate administrative headquarters, along with certain laboratory, R&D and warehouse space, to a new facility located in Aliso Viejo, California. If our San Clemente facility or our future facility in Aliso Viejo suffers a crippling event, or a force majeure event such as an earthquake, fire or flood, this could materially impact our ability to operate.

Additionally, we rely on a limited number of third-party suppliers, in some cases sole suppliers, to supply components for the *iStent*, the *iStent inject* and our other pipeline products. If any one or more of our suppliers cease to provide us with sufficient quantities of components or drugs in a timely manner or on terms acceptable to us, we would have to seek alternative sources of supply. Because of factors such as the proprietary nature of our products, our quality control standards and regulatory requirements, we may have difficulty quickly engaging additional or replacement suppliers for some of our critical components. Despite our efforts to maintain an adequate supply of inventory, the loss of these suppliers, or their inability to provide us with an adequate supply of components or products, could cause delay in the manufacture of our products, thereby impairing our ability to meet the demand of our customers and causing significant harm to our business. Even if we are able to identify and qualify a suitable second source to replace one of our key suppliers, if necessary, that replacement supplier would not have access to our previous supplier's proprietary processes and would therefore be required to develop its own, which could result in further delay. Any disruption of this nature or increased expense could harm our commercialization efforts and adversely affect our operating results.

Our corneal health *Photrexa* therapies are produced by a small number of contract manufacturing organizations. The systems that bio-activate our *Photrexa* therapies are primarily manufactured in Burlington, Massachusetts. Any material disruption to the manufacture of our corneal health products, either our pharmaceuticals or their bio-activation systems, could also adversely affect our operating results.

We and some of our component manufacturers and contract facilities are required to comply with regulatory requirements known as the FDA's Quality System Regulation (QSR), which covers the procedures and documentation of the design, testing, production, control, quality assurance, inspection, complaint handling, recordkeeping, management review, labeling, packaging, sterilization, storage and shipping of our device products. The FDA's Current Good Manufacturing Practices (cGMPs) regulations also apply to the manufacture of our products. The FDA audits compliance with these regulatory requirements through periodic announced and unannounced inspections of manufacturing and other facilities. If our manufacturing facilities or those of any of our component suppliers or contract facilities are found to be in violation of applicable laws and regulations, the FDA could take enforcement action. Additionally, in the event we must obtain a replacement manufacturer, it may be difficult for us to identify and qualify a manufacturer that complies with QSR and cGMPs, which would adversely impact our operations.

If the quality or delivery of our products does not meet our customers' expectations, our reputation could suffer and ultimately our sales and operating earnings could be negatively impacted.

In the course of conducting our business, we have had to and must continue to adequately address quality issues associated with our products, including in our engineering, design, manufacturing and delivery processes, as well as issues in third-party components included in our products. Because our products are highly complex, the occurrence of performance issues may increase as we continue to introduce new products and as we rapidly scale up manufacturing to meet increased demand for our products. Although we have established internal procedures to minimize risks that may arise from product quality issues, there can be no assurance that we will be able to eliminate or mitigate occurrences of these issues and associated liabilities. In addition, identifying the root cause of performance or quality issues, particularly those affecting third-party components, may be difficult, which increases the time needed to address quality issues as they arise and increases the risk that similar problems could recur. Finding solutions to quality issues can be expensive and we may incur significant costs or lost revenue in connection with, for example, shipment holds, product recalls and warranty or other service obligations. In addition, quality issues can impair our relationships with new or existing customers and our reputation as a producer of high quality products could suffer, which could adversely affect our business, financial condition or results of operations.

Epidemic diseases, such as the coronavirus, could adversely affect our operations and financial condition.

An epidemic of the coronavirus (COVID-19) is ongoing in China and other parts of the world. We cannot at this time accurately predict what effects these conditions will have on our operations and sales, including due to uncertainties relating to the ultimate geographic spread of the virus, the severity of the disease, the duration of the outbreak, and the length of the travel restrictions and business closures imposed by governments of impacted countries. The contamination of the epidemic in China and the spread of this and other contagious diseases into areas such as Japan, Singapore, Hong Kong, Korea, Europe and the United States and other key markets could affect demand for our products and impact our operating results materially.

Failure to secure adequate coverage or reimbursement by government or other third-party payors for procedures using our products, or changes in current coverage or reimbursement, could materially impact our net sales and future growth.

Ambulatory surgery centers, hospitals and physician private practices that purchase our products typically bill various third-party payors, such as government programs, private insurance plans and managed care programs, to cover all or a portion of the costs and fees associated with the therapeutics or procedures in which our products are used and bill patients for any applicable deductibles or co-payments. Access to adequate coverage and reimbursement by third-party payors for the procedures using our products is essential to the acceptance of our products by our customers, who may not adopt products for which there is limited or no third-party reimbursement. The requirements and processes for obtaining approval for such reimbursement may vary significantly from country to country, entail prolonged delay, or be more difficult for foreign manufacturers with new, unfamiliar products and treatments. Third-party coverage and reimbursement for our products or any of our product candidates may not be available or adequate in either the U.S. or international markets.

Physicians are typically paid separately from the facility for surgical procedures involving our products; however, there is no published Medicare payment schedule at the national level for physician payment amounts. The physician payment rate is left to the discretion of the regional Medicare Administrative Contractors (MACs), with each

MAC separately determining coverage and no assurance that coverage and adequate reimbursement will be obtained from, or maintained by, the MACs. In order to adopt a new procedure, one of the factors that the surgeon evaluates is whether or not payment for the procedure adequately covers the surgeon's time. As with the facility payment, the incremental payment the physician receives could play a role in a surgeon's decision to adopt our products. Accordingly, changes in the payment the physician receives could affect the extent to which physicians recommend procedures using our products to patients, which could have a material adverse effect on our business, financial condition and operating results.

Third-party payors, whether foreign or domestic, or governmental or commercial, are developing increasingly sophisticated methods of controlling healthcare costs. In addition, in the U.S., no uniform policy of coverage and reimbursement exists among third-party payors; coverage and reimbursement can differ significantly from payor to payor. In addition, payors continually review new products for possible coverage and can, without notice, deny coverage. As a result, the coverage determination process is often time-consuming and costly; requiring us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained, or maintained if obtained. Coverage decisions may depend upon clinical and economic standards that disfavor new products when more established or lower cost therapeutic alternatives are already available or subsequently become available. Any decline in the amount payors are willing to reimburse our customers for procedures using our products, including the amount payors are willing to pay the physicians performing the procedures, which is separately evaluated, could make it difficult for existing customers to continue using, or new customers to adopt, any of our products and could create additional pricing pressure for us. If we were forced to lower the price we charge for our products, our gross margins would decrease, which would adversely affect our ability to invest and grow our business. Further, we believe that future coverage and reimbursement will likely be subject to increased restrictions both in the U.S. and in international markets.

One key aspect of reimbursement in the U.S. is the use of coding. Coding refers to distinct numeric and alphanumeric billing codes that are used by healthcare providers to report the provision of medical procedures and the use of supplies for specific patients to payors. There are different categories of Current Procedural Terminology (CPT) codes (Category I, II and III) based on the procedure or supply. Although we have received a permanent healthcare common procedure coding system J code for our *Photrexa* pharmaceutical therapies, we have only obtained temporary Category III CPT codes for the professional fees associated with CXL and *iStent*-related procedures. There is no guarantee that these billing codes or the payment amounts associated with such codes will not change in the future. Prior to expiration, there are two options: submit an application to convert a temporary code to a permanent code or submit an application for a five-year extension of the temporary code. Further, even when a permanent billing code has been assigned to a product, there is no guarantee that coverage will be provided. MACs have in the past, and may in the future, change coverage terms, which could result in inadequate reimbursement and impact the use of our products. If we are unable to maintain our existing codes or obtain new permanent codes for procedures using our products, or obtain new reimbursement codes for our other products in development, we may be subject to significant pricing pressure, which could harm our business, results of operations, financial condition and prospects.

If our competitors are able to develop and market products that are safer, more effective, less costly or otherwise more attractive than our products, our commercial opportunity may be reduced or eliminated.

Our industry is highly competitive and subject to rapid and profound technological, market and product-related changes. Our success depends, in part, upon our ability to maintain a competitive position in the development of new products for the treatment of chronic eye diseases. Our competitors, medical companies, academic and research institutions or others could develop new drugs, therapies, medical devices or surgical procedures that could render our products obsolete. If such other products demonstrate better safety or effectiveness, clinical results, ease of use or lower costs than our products, it may reduce demand for our products, and our business may be harmed.

Many of our current and potential competitors are large publicly traded companies or divisions of publicly traded companies and have more resources, greater name recognition, longer operating histories, more established relationships with healthcare professionals, customers and third-party payors, broader products lines that provide rebate and bundling opportunities, more established sales and marketing programs and distribution networks, and greater experience in obtaining regulatory clearance or approval. If we are unable to effectively compete, it could adversely affect our business.

Ophthalmic surgeons may not use our products if they do not believe they are safe, efficient, effective and preferable alternatives to other treatment solutions in the market or may use our products without being adequately trained, which could result in inferior clinical outcomes.

We believe that ophthalmic surgeons will not use our products unless they conclude that our products provide a safe, efficient, effective and preferable alternative to currently available treatment options. If ophthalmic surgeons determine that any of our products are not sufficiently effective, efficient or safe, whether based on longer-term patient studies or clinical experience or unsatisfactory patient outcomes or patient injury, our sales would be harmed. It is also possible that as our products become more widely used, latent defects could be identified, creating negative publicity and liability problems for us and adversely affecting demand for our products. If an increasing number of ophthalmic surgeons do not continue to adopt the use of our products, our operating and financial results will be negatively impacted.

Additionally, inferior patient outcomes, or patient injury, may result if untrained or unqualified ophthalmic surgeons elect to perform procedures using our products. After an ophthalmic surgeon is trained by our sales representatives, the surgeon and/or surgical facility that the surgeon utilizes are cleared to purchase, and administer procedures using, our products. There is a risk that untrained or unqualified ophthalmic surgeons could gain access to our products from a facility's inventory and conduct procedures without having received qualified status from us. If performing procedures by unqualified ophthalmic surgeons were to become pervasive, this could raise the risk of complications and inferior clinical outcomes, which could result in negative patient experiences or experiences being published and damaging our reputation and that of our products. This could result in lower penetration and utilization by ophthalmic surgeons and could have a material adverse effect on our net sales growth, expected operating results and financial condition.

Product liability suits brought against us could cause us to incur substantial liabilities, limit sales of our existing products and interfere with commercialization of any products that we may develop.

If our product offerings are defectively designed or manufactured, contain defective materials, or are used or deployed improperly, or if someone claims any of the foregoing, whether or not such claims are meritorious, we may become subject to substantial and costly litigation. Any product liability claims brought against us, with or without merit, could divert management's attention from our business, be expensive to defend, result in sizable damage awards against us, damage our reputation, increase our product liability insurance rates, prevent us from securing continuing coverage, or prevent or interfere with commercialization of our products. In addition, we may not have sufficient insurance coverage for all future claims. Product liability claims brought against us in excess of our insurance coverage would likely be paid out of cash reserves, harming our financial condition and results of operations.

Operating results could be unpredictable and may fluctuate significantly from quarter to quarter, which could adversely affect our business, financial condition, results of operations and the trading price of our common stock.

Our net sales may experience volatility due to a number of factors, many of which are beyond our control, including:

- our ability to drive increased sales of our products;
- our ability to establish and maintain an effective and dedicated sales organization;
- fluctuations in the demand for our products;

- pricing pressure applicable to our products, including adverse third-party coverage and reimbursement outcomes and competitor pricing;
- results of clinical research and trials on our products or competitive products;
- timing of new product offerings, acquisitions, licenses or other significant events by us or our competitors;
- decisions by customers to defer orders in anticipation of the introduction of new products or product enhancements by us or our competitors;
- sampling by and additional training requirements for physicians upon the commercialization of a new product by us or one of our competitors;
- our ability to manage the risks associated with introducing new products, including inventory management;
- regulatory approvals and legislative changes affecting the products we may offer or those of our competitors;
- interruption in the manufacturing or distribution of our products;
- the ability of our suppliers to timely provide us with an adequate supply of product components;
- the effect of competing technological, industry and market developments;
- changes in our ability to obtain regulatory clearance or approval for our products;
- variances in the sales terms, timing or volume of customer orders from period to period;
- the length of our sales cycle, which varies and may be unpredictable; and
- our ability to expand the geographic reach of our sales and marketing efforts.

As a result, you should not rely on our results in any past period as an indication of future results and you should anticipate that fluctuations in our quarterly and annual operating results may continue and could generate volatility in the price of our common stock. We believe that quarterly comparisons of our financial results should not be relied upon as an indication of our future performance.

If we fail to manage our anticipated growth effectively, or are unable to increase or maintain our manufacturing capacity, we may not be able to meet customer demand for our products and our business could suffer.

Since the commercial launch of the *iStent* in July 2012, we have seen significant period-to-period growth in our business, both organically and through transactions, and we must continue to grow in order to meet our business and financial objectives. However, continued growth may create numerous challenges, including:

- new and increased responsibilities for our management team;
- increased pressure on our operating, financial and reporting systems;
- increased competition;
- increased pressure to anticipate and satisfy market demand;
- additional manufacturing capacity requirements;
- strain on our ability to source a larger supply of components that meet our required specifications on a timely basis;
- management of an increasing number of relationships with our customers, suppliers and other third parties;
- entry into new international territories with unfamiliar regulations and business approaches; and
- the need to hire, train and manage additional qualified personnel.

Although we believe we have plans in place sufficient to ensure we have adequate capacity to meet our current business plans, there are uncertainties inherent in expanding our manufacturing capabilities, and we may not be able to sufficiently increase our capacity in a timely manner. For example, manufacturing and product quality issues may arise as we increase production rates at our manufacturing facility or launch new products. Also, we may not manufacture the right product mix to meet customer demand as we introduce new products. As a result, we may experience difficulties in meeting customer demand, in which case we could lose customers or be required to delay new product introductions, and demand for our products could decline. If we fail to manage any of the above challenges effectively, our business may be harmed.

Our future growth depends on our ability to retain members of our senior management and other key employees. If we are unable to retain or recruit qualified personnel for growth, our business results could suffer.

We have benefited substantially from the leadership and performance of our senior management as well as certain key employees. For example, our chief executive officer, as well as other key members of our senior management, has experience successfully developing novel technologies and scaling early-stage medical device and pharmaceutical companies to achieve profitability. Our success will depend on our ability to retain our current management and key employees, and to attract and retain qualified personnel in the future. Competition for senior management and key employees in our industry is intense and we cannot guarantee that we will be able to retain our personnel or attract new, qualified personnel. The loss of services of certain members of our senior management or key employees could prevent or delay the implementation and completion of our strategic objectives, or divert management's attention to seeking qualified replacements. Each member of senior management as well as our key employees may terminate employment without notice and without cause or good reason. The members of our senior management are not subject to non-competition agreements. Accordingly, the adverse effect resulting from the loss of certain members of senior management could be compounded by our inability to prevent them from competing with us.

In addition to competing for market share for our products, we also compete against our competitors for personnel, including qualified sales representatives that are necessary to grow our business. Universities and research institutions also compete with us for scientific and clinical personnel that are important to our research and development efforts. We also rely on consultants and advisors in our research, operations, clinical and commercial efforts to implement our business strategies. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. Our strategic plan requires us to continue growing our sales, marketing, clinical and operational infrastructure in order to generate, and meet, the demand for our products. If we fail to retain or attract these key personnel, we could fail to take advantage of the market for our products, adversely affecting our business, financial condition and operating results.

As we expand our product offerings, some of our products are, and others will be, regulated as drugs and be subject to different regulatory requirements.

As we have expanded our product offerings through organic growth and acquisitions, certain of our products are, and others will be, subject to the regulatory approval process for pharmaceuticals. This process is often a more lengthy, costly and complex process than obtaining regulatory approval for a medical device. The future success of our pharmaceutical and hybrid device and pharmaceutical products depends on our ability to complete clinical trials, and will require significant development activities, regulatory approvals, and substantial additional investment.

We have and may continue to enter into acquisitions, collaborations, in-licensing agreements, joint ventures, alliances or partnerships with third parties that could fail.

We have and may continue to enter into acquisitions, collaborations, in-licensing agreements, joint ventures, alliances, partnerships or undertake one or more of these transactions in order to retain our competitive position within the marketplace or to expand into new markets. Examples include our acquisitions of DOSE and Avedro, as well as our licensing of Santen's Preserflo MicroShunt and the Intratus drug delivery platform. However, we cannot assure you that we will be able to successfully complete any future acquisition we choose to pursue, or that we will be able to successfully integrate any acquired business, product or technology in a cost-effective and non-disruptive manner. Our future successes will depend, in part, on our ability to manage an expanded business, which may pose substantial

challenges for our management, including challenges related to the management and monitoring of new operations and associated increased costs and complexity. There can be no assurances that we will be successful in managing such expanded business or that we will realize the expected economies of scale, synergies and other benefits currently anticipated from recent or future acquisitions or strategic transactions. In addition, if we are unable to integrate any acquired businesses, products or technologies effectively, our business will likely suffer. Additionally, some of these collaborations, joint ventures, alliances and partnerships require us to invest a substantial amount of resources. These arrangements may be terminated before we are able to realize net sales to sufficiently cover the costs associated therewith, which could materially impact our business. We cannot assure you that any such transaction would result in the benefits expected from the transaction, including revenue growth, increased profitability or an enhancement in our business prospects. Achieving the benefits of any acquisition, including the DOSE and Avedro transactions, will depend, in part, on our ability to integrate the business, operations and products of the acquired entities successfully and efficiently with our business, which we may not be able to accomplish. Further, pursuing acquisitions, collaborations, in licensing agreements, joint ventures, alliances or partnerships with third parties, whether or not completed, is costly and time-consuming and could distract Company management from the operation of the business, which could negatively impact our operating results.

Failure to protect our information technology infrastructure against cyber-based attacks, network security breaches, service interruptions or data corruption could materially disrupt our operations and adversely affect our business and operating results.

The efficient operation of our business depends on our information technology systems. We rely on our information technology systems to effectively manage sales and marketing data, accounting and financial functions, inventory management, product development tasks, clinical data, customer service and technical support functions. Our information technology systems are vulnerable to damage or interruption from earthquakes, fires, floods and other natural disasters, terrorist attacks, power losses, computer system or data network failures, security breaches, data corruption and cyber-based attacks, including malicious software programs or other attacks, which have been attempted against us in the past. In addition, a variety of our software systems are cloud-based data management applications, hosted by third-party service providers whose security and information technology systems are subject to similar risks.

The failure to protect either our or our service providers' information technology infrastructure could disrupt our entire operation or result in decreased sales, increased overhead costs, product shortages, loss or misuse of proprietary or confidential information, intellectual property or sensitive or personal information, all of which could have a material adverse effect on our reputation, business, financial condition and operating results.

Failure to comply with data privacy and security laws could have a material adverse effect on our business.

We are subject to state, federal and foreign laws relating to data privacy and security in the conduct of our business, including state breach notification laws, the Health Insurance Portability and Accountability Act (HIPAA), as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH), the European Union's (EU) General Data Protection Regulation (GDPR), and the California Consumer Privacy Act (CCPA). These laws affect how we collect and use data of our employees, consultants, customers and other parties. Furthermore, these laws impose substantial requirements that require the expenditure of significant funds and employee time to comply, and additional states and countries are enacting new data privacy and security laws, which will require future expansion of our compliance efforts. We also rely on third parties to host or otherwise process some of this data. In some instances, these third parties have experienced immaterial failures to protect data privacy. Any failure by a third party to prevent security breaches could have adverse consequences for us. We will need to expend additional resources and make significant investments to comply with data privacy and security laws. Our failure to comply with these laws or prevent security breaches of such data could result in significant liability under applicable laws, cause disruption to our business, harm our reputation and have a material adverse effect on our business.

We cannot be certain that our net operating loss tax carryforwards will be available to offset future taxable income.

At December 31, 2019, we had approximately $356.6 million, $144.0 million and $13.3 million of net operating loss (NOL) carryforwards for federal, state and foreign purposes, respectively, available to offset future taxable income.

The federal NOL carryforwards incurred prior to 2018 begin to expire in 2022. A federal NOL carryforward of $103.1 million will not expire, but can only be used to offset 80 percent of future taxable income. The state NOL carryforwards will begin to expire in 2021. The foreign NOL will begin to expire in 2023. At December 31, 2019, we had federal and state research and development carryforwards of approximately $28.9 million and $12.8 million, respectively. Federal credits begin to expire in 2021, and state credits of $2.9 million begin to expire in 2023. The remaining state credits of $9.8 million carry over indefinitely. We continue to provide a full valuation allowance against these tax attributes because we believe that uncertainty exists with respect to their future realization, as well as with respect to the amount of the tax attributes that will be available in future periods. To the extent available, we intend to use these NOL carryforwards to offset future taxable income associated with our operations. There can be no assurance that we will generate sufficient taxable income in the carryforward period to utilize any remaining NOL carryforwards before they expire.

Risks Related to the Regulatory Environment

Our business, products and processes are subject to extensive regulation and it can be costly to comply with these regulations. Any failure to adhere to applicable regulations could harm our business, financial condition and operating results.

Our products are subject to extensive government regulation in the U.S. by the U.S. Food and Drug Administration (FDA) and state regulatory authorities and by foreign regulatory authorities in the countries in which we conduct business. These regulations relate to, among other things, research and development, design, testing, clinical trials, manufacturing, clearance or approval, environmental controls, safety and efficacy, labeling, advertising, promotion, pricing, recordkeeping, reporting, import and export, post-approval studies and the sale and distribution of our products. See Item 1, Business, “Government Regulation -- Regulation & Reimbursement in the U.S.” for additional information.

The process of obtaining clearance or approvals to market a medical device, drug or other product can be expensive and lengthy, and we cannot guarantee that our current products will receive approval for additional indications or that our future products will receive clearance or approval on a timely basis, if at all. Delays in the commencement or completion of clinical trials or testing could significantly affect our product development costs. We do not know whether planned clinical trials will begin on time, need to be redesigned, enroll an adequate number of patients in a timely manner or be completed on schedule, if at all. Conducting clinical trials is a complex and expensive process, can take many years, and outcomes are inherently uncertain. We incur substantial expense for, and devote significant time to, clinical trials but cannot be certain that the trials will ever result in commercial sales. We may suffer significant setbacks in clinical trials, even after earlier clinical trials showed promising results, and failure can occur at any time during the clinical trial process. Any of our products may malfunction or may produce undesirable adverse effects that could cause us or regulatory authorities to interrupt, delay or halt clinical trials. We, the clinical trial investigators, the independent review board responsible for overseeing the trial, the FDA, or another regulatory authority may suspend or terminate clinical trials at any time to avoid exposing trial participants to unacceptable health risks. Any delay or failure to obtain necessary regulatory approvals would have a material adverse effect on our business, financial condition and prospects.

In some instances, we may pursue a regulatory approval pathway that proves unsuccessful. For example, we intend to seek FDA approval of a new drug application (NDA) under Section 505(b)(2) of the Federal Food, Drug and Cosmetic Act (FDCA) for our drug delivery implant, *iDose*. Section 505(b)(2) permits the filing of an NDA where at least some of the information required for approval comes from studies that were not conducted by or for the applicant. If the FDA does not allow us to pursue the 505(b)(2) regulatory approval pathway for *iDose* as anticipated, we may need to conduct additional clinical trials, provide additional data and information and meet additional standards for regulatory approval. If this were to occur, the time and financial resources required to obtain FDA approval would likely substantially increase. Moreover, the inability to pursue the 505(b)(2) regulatory approval pathway could result in new competitive products reaching the market faster than our product candidate, which could materially adversely impact our competitive position and prospects. We cannot assure you that we will receive the requisite or timely approvals for commercialization of our product candidates.

Even after we have obtained the proper regulatory clearance or approval to market a product, we have ongoing responsibilities under FDA regulations and applicable foreign laws and regulations. We and our suppliers are subject to

extensive post-marketing regulatory requirements and failure to comply with applicable requirements could subject us to enforcement actions. Other post-market requirements that may regulate our products include registration and device listing, quality system requirements, reporting of adverse events and device malfunctions, reporting of corrections and removals, labeling requirements, and promotional restrictions. Our products could experience performance problems that require review and possible corrective action by us or a component supplier. Any recall, whether required by the FDA or another regulatory authority or initiated by us, could harm our reputation with customers and negatively affect our sales.

The FDA, state and foreign regulatory authorities have broad enforcement powers. Our failure to comply with applicable regulatory requirements could result in enforcement action by the FDA, state or foreign regulatory authorities, which may include any of the following sanctions:

- untitled letters or warning letters;
- fines, injunctions, consent decrees and civil penalties;
- recalls, termination of distribution, administrative detention, or seizure of our products;
- customer notifications or repair, replacement or refunds;
- operating restrictions or partial suspension or total shutdown of production;
- delays in or refusal to grant our requests for future 510(k) clearances, NDA or pre-market approvals (PMA) or foreign regulatory approvals of new products, new intended uses, or modifications to existing products;
- withdrawals or suspensions of current 510(k) clearances, NDAs or PMAs or foreign regulatory approvals, resulting in prohibitions on sales of our products;
- FDA refusal to issue certificates to foreign governments needed to export products for sale in other countries; and
- criminal prosecution.

Although we do not currently provide healthcare services, submit claims for third-party reimbursement, or receive payments directly from Medicare, Medicaid or other third-party payors for our products, we are subject to healthcare fraud, abuse and transparency regulations and enforcement by federal and state governments, including with respect to our marketing, training and other practices, which could significantly impact our business. To ensure compliance with Medicare, Medicaid and other regulations, government agencies or their contractors often conduct routine audits and request customer records and other documents to support claims submitted for payment of services rendered. Government agencies or their contractors also periodically open investigations and obtain information from healthcare providers.

The scope and enforcement of each of the laws applicable to our business and products is uncertain and subject to rapid change in the current environment of healthcare reform. If our operations are found to be in violation of any of the government regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in federal and state healthcare programs and the curtailment or restricting of our operations, any of which could harm our ability to operate our business and our financial results.

Legislative or regulatory reform of the healthcare system may affect our ability to sell our products profitably.

In the U.S. and in certain foreign jurisdictions, there have been a number of legislative and regulatory proposals to change the regulatory and healthcare systems in ways that could impact our ability to sell our products profitably, if at all. In the U.S. in recent years, new legislation has been proposed and adopted at the federal and state levels that is

effecting major changes in the healthcare system. In addition, new regulations and interpretations of existing healthcare statutes and regulations are frequently adopted.

In March 2010, the Affordable Care Act, as amended by the Health Care and Education Reconciliation Act (ACA) was signed into law. The ACA substantially changes the way healthcare is financed by both governmental and private insurers, encourages improvements in the quality of healthcare items and services and significantly impacts the medical device industry.

In May 2017, the EU adopted Medical Devices Regulation 2017/745 (MDR), which will repeal and replace the Medical Device Directive (MDD). MDR will take effect beginning May 26, 2020. Although MDR does not set out a substantially different regulatory system, it provides for stricter controls of medical devices. Under provisions that govern the transition period until MDR takes effect, medical devices with notified body certificates issued under the MDD prior to May 26, 2020 may continue to be marketed and sold as long as those certificates are valid, until May 27, 2024 at the latest. After the expiration of any applicable transitional period, only devices that have been CE marked under MDR may be placed on the market in the EU.

If, as a result of legislative or regulatory healthcare reform, we cannot sell our products profitably, our business would be harmed. In addition, any change in the laws or regulations that govern the clearance and approval processes relating to our current and future products could make it more difficult and costly to obtain clearance or approval for new products, or to produce, market and distribute existing products.

As our growth strategy turns increasingly global, we are, and will continue to be, subject to a variety of risks associated with our international operations, which could adversely impact our results of operations and financial condition.

Our existing foreign operations, as well as our planned international growth, expose us to additional uncertainty and risks beyond regulatory authorization and reimbursement levels. Outside the U.S., we sell our products through direct sales organizations in sixteen countries and a network of third-party distribution partners in other markets. These international operations expose us and our subsidiaries and third-party distributors to a variety of risks including, without limitation, the following:

- different, and in some cases more exacting and lengthy, regulatory approval processes and pricing and reimbursement systems;
- compliance with foreign regulations and laws, as well as U.S. laws that apply to activities in foreign jurisdictions, the adherence to which can be costly. Such regulations and laws expose us to penalties for non-compliance. These laws and regulations include various anti-bribery laws, including the U.S. Foreign Corrupt Practices Act, the United Kingdom Bribery Act, the French Sunshine Act, as well as privacy regulations such as the GDPR and export control regulations. Any failure to comply with applicable legal and regulatory obligations could impact us in a variety of ways that include, but are not limited to, significant criminal, civil and administrative penalties, including imprisonment of individuals, fines and penalties, denial of export privileges, seizure of shipments, restrictions on certain business activities and exclusion or debarment from government contracting;
- difficulties enforcing our intellectual property rights and defending against third-party threats and intellectual property enforcement actions against us, our distributors, or any of our third-party suppliers;
- reduced or varied protection for intellectual property rights in some countries;
- pricing pressure that we may experience internationally;
- foreign currency exchange rate fluctuations;
- a shortage of high-quality sales people and distributors, and the difficulties of managing foreign operations;
- the availability and level of third-party coverage and reimbursement within prevailing foreign healthcare systems that may require some of the patients who would be good candidates for procedures using products

to directly absorb medical costs, the ability of those patients to elect to privately pay for procedures using products, or the potential necessity to reduce the selling prices of our products;

- relative disadvantages compared to competitors with more recognizable names, longer operating histories and better established distribution networks and customer relationships;
- political and economic instability;
- changes in duties and tariffs, license obligations and other non-tariff barriers to trade;
- the imposition of restrictions on the activities of foreign agents, representatives and distributors;
- scrutiny of foreign tax authorities that could result in significant fines, penalties and additional taxes being imposed on us;
- laws and business practices favoring local companies;
- longer sales and payment cycles;
- difficulties in maintaining consistency with our internal guidelines;
- difficulties in enforcing agreements and collecting receivables through certain foreign legal systems;
- the imposition of costly and lengthy new export licensing requirements and restrictions, particularly relating to technology;
- international terrorism and anti-U.S. sentiment; and
- the imposition of U.S. or international sanctions against a country, company, person or entity with whom we do business that would restrict or prohibit continued business with the sanctioned country, company, person or entity.

If we experience any of these risks, our sales in non-U.S. jurisdictions may be harmed, our results of operations would suffer, and our business prospects would be negatively impacted.

Legislative changes may also impact our operations. The United Kingdom (U.K.) held a referendum on June 23, 2016 in which voters approved withdrawal from the EU (commonly referred to as Brexit). On January 31, 2020, the U.K. withdrew from the EU. The future relationship between the U.K. and the EU remains uncertain as the U.K. and the EU work through the transition period that provides time for them to negotiate the details of their future relationship. The transition period maintains all existing trading arrangements. The transition period is currently expected to end on December 31, 2020, and, if no agreement is reached, the default scenario would be a “no-deal” Brexit. In the event of a no-deal Brexit, the U.K. will leave the EU with no agreements in place beyond any temporary arrangements that have or may be put in place by the EU or individual EU member states, and the U.K. as part of no-deal contingency efforts and those conferred by mutual membership of the World Trade Organization. It is possible that as a result of Brexit there will be greater restrictions on imports and exports into and out of the U.K. and EU countries and regulatory complexities that could adversely impact the Company.

Our operations involve hazardous materials, and we must comply with environmental laws and regulations, which can be expensive.

We are subject to a variety of federal, state and local regulations relating to the use, handling, storage and disposal of, and human exposure to, hazardous and toxic materials. We could incur costs, fines, and civil and criminal sanctions, third-party property damage or personal injury claims, or could be required to incur substantial investigation or remediation costs, if we were to violate or become liable under environmental laws. Compliance with current or future environmental and safety laws and regulations could restrict our ability to expand our facilities, impair our research, development or production efforts, or require us to incur other significant expenses. There can be no assurance that violations of environmental laws or regulations will not occur in the future as a result of the inability to obtain permits, human error, accident, equipment failure or other causes.

Risks Related to Our Intellectual Property

If we are unable to adequately protect our intellectual property, our competitors and other third parties could develop and commercialize products similar or identical to ours, which would substantially impair our ability to compete.

Our success and ability to compete depends significantly upon our ability to obtain, maintain and protect our proprietary rights and licensed intellectual property rights to the technologies and inventions used in or embodied by our products. We rely on a combination of patents and trademark rights, and to a lesser extent on trade secrets and copyrights, together with licenses and nondisclosure agreements to protect our technologies. These legal means, however, afford only limited protection and may not adequately protect our business. We also have not pursued or maintained, and may not pursue or maintain in the future, patent protection for our products in every country or territory in which we sell or will in the future sell our products. In addition, we cannot be sure that any of our pending patent applications or pending trademark applications will issue or that, if issued, they will issue in a form that will be advantageous to us.

Despite our efforts to protect our proprietary rights, we cannot guarantee that we will be able to adequately protect these rights, which could substantially impair our ability to compete. Our patents may be challenged and held invalid or we may be unable to extend the protection on products with expiring patents. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how. Competitors could purchase our products and attempt to replicate some or all of the competitive advantages we derive from our development efforts, infringe our intellectual property rights, design around our protected technology or develop their own competitive technologies that fall outside of our intellectual property rights. Further, although it is our policy to require each of our employees, consultants and any other parties who may be involved in the development of intellectual property on our behalf to execute proprietary information and inventions agreements, we may be unsuccessful in doing so with each party who in fact develops intellectual property that we regard as our own. The relevant assignment provisions may not be self-executing or may be breached, resulting in ownership disputes and/or litigation.

We have a number of foreign patents and patent applications, and expect to pursue patent protection in the most significant markets in which we do business. The laws of other countries in which our product offerings are or may be sold may not protect our product offerings and intellectual property to the same extent as U.S. laws, if at all. Many companies have encountered significant difficulties in obtaining, protecting and defending such rights in international markets. In addition, many countries limit the enforceability of patents against other parties, including government agencies or government contractors. In these countries, the patent owner may have limited remedies, and certain countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to other parties. We also may be unable to protect our rights in trade secrets and unpatented proprietary technology in these countries. If we encounter such difficulties or we are otherwise precluded from effectively protecting our intellectual property rights in these jurisdictions, our business, financial condition and results of operations could be substantially harmed.

We may not be able to accurately estimate or control our future operating expenses in relation to obtaining, enforcing and/or defending intellectual property, which could lead to cash shortfalls. Our operating expenses may fluctuate significantly in the future as a result of the costs of preparing, filing, prosecuting, defending and enforcing patent claims and other patent related costs, including litigation costs and the results of such litigation or costs associated with administrative proceedings and the results of such proceedings.

We have been and may in the future become involved in patent and other intellectual property litigation or administrative proceedings relating to our intellectual property rights, which could be costly, time consuming and unsuccessful and could interfere with our ability to successfully commercialize our products.

Intellectual property rights are essential to our business. We have asserted and may in the future need to assert claims of infringement against third parties to protect our rights, or to invalidate or challenge the intellectual property rights of a third party, including those rights owned by our competitors. For example, see Note 12, *Commitments and Contingencies*, of our notes to consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K, for a description of our legal proceedings. Additionally, third parties could assert infringement or misappropriation claims against us with respect to our current or future commercial products and seek to invalidate one or more of our patents or trademarks. Intellectual property disputes often involve complex legal and factual questions, and could result in significant costs, substantial damages and our inability to manufacture, market or sell our existing or future products that are found to infringe. Even if we were to prevail in any such action, the litigation or administrative proceeding could result in substantial cost and diversion of resources that could materially and adversely affect our business. Such claims could arise in situations where certain employees, consultants or contractors were previous, or are currently, employed by other medical device, biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees and consultants do not use the intellectual property, proprietary information, know-how or trade secrets of others in their work for us, we may be subject to claims that we or these individuals have, inadvertently or otherwise, misappropriated the intellectual property or disclosed the alleged trade secrets or other proprietary information, of these former employers or competitors.

There is no guarantee that we would be successful enforcing or defending our intellectual property rights in court. A court could hold that some or all of our asserted intellectual property rights are not infringed, or could invalidate our rights, hold our rights unenforceable, or substantially narrow the scope of protection. Further, we could be prohibited from selling our products or a court could order us to pay compensatory damages as well as other penalties and fines. Any such adverse result would undermine our competitive position. Regardless of the final outcome, any litigation to enforce our intellectual property rights in patents, copyrights, trade secrets or trademarks is highly unpredictable and could result in substantial costs and diversion of resources, which could have a material adverse effect on our business, financial condition and results of operations.

Risks Related to Being a Public Company and Our Common Stock

Risks generally associated with a company-wide implementation of an enterprise resource planning (ERP) system may adversely affect our business and results of operations or the effectiveness of our internal controls over financial reporting.

We are in the process of implementing a company-wide ERP system to upgrade certain existing business, operational, and financial processes. Our ERP implementation is a complex and time-consuming project. Our results of operations could be adversely affected if we experience time delays or cost overruns during the ERP implementation process, or if the ERP system or associated process changes do not give rise to the benefits that we expect. This project has required and may continue to require investment of capital and human resources, the re-engineering of processes of our business, and the attention of many employees who would otherwise be focused on other aspects of our business. Any deficiencies in the design and implementation of the new ERP system could result in higher costs than we had anticipated and could adversely affect our ability to develop and launch solutions, provide services, fulfill contractual obligations, file reports with the SEC in a timely manner, operate our business or otherwise affect our controls environment. Any of these consequences could have an adverse effect on our results of operations and financial condition. In addition, because the ERP is a new system and we have no prior experience with it, there is an increased risk that one or more of our financial controls may fail. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition, results of operations or cash flows. If our independent registered public accounting firm determines that we have a material weakness in our internal control over financial reporting, we could lose investor confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or investigations by the New York Stock Exchange, the SEC, or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

The price of our common stock may fluctuate substantially.

The market price for our common stock may fluctuate depending upon many factors, including, but not limited to:

- the depth and liquidity of the market for our common stock;
- volume, timing and nature of orders for our products;
- developments generally affecting our industry;
- actual or anticipated quarterly variation in our results of operations or the results of our competitors;
- the announcements by us or our competitors of new products or product enhancements, significant contracts, commercial relationships or capital commitments;
- developments or disputes concerning our intellectual property or other proprietary rights;
- issuance of new or changes in earnings estimates or recommendations or reports by securities analysts;
- investor perceptions of us and our business, including changes in market valuations of medical device companies;
- actions by institutional or other large stockholders;
- commencement of, or our involvement in, litigation;
- failure to achieve significant sales;
- manufacturing disruptions that could occur if we were unable to successfully expand our production in our current or an alternative facility;
- any future sales of our common stock or other securities;
- any major change to the composition of our board of directors or management;
- our results of operations and financial performance, including any failure to achieve publicly disclosed forecasts or guidance; and
- general economic, industry and market conditions.

In addition, the market price of the stocks of medical device, medical technology, pharmaceutical, biotechnology and other life science companies have experienced significant volatility that often does not relate to the operating performance of the companies represented by the stock. These broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management and limit the market price of our common stock.

Provisions in our restated certificate of incorporation and amended and restated bylaws may have the effect of delaying or preventing a change of control or changes in our management. Our restated certificate of incorporation and amended and restated bylaws include provisions that:

- authorize our board of directors to issue, without further action by the stockholders, up to 5,000,000 shares of undesignated preferred stock;
- require that any action to be taken by our stockholders be affected at a duly called annual or special meeting and not by written consent;
- specify that special meetings of our stockholders may be called only by our board of directors, the chairman of the board of directors, the chief executive officer or the president;

- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;
- establish that our board of directors is divided into three classes, Class I, Class II and Class III, with each class serving staggered three year terms;
- provide that our directors may be removed only for cause by a supermajority vote of our stockholders;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum;
- specify that no stockholder is permitted to cumulate votes at any election of directors; and
- require a supermajority vote of the stockholders and a majority vote of the board to amend certain of the above-mentioned provisions and our bylaws.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock to merge or combine with us.

Our charter provides that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for substantially all disputes between the Company and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with the Company or its directors, officers or other employees.

The Restated Certificate of Incorporation of Glaukos (the Glaukos Charter) provides that, unless the Company consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Company, (ii) any action or proceeding asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Company or its stockholders, (iii) any action or proceeding asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, the Glaukos Charter or our bylaws, or (iv) any action or proceeding asserting a claim governed by the internal affairs doctrine. This exclusive forum provision is intended to apply to claims arising under Delaware state law and would not apply to claims brought pursuant to the Exchange Act or the Securities Act, or any other claim for which the federal courts have exclusive jurisdiction. The exclusive forum provision in the Glaukos Charter will not relieve us of our duties to comply with the federal securities laws and the rules and regulations thereunder, and our stockholders will not be deemed to have waived our compliance with these laws, rules and regulations.

This exclusive forum provision may limit a stockholder's ability to bring a claim in a judicial forum of its choosing for disputes with the combined company or its directors, officers or other employees, which may discourage lawsuits against the Company and its directors, officers and other employees. In addition, stockholders who do bring a claim in the Court of Chancery of the State of Delaware could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near Delaware. The Court of Chancery of the State of Delaware may also reach different judgments or results than would other courts, including courts where a stockholder would otherwise choose to bring the action, and such judgments or results may be more favorable to the Company than to our stockholders. However, the enforceability of similar exclusive forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find this type of provision to be inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings. If a court were to find the exclusive forum provision contained in the Glaukos Charter to be inapplicable or unenforceable in an action, we might incur additional costs associated with resolving such action in other jurisdictions.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We lease two adjacent facilities located in San Clemente, California, both of which expire on December 31, 2024. Each agreement contains an option to extend the lease for one additional three-year period at market rates. The total leased square footage of both facilities equals approximately 98,000. On November 14, 2018, we entered into an office building lease pursuant to which we will lease one property containing three existing office buildings, comprising approximately 160,000 rentable square feet of space, located in Aliso Viejo, California (the Aliso Facility). On December 18, 2018, we also purchased approximately 2.5 acres of vacant land located adjacent to the Aliso Facility for future expansion purposes. The term of the Aliso Facility commenced on May 1, 2019 and continues for thirteen years. The agreement contains an option to extend the lease for two additional five year periods at market rates. We intend to relocate our corporate administrative headquarters, along with certain laboratory, research and development and warehouse space, to the Aliso Facility. We currently intend to maintain manufacturing facilities for our *iStent* and *iStent inject* products at our San Clemente location for the foreseeable future.

Additionally, we lease approximately 27,000 square feet of office and laboratory space in Waltham, Massachusetts, pursuant to a lease agreement that expires in 2023. We also currently occupy approximately 19,000 square feet of leased manufacturing space in Burlington, Massachusetts pursuant to a lease agreement that expires in 2023. Our additional U.S.-based and foreign subsidiaries' leased office space, which includes small administrative offices in Germany, Australia, Canada, Brazil, Ireland, Japan and the United Kingdom, totals less than 14,000 square feet.

We believe our existing properties are well maintained, in good operating condition and are adequate to support our present level of operations.

ITEM 3. LEGAL PROCEEDINGS

For a description of our legal proceedings, see Note 12, *Commitments and Contingencies*, of our notes to consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K, which is incorporated by reference in response to this item.

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

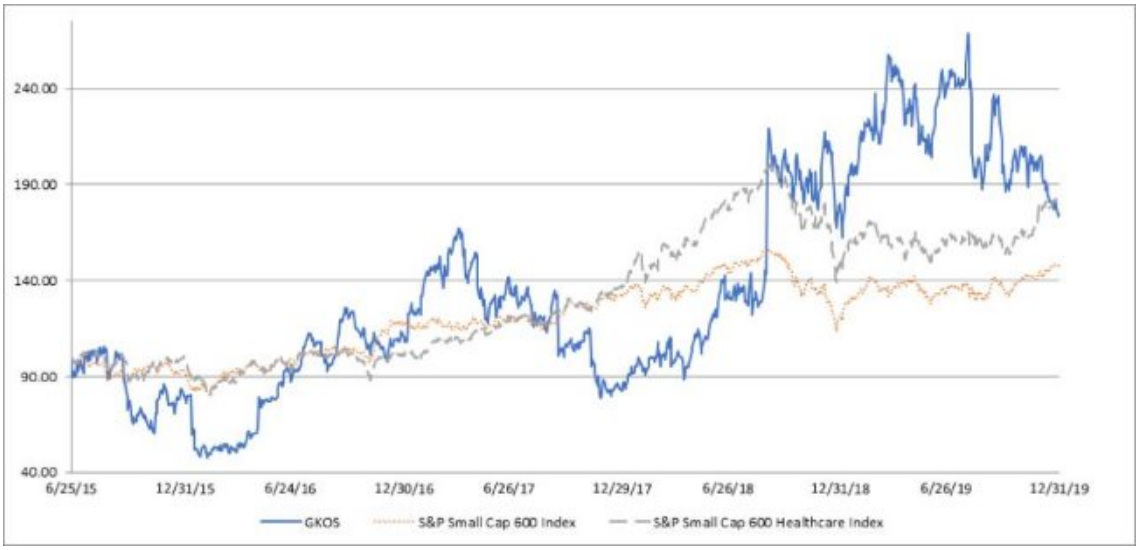
Market Information for Common Stock

Our common stock trades on the New York Stock Exchange (NYSE) under the symbol "GKOS".

As of February 27, 2020, we had 76 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners but whose shares are held in street name by brokers and other nominees. The number of record holders also does not include stockholders whose shares may be held in trust by other entities.

Stock Performance Graph

The following performance graph shows the cumulative total stockholder return of an investment of $100 at the close of market on June 25, 2015 (the first day of trading of our common stock on the NYSE) in (i) our common stock, (ii) the S&P Small Cap 600 index and (iii) the S&P Small Cap 600 Healthcare index. The graph assumes that all dividends were reinvested. Stockholder returns over the indicated period should not be considered indicative of future stockholder returns.



	6/25/2015	12/31/2015	12/30/2016	12/29/2017	12/31/2018	12/31/2019
GKOS	$ 100.00	$ 79.08	$ 109.87	$ 82.16	$ 179.92	$ 174.47
S&P Small Cap 600 index	$ 100.00	$ 92.03	$ 116.47	$ 131.89	$ 120.70	$ 148.20
S&P Small Cap 600 Healthcare index	$ 100.00	$ 98.73	$ 100.89	$ 135.91	$ 149.41	$ 179.67

This performance graph shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities under that section and shall not be deemed to be incorporated by reference into any of our filings under the Securities Act or the Exchange Act.

Dividend Policy

We have never declared or paid any cash dividends on our common stock or any other securities. We anticipate that we will retain all available funds and any future earnings, if any, for use in the operation of our business and do not anticipate paying cash dividends in the foreseeable future.

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial information set forth below for each of the years ended December 31, 2019, December 31, 2018, December 31, 2017, December 31, 2016 and December 31, 2015 has been derived from our audited consolidated financial statements. The information below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the audited consolidated financial statements and notes thereto included in Items 7 and 8, respectively, of this Annual Report on Form 10-K.

	Year ended December 31,				
(in thousands, except per share amounts)	2019	2018	2017	2016	2015
Statements of Operations Data:					
Net sales	$ 236,984	$ 181,278	$ 159,254	$ 114,397	$ 71,700
Cost of sales	38,588	25,075	21,050	16,177	12,988
Gross profit	198,396	156,203	138,204	98,220	58,712
Operating expenses:					
Selling, general and administrative [1]	176,635	119,529	96,260	64,756	43,961
Research and development	68,308	49,676	38,905	29,223	25,047
In-process research and development	3,745	—	5,320	—	—
Total operating expenses	248,688	169,205	140,485	93,979	69,008
(Loss) income from operations	(50,292)	(13,002)	(2,281)	4,241	(10,296)
Loss on deconsolidation of DOSE	—	—	—	—	(25,685)
Non-operating income (expense), net	256	634	2,282	324	(2,307)
Income tax (benefit) provision	(65,460)	583	93	43	33
Net income (loss) [1]	$ 15,424	$ (12,951)	$ (92)	$ 4,522	$ (38,321)
Net loss attributable to noncontrolling interest	—	—	—	—	(1,080)
Net income (loss) attributable to Glaukos Corporation	$ 15,424	$ (12,951)	$ (92)	$ 4,522	$ (37,241)
Basic net income (loss) per share attributable to Glaukos Corporation stockholders [1]	$ 0.41	$ (0.37)	$ (0.00)	$ 0.14	$ (2.13)
Diluted net income (loss) per share attributable to Glaukos Corporation stockholders [1]	$ 0.37	$ (0.37)	$ (0.00)	$ 0.12	$ (2.13)
Weighted average shares used to compute basic net income (loss) per share attributable to Glaukos Corporation stockholders [1]	37,355	35,317	34,381	32,928	17,474
Weighted average shares used to compute diluted net income (loss) per share attributable to Glaukos Corporation stockholders [1]	41,145	35,317	34,381	36,459	17,474

(1) On November 21, 2019, we acquired Avedro, Inc. (Avedro), a hybrid ophthalmic pharmaceutical and medical technology company focused on developing therapies designed to treat corneal diseases and disorders and correct refractive conditions. Avedro developed bio-activated drug formulations used in combination with proprietary systems for the treatment of progressive keratoconus and corneal ectasia following refractive surgery. The therapy is the first and only minimally invasive anterior segment product offering and only available treatment approved by the FDA shown to halt the progression of keratoconus. Please see *Note 2*, *Note 4*, *Note 6* and *Note 7* to the consolidated financial statements in Item 8 of this Annual Report on Form 10-K for additional information on our acquisition of Avedro.

(in thousands)	As of December 31, 2019	2018	2017	2016	2015
Balance Sheet Data:					
Cash and cash equivalents	$ 62,430	$ 29,821	24,508	$ 6,494	$ 21,572
Short-term investments	111,553	110,667	94,506	89,268	69,552
Net working capital	205,178	146,202	122,672	103,085	83,778
Total assets (1) (2)	818,400	206,970	165,836	134,371	116,661
Total liabilities (1) (2)	145,128	33,110	27,634	17,097	21,470
Additional paid in capital (2)	861,740	378,352	331,073	308,815	291,853
Total stockholders' equity (2)	673,272	173,860	138,202	117,274	95,191

(1) Effective January 1, 2019, we adopted Accounting Standards Codification 842, *Leases* (ASC 842), and elected the transition package of three practical expedients permitted within ASC 842, which eliminated the requirement to reassess prior conclusions about lease identification, lease classification, and initial direct costs. We also elected a short-term lease exception policy, permitting the company to not apply the recognition requirements of ASC 842 to leases with terms of 12 months or less. We did not elect the hindsight practical expedient. Upon adoption of ASC 842, we recorded an operating right-of-use asset of $12.8 million and a related operating lease liability of $13.4 million. Periods prior to January 1, 2019 were not adjusted and continued to be reported in accordance with our historic accounting under ASC 840, *Leases*. Please see *Note 2* and *Note 5* to the consolidated financial statements in Item 8 of this Annual Report on Form 10-K for additional information on our adoption of ASC 842.

(2) On November 21, 2019, we acquired Avedro, Inc. (Avedro), a hybrid ophthalmic pharmaceutical and medical technology company focused on developing therapies designed to treat corneal diseases and disorders and correct refractive conditions. Avedro developed bio-activated drug formulations used in combination with proprietary systems for the treatment of progressive keratoconus and corneal ectasia following refractive surgery. The therapy is the first and only minimally invasive anterior segment product offering and only available treatment approved by the FDA shown to halt the progression of keratoconus. Please see *Note 2*, *Note 4*, *Note 6* and *Note 7* to the consolidated financial statements in Item 8 of this Annual Report on Form 10-K for additional information on our acquisition of Avedro.

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

You should read the following discussion and analysis of our financial condition and results of operations together with "Selected Financial Data" and our audited consolidated financial statements and related notes included in Items 6 and 8, respectively, of this Annual Report on Form 10-K. This discussion and analysis and other parts of this Annual Report on Form 10-K contain forward-looking statements that reflect our current plans, expectations, estimates and beliefs that involve risks, uncertainties and assumptions, such as statements regarding our plans, objectives, expectations, intentions and projections. Our actual results and the timing of selected events may differ materially from those discussed in these forward-looking statements. You should carefully read Item 1A - "Risk Factors" included in this Annual Report on Form 10-K to gain an understanding of the important factors that could cause actual results to differ materially from our forward-looking statements. Please also see the section entitled "Special Note Regarding Forward-Looking Statements and Industry Data."

Overview

We are an ophthalmic medical technology and pharmaceutical company focused on developing novel therapies for the treatment of glaucoma, corneal disorders, and retinal disease. We developed Micro-Invasive Glaucoma Surgery (MIGS) to serve as an alternative to the traditional glaucoma treatment paradigm and launched our first MIGS device commercially in 2012. We have also developed a proprietary bio-activated pharmaceutical therapy for the treatment of a corneal disorder, keratoconus, that was approved by the U.S. Food and Drug Administration (FDA) in 2016 and we are developing a pipeline of surgical devices, sustained pharmaceutical therapies, and implantable biosensors intended to treat glaucoma progression, corneal disorders such as keratoconus, dry eye and refractive vision correction, and retinal diseases such as neovascular age-related macular degeneration (AMD) and diabetic macular edema (DME).

Financial Overview

Our net sales increased to $237.0 million for the year ended December 31, 2019 from $181.3 million and $159.3 million for the years ended December 31, 2018 and December 31, 2017, respectively. We achieved net income of $15.4 million for the year ended December 31, 2019 and we incurred net losses of $13.0 million and $0.1 million for the years ended December 31, 2018 and December 31, 2017, respectively.

As of December 31, 2019, we had an accumulated deficit of $189.7 million.

Material Changes and Transactions

Acquisition of Avedro, Inc.

On November 21, 2019, we acquired Avedro, Inc. (Avedro), a hybrid ophthalmic pharmaceutical and medical technology company focused on developing therapies designed to treat corneal diseases and disorders and correct refractive conditions, in a stock-for-stock transaction (Avedro Merger). Avedro developed novel bio-activated drug formulations used in combination with proprietary systems for the treatment of progressive keratoconus and corneal ectasia following refractive surgery. The therapy is the first and only minimally invasive anterior segment product offering approved by the FDA shown to halt the progression of keratoconus.

Total consideration for the Avedro Merger was $437.8 million. The consideration consisted of Glaukos shares totaling $406.8 million issued to replace Avedro common stock, Glaukos shares totaling $0.2 million to replace certain vested Avedro warrants, and $30.8 million of value attributable to the pre-combination services associated with replacement of all Avedro outstanding and unexercised stock option awards and all unvested restricted stock units (Replacement Awards). Please see *Note 2*, *Note 4*, *Note 6* and *Note 7* to the consolidated financial statements in Item 8 of this Annual Report on Form 10-K for additional information on our Avedro Merger.

Licensing Arrangement with Intratus, Inc.

On July 22, 2019, we entered into a global licensing agreement with Intratus, Inc. (Intratus) for $1.5 million in cash, plus future performance-based consideration upon achievement of certain development, regulatory approvals and commercial milestones and royalties on commercial sales. In connection with the license agreement, we obtained an exclusive, royalty-bearing license to research, develop, manufacture and commercialize Intratus' patented, non-invasive transdermal drug delivery platform designed for use in the treatment of dry eye disease, and potentially glaucoma and other corneal disorders such as blepharitis, conjunctivitis and related conditions.

The $1.5 million payment was immediately expensed to in-process research and development (IPR&D) as management determined there were no alternative future uses for the technology acquired.

Acquisition of DOSE Medical Corporation

On June 27, 2019, we acquired DOSE Medical Corporation (DOSE) for $2.5 million in cash, plus potential future performance-based consideration upon achievement of certain regulatory approvals and commercial milestones and royalties on commercial sales (the DOSE Merger). As a result of the DOSE Merger, we are developing multiple micro-invasive, bioerodible, sustained-release drug delivery platforms designed to be used in the treatment of various retinal diseases, including neovascular age-related macular degeneration and diabetic macular edema.

DOSE was spun out from us in 2010 and had operated as a stand-alone entity; however, DOSE was considered a variable interest entity and its operations were consolidated in our financial statements at that time. In 2015, we acquired the *iDose* product line and related assets from DOSE and derecognized DOSE as a consolidated variable interest entity in the financial statements, and in 2017 we acquired DOSE's intraocular pressure (IOP) sensor system. Thomas W. Burns, our President, Chief Executive and board of directors member, and William J. Link, Ph.D., Chairman of our board of directors, served on the board of directors of DOSE and certain members of our management and board of directors held an equity interest in DOSE prior to being acquired.

Commercial Agreement with Santen, Inc.

In April 2019, we announced that we had entered into a multi-year agreement with Santen Inc., the U.S. subsidiary of Santen Pharmaceutical Co., Ltd. (Santen). Pursuant to this agreement, we were appointed the exclusive U.S. partner for the sale of the Preserflo MicroShunt (Microshut), which is currently being studied in an FDA pivotal study and has not yet been approved by the FDA. Following anticipated completion of the premarket approval application (PMA) submission in 2020, Santen intends to seek FDA PMA approval and, if approved, U.S. launch of the product. The MicroShunt is an ab-externo device being developed for treatment of primary open-angle glaucoma where IOP is uncontrolled with maximum tolerated medical therapy or where progression of the disease warrants surgery.

The transactions described above are intended to expand our portfolio of pipeline products beyond the treatment of glaucoma to include pharmaceutical therapies for the treatment of retinal diseases and corneal disorders.

Factors Affecting Our Performance

Our operations to date have been, and we believe our future growth will be, impacted by the following:

- the rate at which we expand our global sales and marketing infrastructure, and the speed at which we can continue increasing awareness of our products to patients and physicians;
- our industry is highly competitive and subject to rapid and profound technological, market and product-related changes. Our success depends, in part, upon our ability to maintain a competitive position in the development of new products for the treatment of chronic eye diseases;
- publications of clinical results by us, our competitors and other third parties can have a significant influence on whether, and the degree to which, our products are used by physicians and the procedures and treatments those physicians choose to administer to their patients;
- the physicians who use our products may not perform procedures during certain times of the year, due to seasonality patterns typical for certain of our procedures, or when they are away from their practices for various reasons; and
- most of our sales outside of the U.S. are denominated in the local currency of the country in which we sell our products. As a result, our revenue from international sales is impacted by fluctuations in foreign currency exchange rates.

Further, we have made and expect to continue to make significant investments in our global sales force, marketing programs, research and development activities, clinical studies, and general and administrative infrastructure. FDA-approved IDE or IND studies and new product development programs in our industry are expensive. We have incurred a significant increase in administrative costs since we began operating as a public company. Our acquisition of Avedro will require significant ongoing expenses, together with construction costs related to our new facility in Aliso Viejo, California and firm purchase commitments to implement global enterprise systems that began in 2019. We expect our near-term 2020 revenues to reflect normal procedural seasonality, the impact of promotional activities relating to sales of *iStent* products near the end of 2019, the impact of expected integration activities relating to the Avedro Merger and disruption resulting from the coronavirus disease (COVID-19), the full effects of which at this time are difficult to predict.

Although we have been profitable for certain periods in our operating history, there can be no assurance that we will continue to be profitable or continue to generate cash from operations.

Components of Results of Operations

Net Sales

We currently operate in one reportable segment and net sales are generated primarily from sales of *iStent* products and, following the Avedro Merger on November 21, 2019, sales of *Photrexa* and other associated drug formulations, as well as our proprietary bioactivation systems, to customers. Revenue is recognized when control of the promised goods or services is transferred to the customer in an amount that reflects the consideration to which we expect to be entitled in exchange for those products or services.

We sell our products through a direct sales organization in the United States, and outside the United States we sell our products primarily through direct sales subsidiaries in sixteen countries and through independent distributors in certain countries in which we do not have a direct presence. The primary end-user customers for our products are surgery centers, hospitals and physician private practices.

While net sales may increase as we expand our global sales and marketing infrastructure and continue to increase awareness of our products by expanding our sales base and increasing our marketing efforts, we also expect that our net sales within a fiscal year may be impacted seasonally, as demand for U.S. ophthalmic procedures is typically softer in the first quarter and stronger in the fourth quarter of a given year. Additionally, for several years we had commercialized our products in the U.S. with few or no direct competitors. Other products have now become available in the U.S. and globally, or are in development by third parties, that have entered or could enter the market and which may affect adoption of or demand for our products. These other products could achieve greater commercial acceptance or demonstrate better safety or effectiveness, clinical results, ease of use or lower costs than our products, which could adversely impact our net sales.

Cost of Sales

Cost of sales reflects the aggregate costs to manufacture our products and includes raw material costs, labor costs, manufacturing overhead expenses and the effect of changes in the balance of reserves for excess and obsolete inventory.

We manufacture our *iStent* products at our current headquarters in San Clemente, California using components manufactured by third parties. We manufacture our KXL and Mosaic systems at our manufacturing facilities in Burlington, Massachusetts, with some limited manufacturing operations in Dublin, Ireland, and we contract with third-party manufacturers in the U.S. and Germany to produce our *Photrexa* and other associated drug formulations.

Due to the relatively low production volumes of our *iStent* products and our KXL and Mosaic systems compared to our potential capacity for those products, a significant portion of our per unit costs is comprised of manufacturing overhead expenses. These expenses include quality assurance, material procurement, inventory control, facilities, equipment and operations supervision and management.

Beginning in late 2013, cost of sales had included amortization of the $17.5 million intangible asset we recognized in connection with our royalty buyout agreement with GMP Vision Solutions, Inc. in November 2013. For the year ended December 31, 2018, the amortization expense was $3.0 million and the intangible asset was fully amortized as of December 31, 2018. The amortization expense was $3.5 million during the year ended December 31, 2017.

Beginning in 2015, cost of sales includes a charge equal to a low single-digit percentage of worldwide net sales of certain current and future products, including our *iStent* products, with a required minimum annual payment of $0.5 million, which amount became payable to the Regents of the University of California (the University) in connection with our December 2014 agreement with the University (the UC Agreement) related to a group of our U.S. patents (the Patent Rights). This ongoing product payment obligation will terminate on the date the last of the Patent Rights expires, which is currently expected to be in 2022.

Under the Protecting Americans from Tax Hikes Act of 2015 (PATH Act), the 2.3% federal medical device excise tax on U.S. sales of medical devices manufactured by us was suspended from January 1, 2016 to December 31, 2017, and, pursuant to HR 195 passed on January 22, 2018, was further suspended through December 31, 2019. The federal medical device excise tax was permanently repealed by the U.S. Senate in December 2019.

Beginning in the fourth quarter of 2019, cost of sales has included amortization of the $252.2 million developed technology intangible asset recognized in connection with the Avedro Merger. For the year ended December 31, 2019, the amortization expense was $2.3 million.

Our future gross profit as a percentage of net sales, or gross margin, will be impacted by numerous factors including commencement of sales of products in our pipeline, or any other future products, which may have higher product costs. Our gross margin will also be affected by manufacturing inefficiencies that we may experience as we attempt to manufacture our products on a larger scale, manufacture new products and change our manufacturing capacity or output. Additionally, our gross margin will continue to be affected by the aforementioned expense related to the UC Agreement and the acquisition fair market value inventory adjustment rollout related to the Avedro Merger. See *Note 6, Business Combinations* to the consolidated financial statements in Item 8 of this Annual Report on Form 10-K for additional information on our Avedro Merger.

Selling, General and Administrative

Our selling, general and administrative (SG&A) expenses primarily consist of personnel-related expenses, including salaries, sales commissions, bonuses, fringe benefits and stock-based compensation for our executive, financial, marketing, sales, and administrative functions. Other significant SG&A expenses include marketing programs; advertising; post-approval clinical studies; conferences and congresses; travel expenses; costs associated with obtaining and maintaining our patent portfolio; professional fees for accounting, auditing, consulting and legal services; costs to implement our global enterprise systems; and allocated overhead expenses.

The Avedro Merger has resulted in significant integration expenses and personnel-related expenses, primarily stock-based compensation and restructuring expenses during the year ended December 31, 2019. Additionally, SG&A will be impacted by the amortization of certain finite-lived intangible assets acquired as a result of the Avedro Merger, along with Avedro's normal and recurring SG&A expenses.

We expect SG&A expenses to continue to grow as a result of the Avedro Merger as we increase our global sales and marketing infrastructure and general administration infrastructure in the United States. We also expect other nonemployee-related costs, including sales and marketing program activities for new products, outside services and accounting and general legal costs to increase as our overall operations grow. The timing of these increased expenditures and their magnitude are primarily dependent on the commercial success and sales growth of our products, as well as on the timing of any new product launches and other potential business and operational activities.

Research and Development

Our R&D activities primarily consist of new product development projects, pre-clinical studies, IDE and IND studies, and other clinical trials. Our R&D expenses primarily consist of personnel-related expenses, including salaries, fringe benefits and stock-based compensation for our R&D employees; research materials; supplies and services; and the costs of conducting clinical studies, which include payments to investigational sites and investigators, clinical research organizations, consultants, and other outside technical services and the costs of materials, supplies and travel. We expense R&D costs as incurred. We expect our R&D expenses to continue to increase as we initiate and advance our development programs, including our expanding surgical, pharmaceutical and IOP sensor development efforts and clinical trials across glaucoma, retinal disease and corneal health.

Completion dates and costs for our clinical development programs include seeking regulatory approvals and our research programs can vary significantly for each current and future product candidate and are difficult to predict. As a result, while we expect our R&D costs to continue to increase for the foreseeable future, we cannot estimate with any degree of certainty the costs we will incur in connection with the development of our product candidates. We anticipate we will make determinations as to which programs and product candidates to pursue and how much funding to direct to each program and product candidate on an ongoing basis in response to the scientific success of early research programs, results of ongoing and future clinical trials, as well as ongoing assessments as to each current or future product candidate's commercial potential and our likelihood of obtaining necessary regulatory approvals.

In-process Research and Development

Our in-process research and development (IPR&D) expenses relate to payments made in connection with the previously disclosed acquisition of DOSE in which DOSE became a wholly-owned subsidiary of the Company, our cost associated with purchasing the IOP Sensor System from DOSE, and our global licensing arrangement with Intratus.

Non-Operating (Expense) Income, Net

Non-operating (expense) income, net primarily consists of interest expense associated with our finance lease for our Aliso Viejo, California facility, interest income derived from our short-term investments and unrealized gains and losses arising from exchange rate fluctuations on transactions denominated in a currency other than the U.S. dollar, primarily related to intercompany loans.

Income Taxes

Our tax provision is comprised of current U.S. federal and state income and franchise taxes as well as foreign income taxes. Due to the Avedro Merger, we were able to reduce a valuation allowance we previously recorded against our deferred tax assets resulting in a $66.3 million deferred tax benefit in 2019. Further, we have elected to net our indefinite-lived deferred tax assets for post-2018 U.S. net operating loss carryforwards and state research credits against our indefinite-lived deferred tax liabilities for IPR&D assets recorded in connection with the Avedro Merger. Our net deferred tax liability of $9.6 million at December 31, 2019 represents the excess of our indefinite-lived deferred tax liabilities over our indefinite-lived deferred tax assets. We continue to provide a full valuation allowance against our other net deferred tax assets.

We record reserves for uncertain tax positions where we believe the ability to sustain the tax position does not reach the more likely than not threshold.

Results of Operations

Comparison of Years Ended December 31, 2019 and December 31, 2018

(in thousands)	2019	Year ended December 31, 2018	% Increase (decrease)
Statements of operations data:			
Net sales	$ 236,984	$ 181,278	31 %
Cost of sales	38,588	25,075	54 %
Gross profit	198,396	156,203	27 %
Operating expenses:			
Selling, general and administrative	176,635	119,529	48 %
Research and development	68,308	49,676	38 %
In-process research and development	3,745	—	NM
Total operating expenses	248,688	169,205	47 %
Loss from operations	(50,292)	(13,002)	287 %
Non-operating income, net	256	634	(60)%
Income tax (benefit) provision	(65,460)	583	NM %
Net income (loss)	$ 15,424	$ (12,951)	NM %

NM = Not Meaningful

Net Sales

Net sales for the years ended December 31, 2019 and December 31, 2018 were $237.0 million and $181.3 million, respectively, reflecting an increase of $55.7 million or 31%.

The increase in net sales from our glaucoma products resulted primarily from expansion of U.S. sales of our *iStent inject*, the withdrawal from the market of a competitive MIGS device in late August 2018, and direct sales operations in our existing international markets. Net sales of glaucoma products in the United States were $187.7 million and $151.7 million for the years ended December 31, 2019 and December 31, 2018, respectively, increasing by 24%. International sales for the years ended December 31, 2019 and December 31, 2018 were $43.3 million and $29.6 million, respectively, increasing by 46%. Net sales at our subsidiaries in Australia, Germany, Japan, France and the United Kingdom accounted for the majority of the increase internationally.

The remaining $6.0 million increase in net sales was generated from our corneal health products as a result of our Avedro Merger on November 21, 2019.

Pricing for our products was not a significant contributing factor to the increase in net sales for the year ended December 31, 2019.

Cost of Sales

Cost of sales for the years ended December 31, 2019 and December 31, 2018 were $38.6 million and $25.1 million, respectively, reflecting an increase of approximately $13.5 million or 54%. The increase was driven by growing worldwide volume, with approximately $4.0 million related to the acquisition fair market value inventory adjustment rollout and $2.3 million related to amortization of certain finite-lived intangible assets acquired, both of which are related to the Avedro Merger; offset by a one-time federal medical device excise tax refund benefit of approximately $0.5 million. Our gross margin was approximately 84% for the year ended December 31, 2019 compared to approximately 86% for the year ended December 31, 2018.

Selling, General and Administrative Expenses

SG&A expenses for the years ended December 31, 2019 and December 31, 2018 were $176.6 million and $119.5 million, respectively, reflecting an increase of $57.1 million or 48%.

The acquisition of Avedro represented an increase in SG&A expenses of $19.1 million that were not in our 2018 results. These expenses were primarily comprised of $7.6 million due to stock-based compensation resulting from post-combination services associated with the Replacement Awards, $7.1 million related to legal, financial advisory and other transaction costs associated with the acquisition, and amortization of finite-lived intangible assets acquired of approximately $0.3 million. In connection with the Avedro acquisition, we implemented a restructuring plan in December 2019 that includes an estimated headcount reduction of 40 employees and a reallocation of responsibilities primarily within the SG&A functions. As of December 31, 2019 we have accrued $4.1 million of restructuring plan costs, and we expect to incur a total of approximately $5.6 million in restructuring charges upon completion of the plan, which we expect to be completed in 2021.

We incurred $3.5 million in normal and recurring Avedro SG&A expenses from acquisition date through December 31, 2019 that were not in our 2018 results.

Additionally, the increase in SG&A expenses for the year ended December 31, 2019 primarily consisted of approximately $5.7 million related to our previously-disclosed patent litigation, approximately $10.1 million in professional services and software systems costs related to our global enterprise systems implementation, and $8.3 million in additional compensation and related employee expenses was associated with our growing number of domestic and international employees.

The remaining increase in SG&A expenses was primarily comprised of expenses incurred for training samples related to our U.S. launch of *iStent inject*, amortization of our right-of-use asset related to our long-term lease in Aliso Viejo, California and non-employee related expenses incurred by our foreign subsidiaries.

Research and Development Expenses

R&D expenses for the years ended December 31, 2019 and December 31, 2018 were $68.3 million and $49.7 million, respectively, reflecting an increase of $18.6 million or 38%. The increase in R&D expenses was primarily the result of approximately $4.8 million in additional compensation and related employee expenses as well as an overall increase of approximately $12.3 million in other core R&D and clinical expenses, including expenses associated with our *iDose Travoprost* Phase III clinical trials. The acquisition of Avedro also represented an increase of approximately $1.5 million in R&D expenses that were not in our 2018 results.

In-Process Research and Development

IPR&D expenses for the year ended December 31, 2019 were $3.7 million, comprised of $2.2 million related to the purchase of certain DOSE assets and $1.5 million related to the upfront payment for our exclusive global licensing agreement with Intratus. There were no IPR&D expenses for the year ended December 31, 2018.

Non-Operating Income, Net

We had non-operating income, net of $0.3 million and $0.6 million for the years ended December 31, 2019 and December 31, 2018, respectively. These amounts primarily relate to interest expense associated with the financing lease for our Aliso Viejo, California facility and recognition of unrealized foreign currency losses due to higher intercompany loan balances denominated in, and impacted by, changes in foreign currency exchange rates offset by increases in interest income related to our short-term investments.

Income Tax (Benefit) Provision

Our effective tax rate for the year ended 2019 was not meaningful due to the large deferred tax benefit recorded in connection with the Avedro Merger relative to the amount of our net loss before taxes. For the year ended December 31, 2019 we recorded a (benefit) for income taxes of $(65.5) million which was primarily comprised of the U.S. federal and state deferred tax benefit related to the Avedro Merger and for the year ended December 31, 2018 we recorded a provision for income taxes of $0.6 million that was primarily comprised of current U.S. state and foreign income taxes.

Comparison of Years ended December 31, 2018 and December 31, 2017

(in thousands)	Year ended December 31, 2018	2017	% Increase (decrease)
Statements of operations data:			
Net sales	$ 181,278	$ 159,254	14 %
Cost of sales	25,075	21,050	19 %
Gross profit	156,203	138,204	13 %
Operating expenses:			
Selling, general and administrative	119,529	96,260	24 %
Research and development	49,676	38,905	28 %
In-process research and development	—	5,320	NM
Total operating expenses	169,205	140,485	20 %
Loss from operations	(13,002)	(2,281)	NM %
Non-operating income, net	634	2,282	(72)%
Provision for income taxes	583	93	527 %
Net loss	$ (12,951)	$ (92)	NM

NM = Not Meaningful

Net Sales

Net sales for the years ended December 31, 2018 and December 31, 2017 were $181.3 million and $159.3 million, respectively, reflecting an increase of $22.0 million or 14%. The increase in net sales resulted primarily from expansion of direct sales operations in our existing international markets, U.S. sales of our *iStent inject* and the withdrawal from the market of a competitive MIGS device in late August 2018. Net sales in the United States were $151.7 million and $140.9 million for the years ended December 31, 2018 and December 31, 2017, respectively, increasing by 8%. International sales for the years ended December 31, 2018 and December 31, 2017 were $29.6 million and $18.4 million, respectively, increasing by 61%. Net sales at our subsidiaries in Australia, Germany, Japan and the United Kingdom accounted for the majority of the increase internationally.

Cost of Sales

Cost of sales for the years ended December 31, 2018 and December 31, 2017 were $25.1 million and $21.1 million, respectively, reflecting an increase of approximately $4.0 million or 19%. Our gross margin was approximately 86% for the year ended December 31, 2018 compared to approximately 87% for the year ended December 31, 2017.

Selling, General and Administrative Expenses

SG&A expenses for the years ended December 31, 2018 and December 31, 2017 were $119.5 million and $96.3 million, respectively, reflecting an increase of $23.3 million or 24%. The increase in SG&A expenses was primarily the result of approximately $14.5 million in additional compensation and related employee expense associated with our growing number of domestic and international employees with the remaining increase comprised of other SG&A expenses such as consulting and professional services fees, including legal fees associated with our previously disclosed patent litigation, training samples related to our recent U.S. launch of *iStent inject*, and non-employee related expenses incurred by our foreign subsidiaries.

Research and Development Expenses

R&D expenses for the years ended December 31, 2018 and December 31, 2017 were $49.7 million and $38.9 million, respectively, reflecting an increase of $10.8 million or 28%. The increase in R&D expenses was primarily the result of approximately $7.0 million in additional compensation and related employee expenses as well as an overall increase of approximately $3.8 million in other core R&D and clinical expenses, including expenses associated with our *iDose Travoprost* Phase III clinical trials.

In-Process Research and Development

IPR&D expenses for the year ended December 31, 2017 were $5.3 million and consisted of the cost associated with purchasing the IOP Sensor System from DOSE on April 12, 2017. There were no IPR&D expenses for the year ended December 31, 2018.

Non-Operating Income, Net

We had non-operating income, net of $0.6 million and $2.3 million for the years ended December 31, 2018 and December 31, 2017, respectively. The decrease in non-operating income, net primarily relates to the recognition of unrealized foreign currency losses due to higher intercompany loan balances denominated in, and impacted by, changes in foreign currency exchange rates, partially offset by increases in interest income related to our short-term investments.

Provision for Income Taxes

Our effective tax rate for the year ended 2018 was not meaningful. For the years ended December 31, 2018 and December 31, 2017, we recorded a provision for income taxes of $0.6 million and $0.1 million, respectively, which were primarily comprised of state and foreign income taxes in the year ended December 31, 2018 and federal alternative minimum tax and state taxes in the year ended December 31, 2017.

Liquidity and Capital Resources

For the year ended December 31, 2019, we achieved net income of $15.4 million primarily due to a large income tax benefit recorded in connection with the Avedro Merger; however we used cash from operations of $0.4 million. As of December 31, 2019, we had an accumulated deficit of approximately $189.7 million. We have funded our operations to date from the sale of equity securities, the issuance of notes payable, cash from exercises of stock options and warrants to purchase equity securities and cash generated from operations. We have made and expect to continue to make significant investments in our global sales force, marketing programs, research and development activities, clinical studies and general and administrative infrastructure. FDA-approved IDE and IND studies and new product development programs in our industry are expensive.

We have incurred a significant increase in administrative costs since we began operating as a public company. Our acquisition of Avedro will require significant ongoing expenses, together with construction costs related to our new facility in Aliso Viejo, California and firm purchase commitments to implement global enterprise systems that began in 2019.

Accordingly, although we have been profitable for certain periods in our operating history, there can be no assurance that we will continue to be profitable or continue to generate cash from operations.

We plan to fund our operations and capital funding needs using existing cash and investments and cash generated from commercial operations, and we may seek to obtain additional financing in the future through debt or equity financings. There can be no assurance that we will be able to obtain additional financing on terms acceptable to us, or at all. We believe that our available cash, cash equivalents, investment balances and interest we earn on these balances and cash generated from commercial operations will be sufficient to fund our operations and satisfy our liquidity requirements for at least the next 12 months from the date our consolidated financial statements for the year ended December 31, 2019 are made publicly available.

The following table summarizes our cash and cash equivalents, short-term investments and selected working capital data as of December 31, 2019 and December 31, 2018 (in thousands):

	December 31, 2019	December 31, 2018
Cash and cash equivalents	$ 62,430	$ 29,821
Short-term investments	111,553	110,667
Accounts receivable, net	38,417	18,673
Inventory, net	42,578	13,282
Accounts payable	5,781	6,286
Accrued liabilities	51,919	23,964
Working capital [1]	205,178	146,202

(1) Working capital consists of total current assets less total current liabilities

Cash Flows

Our historical cash outflows have primarily been associated with cash used for operating activities such as the expansion of our sales, marketing and R&D activities; purchase of and growth in inventory and other working capital needs; the acquisition of intellectual property; and expenditures related to equipment and improvements used to increase our manufacturing capacity, to improve our manufacturing efficiency and for overall facility expansion.

The following table is a condensed summary of our cash flows for the periods indicated:

(in thousands)	Year ended December 31, 2019	2018	2017
Net cash (used in) provided by:			
Operating activities	$ (369)	$ 18,864	$ 26,091
Investing activities	43,426	(26,400)	(12,390)
Financing activities	(9,645)	21,576	4,667
Exchange rate changes	(252)	48	(434)
Net increase in cash, cash equivalents and restricted cash	$ 33,160	$ 14,088	$ 17,934

At December 31, 2019, our cash and cash equivalents were held for working capital purposes. We do not enter into investments for trading or speculative purposes. Our policy is to invest any cash in excess of our immediate requirements in investments designed to preserve the principal balance and provide liquidity.

Operating Activities

In the year ended December 31, 2019, our operating activities used $0.4 million of net cash. In the years ended December 31, 2018, and December 31, 2017, our operating activities generated $18.9 million, and $26.1 million, of net cash, respectively.

For the year ended December 31, 2019, included in net cash used in operating activities reflected our net income of $15.4 million, adjusted for non-cash items of $11.3 million, primarily consisting of stock-based compensation expense of $36.3 million, depreciation and amortization of $6.3 million, amortization of lease right-of-use assets of $3.6 million, the fair value of cash-settled stock options of $3.1 million and a deferred income tax benefit of $66.3 million. This was offset by changes in operating assets and liabilities of $4.5 million, which resulted from increases in accounts receivable, prepaid expenses and other current assets and other assets totaling $9.3 million, offset by increases in accounts payable and accrued liabilities and inventory of $4.9 million.

For the year ended December 31, 2018, included in net cash provided by operating activities reflected our net loss of $13.0 million, adjusted for non-cash items of $35.4 million, primarily consisting of stock based compensation expense of $25.7 million and depreciation and amortization of $6.3 million. This was partially offset by changes in operating assets and liabilities of $3.6 million, which resulted from increases in accounts receivable, inventory and prepaid expenses and other current assets totaling $6.3 million, offset by increases in accounts payable and accrued liabilities and other assets of $2.7 million.

For the year ended December 31, 2017, included in net cash provided by operating activities reflected our net loss of $0.1 million, adjusted for non-cash items of $22.9 million, primarily consisting of stock-based compensation expense of $17.6 million and depreciation and amortization of $5.5 million. This was partially offset by changes in operating assets and liabilities of $3.3 million, which resulted from increases in accounts receivable, inventory, deferred tax asset and other assets totaling $6.9 million, offset by increases in accounts payable, accrued liabilities and prepaid expenses and other current assets of $10.2 million.

Investing Activities

In the year ended December 31, 2019 net cash from investing activities generated approximately $43.4 million. In the years ended December 31, 2018 and December 31, 2017, we used approximately $26.4 million and $12.4 million, respectively, of net cash in investing activities.

In the year ended December 31, 2019, we used approximately $80.4 million for purchases of short-term investments, received proceeds from sales and maturities of short-term investments of $80.5 million and used

approximately $1.6 million related to investments in company-owned life insurance. Additionally, the Avedro Merger resulted in an increase in cash from investing activities of $49.7 million.

In the year ended December 31, 2018, we used approximately $93.7 million for purchases of short-term investments, received proceeds from sales and maturities of short-term investments of $78.9 million and used approximately $1.2 million related to investments in company-owned life insurance.

In the year ended December 31, 2017, we used approximately $94.3 million for purchases of short-term investments, received proceeds from sales and maturities of short-term investments of $88.9 million and used approximately $0.7 million related to investments in company-owned life insurance.

Cash used for purchases of property and equipment was approximately $4.7 million, $10.3 million and $6.3 million for the years ended December 31, 2019, December 31, 2018 and December 31, 2017, respectively.

We expect to increase our investment in property and equipment in the future as we expand our manufacturing capacity for current and new products, improve our manufacturing efficiency and for overall facility expansion, as previously discussed above.

Financing Activities

In the year ended December 31, 2019, our financing activities used $9.6 million of net cash. In the years ended December 31, 2018, and December 31, 2017 our financing activities provided $21.6 million, and $4.7 million of net cash, respectively.

In the year ended December 31, 2019, we used approximately $22.5 million for payment of debt assumed related to the Avedro Merger, we received net cash proceeds of approximately $18.5 million from the exercises of stock options and purchases of our common stock by employees pursuant to our Employee Stock Purchase Plan and used $5.6 million for payment of employee taxes related to restricted stock unit vestings.

In the year ended December 31, 2018, we received net cash proceeds of approximately $22.2 million from the exercises of stock options and purchases of our common stock by employees pursuant to our Employee Stock Purchase Plan and used $0.6 million for payment of employee taxes related to restricted stock unit vestings.

In the year ended December 31, 2017, we received net cash proceeds of approximately $4.7 million from the exercises of stock options and purchases of our common stock by employees pursuant to our Employee Stock Purchase Plan.

Contractual Obligations

The following table summarizes our known contractual obligations as of December 31, 2019 and the effect those obligations are expected to have on our liquidity and cash flows in future periods.

			Payments due by period		
Contractual obligations (in thousands)	**Total**	**Less than 1 year**	**1 - 3 years**	**3 - 5 years**	**More than 5 years**
Operating and finance lease obligations	$ 147,166	$ 3,245	$ 12,057	$ 22,211	$ 109,653
Firm purchase commitments [(i)]	25,005	24,405	595	5	—
Total contractual obligations	$ 172,171	$ 27,650	$ 12,652	$ 22,216	$ 109,653

(i) Of the above disclosed amounts, we had $5.6 million and $1.2 million in commitments for our implementation of global enterprise systems and capital expenditures, respectively, as of December 31, 2019.

Off-balance Sheet Arrangements

We do not have any off-balance sheet arrangements as defined in the rules and regulations of the Securities and Exchange Commission. We do not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or for any other contractually narrow or limited purpose. However, from time to time we enter into certain types of contracts that contingently require us to indemnify parties against third-party claims including in connection with certain real estate leases, and supply purchase agreements, and with directors and officers. The terms of such obligations vary by contract and in most instances a maximum dollar amount is not explicitly stated therein. Generally, amounts under these contracts cannot by reasonably estimated until a specific claim is asserted, thus no liabilities have been recorded for these obligations on our balance sheets for any of the periods presented.

Inflation

We do not believe that inflation has had a material effect on our business, financial condition or results of operations presented herein. If our costs were to become subject to significant inflationary pressures, we may not be able to fully offset such higher costs through selling price increases. Our inability or failure to do so could adversely affect our business, financial condition and results of operations.

Critical Accounting Policies and Significant Estimates

Management's discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles (GAAP). The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities and related disclosure of contingent assets and liabilities, revenue and expenses at the date of the consolidated financial statements. Generally, we base our estimates on historical experience and on various other assumptions in accordance with GAAP that we believe to be reasonable under the circumstances. Actual results may differ materially from these estimates under different assumptions or conditions and such differences could be material to our financial position and results of operations.

While our significant accounting policies are more fully described in the Notes to our consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K, we believe the following accounting policies to be most critical for fully understanding and evaluating our financial condition and results of operations.

Revenue Recognition

We account for revenue in accordance with *Revenue Recognition – Revenue from Contracts with Customers and its related amendments* (ASC 606) and apply the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) we satisfy a performance obligation. We only apply the five-step model to contracts when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, we assess the goods promised within each contract and determine those that are performance obligations, and assess whether each promised good or service is distinct. We then recognize as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied.

We derive our revenue from sales of our products in the United States and internationally. Customers are primarily comprised of ambulatory surgery centers, hospitals and physician private practices, with distributors being used in certain international locations where we do not have a direct commercial presence.

We concluded that one performance obligation exists for the majority of our contracts with customers which is to deliver products in accordance with our normal delivery times. Revenue is recognized when this performance obligation is satisfied, which is the point in time when we consider control of a product to have transferred to the customer. Revenue recognized reflects the consideration to which we expect to be entitled in exchange for those products or services. We have determined the transaction price to be the invoice price, net of adjustments, which includes estimates of variable consideration for certain product returns.

We offer volume-based rebate agreements to certain customers and, in these instances, we provide a rebate (in the form of a credit memo) at the contract's conclusion, if earned by the customer. In such cases, the transaction price is allocated between our delivery of product and the issuance of a rebate at the contract's conclusion for the customer to utilize on prospective purchases. The performance obligation to issue a customer's rebate, if earned, is transferred over time and our method of measuring progress is the output method, whereby the progress is measured by the estimated rebate earned to date over the total rebate estimated to be earned over the contract period. The provision for volume-based rebates is estimated based on customers' contracted rebate programs and the customers' projected sales levels. We periodically monitor our customer rebate programs to ensure the rebate allowance is fairly stated. Our rebate allowance is included in accrued liabilities in the consolidated balance sheets and estimated rebates accrued were not material during the periods presented.

Additionally, we have a performance obligation related to certain customers' right to a future discount on single dose pharmaceutical purchases in the U.S., and that performance obligation is expected to be recognized when the customer elects to utilize the discount, which is generally within one year. Additionally, we have a performance obligation related to extended warranty agreements with customers related to our KXL systems.

Customers are not granted specific rights of return; however, we may permit returns of certain products from customers if such product is returned in a timely manner and in good condition. We generally provide a warranty on our products for one year from the date of shipment, and offer an extended warranty for our KXL systems. Any product found to be defective or out of specification will be replaced or serviced at no charge during the warranty period. Estimated allowances for sales returns and warranty replacements are recorded at the time of sale of the product and are estimated based upon the historical patterns of product returns matched against sales, and an evaluation of specific factors that may increase the risk of product returns. Product returns and warranty replacements to date have been consistent with amounts reserved or accrued and have not been significant. If actual results in the future vary from our estimates, we will adjust these estimates which would affect net product revenue and earnings in the period such variances become known.

Clinical Trial Expense Accruals

As part of our R&D expenses, we accrue at each balance sheet date the estimated costs of clinical study activities performed by third-party clinical sites with whom we have agreements providing for fees based upon the quantities of subjects enrolled and clinical evaluation visits that occur over the life of the study. The estimates are determined based upon a review of the agreements and data collected by internal and external clinical personnel as to the status of enrollment and subject visits, and are based upon the facts and circumstances known to us at each financial reporting date. If the actual timing of performance of activities varies from the assumptions used in the estimates, we adjust the accruals accordingly. There have been no material adjustments to our prior period accrued estimates for clinical trial activities through December 31, 2019. If we underestimate or overestimate the activity or fees associated with a study or service at a given point in time, adjustments to R&D expenses may be necessary in future periods. Subsequent changes in estimates may result in a material change in our accruals. Material nonrefundable advance payments for goods and services, including fees for process development or manufacturing and distribution of clinical supplies that will be used in future research and development activities, are deferred and recognized as expense in the period that the related goods are consumed or services are performed.

Intangible Assets

Intangible assets primarily consist of developed technology, customer relationships, and IPR&D assets related to the Avedro Merger, as well as the buyout of a royalty payment obligation.

Intangible assets with finite-lives include developed technology, customer relationships and the buyout of a royalty payment obligation, which are amortized on a straight-line basis over their estimated useful lives, which range from five to eleven years. We review finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets or asset group may not be recoverable. When such an event occurs, management determines whether there has been impairment by comparing the anticipated undiscounted future net cash flows to the related asset group's carrying value.

Indefinite-lived intangible assets are comprised of IPR&D assets associated with other applications of Avedro's corneal remodeling platform, which will not be amortized until technological feasibility is met, but will be assessed for impairment annually.

Please see *Note 7, Intangible Assets and Goodwill* to the consolidated financial statements in Item 8 of this Annual Report on Form 10-K for additional information on our intangible assets.

Goodwill

Goodwill represents the excess of the purchase price of an acquired business over the fair value of the identifiable assets acquired and liabilities assumed. Goodwill is not amortized, but is tested for impairment annually in the fourth quarter, or more frequently if events or circumstances indicate the carrying value may no longer be recoverable and that an impairment loss may have occurred. The Company operates as one segment, which is considered to be the sole reporting unit, and therefore goodwill is tested for impairment at the consolidated level. Please see *Note 6, Business Combinations* and *Note 7, Intangible Assets and Goodwill* to the consolidated financial statements in Item 8 of this Annual Report on Form 10-K for additional information on our goodwill.

Inventory Valuation

Except for inventory acquired in connection with the Avedro Merger, further described in *Note 6, Business Combinations* to the consolidated financial statements in Item 8 of this Annual Report on Form 10-K, we value inventory at the lower of cost and net realizable value. Cost is determined by the first-in, first-out method. This policy requires us to make estimates regarding the market value of our inventory, including an assessment of excess or obsolete inventory. We evaluate inventory for excess quantities and obsolescence based on an estimate of the future demand for our product within a specified time horizon, and record an allowance to reduce the carrying value of inventory as determined necessary. The estimates we use for demand are also used for near-term capacity planning and inventory purchasing and are consistent with our revenue forecasts. If our actual demand is less than our forecast demand, we may be required to take additional excess inventory charges, which would decrease gross margin and adversely impact net operating results in the future.

Stock-Based Compensation Expense

Stock-based compensation expense for stock options is measured at the date of grant, based on the estimated fair value of the award using the Black-Scholes option pricing model.

Stock-based compensation expense for restricted stock units is also measured at the date of grant, based on the closing price of our common stock.

For awards subject to time-based vesting conditions, we recognize stock-based compensation expense over the requisite service period on a straight-line basis, net of estimated forfeitures.

The estimation of the fair value of each stock-based option grant or issuance on the date of grant involves numerous assumptions by management. Although we calculate the fair value under the Black-Scholes option pricing model, which is a standard option pricing model, this model still requires the use of numerous assumptions, including, among others, the expected life (turnover), volatility of the underlying equity security, a risk free interest rate and expected dividends. Because we have a limited operating history as a public company, there is a lack of company-specific historical and implied volatility data, and therefore we have estimated stock price volatility based upon an index of the historical volatilities of a group of comparable publicly-traded medical device peer companies. We will continue to apply this process until a sufficient amount of historical information regarding the volatility of our own stock price becomes available. We have estimated the expected term of our stock options using the "simplified" method, whereby the expected life equals the average of the vesting term and the original contractual term of the option. The use of different values by management in connection with these assumptions in the Black-Scholes option pricing model could produce substantially different results.

Recent Accounting Pronouncements

For a description of recent accounting pronouncements, see Note 2 of the notes to our consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

We are exposed to market risks in the ordinary course of our business. Our cash and cash equivalents include cash in readily available checking and money market accounts, as well as a certificate of deposit. These securities are not dependent on interest rate fluctuations that could cause the principal amount of these assets to fluctuate and thus do not pose any interest rate risk to us. While we believe our cash and cash equivalents do not contain excessive risk, we cannot provide absolute assurance that in the future our investments will not be subject to adverse changes in market value.

In addition, we maintain significant amounts of cash and cash equivalents at one or more financial institutions that are in excess of federally insured limits.

Foreign Currency Exchange Risk

The financial statements of our foreign subsidiaries and their sales to customers are denominated in the foreign subsidiaries' respective functional currencies, and therefore we have exposure to foreign currency exchange rates. The remainder of our business is primarily denominated in U.S. dollars. The effect of a 10% adverse change in exchange rates on foreign denominated cash, receivables and payables would not have been material for the periods presented. As our operations in countries outside of the United States grow, our results of operations and cash flows will be subject to fluctuations due to changes in foreign currency exchange rates, which could harm our business in the future. To date, we have not entered into any material foreign currency hedging contracts although we may do so in the future.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Index to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Glaukos Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Glaukos Corporation (the Company) as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated March 2, 2020 expressed an unqualified opinion thereon.

Adoption of ASU No. 2016-02

As discussed in Note 2 to the consolidated financial statements, the Company changed its method for accounting for leases in 2019 due to the adoption of Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842), and the related amendments.

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 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. 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 included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate 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 consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Revenue from contracts with customers

Description of the Matter

As discussed in Note 2 of the consolidated financial statements, the Company derives its revenue from sales of its products in the United States and internationally. Customers are primarily comprised of ambulatory surgery centers, hospitals and physician private practices. The Company concluded that one performance obligation exists for the majority of its contracts with customers which is to deliver products in accordance with the Company's normal delivery times. Revenue is recognized when this performance obligation is satisfied at a point in time when the Company considers control of a product to have transferred to the customer. Revenue recognized reflects the consideration to which the Company expects to be entitled in exchange for those products or services.

Auditing the Company's revenue was complex due to the Company's volume of new customers. For those contracts that otherwise meet the revenue recognition criteria, the Company only recognizes revenue when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods it transfers to the customer. This requires management to perform an assessment related to the probability of collecting the consideration. The assessment can contain judgment especially as it relates to new customers with no history or a limited history of product sales with the Company.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's process of recording revenue from sales of its products, including controls over the review and approval of customer credit terms. We also tested management's controls related to the completeness and accuracy of data, including calculations, utilized in the controls.

To test product revenue, our audit procedures included, among others, inspecting the application of the Company's credit policy to ensure consistency in how the Company evaluated whether a customer is creditworthy and to ensure that this evaluation was based on objective and verifiable criteria. To this end, we obtained a sample of credit reports, recent financial information, historical payment information, or other relevant information as applicable. We also confirmed on a sample basis that the customers' payment history does not demonstrate significant bad debt expense or significant increases in the allowance for doubtful accounts. To test management's assessment related to the probability of collection for customers with no history or a limited history of product sales we investigated a sample of new customers to obtain evidence of financial condition.

Acquisition of Avedro Inc. – Valuation of certain intangible assets

Description of the Matter

As described in Note 1 to the consolidated financial statements, the Company completed its acquisition of Avedro Inc. (Avedro) in an all stock exchange transaction on November 21, 2019. The Company's accounting for the acquisition included determining the fair value of the intangible assets acquired, which primarily included developed technology, in-process research and development (IPR&D), and customer relationships.

Auditing the Company's accounting for its acquisition of Avedro was complex due to the significant estimation required by management to determine the fair value of developed technology and IPR&D intangible assets (the Intangible Assets) of $252.2 million and $118.9 million, respectively. The significant estimation was primarily due to the complexity of the valuation models used by management to measure the fair value of the Intangible Assets and the sensitivity of the respective fair values to the significant underlying assumptions. The Company used an income approach to measure the Intangible Assets. The significant assumptions used to estimate the value of the intangible assets included discount rates and certain assumptions that form the basis of the forecasted results (e.g., revenue growth rates). These significant assumptions relate to the future performance of the acquired business, are forward looking and could be affected by future economic and market conditions.

How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design, and tested the operating effectiveness of the Company's controls over management's recognition and measurement of the technology and customer-related intangible assets including controls over management's review of key assumptions used in the valuations. To test the estimated fair value of the Intangible Assets, we involved our valuation specialists to assist in evaluating the methodologies utilized by the Company's valuation specialist, as well as the key assumptions utilized in the valuation of the intangible assets. We performed audit procedures that included, among others, evaluating the completeness and accuracy of the underlying forecasted data supporting the significant assumptions and estimates. To test the reasonableness of these forecasts and assumptions, we compared them to current industry, market and economic trends, to the assumptions used to value similar assets in other acquisitions, to the historical results of the acquired business and to other guidelines used by companies within the same industry. Further, we considered any contrary evidence that would suggest the forecasted information and assumptions were not supportable.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2006.

Irvine, California

March 2, 2020

Glaukos Corporation
Consolidated Balance Sheets
(in thousands, except par values)

	December 31, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 62,430	$ 29,821
Short-term investments	111,553	110,667
Accounts receivable, net	38,417	18,673
Inventory, net	42,578	13,282
Prepaid expenses and other current assets	7,900	4,124
Total current assets	262,878	176,567
Restricted cash	9,326	8,775
Property and equipment, net	22,056	19,153
Operating lease right-of-use asset	15,704	—
Finance lease right-of-use asset	54,048	—
Intangible assets, net	382,605	—
Goodwill	66,134	—
Deferred tax asset and receivable, net	—	213
Deposits and other assets	5,649	2,262
Total assets	$ 818,400	$ 206,970
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 5,781	$ 6,286
Accrued liabilities	51,919	23,964
Deferred rent	—	115
Total current liabilities	57,700	30,365
Operating lease liability	14,195	—
Finance lease liability	58,435	—
Deferred tax liability, net	9,632	—
Other liabilities	5,166	2,745
Total liabilities	145,128	33,110
Commitments and contingencies (Note 12)		
Stockholders’ equity:		
Preferred stock, $0.001 par value; 5,000 shares authorized; no shares issued and outstanding as of December 31, 2019 and December 31, 2018	—	—
Common stock, $0.001 par value; 150,000 shares authorized; 43,530 and 36,135 shares issued and 43,502 and 36,107 shares outstanding at December 31, 2019 and December 31, 2018, respectively	44	36
Additional paid-in capital	861,740	378,352
Accumulated other comprehensive income	1,330	738
Accumulated deficit	(189,710)	(205,134)
Less treasury stock (28 shares as of December 31, 2019 and December 31, 2018)	(132)	(132)
Total stockholders’ equity	673,272	173,860
Total liabilities and stockholders' equity	$ 818,400	$ 206,970

See accompanying notes to consolidated financial statements.

Glaukos Corporation
Consolidated Statements of Operations
(in thousands, except per share amounts)

	Year ended December 31,		
	2019	2018	2017
Net sales	$ 236,984	$ 181,278	$ 159,254
Cost of sales	38,588	25,075	21,050
Gross profit	198,396	156,203	138,204
Operating expenses:			
Selling, general and administrative	176,635	119,529	96,260
Research and development	68,308	49,676	38,905
In-process research and development	3,745	—	5,320
Total operating expenses	248,688	169,205	140,485
Loss from operations	(50,292)	(13,002)	(2,281)
Non-operating income (expense):			
Interest income	3,169	2,252	1,375
Interest expense	(2,565)	—	—
Other (expense) income, net	(348)	(1,618)	907
Total non-operating income	256	634	2,282
(Loss) income before taxes	(50,036)	(12,368)	1
Income tax (benefit) provision	(65,460)	583	93
Net income (loss)	$ 15,424	$ (12,951)	$ (92)
Basic net income (loss) per share	$ 0.41	$ (0.37)	$ (0.00)
Diluted net income (loss) per share	$ 0.37	$ (0.37)	$ (0.00)
Weighted-average shares used to compute basic net income (loss) per share	37,355	35,317	34,381
Weighted-average shares used to compute diluted net income (loss) per share	41,145	35,317	34,381

See accompanying notes to consolidated financial statements.

Glaukos Corporation
Consolidated Statements of Comprehensive Income (Loss)
(in thousands)

	Year ended December 31,		
	2019	2018	2017
Net income (loss)	$ 15,424	$ (12,951)	$ (92)
Other comprehensive income (loss):			
Foreign currency translation (loss) gain	(65)	1,377	(1,115)
Unrealized gain (loss) on short-term investments, net of tax	657	(48)	(124)
Other comprehensive income (loss)	592	1,329	(1,239)
Total comprehensive income (loss)	$ 16,016	$ (11,622)	$ (1,331)

See accompanying notes to consolidated financial statements.

Glaukos Corporation
Consolidated Statements of Stockholders' Equity
(in thousands)

	Common stock		Additional paid-in capital	Accumulated other comprehensive income (loss)	Accumulated deficit	Treasury stock		Total equity
	Shares	Amount				Shares	Amount	
Balance at December 31, 2016	33,971	$ 34	$ 308,815	$ 648	$ (192,091)	(28)	$ (132)	$ 117,274
Common stock issued under stock plans	676	1	4,666	—	—	—	—	4,667
Stock-based compensation	—	—	17,592	—	—	—	—	17,592
Other comprehensive loss	—	—	—	(1,239)	—	—	—	(1,239)
Net loss	—	—	—	—	(92)	—	—	(92)
Balance at December 31, 2017	34,647	$ 35	$ 331,073	$ (591)	$ (192,183)	(28)	$ (132)	$ 138,202
Common stock issued under stock plans	1,488	1	21,575	—	—	—	—	21,576
Stock-based compensation	—	—	25,704	—	—	—	—	25,704
Other comprehensive income	—	—	—	1,329	—	—	—	1,329
Net loss	—	—	—	—	(12,951)	—	—	(12,951)
Balance at December 31, 2018	36,135	$ 36	$ 378,352	$ 738	$ (205,134)	(28)	$ (132)	$ 173,860
Common stock issued under stock plans	942	1	12,850	—	—	—	—	12,851
Issuance of common stock in connection with the Avedro Merger	6,453	7	406,956	—	—	—	—	406,963
Value of Replacement Awards issued in the Avedro Merger attributable to pre-combination services	—	—	27,189	—	—	—	—	27,189
Stock-based compensation	—	—	36,393	—	—	—	—	36,393
Other comprehensive income	—	—	—	592	—	—	—	592
Net income	—	—	—	—	15,424	—	—	15,424
Balance at December 31, 2019	43,530	$ 44	$ 861,740	$ 1,330	$ (189,710)	(28)	$ (132)	$ 673,272

See accompanying notes to consolidated financial statements.

Glaukos Corporation
Consolidated Statements of Cash Flows
(in thousands)

	Year ended December 31,		
	2019	2018	2017
Operating Activities			
Net income (loss)	$ 15,424	$ (12,951)	$ (92)
Adjustments to reconcile net income (loss) to net cash (used in) provided by operating activities:			
Depreciation and amortization	6,306	6,264	5,482
Amortization of right-of-use lease assets	3,557	—	—
Deferred income tax benefit	(66,306)	—	—
Loss on disposal of fixed assets	430	156	6
Stock-based compensation	36,393	25,704	17,592
Fair value of cash-settled stock options	3,088	—	—
Unrealized foreign currency losses (gains)	194	1,647	(951)
Amortization of (discount) premium on short-term investments	(338)	(295)	20
Deferred rent and other liabilities	5,352	1,919	722
Changes in operating assets and liabilities:			
Accounts receivable, net	(6,632)	(2,252)	(2,181)
Inventory, net	4,078	(2,303)	(4,162)
Prepaid expenses and other current assets	(917)	(1,756)	494
Accounts payable and accrued liabilities	779	2,527	9,741
Deferred tax asset and receivable, net	—	—	(235)
Other assets	(1,777)	204	(345)
Net cash (used in) provided by operating activities	(369)	18,864	26,091
Investing activities			
Cash acquired due to acquisition	49,652	—	—
Purchases of property and equipment	(4,724)	(10,315)	(6,311)
Purchases of short-term investments	(80,388)	(93,696)	(94,307)
Proceeds from sales and maturities of short-term investments	80,494	78,851	88,891
Investment in company-owned life insurance	(1,608)	(1,240)	(663)
Net cash provided by (used) in investing activities	43,426	(26,400)	(12,390)
Financing activities			
Proceeds from exercise of stock options	15,064	18,654	3,699
Share purchases under Employee Stock Purchase Plan	3,388	3,509	968
Payments of employee taxes related to vested restricted stock units	(5,601)	(587)	—
Payment of debt assumed in the Avedro Merger	(22,496)	—	—
Net cash (used in) provided by financing activities	(9,645)	21,576	4,667
Effect of exchange rate changes on cash and cash equivalents	(252)	48	(434)
Net increase in cash, cash equivalents and restricted cash	33,160	14,088	17,934
Cash, cash equivalents and restricted cash at beginning of period	38,596	24,508	6,574
Cash, cash equivalents and restricted cash at end of period	$ 71,756	$ 38,596	$ 24,508
Supplemental schedule of noncash investing and financing activities			
Shares issued, and Replacement Awards assumed, in connection with Avedro Merger	$ 437,751	$ —	$ —
Debt assumed in the Avedro Merger	$ 22,496	$ —	$ —
Purchases of property and equipment included in accounts payable and accrued liabilities	$ 995	$ 152	$ 749
Reduction of liability upon vesting of stock options previously exercised for unvested stock	$ —	$ —	$ 4
Supplemental disclosures of cash flow information			
Taxes paid, net of refunds	$ 171	$ 401	$ 12
Interest paid	$ 2	$ —	$ —

See accompanying notes to consolidated financial statements.

Glaukos Corporation

Notes to Consolidated Financial Statements

Note 1. Organization and Basis of Presentation

Organization and Business

Glaukos Corporation (Glaukos or the Company), incorporated in Delaware on July 14, 1998, is an ophthalmic medical technology and pharmaceutical company focused on developing novel therapies for the treatment of glaucoma, corneal disorders, and retinal disease. The Company developed Micro-Invasive Glaucoma Surgery (MIGS) to serve as an alternative to the traditional glaucoma treatment paradigm and launched its first MIGS device commercially in 2012. The Company also offers commercially a proprietary bio-activated pharmaceutical therapy for the treatment of a corneal disorder, keratoconus, that was approved by the U.S. Food and Drug Administration (FDA) in 2016 and is developing a pipeline of surgical devices, sustained pharmaceutical therapies, and implantable biosensors intended to treat glaucoma progression, corneal disorders such as keratoconus, dry eye and refractive vision correction, and retinal diseases such as neovascular age-related macular degeneration and diabetic macular edema.

The accompanying consolidated financial statements include the accounts of Glaukos and its wholly-owned subsidiaries. All significant intercompany balances and transactions among the consolidated entities have been eliminated in consolidation.

Liquidity

For the year ended December 31, 2019, the Company achieved net income of $15.4 million, however used $0.4 million of cash from operations and as of December 31, 2019 had an accumulated deficit of $189.7 million. For the year ended December 31, 2018, the Company incurred a net loss of $13.0 million, and generated $18.9 million of cash from operations. The Company has financed operations to date primarily through the sale of equity securities, the issuance of notes payable, cash from exercises of stock options and warrants to purchase equity securities and cash generated by commercial operations. Although the Company has been profitable for certain periods in its operating history, there can be no assurance that the Company will continue to be profitable or continue to generate cash from operations.

The Company plans to fund its operations and capital funding needs using existing cash, cash equivalents and investments, cash generated from commercial operations, and through future debt and equity financings. There can be no assurance that the Company will be able to obtain additional financing on terms acceptable to it, or at all. Any equity financing may result in dilution to existing stockholders and any additional debt financing may include restrictive covenants. As of December 31, 2019, the Company had cash, cash equivalents, restricted cash and short-term investments totaling $183.3 million and net working capital of $205.2 million. The Company has performed an analysis and concluded substantial doubt does not exist with respect to the Company being able to continue as a going concern through one year from the date of issuance of the consolidated financial statements for the year ended December 31, 2019.

Recent Developments

Acquisition of Avedro, Inc.

On August 7, 2019, the Company entered into an Agreement and Plan of Merger (Merger Agreement) with Atlantic Merger Sub, Inc. (Merger Sub) and Avedro, pursuant to which Merger Sub would merge with and into Avedro, with Avedro continuing as the surviving corporation and a wholly owned subsidiary of the Company (the Avedro Merger). Avedro is a hybrid ophthalmic pharmaceutical and medical technology company focused on developing therapies designed to treat corneal diseases and disorders and correct refractive conditions.

Under the terms of the Merger Agreement, each share of Avedro common stock and certain vested Avedro warrants that were issued and outstanding immediately prior to the effective time of the Avedro Merger were automatically cancelled and converted into the right to receive 0.365 of a share of common stock of Glaukos. Also, subject to certain exceptions, each option and its associated exercise price previously granted by Avedro that was outstanding and unexercised immediately prior to the effective time of the Avedro Merger, was assumed by the Company and converted using the same 0.365 ratio noted above, into a stock option exercisable for common stock of Glaukos. Lastly, each restricted stock unit award previously granted by Avedro that was outstanding immediately prior to the effective time of the merger, subject to certain exceptions, was assumed by Glaukos and was converted using the same 0.365 ratio noted above, into a restricted stock unit award with respect to common stock of Glaukos.

On November 21, 2019, the Avedro Merger was consummated in a stock-for-stock transaction for total consideration of $437.8 million (Merger Consideration). The total consideration consisted of Glaukos shares worth $406.8 million issued to replace Avedro common stock, Glaukos shares worth $0.2 million to replace the certain vested Avedro warrants, and $30.8 million of value attributable to the pre-combination services associated with replacement of all Avedro outstanding and unexercised stock option awards and all outstanding restricted stock units (Replacement Awards).

Immediately following the Avedro Merger closing, the Company used approximately $22.5 million for payment of debt assumed as a result of the Avedro Merger.

See *Note 4, Fair Value Measurements*, *Note 6, Business Combinations*, *Note 7, Intangible Assets and Goodwill* and *Note 9, Stock-Based Compensation* and *Note 10, Income Taxes* for additional details regarding the impact of the Avedro Merger on the Company's consolidated financial statements.

Licensing Arrangement with Intratus, Inc.

On July 22, 2019, the Company entered into a global licensing agreement with Intratus, Inc. (Intratus) for $1.5 million in cash, plus future performance-based consideration upon achievement of certain development, regulatory approvals and commercial milestones and royalties on commercial sales, pursuant to which the Company obtained an exclusive, royalty-bearing license to research, develop, manufacture and commercialize Intratus' patented, non-invasive drug delivery platform designed for use in the treatment of dry eye disease, glaucoma and other corneal disorders such as blepharitis, conjunctivitis and related conditions.

The $1.5 million payment was immediately expensed to in-process research and development (IPR&D) as management determined there were no alternative future uses for the technology acquired.

Acquisition of DOSE Medical Corporation

On June 19, 2019, the Company entered into a definitive agreement and plan of merger to acquire DOSE Medical Corporation (DOSE) for $2.5 million in cash, plus potential future performance-based consideration upon achievement of certain regulatory approvals and commercial milestones and royalties on commercial sales (the DOSE Merger). If certain DOSE products receive FDA approval within ten years following the closing of the DOSE Merger, the Company will pay the DOSE shareholders amounts between $5.0 million and $22.5 million, depending on the type of DOSE product approved. The Company will pay additional performance-based payments to DOSE shareholders if within ten years of closing of the DOSE Merger, such DOSE products receive approval from the EU European Medicines Agency, in which case the Company will pay the DOSE shareholders either $1.25 million and/or $2.5 million, depending on the type of DOSE product approved. Following FDA approval of such DOSE products, the Company will pay the DOSE shareholders quarterly royalty payments equal to 5% of net sales of such DOSE products for a period of ten years. The Company will also pay the DOSE shareholders additional performance-based payments of $7.5 million and $20.0 million upon the achievement of certain net sales milestones with respect to such DOSE products. Finally, under the terms of the DOSE Merger, the Company may elect to buyout the additional milestone and royalty payments described above by paying former DOSE shareholders between $10.0 and $55.0 million, depending on the type of DOSE product involved. DOSE is currently conducting research and development on multiple micro-invasive, bioerodible, sustained-release drug delivery platforms designed to be used in the treatment of various retinal diseases, including age-related macular degeneration and diabetic macular edema.

On June 27, 2019, the Company completed its acquisition of DOSE and DOSE became a wholly-owned subsidiary of the Company. The transaction was accounted for as an asset acquisition. Of the $2.5 million initial cash payment, $2.2 million was immediately charged to IPR&D expense as management determined there was no alternative future use related to the single group of identifiable assets purchased. The remaining $0.3 million of upfront consideration was capitalized as property & equipment, net and is being depreciated over the corresponding asset's useful life. Management will account for the payment of the future performance-based consideration if and when earned.

DOSE was spun out from the Company in 2010 and had operated as a stand-alone entity; however, DOSE was considered a variable interest entity and its operations were consolidated in the Company's financial statements at that time. In 2015, the Company acquired the *iDose* product line and related assets from DOSE and upon the acquisition, the Company derecognized DOSE as a consolidated variable interest entity in the financial statements, and in 2017 the Company acquired DOSE's IOP sensor system. Thomas W. Burns, the Company's President, Chief Executive and board of directors member, and William J. Link, Ph.D., Chairman of the Company's board of directors, served on the board of directors of DOSE and certain members of management and board of directors held an equity interest in DOSE prior to being acquired.

Commercial Agreement with Santen, Inc.

In April 2019, the Company announced it had entered into a multi-year agreement with Santen Inc., the U.S. subsidiary of Santen Pharmaceutical Co., Ltd. (Santen). Pursuant to this agreement the Company was appointed the exclusive U.S. partner for the sale of the MicroShunt, which is currently being studied in an FDA pivotal study and has not yet been approved by the FDA. Following anticipated completion of the premarket approval application (PMA) submission in 2020, Santen intends to seek FDA PMA approval and, if approved, U.S. launch of the product. The MicroShunt is an ab-externo device being developed for treatment of primary open-angle glaucoma where IOP is uncontrolled with maximum tolerated medical therapy or where progression of the disease warrants surgery.

The transactions described above are intended to expand the Company's portfolio of pipeline products beyond the treatment of glaucoma to include pharmaceutical therapies for the treatment of retinal diseases and corneal disorders.

Note 2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP).

Use of Estimates

The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts in the consolidated financial statements and accompanying notes. Actual results could differ materially from those estimates and assumptions. Management considers many factors in selecting appropriate financial accounting policies and controls and in developing the estimates and assumptions that are used in the preparation of these consolidated financial statements. Management must apply significant judgment in this process. In addition, other factors may affect estimates, including expected business and operational changes, sensitivity and volatility associated with the assumptions used in developing estimates, and whether historical trends are expected to be representative of future trends. The estimation process often may yield a range of reasonable estimates of the ultimate future outcomes, and management must select an amount that falls within that range of reasonable estimates. The most significant estimates in the accompanying consolidated financial statements relate to revenue recognition, the incremental borrowing rate related to the Company's leased assets, stock-based compensation expense and the valuation of certain intangible assets related to the Company's acquisition of Avedro. Although these estimates are based on the Company's knowledge of current events and actions it may undertake in the future, this process may result in actual results differing materially from those estimated amounts used in the preparation of the consolidated financial statements.

Segments

The Company has one business activity: the development and commercialization of therapies designed to treat glaucoma, corneal disorders and retinal diseases, and operates as one operating segment. The Company determined its operating segment on the same basis that it uses to evaluate its performance internally. The Company's chief operating decision-maker (CODM), its Chief Executive Officer, reviews its consolidated operating results for the purpose of allocating resources and evaluating financial performance.

Foreign Currency Translation

The accompanying consolidated financial statements are presented in United States (U.S.) dollars. The Company considers the local currency to be the functional currency for its international subsidiaries. Accordingly, their assets and liabilities are translated into U.S. dollars using the exchange rate in effect on the balance sheet date. Revenues and expenses are translated at average exchange rates prevailing throughout the periods presented. As a result, currency translation adjustments arising from period to period are charged or credited to accumulated other comprehensive income (loss) in stockholders' equity. For the year ended December 31, 2019, the Company reported a loss from foreign currency translation adjustments of approximately $0.1 million. For the year ended December 31, 2018, the Company reported a gain from foreign currency translation adjustments of approximately $1.4 million and for the year ended December 31, 2017, the Company reported a loss from foreign currency translation adjustments of approximately $1.1 million.

Unrealized gains and losses that arise from exchange rate fluctuations on transactions denominated in a currency other than the functional currency, primarily gains and losses on intercompany loans, are included in the consolidated statements of operations as a component of other (expense) income, net. For the years ended December 31, 2019 and December 31, 2018, the Company reported net foreign currency transaction losses of $0.2 million and $1.6 million, respectively, and for the year ended December 31, 2017, the Company reported a net foreign currency transaction gain of $1.0 million.

Cash, Cash Equivalents and Short-term Investments

The Company invests its excess cash in marketable securities, including money market funds, money market securities, bank certificates of deposits, corporate bonds, corporate commercial paper, U.S. government bonds and U.S. government agency bonds. For financial reporting purposes, liquid investment instruments purchased with an original maturity of three months or less are considered to be cash equivalents. Cash and cash equivalents are recorded at face value or cost, which approximates fair market value. The Company maintains cash balances in excess of amounts insured by the Federal Deposit Insurance Commission. Investments are stated at fair value as determined by quoted market prices. Investments are considered available for sale and, accordingly, unrealized gains and losses are included in accumulated other comprehensive income (loss) within stockholders' equity.

The Company's entire investment portfolio, except for restricted cash, is considered to be available for use in current operations and, accordingly, all such investments are stated at fair value using quoted market prices and classified as current assets, although the stated maturity of individual investments may be one year or more beyond the balance sheet date. The Company did not have any trading securities or restricted investments at December 31, 2019, December 31, 2018 or December 31, 2017.

Realized gains and losses and declines in value, if any, judged to be other-than-temporary on available for sale securities, are reported in other (expense) income, net. When securities are sold, any associated unrealized gain or loss previously reported as a separate component of stockholders' equity is reclassified out of stockholders' equity and recorded in the statements of operations in the period sold using the specific identification method. Accrued interest and dividends from investments are included in other (expense) income, net. The Company periodically reviews its available for sale securities for other than temporary declines in fair value below the cost basis, and whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

Restricted Cash

The Company had a bank issue a letter of credit related to its Aliso Viejo, California office building lease, which commenced on April 1, 2019. The letter of credit is secured with an amount of cash held in a restricted account of $8.8 million as of December 31, 2019 and December 31, 2018. Beginning on the first day of the thirty-seventh month of the lease term, and on each twelve month anniversary thereafter, the letter of credit will be reduced by 20% until the letter of credit amount has been reduced to $2.0 million.

As of December 31, 2019, as a result of the Avedro Merger, the Company has two other irrevocable standby letters of credit secured with $0.4 million of cash in a restricted account related to its office lease agreements. Lastly, the Company maintains $0.2 million in restricted cash which is held to collateralize a credit card program.

See *Note 12, Commitments and Contingencies* for additional information related to these commitments.

The following table provides a reconciliation of cash and cash equivalents and restricted cash reported within the consolidated balance sheets that equate to the amount reported in the consolidated statement of cash flows as of December 31, 2019, December 31, 2018 and December 31, 2017 (in thousands):

	Year ended December 31,		
	2019	**2018**	**2017**
Cash and cash equivalents	$ 62,430	$ 29,821	$ 24,508
Restricted cash	9,326	8,775	—
Cash, cash equivalents and restricted cash in the consolidated statement of cash flows	$ 71,756	$ 38,596	$ 24,508

Concentration of Credit Risk and Significant Customers

Financial instruments, which potentially subject the Company to significant concentration of credit risk, consist primarily of cash, cash equivalents, short-term investments and accounts receivable. The Company maintains deposits in federally insured financial institutions in excess of federally insured limits and management believes that the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which those deposits are held. Additionally, the Company has established guidelines regarding investment instruments and their maturities which are designed to maintain preservation of principal and liquidity. The Company believes that the concentration of credit risk in its accounts receivable is mitigated by its credit evaluation process, relatively short collection terms and the level of credit worthiness of its customers. During the years ended 2019, 2018 and 2017, none of the Company's customers accounted for more than 10% of revenues.

Accounts Receivable

The Company sells its products directly to ambulatory surgery centers, hospitals, and physician private practices, with distributors being used in certain international locations where the Company does not have a direct commercial presence. The Company periodically assesses the payment performance of these customers and establishes reserves for anticipated losses when necessary, which losses historically have not been significant and have not exceeded management's estimates. Accounts receivable are recorded at the invoiced amount and do not bear interest. The Company maintains an allowance for doubtful accounts based on historical collection experience and expectations of future collection based on current market conditions. The allowance for doubtful accounts is management's best estimate of the amount of probable credit losses. Account balances are charged against the allowance when it is probable the receivable will not be recovered. The Company's allowance for doubtful accounts was approximately $1.2 million, $0.7 million and $0.6 million as of December 31, 2019, December 31, 2018 and December 31, 2017, respectively. Additionally, no customers accounted for more than 10% of net accounts receivable as of any such date.

Inventory

Except for inventory acquired in connection with the Avedro Merger, further described in *Note 6, Business Combinations*, inventory is valued at the lower of cost and net realizable value with cost being determined by the first-in, first-out method.

Management evaluates inventory for excess quantities and obsolescence and records an allowance to reduce the carrying value of inventory as determined necessary.

Property and Equipment, Net

Property and equipment is recorded at cost. Depreciation of property and equipment is generally provided using the straight-line method over the estimated useful lives of the assets, which range from three to five years. Leasehold improvements are amortized over their estimated useful life or the related lease term, whichever is shorter. Maintenance and repairs are expensed as incurred.

All long lived assets are reviewed for impairment in value when changes in circumstances dictate, based upon undiscounted future operating cash flows, and appropriate losses are recognized and reflected in current earnings to the extent the carrying amount of an asset exceeds its estimated fair value, determined by the use of appraisals, discounted cash flow analyses or comparable fair values of similar assets. The Company recorded impairment charges of $0.4 million during the year ended December 31, 2019 and no impairment charges during 2018 or 2017.

Intangible Assets

Intangible assets primarily consist of developed technology, customer relationships, and IPR&D assets related to the Avedro Merger, as well as the buyout of a royalty payment obligation.

Intangible assets with finite-lives include developed technology, customer relationships and the buyout of a royalty payment obligation, which are amortized on a straight-line basis over their estimated useful lives, which range from five to eleven years. The Company reviews finite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets or asset group may not be recoverable. When such an event occurs, management determines whether there has been impairment by comparing the anticipated undiscounted future net cash flows to the related asset group's carrying value. If the affected intangible assets are not recoverable, management estimates the fair value of the assets and would record an impairment loss if the carrying value of the assets exceeds the fair value.

Indefinite-lived intangible assets are comprised of IPR&D assets and are not amortized, but instead tested for impairment until the successful completion and commercialization, or abandonment, of the associated research and development efforts, at which point the IPR&D assets are either amortized over their estimated useful lives, or written-off immediately, as the case may be.

Refer to *Note 7, Intangible Assets and Goodwill* for more information on the Company's intangible assets.

Goodwill

Goodwill represents the excess of the acquisition consideration for an acquired business over the fair value of the identifiable assets acquired and liabilities assumed. Goodwill is not amortized, but is tested for impairment annually in the fourth quarter, or more frequently if events or circumstances indicate the carrying value may no longer be recoverable and that an impairment loss may have occurred. The Company operates as one segment, which is considered to be the sole reporting unit, and therefore goodwill is tested for impairment at the consolidated level.

During the goodwill impairment review, management will assess qualitative factors to determine whether it is more likely than not that the fair value of the Company's reporting unit is less than the carrying amount, including goodwill. The qualitative factors include, but are not limited to, macroeconomic conditions and industry and market considerations. If, after assessing the totality of these qualitative factors, the Company determines that it is not more likely than not that the fair value of its reporting unit is less than the carrying amount, then no additional assessment is deemed necessary. Otherwise, management proceeds to perform the two-step test for goodwill impairment. The first step involves comparing the estimated fair value of the reporting unit with its carrying value, including goodwill. If the carrying amount of the reporting unit exceeds the fair value, the second step of the goodwill impairment test is performed to determine the amount of loss, which involves comparing the implied fair values of the goodwill to the carrying value of the goodwill. The Company may also elect to bypass the qualitative assessment in a period and elect to proceed to perform the first step of the goodwill impairment test.

Refer to *Note 6, Business Combinations* and *Note 7, Intangible Assets and Goodwill* for more information on the Company's goodwill.

Fair Value of Financial Instruments

The carrying amounts of cash equivalents, accounts receivable, accounts payable, and accrued liabilities are considered to be representative of their respective fair values because of the short-term nature of those instruments.

The valuation of assets and liabilities is subject to fair value measurements using a three-tiered approach and fair value measurements are classified and disclosed by the Company in one of the following three categories:

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

Level 2: Quoted prices for similar assets and liabilities in active markets, quoted prices in markets that are not active, or inputs which are observable, either directly or indirectly, for substantially the full term of the asset or liability; and

Level 3: Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (i.e., supported by little or no market activity).

Leases

In February 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2016-02, *Leases (Topic 842)*, which amends the existing accounting standards for leases. In September 2017, the FASB issued ASU No. 2017-13, which provides additional clarification and implementation guidance on the previously issued ASU No. 2016-02 (collectively, ASC 842). Under the new guidance, a lessee is required to recognize a lease liability and a right-of-use asset for all leases with terms in excess of 12 months.

Consistent with historical guidance, a lessee's recognition, measurement, and presentation of expenses and cash flows arising from a lease will continue to depend primarily on its classification. ASC 842 was effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company adopted the requirements of ASC 842 effective January 1, 2019 and elected the modified retrospective method for all lease arrangements at the beginning of the period of adoption. Results for reporting periods beginning on or after January 1, 2019 are presented under ASC 842, while prior period amounts were not adjusted and are reported in accordance with the Company's historic accounting under ASC 840, *Leases.*

For leases that commenced before the effective date of ASC 842, the Company elected the transition package of three practical expedients permitted within ASC 842, which eliminates the requirements to reassess prior conclusions about lease identification, lease classification, and initial direct costs.

The Company did not elect the hindsight practical expedient, which permits the use of hindsight when determining lease term and impairment of right-of-use assets. Further, the Company elected a short-term lease exception policy, permitting the Company to not apply the recognition requirements of this standard to short-term leases (i.e., leases with terms of 12 months or less) and an accounting policy to account for lease and non-lease components as a single component for certain classes of assets. As a result of adopting ASC 842 as of January 1, 2019, the Company recorded an operating lease right-of-use asset of $12.8 million and related operating lease liability of $13.4 million, primarily related to facilities and certain equipment, based on the present value of the future lease payments on the date of adoption. Adopting ASC 842 did not have a material impact on the Company's consolidated statements of operations and cash flows. See Note 5, *Leases* for further discussion of the Company's adoption of ASC 842 and related disclosures.

The Company determines if an arrangement is a lease at inception. As a lessee, right-of-use assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent an obligation to make lease payments arising from the lease. Right-of-use assets and lease liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. As the Company does not have any outstanding debt or committed credit facilities, the Company estimates the incremental borrowing rate based on prevailing financial market conditions, peer company credit analyses, and management judgment. Operating lease right-of-use assets also include any lease payments made at or before lease commencement and exclude any lease incentives received. The lease terms used to calculate the right-of-use asset and related lease liability include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense for operating leases is recognized on a straight-line basis over the lease term as an operating expense while the expense for finance leases is recognized as amortization expense and interest expense using the accelerated interest method of recognition.

As of December 31, 2019, the finance lease right-of-use asset excludes lease incentives totaling approximately $12.6 million that is included in the finance lease liability on the consolidated balance sheets.

As a result of the Avedro Merger, the Company leases approximately 27,000 square feet of office and laboratory space in Waltham, Massachusetts, pursuant to a lease agreement that expires in 2023. The Company also currently occupies approximately 19,000 square feet of leased manufacturing space in Burlington, Massachusetts pursuant to a lease agreement that expires in 2023.

Revenue Recognition

The Company accounts for revenue in accordance with Accounting Standards Codification (ASC) 606, *Revenue Recognition – Revenue from Contracts with Customers and its related amendments* (ASC 606) and applies the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that the entity will collect the consideration it is entitled to in exchange for the goods it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, the Company assesses the goods promised within each contract and determines those that are performance obligations, and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied.

The Company elects to use the following practical expedients: (i) to exclude disclosures of transaction prices allocated to remaining performance obligations when the Company expects to recognize such revenue within one year; (ii) to expense costs as incurred for costs to obtain a contract when the amortization period would have been one year or less, which includes certain of the Company's internal sales force compensation programs; (iii) to account for shipping and handling costs as fulfillment costs (i.e., as an expense) rather than promised service (i.e., a revenue element); and (iv) to exclude from revenue the taxes collected from customers relating to product sales which are remitted to governmental authorities.

The Company derives its revenue from sales of its products in the United States and internationally. Customers are primarily comprised of ambulatory surgery centers, hospitals and physician private practices, with distributors being used in certain international locations where the Company does not have a direct commercial presence.

The Company concluded that one performance obligation exists for the majority of its contracts with customers which is to deliver products in accordance with the Company's normal delivery times. Revenue is recognized when this performance obligation is satisfied, which is the point in time when the Company considers control of a product to have transferred to the customer. Revenue recognized reflects the consideration to which the Company expects to be entitled in exchange for those products or services. The Company has determined the transaction price to be the invoice price, net of adjustments, which includes estimates of variable consideration for product returns.

The Company offers volume-based rebate agreements to certain customers and, in these instances, the Company provides a rebate (in the form of a credit memo) at the contract's conclusion, if earned by the customer. In such cases, the transaction price is allocated between the Company's delivery of product and the issuance of a rebate at the contract's conclusion for the customer to utilize on prospective purchases. The performance obligation to issue a customer's rebate, if earned, is transferred over time and the Company's method of measuring progress is the output method, whereby the progress is measured by the estimated rebate earned to date over the total rebate estimated to be earned over the contract period. The provision for volume-based rebates is estimated based on customers' contracted rebate programs and the customers' projected sales levels. The Company periodically monitors its customer rebate programs to ensure the rebate allowance is fairly stated. The Company's rebate allowance is included in accrued liabilities in the consolidated balance sheets and estimated rebates accrued were not material during the periods presented.

Additionally, the Company has a performance obligation related to certain customers' right to a future discount on single dose pharmaceutical purchases in the U.S., and that performance obligation is expected to be recognized when the customer elects to utilize the discount, which is generally within one year. Additionally, the Company has a performance obligation related to its extended warranty agreements with customers related to its KXL systems.

Customers are not granted specific rights of return; however, the Company may permit returns of certain products from customers if such product is returned in a timely manner and in good condition. The Company generally provides a warranty on its products for one year from the date of shipment, and offers an extended warranty for its KXL systems. Any product found to be defective or out of specification will be replaced or serviced at no charge during the warranty period. Estimated allowances for sales returns and warranty replacements are recorded at the time of sale of the product and are estimated based upon the historical patterns of product returns matched against sales, and an evaluation of specific factors that may increase the risk of product returns. Product returns and warranty replacements to date have been consistent with amounts reserved or accrued and have not been significant. If actual results in the future vary from the Company's estimates, the Company will adjust these estimates which would affect net product revenue and earnings in the period such variances become known.

Shipping and Handling Costs

All shipping and handling costs are expensed as incurred and are charged to general and administrative expense. Charges to customers for shipping and handling are credited to general and administrative expense.

Advertising Costs

All advertising costs are expensed as incurred. Advertising costs incurred during the years ended December 31, 2019, December 31, 2018 and December 31, 2017 were approximately $2.5 million, $1.8 million and $2.1 million, respectively.

Income Taxes

Income taxes are accounted for using an asset and liability approach that requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the financial reporting

basis and the tax basis of the Company's assets and liabilities at the applicable tax rates, along with net operating loss and tax credit carryovers. The Company records a valuation allowance against its deferred tax assets to reduce the net carrying value to an amount that it believes is more likely than not to be realized. Management has considered estimated taxable income and ongoing prudent and feasible tax planning strategies in assessing the amount of the valuation allowance. Based upon the weight of available evidence, which includes the Company's historical operating performance and limited potential to utilize tax credit carryforwards, the Company has determined that total deferred tax assets should be fully offset by a valuation allowance. When the Company establishes or reduces the valuation allowance against its deferred tax assets, its provision for income taxes will increase or decrease, respectively, in the period such determination is made.

The Company is required to file federal and state income tax returns in the United States and various other state jurisdictions. The Company also files income tax returns in the foreign countries in which its subsidiaries operate. The preparation of these income tax returns requires the Company to interpret the applicable tax laws and regulations in effect in such jurisdictions, which could affect the amount of tax paid.

Additionally, the Company follows an accounting standard addressing the accounting for uncertainty in income taxes that prescribes rules for recognition, measurement, and classification in the consolidated financial statements of tax positions taken or expected to be taken in a tax return.

Research and Development Expenses

Major components of research and development expense include personnel costs, preclinical studies, clinical trials and related clinical product manufacturing, materials and supplies, and fees paid to consultants. Research and development costs are expensed as goods are received or services are rendered. Costs to acquire technologies to be used in research and development that have not reached technological feasibility and have no alternative future use are also expensed as incurred.

At each financial reporting date, the Company accrues the estimated unpaid costs of clinical study activities performed during a period by third party clinical sites with whom the Company has agreements that provide for fees based upon the quantities of subjects enrolled and clinical evaluation visits that occur over the life of the study. The cost estimates are determined based upon a review of the agreements and data collected by internal and external clinical personnel as to the status of enrollment and subject visits, and are based upon the facts and circumstances known to the Company at each financial reporting date. If the actual performance of activities varies from the assumptions used in the cost estimates, the accruals are adjusted accordingly. There have been no material adjustments to the Company's prior period accrued estimates for clinical trial activities through December 31, 2019.

Stock-Based Compensation

The Company recognizes compensation expense for all stock-based awards granted to employees and nonemployees, including members of its board of directors.

The fair value of stock option awards is estimated at the grant date using the Black-Scholes option pricing model, and the portion that is ultimately expected to vest is recognized as compensation cost over the requisite service period using the straight-line method. The determination of the fair value-based measurement of stock options on the date of grant using an option pricing model is affected by the determination of the fair value of the underlying stock as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the Company's stock price volatility over the expected term of the grants, and actual and projected stock option exercise behaviors. In the future, as additional empirical evidence regarding these estimates becomes available, the Company may change or refine its approach of deriving them, and these changes could impact the fair value-based measurement of stock options granted in the future. Changes in the fair value-based measurement of stock awards could materially impact the Company's operating results.

As further described in *Note 9, Stock-Based Compensation*, certain cash-settled stock option awards were granted to Avedro employees as part of the Avedro Merger. These cash-settled stock options are recorded at fair value each reporting period with changes in fair value reflected in earnings.

The fair value of restricted stock unit (RSU) awards made to employees and nonemployees is equal to the closing market price of the Company's common stock on the grant date.

Software Costs

The Company currently expenses software service costs along with any associated implementation costs as services are provided and implementation costs are incurred.

Comprehensive Income (Loss)

All components of comprehensive income (loss), including net income (loss), are reported in the consolidated financial statements in the period in which they are recognized. Comprehensive income (loss) is defined as the change in equity during a period from transactions and other events and circumstances from non-owner sources, including unrealized gains and losses on marketable securities and foreign currency translation adjustments.

Net Income (Loss) per Share

Basic net income (loss) per share is calculated by dividing the net income (loss) by the weighted average number of common shares that were outstanding for the period, without consideration for common stock equivalents.

For periods when the Company realizes a net loss, no common stock equivalents are included in the calculation of weighted average number of dilutive common stock equivalents as the effect of applying the treasury stock method is considered anti-dilutive.

For periods when the Company realizes net income, diluted net income per share is calculated by dividing the net income by the weighted average number of common shares plus the sum of the weighted average number of dilutive common stock equivalents outstanding for the period determined using the treasury stock method. Common stock equivalents are comprised of stock options, outstanding and unvested RSUs under the Company's incentive compensation plans and shares issuable under the Company's Employee Stock Purchase Plan (ESPP).

The Company's computation of net income (loss) per share is as follows (in thousands, except per share amounts):

	As of December 31,		
	2019	2018	2017
Numerator:			
Net income (loss) - basic	$ 15,424	$ (12,951)	$ (92)
Denominator:			
Weighted average number of common shares outstanding - basic	37,355	35,317	34,381
Common stock equivalents from outstanding common stock options	3,495	-	-
Common stock equivalents for ESPP	25	-	-
Common stock equivalents from unvested restricted stock units	270	-	-
Weighted average number of common shares outstanding - diluted	41,145	35,317	34,381
Basic net income (loss) per share	$ 0.41	$ (0.37)	$ (0.00)
Diluted net income (loss) per share	$ 0.37	$ (0.37)	$ (0.00)

Potentially dilutive securities not included in the calculation of diluted net income (loss) per share because to do so would be anti-dilutive were as follows (in common stock equivalent shares, in thousands):

	As of December 31,		
	2019	2018	2017
Stock options outstanding	3,616	5,614	5,516
Unvested restricted stock units	365	244	173
Employee stock purchase plan	26	3	28
	4,007	5,861	5,717

Recently Adopted Accounting Pronouncements

In February 2018, the FASB issued ASU No. 2018-02, *Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* (ASU 2018-02) that gives entities the option to reclassify to retained earnings tax effects related to items that have been stranded in accumulated other comprehensive income as a result of the Act. A company that elects to reclassify these amounts must reclassify stranded tax effects related to the Act's change in U.S. federal tax rate for all items accounted for in other comprehensive income. Companies can also elect to reclassify other stranded effects that relate to the Act but do not directly relate to the change in the federal rate. Companies can choose whether to apply the amendments retrospectively to each period in which the effect of the Act is recognized or to apply the amendments in the period of adoption. The guidance was effective for the Company for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The Company adopted ASU 2018-02 effective January 1, 2019 and the adoption did not have a material impact to the Company's consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting* (ASU 2018-07). ASU 2018-07 simplifies the accounting for share-based payments to nonemployees by aligning it with the accounting for share-based payments to employees, with certain exceptions. Consistent with the accounting requirement for employee share-based payment awards, nonemployee share-based payment awards are measured at grant-date fair value of the equity instruments that an entity is obligated to issue when the good has been delivered, or the service has been rendered, and any other conditions necessary to earn the right to benefit from the instruments have been satisfied. The accounting standard was effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company adopted the guidance effective January 1, 2019 and the adoption did not have a material impact to the Company's consolidated financial statements.

In July 2019, the FASB issued ASU No. 2019-07*, Codification Updates to SEC Sections – Amendments to SEC Paragraphs Pursuant to SEC Final Rule Releases No. 33-10532, and Nos. 33-10231 and 33-10442, Investment Company Reporting Modernization and Miscellaneous Updates* (ASU 2019-07). ASU 2019-07 aligns the guidance in various SEC sections of the Codification with the requirements of certain SEC final rules. ASU 2019-07 was effective immediately and the adoption of ASU 2019-07 did not have a material impact on the Company's consolidated financial statements.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes.* ASU 2019-12 simplifies the accounting for income taxes by eliminating certain exceptions to the guidance in ASC 740 related to the approach for intraperiod tax allocation, the methodology for calculating incomes taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. ASU 2019-12 is effective in 2021 and interim periods within that year, and permits for early adoption. The Company elected to early adopt ASU 2019-12 effective December 31, 2019 and the adoption did not have a material impact to the Company's consolidated financial statements.

See above under "*Leases*" for a discussion of ASC 842, which was adopted effective January 1, 2019.

Recently Issued Accounting Pronouncements Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* (ASU 2016-13), which amends the impairment model by requiring entities to use a forward-looking approach based on expected losses rather than incurred losses to estimate credit losses on certain types of financial instruments, including trade receivables. This may result in the earlier recognition of allowances for losses. ASU 2016-13 is effective for the Company for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, with early adoption permitted. In November 2018, the FASB issued ASU 2018-19, *Codification Improvements to Topic 326, Financial Instruments—Credit Losses*, which provided additional implementation guidance on the previously issued guidance. The Company is assessing the potential impacts of these standards; however, it does not believe there will be a material impact on its consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820)* (ASU 2018-13), which modifies the disclosures on fair value measurements by removing the requirement to disclose the amount and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy and the policy for timing of such transfers. The guidance expands the disclosure requirements for Level 3 fair value measurements, primarily focused on changes in unrealized gains and losses included in other comprehensive loss. ASU 2018-13 is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, with early adoption permitted. The Company is assessing the potential impacts of the standard on its consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-15*, Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* (ASU 2018-15) which clarifies the accounting for implementation costs in cloud computing arrangements. ASU 2018-15 is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years, and early adoption is permitted. The Company is assessing the potential impacts of these standards.

In November 2018, the FASB issued ASU 2018-18, *Collaborative Arrangements (Topic 808): Clarifying the Interaction Between Topic 808 and Topic 606* (ASU 2018-18). ASU 2018-18 clarifies that certain transactions between participants in a collaborative arrangement should be accounted for under ASC 606 when the counterparty is a customer and precludes an entity from presenting consideration from a transaction in a collaborative arrangement as revenue from contracts with customers if the counterparty is not a customer for that transaction. For the Company, these amendments are effective for fiscal years beginning after December 15, 2019, including interim periods within those years. Early adoption is permitted, including adoption in any interim period, for entities that have adopted ASC 606. The Company is assessing the potential impacts of these standards; however, it does not believe there will be a material impact on its consolidated financial statements.

Note 3. Balance Sheet Details

Short-term Investments

Short-term investments consisted of the following (in thousands):

		At December 31, 2019			
	Maturity (in years)	Amortized cost or cost	Unrealized gains	Unrealized losses	Estimated fair value
Bank certificates of deposit	less than 1	12,999	7	—	13,006
Commercial paper	less than 1	7,475	8	—	7,483
Corporate notes	less than 3	65,354	295	(10)	65,639
Asset-backed securities	less than 3	25,333	99	(7)	25,425
Total		$ 111,161	$ 409	$ (17)	$ 111,553

		At December 31, 2018			
	Maturity (in years)	Amortized cost or cost	Unrealized gains	Unrealized losses	Estimated fair value
U.S government bonds	less than 1	$ 1,300	$ —	$ (3)	$ 1,297
U.S. government agency bonds	less than 1	1,994	—	(12)	1,982
Bank certificates of deposit	less than 2	15,201	2	(3)	15,200
Commercial paper	less than 1	9,597	1	(5)	9,593
Corporate notes	less than 3	60,923	24	(194)	60,753
Asset-backed securities	less than 3	21,918	18	(94)	21,842
Total		$ 110,933	$ 45	$ (311)	$ 110,667

Accounts Receivable, Net

Accounts receivable consisted of the following (in thousands):

	December 31,	
	2019	2018
Accounts receivable	$ 39,657	$ 19,333
Allowance for doubtful accounts	(1,240)	(660)
	$ 38,417	$ 18,673

Inventory, Net

Inventory consisted of the following (in thousands):

	December 31,	
	2019	2018
Finished goods	$ 32,108	$ 4,256
Work in process	3,884	3,197
Raw material	6,586	5,829
	$ 42,578	$ 13,282

Property and Equipment, Net

Property and equipment consisted of the following (in thousands):

	December 31,	
	2019	2018
Buildings	$ 874	$ 874
Equipment	13,782	10,306
Furniture and fixtures	1,643	1,570
Leasehold improvements	6,384	4,792
Computer equipment and software	2,808	2,232
Land	7,068	7,068
Construction in progress	1,627	1,231
	34,186	28,073
Less accumulated depreciation and amortization	(12,130)	(8,920)
	$ 22,056	$ 19,153

Depreciation and amortization expense related to property and equipment was $3.7 million, $3.1 million and $2.1 million for the years ended December 31, 2019, December 31, 2018 and December 31, 2017, respectively.

Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	December 31,	
	2019	2018
Accrued bonuses	$ 13,525	$ 8,604
Accrued legal expenses	3,957	2,466
Accrued vacation benefits	2,784	2,446
Accrued restructuring costs	4,096	—
Accrued liability for cash-settled options	6,685	—
Other accrued liabilities	20,872	10,448
	$ 51,919	$ 23,964

Note 4. Fair Value Measurements

Fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability.

The following tables present information about the Company's financial assets measured at fair value on a recurring basis as of December 31, 2019 and December 31, 2018, and indicate the fair value hierarchy of the valuation techniques utilized by the Company to determine such fair value (in thousands). The Company did not have any financial liabilities measured at fair value on a recurring basis as of December 31, 2018.

	At December 31, 2019			
	December 31, 2019	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets				
Money market funds [(i)]	$ 2,530	$ 2,530	$ —	$ —
Bank certificates of deposit [(ii)(iii)]	14,208	—	14,208	—
Commercial paper [(ii)]	7,484	—	7,484	—
Corporate notes [(ii)]	65,638	—	65,638	—
Asset-backed securities [(ii)]	25,424	—	25,424	—
Total assets	$ 115,284	$ 2,530	$ 112,754	$ —
Liabilities				
Cash-settled stock options	$ 6,685	—	6,685	—
Total liabilities	$ 6,685	$ —	$ 6,685	$ —

(i) Included in cash and cash equivalents with a maturity of three months or less from date of purchase on the consolidated balance sheets.

(ii) Included in short-term investments on the consolidated balance sheets.

(iii) One bank certificate of deposit investment totaling $1,201 (in thousands) is included in cash and cash equivalents on the consolidated balance sheets, as the investment has a maturity of three months or less from the date of purchase on the consolidated balance sheets.

	At December 31, 2018			
	December 31, 2018	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets				
Money market funds [(i)]	$ 1,156	$ 1,156	$ —	$ —
U.S. government agency bonds [(ii)]	1,982	—	1,982	—
U.S. Government bonds [(ii)]	1,297	—	1,297	—
Bank certificates of deposit [(ii)]	15,201	—	15,201	—
Commercial paper [(ii)]	9,593	—	9,593	—
Corporate notes [(ii)(iii)]	61,752	—	61,752	—
Asset-backed securities [(ii)]	21,842	—	21,842	—
Total assets	$ 112,823	$ 1,156	$ 111,667	$ —

(i) Included in cash and cash equivalents with a maturity of three months or less from date of purchase on the consolidated balance sheets.

(ii) Included in short-term investments on the consolidated balance sheets.

(iii) One corporate note investment totaling $1,000 (in thousands) is included in cash and cash equivalents on the consolidated balance sheets, as the investment has a maturity of three months or less from the date of purchase on the consolidated balance sheets.

Money market funds and currency are highly liquid investments and are actively traded. The pricing information on these investment instruments is readily available and can be independently validated as of the measurement date. This approach results in the classification of these securities as Level 1 of the fair value hierarchy.

U.S. government agency bonds, U.S. government bonds, bank certificates of deposit, commercial paper, corporate notes and asset-backed securities are measured at fair value using Level 2 inputs. The Company reviews trading activity and pricing for these investments as of each measurement date. When sufficient quoted pricing for identical securities is not available, the Company uses market pricing and other observable market inputs for similar securities obtained from third party data providers. These inputs represent quoted prices for similar assets in active markets or these inputs have been derived from observable market data.

The fair value of cash-settled stock options is based on the Black-Scholes option valuation model utilizing the Company's stock price, the cash-settled options' remaining term, expected stock price volatility, and the risk-free interest rate as of the measurement date. The changes in the fair value are reflected in compensation expense within selling, general and administrative expense on the consolidated income statement. Please see *Note 9*, *Stock-Based Compensation* for further details regarding these cash-settled stock options.

This approach results in the classification of these securities as Level 2 of the fair value hierarchy.

There were no transfers between levels within the fair value hierarchy during the periods presented.

The Company did not have any assets or liabilities measured at fair value on a recurring basis within Level 3 fair value measurements as of December 31, 2019 and December 31, 2018.

Note 5. Leases

The Company has operating and finance leases for facilities and certain equipment. Leases with an initial term of 12 months or less are not recorded on the consolidated balance sheet. Lease expense for operating leases is recognized on a straight-line basis over the lease term. For lease agreements entered into or reassessed after the adoption of ASC 842, the Company combines lease and non-lease components. See Note 2, *Summary of Significant Accounting Policies* for additional information.

The Company's leases have remaining non-cancelable lease terms of approximately one year to thirteen years, some of which include options to extend the leases for up to ten years, and some of which include options to terminate the lease within one year. The exercise of lease renewal options is at the Company's sole discretion. In certain of the Company's lease agreements, the rental payments are adjusted periodically to reflect actual charges incurred for common area maintenance, landlord incentives and/or inflation.

The Company leases two adjacent facilities located in San Clemente, California. During December 2018, the Company extended the term of these facilities by three years, both of which now expire on December 31, 2024. Each agreement contains an option to extend the lease for one additional three year period at market rates. The total leased square footage of these facilities equals approximately 98,000. In conjunction with these extensions, the lease landlord agreed to provide the Company with a tenant improvement allowance in the amount of the cost of any leasehold improvements, not to exceed approximately $0.3 million upon the Company providing the necessary documentation evidencing the costs of the allowable leasehold improvements.

On November 14, 2018, the Company entered into an office building lease pursuant to which the Company will lease one property containing three existing office buildings, comprising approximately 160,000 rentable square feet of space, located in Aliso Viejo, California (Aliso Facility) which was accounted for as a finance lease. The term of the Aliso Facility commenced on April 1, 2019 and continues for thirteen years. The agreement contains an option to extend the lease for two additional five year periods at market rates. The Company intends to relocate its corporate administrative headquarters, along with certain laboratory, research and development and warehouse space, to the Aliso Facility. The lease landlord agreed to provide the Company with a tenant improvement allowance in the amount of the cost of any leasehold improvements, not to exceed approximately $12.6 million upon the Company providing the necessary documentation evidencing the costs of the allowable leasehold improvements.

The Company currently intends to maintain its manufacturing facilities at its San Clemente location for the foreseeable future.

As a result of the Avedro Merger, the Company leases approximately 27,000 square feet of office and laboratory space in Waltham, Massachusetts, pursuant to a lease agreement that expires in 2023. The Company also currently occupies approximately 19,000 square feet of leased manufacturing space in Burlington, Massachusetts pursuant to a lease agreement that expires in 2023.

The Company's remaining U.S.-based and foreign subsidiaries' leased office space totals less than 14,000 square feet.

The following table presents the lease balances within the consolidated balance sheets:

Leases (in thousands)	Classification	December 31, 2019
Assets		
Operating	Operating lease right-of-use asset	$ 15,704
Finance	Finance lease right-of-use asset	54,048
Total lease assets		$ 69,752
Liabilities		
Current		
Operating	Accrued liabilities	$ 2,401
Noncurrent		
Operating	Operating lease liability	14,195
Finance	Finance lease liability	58,435
Total lease liabilities		$ 75,031

Note: As the implicit rates in the Company's leases are not readily available, the incremental borrowing rate was determined based on the information available at commencement date in determining the present value of lease payments.

For the year ended December 31, 2019, the components of operating and finance lease expenses were as follows:

	Year Ended

Lease Cost (in thousands)	Classification		December 31, 2019
Fixed operating lease cost	Selling, general and administrative expenses	$	2,473 (a)
Finance lease cost	Amortization of right-of-use asset included in Selling, general and administrative expenses	$	1,822
Finance lease cost	Interest on lease liability	$	2,565

(a) Includes short-term leases, which are immaterial.

The following table presents the maturity of the Company's operating and finance lease liabilities as of December 31, 2019:

Maturity of Lease Liabilities (in thousands)	Operating Leases (a)	Finance Leases (b)
2020	$ 3,245	$ —
2021	3,166	—
2022	3,119	—
2023	2,230	3,543
2024	2,023	5,184
Thereafter	6,294	118,362
Total lease payments	$ 20,077	$ 127,089
Less: imputed interest	3,481	68,654
Total lease liabilities	$ 16,596	$ 58,435

(a) Operating lease payments include $12.0 million related to options to extend lease terms that are reasonably certain of being exercised.
(b) Finance lease payments include $75.8 million related to options to extend lease terms that are reasonably certain of being exercised.

The weighted-average remaining lease term and weighted-average discount rate related to the Company's operating and finance leases as of December 31, 2019 were:

Lease Term and Discount Rate	December 31, 2019
Weighted-average remaining lease term (years)	
Operating leases	6.5
Finance leases	22.3
Weighted-average discount rate	
Operating leases	5.5 %
Finance leases	6.0 %

Supplemental cash flow information related to the Company's operating and finance leases was as follows:

Other Information (in thousands)	Year Ended December 31, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 2,134
Right-of-use asset obtained in exchange for lease obligations:	
Operating lease	$ 17,474
Finance lease	55,870

Note 6. Business Combinations

As a result of the Avedro Merger previously discussed in Note 1*, Organization and Basis of Presentation*, effective November 21, 2019, Avedro is a wholly-owned subsidiary of the Company and the Avedro Merger is intended to expand the Company's portfolio of pipeline products beyond the treatment of glaucoma to include pharmaceutical

therapies for the treatment of corneal disorders as part of the Company's strategic objective to build a portfolio of micro-scale surgical and pharmaceutical therapies in corneal health and retinal disease.

The fair value of consideration transferred at closing was $437.8 million (the Merger Consideration), that consisted of Glaukos shares worth $406.8 million issued to replace Avedro common stock, Glaukos shares worth $0.2 million to replace the certain vested Avedro warrants, and $30.8 million of value attributable to the pre-combination services associated with replacement of all Avedro outstanding and unexercised stock option awards and all outstanding restricted stock units (Replacement Awards). See Note 9, Stock-based Compensation for further details regarding the Replacement Awards. The following table summarizes the components of the Merger Consideration as of November 21, 2019 (in thousands, except shares and stock closing price):

Avedro shares of common stock outstanding at closing		17,670,003
Exchange Ratio		0.365
Right to receive shares of Glaukos		6,449,551
Glaukos closing stock price on November 21, 2019	$	63.07
Fair value of Glaukos common stock issued in the Merger, plus an immaterial amount of cash paid for fractional shares	$	406,776
Fair value of Glaukos common stock issued to replace certain vested Avedro warrants	$	189
Fair value of Replacement Awards attributable to pre-combination services	$	30,786
Total Merger Consideration	$	437,751

The Company performed a valuation analysis of the fair market value of Avedro's assets and liabilities as of closing. The following table sets forth an allocation of the Merger Consideration to the identifiable tangible and intangible assets acquired and liabilities assumed, with the excess recorded to goodwill. This allocation of the Merger Consideration as of November 21, 2019 may be subject to revision if new facts and circumstances arise over the measurement period, which may extend up to one year from closing (in thousands):

Assets Acquired:		
Cash	$	49,101
Accounts receivable		13,113
Inventory		33,339
Prepaid expenses and other current assets		2,522
Restricted cash		551
Property and equipment		1,489
Intangible assets		385,200
Goodwill		66,134
Liabilities Assumed:		
Accounts payable		7,056
Accrued liabilities		6,776
Deferred revenue		1,389
Debt		22,496
Deferred revenue, non-current		43
Deferred tax liability		75,938
Fair value of net assets acquired	$	437,751

Goodwill represents the excess of the Merger Consideration over the preliminary fair value of the underlying assets acquired and liabilities assumed. Goodwill is attributable to the assembled workforce of experienced personnel at Avedro and expected synergies, and is not deductible for tax purposes.

Additionally, the fair market value inventory adjustment totaled approximately $29.0 million and is being amortized to cost of sales over the inventory's expected turnover period. As of December 31, 2019 the Company

recorded approximately $4.0 million related to this amortization in cost of sales in the consolidated statement of operations.

The Company consolidated Avedro's operating results into its consolidated financial statements beginning on November 21, 2019. The amount of net sales and net loss of Avedro included in the consolidated financial statements since the date of the acquisition is $6.0 million and $0.6 million, respectively. The fair value and estimated useful lives of the Avedro intangible assets are as follows (in thousands, except where noted):

	Fair Value	Estimated Useful Life (in years)
Intangible assets subject to amortization:		
Developed technology	$ 252,200	11.4
Customer relationships	14,100	5
Total	$ 266,300	
Intangible assets not subject to amortization:		
In-process research and development (IPR&D)	$ 118,900	Indefinite
Total intangible assets	$ 385,200	

Supplemental Pro Forma Information (unaudited):

The following supplemental financial information presents the pro forma combined results of the Company as if the Avedro Merger had occurred on January 1, 2018 (in thousands):

	2019	2018
Pro forma revenue	$ 273,823	$ 211,447
Pro forma net loss	$ (103,275)	$ (27,200)

The above pro forma results are based on assumptions and estimates, which the Company believes to be reasonable; however, are not the operating results that would have been realized had the Avedro Merger actually closed on January 1, 2018 and are not necessarily indicative of the Company's ongoing combined operating results.

The pro forma results include adjustments related to purchase accounting, acquisition and integration costs, amortization of intangible assets, and conforming accounting policies. Material non-recurring pro forma adjustments reflected in the pro forma results include: (1) the removal of $16.1 million in transaction and integration costs incurred in 2019; (2) the inclusion of $16.3 million in transaction and integration costs incurred in 2018; (3) a $2.5 million increase to Avedro revenue in 2018 in order to reflect the adoption of ASC 606; (4) the removal of a $75.9 million tax benefit from 2019, and the inclusion of a $75.9 million tax benefit in 2018 related to the partial release of the Company's valuation allowance due to net deferred tax liabilities assumed in the Avedro Merger; and (5) the amortization of approximately $29.0 million of step-up in the fair value of inventory to cost of sales in 2018.

Note 7. Intangible Assets and Goodwill

Avedro intangible assets

As part of the Avedro Merger on November 21, 2019, the Company acquired identifiable intangible assets for (1) developed technology related to *Photrexa*, a bio-activated pharmaceutical therapy for the corneal cross-linking treatment of keratoconus, which will be amortized to cost of sales over a weighted-average estimated useful life of approximately 11 years, and (2) customer relationships, which will be amortized to selling, general and administrative expense over an estimated useful life of 5 years. The Company also acquired IPR&D related to other applications of Avedro's corneal remodeling platform, which will not be amortized until technological feasibility is met, but will be assessed for impairment annually.

The fair value of developed technology and IPR&D assets were determined using an excess earnings methodology. Significant assumptions used in the valuation include: (i) the period in which material net cash inflows are

expected to commence, which was estimated to be 2021 for developed technology and 2023 for IPR&D assets, and (ii) the risk-adjusted discount rate of 11.5% for developed technology and 13% for IPR&D assets.

For the year ended December 31, 2019 amortization expense related to the above finite-lived intangible assets was approximately $2.3 million and $0.3 million, recorded in cost of sales and selling, general and administrative expenses, respectively, in the consolidated statement of operations. There was not amortization expense related to these intangible assets for the years ended December 31, 2018 and December 31, 2017.

Goodwill

The addition of $66.1 million in goodwill as of December 31, 2019 relates to the Avedro Merger. For additional details, please refer to *Note 6, Business Combinations*. The first annual assessment of goodwill by reporting unit is scheduled to be performed in the fourth quarter of the year ending December 31, 2020 and on an annual basis thereafter, or more frequently if events or circumstances indicate the carrying value may no longer be recoverable and that an impairment loss may have occurred.

GMP Vision Solutions intangible asset

In January 2007, the Company entered into an agreement (the Original GMP Agreement) with GMP Vision Solutions, Inc. (GMP) to acquire certain IPR&D in exchange for periodic royalty payments equal to a single-digit percentage of revenues received for royalty-bearing products and periodic royalty payments at a higher royalty rate applied to all amounts received in connection with the grant of licenses or sub-licenses of the related intellectual property.

In November 2013, the Company entered into an amended agreement with GMP in which remaining royalties payable to GMP (the Buyout Agreement) were canceled in exchange for the issuance of $17.5 million in promissory notes payable to GMP and a party related to GMP. Additionally, the Buyout Agreement included a provision that, in the event of a Company sale, as defined in the amendment, the Company would be required to pay GMP a percentage of the sale consideration above a certain threshold, with such payment not to exceed $2.0 million.

The Company concluded that the $17.5 million transaction represented the purchase of an intangible asset. The Company estimated a useful life of five years over which the intangible asset was being amortized to cost of sales in the accompanying statements of operations, which amortization period was determined after consideration of the projected outgoing royalty payment stream had the Buyout Agreement not occurred, and the remaining life of the patents obtained in the Original GMP Agreement. After determining that the pattern of future cash flows associated with this intangible asset could not be reliably estimated with a high level of precision, the Company concluded that the intangible asset would be amortized on a straight-line basis over the estimated useful life. For the year ended December 31, 2018, the amortization expense was $3.0 million and the intangible asset has been fully amortized. The amortization expense was $3.5 million during the year ended December 31, 2017.

Other intangible assets

The Company entered into agreements with international distributors pursuant to which their distribution rights with the Company were terminated effective as of December 31, 2015. As part of the agreements the distributors agreed to provide certain services to, and not compete with, the Company for one-to-two years in exchange for payments calculated based on single-digit percentages of the Company's future revenues in those years in the respective countries that had comprised the distributors' territories. Management recorded the estimated fair value of the non-compete provisions as intangible assets. For the years ended December 31, 2018 and December 31, 2017, the Company recorded amortization expense related to the non-compete provisions of approximately $0.2 million and $0.3 million, respectively. As of December 31, 2018, the non-compete intangible assets were fully amortized.

The following table presents the composition of our intangible assets and goodwill (in thousands):

	Estimated Useful Life (in years)	As of December 31, 2019			As of December 31, 2018		
		Gross Carrying Amount	Accumulated Amortization	Net Amount	Gross Carrying Amount	Accumulated Amortization	Net Amount
Developed technology	11.4	$ 252,200	(2,301)	249,899	—	—	—
Customer relationships	5.0	14,100	(294)	13,806	—	—	—
GMP royalty buyout	5.0	17,500	(17,500)	—	17,500	(17,500)	—
Non-compete agreements	1-2	321	(321)	—	321	(321)	—
Intangible assets subject to amortization		284,121	(20,416)	263,705	17,821	(17,821)	—
In-process research and development	Indefinite	$ 118,900	—	118,900	—	—	—
Goodwill	Indefinite	$ 66,134	—	66,134	—	—	—
Total		$ 469,155	$ (20,416)	$ 448,739	$ 17,821	$ (17,821)	$ —

As of December 31, 2019, expected amortization expense for unamortized finite-lived intangible assets for the next five years and thereafter is as follows (in thousands):

	Amortization Expense
2020	$ 24,912
2021	24,912
2022	24,912
2023	24,912
2024	24,619
Thereafter	139,438
Total amortization	$ 263,705

Actual amortization expense to be reported in future periods could differ from these estimates as a result of asset impairments, acquisitions, or other facts and circumstances.

Note 8. Revenue from Contracts with Customers

The Company's net sales are generated primarily from sales of *iStent* products to customers, and following the Avedro Merger on November 21, 2019, sales of *Photrexa* and associated drug formulations as well as KXL and Mosaic systems. Customers are primarily comprised of ambulatory surgery centers, hospitals and physician private practices, with distributors being used in certain international locations where the Company currently does not have a direct commercial presence.

Revenue is recognized in an amount that reflects the consideration the Company expects to be entitled to in exchange for goods or services, and all of the Company's net sales are considered revenue from contracts with customers.

Disaggregation of Revenue

The Company's revenues disaggregated by product category, for the years ended December 31, 2019, December 31, 2018 and December 31, 2017 was as follows (in thousands):

	Year ended December 31,		
	2019	**2018**	**2017**
Glaucoma	$ 230,967	$ 181,278	$ 159,254
Corneal Health	6,017	—	—
Total	$ 236,984	$ 181,278	$ 159,254

The following table presents the Company's revenues disaggregated by geography for the years ended December 31, 2019, December 31, 2018 and December 31, 2017 (in thousands):

Geographic net sales information (in thousands)	Year ended December 31, **2019**	**2018**	**2017**
United States	$ 192,456	$ 151,677	$ 140,902
International	44,528	29,601	18,352
Total net sales	$ 236,984	$ 181,278	$ 159,254

Contract Balances

Contract Assets

Amounts are recorded as accounts receivable when the Company's right to consideration becomes unconditional. Payment terms on invoiced amounts are typically 30 days for *iStent* and corneal health products, though extended payment terms on corneal health products may be offered. However the Company does not consider any significant financing components in customer contracts given the expected time between transfer of the promised products and the payment of the associated consideration is less than one year. As of December 31, 2019 and December 31, 2018, all amounts included in accounts receivable, net on the consolidated balance sheets are related to contracts with customers.

Sales commissions earned on U.S. sales of KXL systems are capitalized as the commissions represent costs to obtain a contract and the amortization period is deemed greater than one year. These costs are deferred in other assets on the Company's consolidated balance sheet, net of the short term portion included in prepaid assets and other current assets, and are amortized as a sales and marketing expense on a straight-line basis over the expected period of benefit. Capitalized sales commissions and the related amortization expense included in the consolidated financial statements were immaterial as of December 31, 2019, and were not presented in the consolidated financial statements as of December 31, 2018.

Aside from the aforementioned contract assets, the Company does not have any contract assets given that the Company does not have any unbilled receivables and sales commissions on other products are expensed within selling, general and administrative expenses within the consolidated statement of operations when incurred as any incremental cost of obtaining contracts with customers would have an amortization period of less than one year.

Contract Liabilities

Contract liabilities reflect consideration received from customers' purchases allocated to the Company's future performance obligations.

The Company has a performance obligation to issue a rebate to customers who may be eligible for a rebate at the conclusion of their contract term. This performance obligation is transferred over time and the Company's method of measuring progress is the output method, whereby the progress is measured by the estimated rebate earned to date over the total rebate estimated to be earned over the contract period. The Company's rebate allowance is included in accrued liabilities in the consolidated balance sheets and estimated rebates accrued were not material during the periods presented.

Additionally, in the U.S. the Company has a performance obligation related to its customers' right to a future discount on single dose pharmaceutical purchases, and, to a lesser extent, extended warranty service contracts. As of December 31, 2019, the amount allocated to the customers' right to a future discount and is expected to be recognized when the customer elects to utilize the discount, which is generally within one year, was immaterial, as was the amount allocated to extended warranty service contracts.

During the year ended December 31, 2019, the Company did not recognize any revenue related to material changes in transaction prices regarding its contracts with customers and did not recognize any material changes in revenue related to amounts included in contract liabilities at the beginning of the period.

Note 9. Stock-Based Compensation

The Company has 5,000,000 of authorized preferred stock issuable, and there is no preferred stock outstanding as of December 31, 2019 and December 31, 2018. Each share of common stock is entitled to one vote.

The Company has four stock based compensation plans (collectively, the Stock Plans)—the 2001 Stock Option Plan (the 2001 Stock Plan), the 2011 Stock Plan (the 2011 Stock Plan), the 2015 Omnibus Incentive Compensation Plan (the 2015 Stock Plan) and the ESPP. The 2015 Stock Plan permits grants of RSU awards.

The purpose of these plans is to provide incentives to employees, directors and nonemployee consultants. The Company no longer grants any awards under the 2001 Stock Plan and the 2011 Stock Plan. The maximum term of any stock options granted under the Stock Plans is 10 years. For employees and nonemployees, stock options generally vest 25% on the first anniversary of the original vesting date, with the balance vesting monthly or annually over the remaining three years. Stock options are granted at exercise prices at least equal to the fair value of the underlying stock at the date of the grant. For employees and nonemployees, generally, RSU awards vest 25% on each of the first, second, third and fourth anniversaries of the grant date and in certain cases, vest one year after grant date.

In 2019, the Compensation Committee approved the grant of performance-based equity awards (PBEAs) to the Company's named executive officers and certain other employees pursuant to the 2015 Stock Plan. These PBEAs will only vest upon the Compensation Committee's determination that a pre-defined Company operational goal was satisfied.

The ESPP permits eligible employees to purchase shares of the Company's common stock, using contributions via payroll deductions of up to 15% of their earnings, at a price per share equal to 85% of the lower of the stock's fair market value on the offering date or purchase date. The ESPP is intended to qualify as an "employee stock purchase plan" under Section 423 of the Internal Revenue Code.

On November 21, 2019, in connection with the Avedro Merger, the Company granted the following Replacement Awards to employees of Avedro: (i) approximately 0.2 million cash-settled stock options to certain executives, which became fully vested on December 31, 2019, (ii) approximately 0.1 million stock options and approximately 5,500 restricted stock units to Avedro's board of directors, which were granted with no post-combination vesting requirements, and (iii) approximately 0.7 million stock options and approximately 0.1 million restricted stock units, which are time-vesting. Approximately $30.8 million of the fair value of the Replacement Awards was attributable to pre-combination service and was included in the purchase price of Avedro (see *Note 6*, *Business Combinations*). The remaining value of the Replacement Awards of $26.0 million will be recognized as post-combination expense over the remaining requisite service period for the time-vesting awards ($3.1 million and $1.5 million related to the cash-settled stock options granted to certain executives and awards granted to the Avedro board of directors, respectively, was recognized in post-combination expense during the period from November 21, 2019 to December 31, 2019).

As of January 1, 2020, the Company has reserved an aggregate of 13.5 million shares of common stock for issuance under the 2015 Stock Plan, and 1.8 million shares of common stock for issuance under the ESPP.

Valuation and Expense Recognition of Stock-Based Awards

The Company accounts for the measurement and recognition of compensation expense for all share-based awards made to the Company's employees and nonemployees based on the estimated fair value of the awards.

The fair value of RSU awards made to employees and nonemployees is equal to the closing market price of the Company's common stock price on the grant date.

The Company uses the Black-Scholes option-pricing model to estimate the fair value of stock options and look back options included as part of the ESPP. The determination of fair value using the Black-Scholes option-pricing model is affected by the estimated fair market value per share of the Company's common stock as well as assumptions regarding a number of highly complex and subjective variables, including expected stock price volatility, risk-free interest rate, expected dividends and expected option life and generally requires significant management judgment to determine.

Risk-free interest rate. The risk-free interest rate is equal to the U.S. Treasury Note interest rate for the comparable term for the expected option life as of the valuation date. If the expected option life is between the U.S. Treasury Note rates of two published terms, then the risk-free interest rate is based on the straight-line interpolation between the U.S. Treasury Note rates of the two published terms as of the valuation date.

Expected dividend yield. The expected dividend yield is based on the Company's history and expectation of dividend payouts. The Company has never declared or paid any cash dividends and does not presently plan to pay cash dividends in the foreseeable future.

Expected volatility. The Company only recently began to have publicly traded equity and has a limited operating history and a lack of Company-specific historical and implied volatility data, and therefore has estimated its stock price volatility based upon an index of the historical volatilities of a group of comparable publicly-traded medical device peer companies. The historical volatility data was computed using the historical daily closing prices for the selected peer companies' shares during the equivalent period of the calculated expected term of the Company's stock options. The Company will continue to apply this process until a sufficient amount of historical information regarding the volatility of its own stock price becomes available.

Expected term. The Company has concluded that its stock option exercise history does not provide a reasonable basis upon which to estimate expected term, and therefore it uses the simplified method for estimating the expected term of stock option grants. Under this approach, the weighted-average expected term is presumed to be the average of the vesting term and the contractual term of the option.

Fair value of common stock. The Company has used the daily market prices in the determination of the fair value of its common stock.

Forfeiture rate. The Company reduces share-based compensation expense for estimated forfeitures. Forfeitures are estimated at the time of grant based on historical experience, and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Stock Options

The following table summarizes stock option activity under the 2001 Stock Plan, 2011 Stock Plan and 2015 Stock Plan:

	Number of shares underlying options (in thousands)	Weighted-average exercise price per share	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value (in thousands)
Outstanding at December 31, 2016	5,911	$ 12.59	7.3	129,591
Granted	1,877	43.85		
Exercised	(639)	5.76		22,105
Canceled/forfeited/expired	(123)	23.79		
Outstanding at December 31, 2017	7,026	$ 21.36	7.3	$ 69,555
Granted	896	30.83		
Exercised	(1,304)	14.27		46,639
Canceled/forfeited/expired	(311)	31.14		
Outstanding at December 31, 2018	6,307	$ 23.69	6.7	$ 204,896
Granted	186	68.10		
Replacement Awards	803	13.64		
Exercised	(696)	21.53		33,132
Canceled/forfeited/expired	(17)	42.75		
Outstanding at December 31, 2019	6,583	$ 23.91	6.1	$ 204,062
Vested and expected to vest at December 31, 2019	6,418	$ 24.16	6.2	$ 197,261
Exercisable at December 31, 2019	4,985	$ 19.71	5.5	$ 173,590

Intrinsic value is calculated as the difference between the exercise price of the underlying options and the fair value of the common stock for the options that had exercise prices that were lower than the fair value per share of the common stock on the date of exercise.

The weighted average estimated grant date fair value per share of stock options granted during the years ended December 31, 2019, December 31, 2018 and December 31, 2017 was $32.07, $14.98 and $20.62, respectively.

The total fair value of stock options that vested during the years ended December 31, 2019, December 31, 2018 and December 31, 2017 was $33.9 million, $24.2 million and $12.9 million, respectively.

The fair value of each option award is estimated on the date of grant using a Black-Sholes option pricing model applying the assumptions noted in the following table. The weighted average assumptions used to estimate the fair value of options granted to employees and non-employees were as follows:

	Year ended December 31,		
	2019	2018	2017
Risk-free interest rate	2.17 %	2.67 %	2.13 %
Expected dividend yield	0.0 %	0.0 %	0.0 %
Expected volatility	46.8 %	44.9 %	46.5 %
Expected term (in years)	6.01	6.10	6.04

Restricted Stock Units

The following table summarizes the activity of unvested RSUs under the Stock Plans during the years ended December 31, 2019 and December 31, 2018:

	Number of shares (in thousands)	Weighted-average grant date fair value
Unvested at December 31, 2017	173	$ 39.10
Granted	419	33.64
Vested	(41)	39.36
Canceled/forfeited	(19)	33.67
Unvested at December 31, 2018	532	$ 35.17
Granted	323	69.76
Replacement Awards	102	63.07
Vested	(237)	36.54
Canceled/forfeited	(25)	44.59
Unvested at December 31, 2019	695	$ 54.40

The total fair value of RSUs made to employees and nonemployees is equal to the closing market price of the Company's common stock on the grant date. The total fair value of RSUs that vested during the years ended December 31, 2019 and December 31, 2018 was $8.6 million and $1.6 million, respectively. No restricted stock units vested during the year ended December 31, 2017.

Cash-Settled Stock Options

The following table summarizes the activity of cash-settled stock options during the years ended December 31, 2019 and December 31, 2018:

	Number of shares underlying options (in thousands)	Weighted-average exercise price per share	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value (in thousands)
Outstanding at December 31, 2018	—	$ —	—	$ —
Replacement Awards	230	25.89		
Exercised	—	—		—
Canceled/forfeited/expired	—	—		
Outstanding at December 31, 2019	230	$ 25.89	0.5	$ 6,572
Exercisable at December 31, 2019	230	$ 25.89	0.5	$ 6,572

The fair value of cash-settled stock options is based on the Black-Scholes option valuation model utilizing the Company's stock price, the cash-settled options' remaining term of 0.5 years, expected stock price volatility of 44.25%, and the risk-free interest rate of 1.6% as of the measurement date. The changes in the fair value are reflected in compensation expense within selling, general and administrative expense on the consolidated income statement.

The cash-settled stock options granted to certain Avedro executives are included in accrued liabilities on the Company's consolidated balance sheet and are recorded at fair value each reporting period with changes in fair value reflected in earnings. The cash-settled stock options were fully vested as of December 31, 2019 and have a contractual term that ends on June 30, 2020.

All Share-Based Compensation Arrangements

The following table summarizes the allocation of stock-based compensation related to stock options and RSUs and includes Replacement Awards, as well as cash-settled stock options in the accompanying consolidated statements of operations (in thousands):

	Year ended December 31,		
	2019	2018	2017
Cost of sales	$ 1,127	$ 703	$ 597
Selling, general & administrative	31,801	19,816	13,006
Research and development	6,553	5,185	3,989
Total	$ 39,481	$ 25,704	$ 17,592

(i) Of the total amount, $3.1 million relates to cash-settled stock options included in accrued liabilities within the consolidated balance sheet as of December 31, 2019.

In the years ended December 31, 2019, December 31, 2018, and December 31, 2017, the related tax benefits were $4.6 million, $10.5 million and $5.4 million, respectively, relating to stock-based compensation.

At December 31, 2019, the total unamortized stock-based compensation expense was approximately $65.3 million. Of the approximately $65.3 million in unamortized stock-based compensation expense, $36.7 million was attributable to stock options and is to be recognized over the stock options' remaining vesting terms of approximately 4.0 years (2.1 years on a weighted average basis). The remaining $28.6 million was attributable to RSUs and is to be recognized over the restricted stock units' vesting terms of approximately 4.0 years (1.5 years on a weighted-average basis). The cash-settled stock options were fully expensed as of December 31, 2019.

The total stock-based compensation cost capitalized in inventory was not material for the years ended December 31, 2019, December 31, 2018 and December 31, 2017, respectively.

Common Stock Reserved for Future Issuance

Common stock reserved for issuance is as follows (in thousands):

	As of December 31, 2019
Stock options issued and outstanding—2001 Plan	413
Stock options issued and outstanding—2011 Plan	1,384
Stock options issued and outstanding—2015 Plan	4,786
Employee stock purchase plan	1,341
Authorized for future stock awards or option grants	5,405
	13,329

Note 10. Income Taxes

United States and foreign (loss) income before income taxes was as follows (in thousands):

	Year ended December 31,		
	2019	2018	2017
United States	$ (50,339)	$ (14,776)	$ 12,543
Foreign	303	2,408	(12,542)
Total	$ (50,036)	$ (12,368)	$ 1

The income tax (benefit) provision was as follows (in thousands):

	December 31,		
	2019	2018	2017
Current:			
Federal	$ 237	$ —	$ 235
State	122	274	93
Foreign	487	309	—
	846	583	328
Deferred:			
Federal	(58,368)	—	(235)
State	(7,938)	—	—
Foreign	—	—	—
	(66,306)	—	(235)
Income tax (benefit) provision	$ (65,460)	$ 583	$ 93

The reconciliations of the U.S. federal statutory tax expense to the combined effective tax (benefit) provision are as follows:

	Year ended December 31,		
(amounts in thousands)	2019	2018	2017
Statutory rate of tax benefit	$ (10,508)	$ (2,597)	$ -
State income taxes, net of federal benefit	(2,418)	(1,518)	(17)
Permanent and other items	4,371	1,349	279
Stock-based compensation	(5,006)	(6,007)	(5,478)
Research credits	(3,594)	(2,556)	(2,215)
Uncertain tax positions	1,780	6,143	1,108
Change in tax rate	419	(250)	1,013
Tax Cuts and Jobs Act	-	-	25,216
ASU 2016-09 Implementation & ASC 842 Adoption in 2019	(104)	-	-
Valuation allowance	(50,400)	6,019	(19,813)
Income tax (benefit) provision	$ (65,460)	$ 583	$ 93

Significant components of the Company's net deferred tax assets at December 31, 2019 and December 31, 2018 are as follows (in thousands):

	December 31,	
	2019	2018
Deferred tax assets:		
Net operating loss carryforwards	$ 69,571	$ 40,041
Tax credits	11,590	7,754
Depreciation and amortization	—	9,356
Stock-based compensation	19,268	9,838
Reserves and accruals	7,996	5,030
Lease liability	18,422	—
Other, net	147	$ (65)
Total deferred tax assets	126,994	71,954
Deferred tax liabilities:		
Depreciation and amortization	(81,174)	—
ROU Lease Asset	(17,333)	—
Inventory	(6,030)	—
Total deferred tax liabilities	$ (104,537)	—
Valuation allowance	(32,089)	(71,954)
Net deferred tax liability	$ (9,632)	$ —

Based on the weight of available evidence, management has established a valuation allowance for a portion of its deferred tax assets which it expects will not be realized on a more likely than not basis. In connection with the Avedro Merger, the Company recorded a valuation allowance of $10.7 million which increased the amount of net deferred tax liability and goodwill recorded in purchase accounting. The Company recorded $75.9 million of net deferred tax liabilities as a result of the Avedro Merger. These deferred tax liabilities provide a source of future taxable income to realize the Company's deferred tax assets. As a result of the Company's valuation allowance, $66.3 million was reduced and recorded as a deferred tax benefit in the Company's consolidated statement of operations.

As of December 31, 2019, the Company had indefinite-lived deferred tax assets for federal and certain state net operating loss (NOL) carryforwards generated after 2017 and California R&D credit carryforwards. The Company also had indefinite-lived deferred tax liabilities for certain identified intellectual property of Avedro. In determining the amount of valuation allowance to record as of December 31, 2019, the Company has elected to offset its indefinite-lived deferred tax assets and liabilities. The net change in the valuation allowance was $(39.9) million in 2019.

At December 31, 2019, the Company had approximately $355.6 million, $144.0 million and $13.3 million of NOL carryforwards for federal, state and foreign purposes, respectively, available to offset future taxable income. The federal NOL carryforwards incurred prior to 2018 will begin to expire in 2022. A federal NOL carryforward of $103.1 million will not expire, but can only be used to offset 80 percent of future taxable income. The state NOL carryforwards will begin to expire in 2021. The foreign NOL carryforwards will begin to expire in 2023.

At December 31, 2019, the Company had federal and state R&D credit carryforwards of $28.9 million and $12.8 million, respectively. Federal credits begin to expire in 2021, and the state credits of $2.9 million begin to expire in 2023. The remaining state credits of $9.8 million carry over indefinitely.

Utilization of the NOL and tax credit carryforwards will be subject to annual limitations under the Internal Revenue Code of 1986 (IRC) Section 382 and Section 383 and similar state provisions due to several ownership changes that have occurred previously or that could occur in the future. These ownership changes may limit the amount of NOL and tax credit carryforwards and other deferred tax assets that can be utilized to offset future taxable income and tax. In general, all ownership changes as defined by IRC Section 382 result from transactions increasing ownership of certain stockholders in the stock of the Company by more than 50 percentage points over a three-year period. An analysis was performed by the Company which indicated that several ownership changes have occurred in previous years which created annual limitations on the Company's ability to utilize net operating loss and tax credit carryforwards.

The Company is in the process of completing a Section 382 and Section 383 analysis through December 31, 2019. Approximately $10.6 million of the Glaukos federal NOL carryforwards and $0.3 million of federal R&D tax credits are expected to expire unutilized due to the limitations provided by Section 382 and Section 383. As noted below, certain of the tax NOL and credit carryforwards of the Company's subsidiaries are expected to expire unutilized.

As previously discussed in *Note 1, Organization and Basis of Presentation*, the DOSE Merger was accounted for as an acquisition of certain assets including equipment and IPR&D. For tax purposes, the DOSE Merger is treated as a taxable acquisition of the stock of DOSE and accordingly, DOSE became a wholly-owned subsidiary of Glaukos on June 27, 2019. DOSE will be included in the Company's 2019 consolidated U.S. federal income tax return and its combined California income tax return from the date of acquisition. As of June 27, 2019, DOSE's federal and California NOL carryforwards were $2.9 million and $0.7 million, respectively, and DOSE's federal and California R&D tax credit carryforwards were $0.1 million and $0.2 million, respectively. The NOL and R&D tax credit carryforwards are subject to limitation pursuant to Section 382 and Section 383 of the IRC. As a result of the limitations, the federal R&D credit will expire unutilized, and a portion of the California NOL will likely expire unutilized. The federal NOL and California R&D credits do not expire, therefore the Company has provided deferred tax assets for these tax attributes.

As previously discussed in *Note 1, Organization and Basis of Presentation*, the Avedro Merger was accounted for as a business combination. For tax purposes, the Company acquired Avedro via a tax deferred merger for $437.8 million in Glaukos stock. Following the Avedro Merger, Avedro became a wholly-owned subsidiary of the Company on November 21, 2019. Avedro will be included in the Company's 2019 consolidated U.S. federal income tax return from the date of acquisition. As of November 21, 2019, Avedro's federal NOL carryforward was $178.8 million, its federal R&D credit carryforward was $17.3 million, its state NOL carryforwards were $97.2 million and its Massachusetts tax credits were $3.0 million. These attributes are subject to limitation under Section 382 and Section 383. As a result of these limitations, approximately $80.2 million of Avedro's federal NOLs, $14.7 million of its federal R&D tax credits, $36.4 million of its state NOLs and $1.5 million of its Massachusetts tax credit carryforwards will expire unutilized. The Company recorded deferred tax assets for these tax attributes which do not exceed the Section 382 and Section 383 limitations. The Company recorded deferred tax assets and liabilities for the differences between the fair market value of Avedro's assets and liabilities and their respective tax basis in purchase accounting. The net deferred tax liability recorded in purchase accounting of $75.9 million increased goodwill.

Certain foreign subsidiary earnings are subject to U.S. taxation under The Tax Cuts and Jobs Act of 2017 (the Act), which also repeals U.S. taxation on the subsequent repatriation of those earnings. The Company intends to invest substantially all of its foreign earnings, as well as its capital in the foreign subsidiaries, indefinitely outside of the U.S. in those jurisdictions in which the Company would incur significant, additional costs upon repatriation of such amounts.

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits for the years ended December 31, 2019, December 31, 2018 and December 31, 2017, excluding interest and penalties, is as follows (in thousands):

	December 31,		
	2019	2018	2017
Balance at beginning of the year	$ 13,486	$ 7,227	$ 5,947
Net addition for tax positions - prior years	230	4,558	—
Net additions for tax positions - current year	2,339	1,701	1,280
Subtractions from tax positions - prior years	(537)	—	—
Subtractions from tax positions - current year	(442)	—	—
Balance at end of the year	$ 15,076	$ 13,486	$ 7,227

As of December 31, 2019, approximately $0.4 million of unrecognized tax benefits would reduce the Company's annual effective tax rate if recognized.

The Company's policy is to recognize interest expense and penalties related to income tax matters as a component of its income tax (benefit) provision. There was no accrued interest and penalties associated with uncertain tax positions as of December 31, 2019, December 31, 2018 and December 31, 2017. It is not anticipated that there will be a significant change in the unrecognized tax benefits over the next 12 months.

Due to the Company's NOL carryforwards, its federal, state and foreign income tax returns are open to examination by the Internal Revenue Service and state jurisdictions for all years since inception. In November 2019, the Internal Revenue Service (IRS) commenced an examination of the Company's 2017 federal income tax return. The examination is in its preliminary stages and management does not anticipate material adjustments at this time.

The Act subjects a U.S. Shareholder to tax on global intangible low-taxed income (GILTI) earned by certain foreign subsidiaries. The FASB Staff Q&A, Topic 740, No. 5, *Accounting for Global Intangible Low-Taxed Income*, states that an entity can make an accounting policy election to recognize deferred taxes for temporary basis differences expected to reverse as GILTI in future years or to provide for the tax expense related to GILTI in the year the tax is incurred as a period expense only. The Company elects to provide for the tax expense related to GILTI in the year the tax is incurred as a period expense only.

Note 11. Employee Benefits

Defined Contribution Plan

The Company sponsors a defined contribution plan pursuant to section 401(k) of the U.S. Internal Revenue Code that allows participating employees to contribute up to 100% of their salary, to an annual maximum of $19,000 in 2019 and $18,500 in 2018 ($25,000 in 2019 and $24,500 in 2018 for employees over the age of 50). Through December 31, 2019, the Company has only made "qualified nonelective contributions" to maintain compliance with IRS regulations. Beginning in 2017, the Company contributes a $0.50 match for every $1.00 contributed by a participating employee up to 6% of plan-eligible earnings, with such Company contributions becoming fully vested when participating employees reach the 3-year anniversary from their date of hire, giving credit for past service. For the years ended December 31, 2019, December 31, 2018 and December 31, 2017, Company contributions totaled approximately $1.6 million, $1.4 million and $1.0 million, respectively.

Deferred Compensation Plan

Pursuant to the Company's deferred compensation plan (the Deferred Compensation Plan), eligible senior level employees are permitted to make elective deferrals of compensation to which they will become entitled in the future. The Company has also established a rabbi trust that serves as an investment to shadow the Deferred Compensation Plan liability. The investments of the rabbi trust consist of company-owned life insurance policies (COLIs). The fair value of the Deferred Compensation Plan liability, included in other liabilities on the consolidated balance sheets, was approximately $3.7 million and $2.0 million as of December 31, 2019 and December, 31, 2018, respectively, and the cash surrender value of the COLIs, included in deposits and other assets on the consolidated balance sheets, which reflects the underlying assets at fair value, was approximately $3.5 million and $1.9 million as of December 31, 2019 and December 31, 2018, respectively.

Note 12. Commitments and Contingencies

Patent Litigation

On April 14, 2018, the Company filed a patent infringement lawsuit against Ivantis, Inc. (Ivantis) in the U.S. District Court for the Central District of California, Southern Division (the Court), alleging that Ivantis' Hydrus© Microstent device infringes the Company's U.S. Patent Nos. 6,626,858 and 9,827,143. In August 2018, Ivantis filed counterclaims alleging that the Company's *iStent inject* infringes three patents which Ivantis acquired after the start of the litigation (Acquired Patents). On March 18, 2019, the Court granted the Company's early motion for summary judgment, finding that the Company does not infringe the Acquired Patents. Fact discovery on the Company's claims against Ivantis closed in September 2019, and trial is scheduled to begin on or around July 28, 2020. Additionally, Ivantis filed five Inter Partes Review (IPR) petitions with the Patent Trial and Appeal Board (PTAB) on the patents the Company has asserted in the litigation. The PTAB denied institution of all five petitions. The Company is currently unable to predict the ultimate outcome of these matters or reasonably estimate a possible loss or range of loss, and thus, no amounts have been accrued in the consolidated financial statements.

Securities Litigation

Four alleged Avedro stockholders filed lawsuits challenging the Avedro Merger. Two of those lawsuits, *Kent v. Avedro, Inc.*, et. al, 1:19-cv-01845-MN filed in the United States District Court for the District of Delaware and *Thompson v. Avedro, Inc., et. al,* 1:19-cv-02075-UNA filed in the United States District Court for the Southern District of Delaware, named as defendants Avedro and each member of the Avedro board of directors, including former directors Dr. Gilbert H. Kliman and Thomas W. Burns, as well as Glaukos and Merger Sub. The other two lawsuits, *Payne v. Avedro, Inc. et. al*, 1:19-cv-02019-CFC in the United States District Court for the District of Delaware and *Bushansky v. Avedro, Inc. et. al,* 1:19-cv-10015-LAP in the United States District Court for the Southern District of New York, named as defendants Avedro and each member of the Avedro board of directors but did not name former Avedro directors, Glaukos or Merger Sub as defendants. The plaintiffs in these actions generally alleged that the Registration Statement filed in connection with the Avedro Merger omitted material information with respect to the Avedro Merger, which rendered such Registration Statement false and misleading. The complaints sought a preliminary and permanent injunction of the Avedro Merger and, if the Avedro Merger was consummated, rescission or rescissory damages. The complaints also sought the dissemination of a registration statement that disclosed certain information requested by the plaintiffs as well as attorneys' and experts' fees.

On January 8, 2020, following Avedro's filing of additional disclosures which rendered the plaintiffs' disclosure claims moot, Glaukos entered into a Confidential Fee Agreement (Confidential Fee Agreement) with each of the plaintiffs listed above, and the Confidential Fee Agreement settlement amounts were immaterial. Pursuant to the terms of the Confidential Fee Agreement, the plaintiffs agreed to dismiss the respective actions with prejudice as to each of the named plaintiffs and without prejudice as to the claims of the putative class of Avedro stockholders. Avedro and the other named defendants maintain that they committed no breach of fiduciary duty and that there is no merit with respect to any allegation asserted in connection with the Avedro Merger or any public disclosures, but wished to settle the actions to eliminate the burden, expense, and uncertainties of further litigation.

Secured Letters of Credit

The Company had a bank issue a letter of credit in the amount of $8.8 million that is related to its Aliso Facility. The letter of credit is secured with an amount of cash held in a restricted account of approximately $8.8 million as of December 31, 2019 and December 31, 2018. Beginning as of the first day of the thirty-seventh month of the lease term, and on each twelve month anniversary thereafter, the letter of credit will be reduced by 20% until the letter of credit amount has been reduced to $2.0 million.

As of December 31, 2019, as a result of the Avedro Merger, the Company has two other irrevocable standby letters of credit secured with $0.4 million of cash in a restricted account related to its office lease agreements. Lastly, the Company maintains $0.2 million in restricted cash which is held to collateralize a credit card program.

Global Enterprise Systems Implementation

In the first quarter of 2019, the Company began implementing new enterprise systems and other technology optimizations and facilities infrastructure globally. As of December 31, 2019, the Company has firm purchase commitments related to software costs and these systems implementations of approximately $5.6 million.

Corporate Restructuring Costs

Following the Avedro Merger, the Company is conducting a restructuring that includes an estimated headcount reduction of 40 employees and a reallocation of responsibilities primarily within the selling, general and administrative functions. The Company measured and accrued the liabilities associated with employee separation costs at fair value as of the date the plan was announced and terminations were communicated to employees, which primarily includes severance pay and other separation costs such as benefit continuation.

As of December 31, 2019 the Company has accrued $4.1 million of restructuring plan costs, and expects to incur a total of approximately $5.6 million in restructuring charges upon completion of the plan, which is expected to be completed in 2021. The recognition of restructuring charges requires that the Company make certain judgments and estimates regarding the nature, timing and amount of costs associated with the planned reductions of workforce. At the end of each reporting period, the Company will evaluate the remaining accrued balance to ensure appropriateness with the Company's restructuring plans.

A reconciliation of the beginning and ending balance of the restructuring reserve, included in accrued liabilities on the consolidated balance sheet, is as follows (in thousands):

Rollforward of Accrued Restructuring (in thousands)	December 31, 2019
Balance at beginning of year	$ —
Total restructuring accrual charges	4,115
Employee separation payments	(19)
Balance at end of period	$ 4,096

Purchase Commitment

As of December 31, 2019, the Company had noncancelable, firm purchase commitments of $0.2 million due beyond one year.

Regents of the University of California

On December 30, 2014, the Company executed an agreement (the UC Agreement) with the Regents of the University of California (the University) to correct inventorship in connection with a group of the Company's U.S. patents (the Patent Rights) and to obtain from the University a covenant that it did not and would not claim any right or title to the Patent Rights and will not challenge or assist any others in challenging the Patent Rights. In connection with the UC Agreement, Glaukos agreed to pay to the University a low single-digit percentage of worldwide net sales of certain current and future products, including the Company's *iStent* products, with a required minimum annual payment of $0.5 million. This ongoing product payment terminates on the date that the last of the Patent Rights expires, which is currently expected to be in 2022. For the years ended December 31, 2019, December 31, 2018 and December 31, 2017, the Company recorded approximately $5.7 million, $4.5 million and $3.9 million, respectively, in cost of sales in connection with the product payment obligation.

Indemnification

In the ordinary course of business, the Company enters into agreements that may include indemnification provisions. Pursuant to such agreements, the Company may indemnify, hold harmless and defend the indemnified parties for losses suffered or incurred by the indemnified party. Some of the provisions will limit losses to those arising from third-party actions. In some cases, the indemnification will continue after the termination of the agreement. The maximum potential amount of future payments the Company could be required to make under these provisions is not determinable. To date, the Company has not incurred material costs to defend lawsuits or settle claims related to these indemnification provisions. The Company has also entered into indemnification agreements with its directors and officers that may require it to indemnify its directors and officers against liabilities that may arise by reason of their status or service as directors or officers to the fullest extent permitted by corporate law. The Company also has directors' and officers' insurance.

Note 13. Business Segment Information

The Company has one business activity: the development and commercialization of therapies designed to treat glaucoma, corneal disorders and retinal diseases, and operates as one operating segment. The Company determined its operating segment on the same basis that it uses to evaluate its performance internally. The Company's revenues disaggregated by revenue and product category are included in *Note 8, Revenue from Contracts with Customers*. The Company's chief operating decision-maker (CODM), its Chief Executive Officer, reviews its consolidated operating results for the purpose of allocating resources and evaluating financial performance.

	Property and equipment, net			Depreciation and amortization			Capital expenditures		
	As of December 31,			Year ended December 31,			Year ended December 31,		
	2019	2018	2017	2019	2018	2017	2019	2018	2017
United States	$ 21,932	$ 19,040	$ 11,677	$ 6,273	$ 6,234	$ 5,406	$ 4,681	$ 10,288	$ 6,051
International	124	113	117	33	30	76	44	27	221
Total	$ 22,056	$ 19,153	$ 11,794	$ 6,306	$ 6,264	$ 5,482	$ 4,725	$ 10,315	$ 6,272

Note 14. Selected Quarterly Financial Information (Unaudited)

	Three months ended			
(in thousands, except per share amounts)	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019
Net sales	$ 54,026	$ 58,600	$ 58,509	$ 65,849
Cost of sales	7,111	7,870	7,703	15,904
Gross profit	46,915	50,730	50,806	49,945
Operating expenses:				
Selling, general and administrative	34,925	37,656	44,443	59,611
Research and development	13,930	17,069	17,278	20,031
In-process research and development	—	2,245	1,500	—
Total operating expenses	48,855	56,970	63,221	79,642
Loss from operations	(1,940)	(6,240)	(12,415)	(29,697)
Non-operating income (expense)	720	3	(904)	437
Income tax provision (benefit)	122	72	187	(65,841)
Net (loss) income	$ (1,342)	$ (6,309)	$ (13,506)	$ 36,581
Net (loss) income per share [(1)]:				
Basic	$ (0.04)	$ (0.17)	$ (0.37)	$ 0.92
Diluted	$ (0.04)	$ (0.17)	$ (0.37)	$ 0.84

(in thousands, except per share amounts)	Three months ended March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018
Net sales	$ 40,133	$ 43,161	$ 43,908	$ 54,076
Cost of sales	5,786	6,160	6,011	7,118
Gross profit	34,347	37,001	37,897	46,958
Operating expenses:				
Selling, general and administrative	27,155	28,638	31,632	32,104
Research and development	10,906	12,611	13,202	12,957
Total operating expenses	38,061	41,249	44,834	45,061
(Loss) income from operations	(3,714)	(4,248)	(6,937)	1,897
Non-operating income (expense)	1,008	(1,139)	353	412
Provision for income taxes	5	11	37	530
Net (loss) income	$ (2,711)	$ (5,398)	$ (6,621)	$ 1,779
Net (loss) income per share [1]:				
Basic	$ (0.08)	$ (0.15)	$ (0.19)	$ 0.05
Diluted	$ (0.08)	$ (0.15)	$ (0.19)	$ 0.04

(1) Net income or loss per share is computed independently for each of the quarters presented. Therefore, the sum of the quarterly per-share amounts will not necessarily equal the annual per share amount.

Note 15. Subsequent Events

None.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, refers to controls and procedures that are designed to ensure that information required to be disclosed by a 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. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our management, with the participation of our chief executive officer and our chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Annual Report on Form 10-K. Based on that evaluation, our chief executive officer and our chief financial officer concluded that our disclosure controls and procedures were effective, at the reasonable assurance level, as of December 31, 2019.

Management's Annual Report on Internal Control Over Financial Reporting and Attestation Report of the Registered Public Accounting Firm

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that the transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and our directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Our management, with the participation of our chief executive officer and our chief financial officer, conducted an evaluation of the effectiveness of our internal control over financial reporting as of the end of the period covered by this Annual Report on Form 10-K based on the framework in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2019. Management's assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2019 excluded Avedro Inc., which was acquired by the Company in November 2019, with the exception of the fair value adjustments related to purchase accounting. The aforementioned total assets and total revenues of Avedro represent 5.6% and 2.5 %, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2019.

Ernst & Young LLP, our independent registered public accounting firm, which audited the consolidated financial statements included in this Annual Report on Form 10-K, has issued an audit report on our internal control over financial reporting. See Report of Independent Registered Public Accounting Firm below.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, during our fourth fiscal quarter of 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Glaukos Corporation

Opinion on Internal Control Over Financial Reporting

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

As indicated in the accompanying Management's Annual Report on Internal Control over Financial Reporting , management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Avedro, Inc., which is included in the 2019 consolidated financial statements of the Company and constituted 5.6% and 4.9% of total and net assets, respectively, as of December 31, 2019 and 2.5% and 1.2% of revenues and loss before taxes, respectively, for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Avedro, Inc.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and our report dated March 2, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with 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 effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ Ernst & Young LLP

Irvine, California
March 2, 2020

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

We have adopted a written code of business conduct and ethics that applies to our directors, executive officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A current copy of the code is posted on the investor section of our web site, www.glaukos.com. To the extent required by rules adopted by the SEC and NYSE, we intend to promptly disclose future amendments to certain provisions of the code, or waivers of such provisions granted to executive officers and directors, in the Corporate Governance section of our Investor Relations web site at investors.glaukos.com.

The remaining information required by this Item 10 will be included in our Proxy Statement for the 2020 Annual Meeting of Stockholders, which will be filed with the SEC no later than 120 days after the close of the fiscal year ended December 31, 2019, and is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item 11 will be included in our Proxy Statement for the 2020 Annual Meeting of Stockholders, which will be filed with the SEC no later than 120 days after the close of the fiscal year ended December 31, 2019, and is incorporated herein by reference.

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

The information required by this Item 12 will be included in our Proxy Statement for the 2020 Annual Meeting of Stockholders, which will be filed with the SEC no later than 120 days after the close of the fiscal year ended December 31, 2019, and is incorporated herein by reference.

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

The information required by this Item 13 will be included in our Proxy Statement for the 2020 Annual Meeting of Stockholders, which will be filed with the SEC no later than 120 days after the close of the fiscal year ended December 31, 2019, and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item 14 will be included in our Proxy Statement for the 2020 Annual Meeting of Stockholders, which will be filed with the SEC no later than 120 days after the close of the fiscal year ended December 31, 2019, and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) List of documents filed as part of this Annual Report on Form 10-K:

(1) Financial Statements

The financial statements included in Part II, Item 8 of this document are filed as part of this Annual Report on Form 10-K.

(2) Financial Statement Schedules

Schedules have been omitted because they are not applicable or the amounts are immaterial or the required information is presented in the financial statements or notes thereto.

(b) Exhibits

The exhibits listed in the Exhibit Index below are filed, furnished or incorporated by reference as part of this Annual Report on Form 10-K.

`INDEX TO EXHIBITS

Exhibit Number	Description
2.1	IOP System Purchase Agreement dated as of April 12, 2017 by and between Glaukos Corporation and DOSE Medical Corporation (incorporated by reference to Exhibit 2.1 to the Form 8-K (File No. 001-37463) filed on April 12, 2017)
2.2	Agreement and Plan of Merger, dated as of August 7, 2019, among Glaukos Corporation, Atlantic Merger Sub Inc., and Avedro, Inc. (incorporated by reference to Exhibit 2.1 to the Form 8-K (File No. 001-37463) filed on August 8, 2019).
3.1	Restated Certificate of Incorporation of the Registrant (incorporated by referenced to Exhibit 3.1 to the Form 8-K (File No. 001-37463) filed on June 30, 2015).
3.2	Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Form 8-K (File No. 001-37463) filed on June 30, 2015).
4.1*	Description of Capital Stock of Glaukos Corporation
10.1	Fourth Amended and Restated Investors' Rights Agreement, dated as of January 25, 2011, by and among the Registrant and the stockholders named therein (incorporated by reference to Exhibit 10.1 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.2	Amendment No. 1 to the Fourth Amended and Restated Investors' Rights Agreement, dated as of January 22, 2013, by and among the Registrant and the stockholders named therein (incorporated by reference to Exhibit 10.2 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.3	Amendment No. 2 to the Fourth Amended and Restated Investors' Rights Agreement, dated as of July 10, 2014, by and among the Registrant and the stockholders named therein (incorporated by reference to Exhibit 10.3 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.4+	Form of Director and Executive Officer Indemnification Agreement (incorporated by reference to Exhibit 10.8 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.5+	2001 Stock Option Plan (incorporated by reference to Exhibit 10.9 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.6+	Notice of Incentive Stock Option Grant and Stock Option Agreement under the 2001 Stock Option Plan (incorporated by reference to Exhibit 10.10 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.7+	Notice of Non-Statutory Stock Option Grant and Stock Option Agreement under the 2001 Stock Option Plan (incorporated by reference to Exhibit 10.11 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.8+	2011 Stock Plan (incorporated by reference to Exhibit 10.12 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.9+	Form of Notice of Incentive Stock Option Grant and Stock Option Agreement under the 2011 Stock Plan (incorporated by reference to Exhibit 10.13 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.10+	Form of Notice of Non-Statutory Stock Option Grant and Stock Option Agreement under the 2011 Stock Plan (incorporated by reference to Exhibit 10.14 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.11+	Form of Notice of Grant of Restricted Stock Units and Restricted Stock Unit Agreement under the 2015 Omnibus Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q (No. 333-204091) filed on August 7, 2017).

Exhibit Number	Description
10.12+	Form of Notice of Grant of Option and Option Award Agreement under the 2015 Omnibus Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q (No. 001-37463) filed on May 9, 2018).
10.13+	Form of Notice of Grant of Restricted Stock Units and Restricted Stock Unit Agreement under the 2015 Omnibus Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q (No. 001-37463) filed on August 6, 2018).
10.14+	Form of Director Notice of Grant of Restricted Stock Units and Restricted Stock Unit Agreement under the 2015 Omnibus Incentive Compensation Plan. (incorporated by reference to Exhibit 10.22 to the Annual Report on Form 10-K (No. 001-37463) filed on February 28, 2018).
10.15+*	Form of Notice of Grant of Performance-Based Equity Award under the 2015 Omnibus Incentive Compensation Plan
10.16+	2015 Omnibus Incentive Compensation Plan (incorporated by reference to Exhibit 10.15 to Amendment No. 2 to the Registration Statement on Form S-1 (No. 333-204091) filed on June 15, 2015).
10.17+	2015 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.16 to Amendment No. 2 to the Registration Statement on Form S-1 (No. 333-204091) filed on June 15, 2015).
10.18+	Thomas W. Burns Offer Letter dated July 10, 2014 (incorporated by reference to Exhibit 10.17 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.19+	Thomas W. Burns Amended and Restated Executive Severance and Change in Control Agreement dated November 3, 2017 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No 001-37464) filed on November 7, 2017).
10.20+	Chris M. Calcaterra Offer Letter dated July 10, 2014 (incorporated by reference to Exhibit 10.19 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.21+	Chris M. Calcaterra Amended and Restated Executive Severance and Change in Control Agreement dated November 3, 2017 (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K (File No. 001-37463) filed on November 7, 2017).
10.22+	Joseph E. Gilliam Offer Letter dated February 3, 2017 (incorporated by reference to Exhibit 99.2 to the to the Company's Current Report on Form 8-K (File No. 001-37463) filed on February 6, 2017).
10.23+	Joseph E. Gilliam Amended and Restated Executive Severance and Change in Control Agreement dated November 3, 2017 (incorporated by reference to Exhibit 10.3 to the Form 8-K (File No. 001-37463) filed on November 7, 2017).
10.24+	The Executive Nonqualified Excess Plan and the Executive Nonqualified Excess Plan Adoption Agreement (incorporated by reference to Exhibit 10.20 to the Annual Report on Form 10-K (No. 001-37463) filed on March 15, 2017).
10.25+*	Directors' Compensation Policy
10.26	Asset Purchase Agreement, dated as of July 10, 2014, by and between the Registrant and DOSE Medical Corporation (incorporated by reference to Exhibit 10.25 to the Registration Statement on Form S-1 (No. 333-204091) filed on May 12, 2015).
10.27	Standard Industrial/Commercial Single-Tenant Lease—Net, dated as of June 8, 2015, by and between the Registrant and 229 Fabricante, LLC (incorporated by reference to Exhibit 10.35 to Amendment No. 2 to the Registration Statement on Form S-1 (No. 333-204091) filed on June 15, 2015).
10.28	Office Building Lease dated as of November 14, 2018, by and between the Registrant and CIP 2014/SG, Aliso Owner LLC. (incorporated by reference to Exhibit 10.27 to the Annual Report on Form 10-K (File No. 001-37463) filed on February 28, 2019).

Exhibit Number	Description
10.29	Amended and Restated Patent License Agreement, by and between the Registrant and DOSE Medical Corporation, dated as of June 30, 2015 (incorporated by reference to Exhibit 10.1 to the Form 8-K (File No. 001-37463) filed on June 30, 2015).
10.30	First Amendment to Amended and Restated Patent License Agreement dated as of April 12, 2017 by and between Glaukos Corporation and DOSE Medical Corporation (incorporated by reference to Exhibit 10.1 to the Form 8-K (File No. 001-37463) filed on April 12, 2017).
10.31	Agreement and Plan of Merger, dated as of June 19, 2019, by and between Glaukos Corporation, GKOS Merger Sub, Inc., DOSE Medical Corporation and Fortis Advisors LLC, solely in its capacity as the Stockholders' Representative (incorporated by reference to Exhibit 99.2 to the Form 8-K (File No. 001-37463) filed on June 19, 2019).
21*	Subsidiaries of Glaukos Corporation as of December 31, 2019
23.1*	Consent of Independent Registered Public Accounting Firm
31.1*	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1**	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2**	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS*	XBRL Instance Document - formatted as inline XBRL
101.SCH*	XBRL Taxonomy Schema Linkbase Document
101.CAL*	XBRL Taxonomy Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Definition Linkbase Document
101.LAB*	XBRL Taxonomy Labels Linkbase Document
101.PRE*	XBRL Taxonomy Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

+ Indicates a management contract or compensatory plan or arrangement.

* Filed Herewith.

** Furnished Herewith.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Clemente, State of California, on March 2, 2020.

GLAUKOS CORPORATION

By: /s/ THOMAS W. BURNS
Thomas W. Burns
Chief Executive Officer and President

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

Signature	Title	Date
/s/ THOMAS W. BURNS Thomas W. Burns	Chief Executive Officer, President and Director (Principal Executive Officer)	March 2, 2020
/s/ JOSEPH E. GILLIAM Joseph E. Gilliam	Chief Financial Officer & SVP, Corporate Development (Principal Accounting and Financial Officer)	March 2, 2020
/s/ WILLIAM J. LINK William J. Link, Ph.D.	Chairman of the Board	March 2, 2020
/s/ MARK J. FOLEY Mark J. Foley	Director	March 2, 2020
/s/ DAVID F. HOFFMEISTER David F. Hoffmeister	Director	March 2, 2020
/s/ MARC A. STAPLEY Marc A. Stapley	Director	March 2, 2020
/s/ AIMEE S. WEISNER Aimee S. Weisner	Director	March 2, 2020

Exhibit 4.1

DESCRIPTION OF CAPITAL STOCK OF GLAUKOS CORPORATION

References to "we," "us" and "our" in this section refer to Glaukos Corporation.

General

The following is a summary of the rights of our common stock and preferred stock, and of certain provisions of our restated certificate of incorporation (our "certificate of incorporation"), our amended and restated bylaws (our "bylaws"), and certain provisions of applicable law. The following description is only a summary and is qualified by reference to our certificate of incorporation and our bylaws, copies of which are filed as exhibits to our Annual Report on Form 10-K for the year ended December 31, 2019 filed with the Securities and Exchange Commission.

Authorized Capitalization

Our authorized capital stock consists of shares, all with a par value of $0.001 per share, of which:

- 150,000,000 shares are designated as common stock; and
- 5,000,000 shares are designated as preferred stock.

As of February 27, 2020, 43,772,455 shares of our common stock were issued and 43,744,455 shares of our common stock were outstanding, and no shares of our preferred stock were issued or outstanding.

Common Stock

Voting

The holders of our common stock are entitled to one vote per share on all matters to be voted on by our stockholders. Our certificate of incorporation prohibits cumulative voting in the election of directors. Our bylaws provide for a plurality voting standard for the election of directors. Our certificate of incorporation includes certain supermajority voting provisions relating to the removal of directors, certain amendments to our certificate of incorporation and certain amendments to our bylaws.

Dividends

Subject to preferences that may be applicable to any then outstanding preferred stock, holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of preferred stock.

Rights and Preferences

Holders of common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are fully paid and nonassessable.

Preferred Stock

Our board of directors has the authority, without further action by our stockholders, to designate and issue up to 5,000,000 shares of preferred stock in one or more series. Our board of directors may also designate the rights, preferences and privileges of each such series of preferred stock, any or all of which may be greater than or senior to those of our common stock. Though the actual effect of any issuance of preferred stock on the rights of the holders of common stock will not be known until our board of directors determines the specific rights of the holders of preferred stock, the potential effects of such an issuance include:

- diluting the voting power of the holders of common stock;
- reducing the likelihood that holders of common stock will receive dividend payments;
- reducing the likelihood that holders of common stock will receive payments in the event of our sale, liquidation, dissolution, or winding up; and
- delaying, deterring or preventing a change-in-control or other corporate takeover.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Delaware Law

Certain provisions of Delaware law and our certificate of incorporation and bylaws contain provisions that could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids. These provisions are also designed in part to encourage anyone seeking to acquire control of us to negotiate with our board of directors. We believe that the advantages gained by protecting our ability to negotiate with any unsolicited and potentially unfriendly acquirer outweigh the disadvantages of discouraging such proposals, including those priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could improve their terms.

Certificate of Incorporation and Bylaws

Our certificate of incorporation and/or bylaws include provisions that:

- authorize our board of directors to issue, without further action by our stockholders, up to 5,000,000 shares of undesignated preferred stock;
- require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;
- specify that special meetings of our stockholders can be called only by our chairperson of the board of directors, our chief executive officer, our president or our board of directors acting pursuant to a resolution adopted by a majority of our board of directors;
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;
- provide that directors may be removed only for cause by a supermajority vote of the stockholders;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum;

- establish that our board of directors is divided into three classes, Class I, Class II and Class III, with each class serving staggered terms;
- specify that no stockholder is permitted to cumulate votes at any election of our board of directors; and
- require a supermajority vote of the stockholders and a majority of our board of directors to amend certain of the above-mentioned provisions and our bylaws.

Exclusive Forum

Under the provisions of our certificate of incorporation, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for: (i) any derivative action or proceeding brought on behalf of us; (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders; (iii) any action or proceeding asserting a claim arising pursuant to any provision of the Delaware General Corporation Law (the "DGCL"), or our certificate of incorporation or bylaws; or (iv) any action asserting a claim governed by the internal affairs doctrine. This exclusive forum provision is intended to apply to claims arising under Delaware state law and would not apply to claims brought pursuant to the Securities Exchange Act of 1934, as amended, or Securities Act of 1933, as amended, or any other claim for which the federal courts have exclusive jurisdiction. The exclusive forum provision in our certificate of incorporation will not relieve us of our duties to comply with the federal securities laws and the rules and regulations thereunder, and our stockholders will not be deemed to have waived our compliance with these laws, rules and regulations.

Delaware Anti-Takeover Statute

We are subject to the provisions of Section 203 of the DGCL regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging, under certain circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not for determining the outstanding voting stock owned by the interested stockholder, (1) shares owned by persons who are directors and also officers, and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least $66^{2}/_{3}\%$ of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may discourage business combinations or other attempts that might result in the payment of a premium over the market price for the shares of common stock held by our stockholders.

The provisions of Delaware law and our certificate of incorporation and bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC.

Listing

Our common stock is listed on the New York Stock Exchange under the symbol "GKOS."

Exhibit 10.15

GLAUKOS CORPORATION
NOTICE OF GRANT OF PERFORMANCE-BASED EQUITY AWARD

The Participant has been granted the number of Performance-Based Restricted Stock Units set forth below (the *"**PBRSUs**"*) pursuant to the Glaukos Corporation 2015 Omnibus Incentive Compensation Plan (the *"**Plan**"*), as follows:

Participant: _____

Date of Grant: _____

Number of PBRSUs: _____

Vesting Commencement Date _____

Vested Shares: Subject to your continued status as a Service provider through the applicable vesting date, 100% of the Number of PBRSUs shall become vested in accordance with the terms of the Plan, the Award Agreement, this Notice of Grant and the following performance-based vesting schedule:

In order to vest in the PBRSUs, the Company must fully train and certify 75% of Existing Surgeons on the Company's *iStent inject* Trabecular Micro-Bypass Stent System prior to the third (3rd) anniversary of the Date of Grant (the "***Performance Goal***"). Vesting of the PBRSUs shall be subject to, and shall only occur upon, the Administrator's certification that the Performance Goal has been successfully achieved. If the Performance Goal is not successfully achieved prior to the third (3rd) anniversary of the Date of Grant, 100% of the Number of PBRSUs shall be forfeited for no consideration. "***Existing Surgeons***" shall mean any surgeon who utilized the *iStent* Trabecular Micro-Bypass Stent System prior to the *iStent inject* Trabecular Micro-Bypass Stent System launch and who remains an active customer of the Company.

Capitalized terms not defined herein shall have the meaning as set forth in the Plan.

Upon any termination of Participant's Service, except in the event of Participant's death or Disability, if the vesting conditions described in the Vested Shares section above are not achieved by the date indicated, the unvested PBRSUs will terminate and Participant's right to the unvested PBRSUs will be forfeited.

By signing below, the Participant agrees that the Company, its directors, officers and shareholders shall not be held liable for any tax, penalty, interest or cost incurred by the Participant as a result of such determination by the IRS. The Participant is urged to consult with his or her own tax advisor regarding the tax consequences of the PBRSUs, including the application of Section 409A.

By their signatures below, the Company and the Participant agree that the PBRSUs are governed by this Grant Notice and by the provisions of the Plan and the Restricted Stock Unit Agreement, both of which are attached to and made a part of this document. The Participant acknowledges receipt of copies of the Plan and the Restricted Stock Unit Agreement, represents that the Participant has read and is familiar with their provisions, and hereby accepts the PBRSUs subject to all of their terms and conditions.

GLAUKOS CORPORATION	PARTICIPANT
By: _____	_____
	Signature
Its: _____	_____
	Date
Address:	_____
	Address
	_____

ATTACHMENTS: Glaukos Corporation 2015 Omnibus Incentive Compensation Plan, as amended to the Date of Grant; Restricted Stock Unit Agreement

GLAUKOS CORPORATION
PERFORMANCE-BASED RESTRICTED STOCK UNIT AGREEMENT

Glaukos Corporation has granted to the Participant named in the *Notice of Grant of Performance-Based Equity Award* (the "***Grant Notice***") to which this Performance-Based Restricted Stock Unit Agreement (the "***Agreement***") is attached a number of Performance-Based Restricted Stock Units (the "***PBRSUs***") pursuant to the terms and conditions set forth in the Grant Notice and this Agreement. The PBRSUs have been granted pursuant to and shall in all respects be subject to the terms and conditions of the Glaukos Corporation 2015 Omnibus Incentive Compensation Plan (the "***Plan***"), the provisions of which are incorporated herein by reference. By signing the Grant Notice, the Participant: (a) acknowledges receipt of, and represents that the Participant has read and is familiar with the terms and conditions of, the Grant Notice, this Agreement and the Plan, (b) accepts the PBRSUs subject to all of the terms and conditions of the Grant Notice, this Agreement and the Plan, and (c) agrees to accept as binding, conclusive and final all decisions or interpretations of the Board upon any questions arising under the Grant Notice, this Agreement or the Plan.

1. DEFINITIONS AND CONSTRUCTION.

1.1 ***Definitions.*** Unless otherwise defined herein, capitalized terms shall have the meanings assigned to such terms in the Grant Notice or the Plan.

1.2 ***Construction.*** Captions and titles contained herein are for convenience only and shall not affect the meaning or interpretation of any provision of this Agreement. Except when otherwise indicated by the context, the singular shall include the plural and the plural shall include the singular. Use of the term "or" is not intended to be exclusive, unless the context clearly requires otherwise.

2. ADMINISTRATION.

All questions of interpretation concerning the Grant Notice, this Agreement, the Plan or any other form of agreement or other document employed by the Company in the administration of the Plan or the PBRSUs shall be determined by the Administrator. All such determinations by the Administrator shall be final, binding and conclusive upon all persons having an interest in the PBRSUs, unless fraudulent or made in bad faith. Any and all actions, decisions and determinations taken or made by the Administrator in the exercise of its discretion pursuant to the Plan or the PBRSUs or other agreement thereunder (other than determining questions of interpretation pursuant to the preceding sentence) shall be final, binding and conclusive upon all persons having an interest in the PBRSUs. Any Officer shall have the authority to act on behalf of the Company with respect to any matter, right, obligation, or election which is the responsibility of or which is allocated to the Company herein, provided the Officer has apparent authority with respect to such matter, right, obligation, or election.

3. VESTING.

Except as set forth in Section 4 below and subject to the limitations contained herein, the PBRSUs shall vest as provided in the Grant Notice.

4. TERMINATION OF SERVICE.

4.1 ***Termination of Service Due to Participant's Death.*** Except as otherwise provided in this Agreement, if Participant's Service terminates because of Participant' death, the unvested portion of the PBRSUs will become one hundred percent (100%) vested on the date of Participant's termination of Service due to death.

4.2 ***Termination of Service Due to Participant's Disability.*** Except as otherwise provided in this Agreement, if Participant's Service terminates as a result of Disability, the unvested PBRSUs will become one hundred percent (100%) vested on the date of Participant's termination of Service due to Disability.

For purposes of this Subsection 4.2, "Disability" will be determined in accordance with the standards and procedures of the then-current long term disability plan maintained by the Company, which is generally a physical condition arising from an illness or injury, which renders an individual incapable of performing work in any occupation, as determined by the Company.

4.3 ***Other Termination of Service.*** In the event Participant's Service terminates for any reason other than death or Disability, vesting shall cease upon the termination of the Participant's Service. Any portion of the PBRSUs that have not vested as of Participant's termination of Service for any reason other than death or Disability shall be forfeited upon termination of Service.

5. DIVIDENDS.

The Participant shall not receive any payment or other adjustment in the number of PBRSUs for dividends or other distributions that may be made in respect of the shares of Stock to which the PBRSUs relate.

6. DISTRIBUTION OF SHARES OF STOCK.

The Company will deliver to the Participant a number of shares of Stock equal to the number of vested shares of Stock subject to the PBRSUs on the vesting date or dates provided in the Grant Notice, less any shares of Stock withheld for the payment of taxes as described in Subsection 12.2 of this Agreement; *provided, however*, that if any shares of Stock subject to the PBRSUs vest on or prior to the execution of the Grant Notice, then such shares, less any shares of Stock withheld for the payment of taxes as described in Subsection 12.2 of this Agreement, shall be delivered as soon as practicable following the date of execution of the Grant Notice.

7. ADJUSTMENTS; CHANGE IN CONTROL.

The provisions of the Plan applicable to Adjustments and a Change in Control or other corporate transaction, as described in Section 12 of the Plan, shall apply to the PBRSUs.

8. SECURITIES LAW COMPLIANCE.

The Participant may not be issued any shares of Stock pursuant to the PBRSUs unless the shares of Stock are either (i) then registered under the Securities Act or (ii) the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. The PBRSUs must also comply with other applicable laws and regulations governing the PBRSUs, and the Participant shall not receive such shares if the Company determines that such receipt would not be in material compliance with such laws and regulations.

9. EXECUTION OF DOCUMENTS.

The Participant hereby acknowledges and agrees that the manner selected by the Company to indicate the Participant's consent to the Grant Notice is also deemed to be execution of the Grant Notice and of this Agreement. The Participant further agrees that such manner of indicating consent may be relied upon as the Participant's signature for establishing execution of any documents to be executed in the future in connection with the PBRSUs. This Agreement shall be deemed to be signed by the Company and the Participant upon the respective signing by the Company and the Participant of the Grant Notice to which it is attached.

10. PBRSUS NOT A SERVICE CONTRACT.

The PBRSUs are not an employment or service contract, and nothing in the PBRSUs shall be deemed to create in any way whatsoever any obligation on the Participant to continue in the service of the Company or any Subsidiary, or on the part of the Company or any Subsidiary to continue such service. In addition, nothing in the PBRSUs shall obligate the Company or any Subsidiary, their respective stockholders, boards of directors, officers or Employees to continue any relationship that the Participant might have as an Employee, Director or consultant for the Company or any Subsidiary.

11. UNSECURED OBLIGATION.

The PBRSUs are unfunded, and as a holder of a vested number of PBRSUs, the Participant shall be considered an unsecured creditor of the Company with respect to the Company's obligation, if any, to issue shares of Stock pursuant to Section 6 of this Agreement.

12. TAX WITHHOLDING.

12.1 ***In General.*** At the time this Agreement is executed, or at any time thereafter as requested by the Company, the Participant hereby authorizes withholding from payroll and any other amounts payable to the Participant, and otherwise agrees to make adequate provision for, any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company, if any, which arise in connection with the grant or vesting of the PBRSUs or the issuance of Stock in settlement thereof. The Company shall have no obligation to deliver Stock until the tax obligations of the Company have been satisfied by the Participant.

12.2 ***Withholding in Securities.*** The Company shall require the Participant to satisfy all of the tax obligations by deducting from the shares of Stock otherwise deliverable to the Participant in settlement of the PBRSUs a number of shares of Stock having a fair market value,

as determined by the Company as of the date on which the tax obligations arise, not in excess of the amount of such tax obligations determined by the applicable withholding rates. Any adverse consequences to the Participant resulting from the procedure permitted under this Subsection 12.2, including, without limitation, tax consequences, shall be the sole responsibility of the Participant.

12.3 ***Consultation*****.** The Participant hereby acknowledges that he or she understands that the Participant may suffer adverse tax consequences as a result of participation in the Plan. The Participant hereby represents that the Participant has consulted with tax consultants in connection with the Award and that the Participant is not relying on the Company for any tax advice.

12.4 ***Beneficial Ownership of Shares; Certificate Registration*****.** The Participant hereby authorizes the Company, in its sole discretion, to deposit for the benefit of the Participant with any broker with which the Participant has an account relationship of which the Company has notice any or all shares acquired by the Participant pursuant to the settlement of the PBRSUs. Except as provided by the preceding sentence, a certificate for the shares pursuant to the PBRSUs shall be registered in the name of the Participant, or, if applicable, in the names of the heirs of the Participant.

13. NONTRANSFERABILITY OF THE PBRSUS.

The PBRSUs and the rights and privileges conferred hereby shall not be sold, pledged or otherwise transferred (whether by operation of law or otherwise) in any manner otherwise than by will or by the laws of descent or distribution, and shall not be subject to sale under execution, attachment, levy or similar process. The terms of the Plan and this Agreement shall be binding upon the executors, administrators, heirs, successors and assigns of the Participant.

14. RIGHTS AS A STOCKHOLDER, DIRECTOR, EMPLOYEE OR CONSULTANT.

The Participant shall have no rights as a stockholder with respect to any shares related to the PBRSUs until the date of issuance of the shares pursuant to the PBRSUs (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). If the Participant is an Employee, the Participant understands and acknowledges that, except as otherwise provided in a separate, written employment agreement between the Company or any Subsidiary and the Participant, the Participant's employment is "at will" and is for no specified term. Nothing in this Agreement shall confer upon the Participant any right to continue in the Service of the Company or any Subsidiary or interfere in any way with any right of the Company or any Subsidiary to terminate the Participant's Service as a Director, an Employee or consultant, as the case may be, at any time.

15. MISCELLANEOUS PROVISIONS.

15.1 ***Termination or Amendment.*** The Board may terminate or amend the Plan or the PBRSUs at any time.

15.2 ***Compliance with Section 409A.*** The Company intends that income realized by the Participant pursuant to the Plan and this Agreement will not be subject to taxation under

Section 409A of the Code. The provisions of the Plan and this Agreement shall be interpreted and construed in favor of satisfying any applicable requirements of Section 409A of the Code. The Company, in its reasonable discretion, may amend (including retroactively) the Plan and this Agreement in order to conform to the applicable requirements of Section 409A of the Code, including amendments to facilitate the Participant's ability to avoid taxation under Section 409A of the Code. However, the preceding provisions shall not be construed as a guarantee by the Company of any particular tax result for income realized by the Participant pursuant to the Plan or this Agreement. In any event, and except for the responsibilities of the Company set forth in Section 12, neither the Company nor any Subsidiary shall be responsible for the payment of any applicable taxes on income realized by the Participant pursuant to the Plan or this Agreement.

15.3 ***Fractional Shares.*** The Company shall not be required to issue fractional shares upon the settlement of the PBRSUs.

15.4 ***Further Instruments.*** The parties hereto agree to execute such further instruments and to take such further action as may reasonably be necessary to carry out the intent of this Agreement.

15.5 ***Binding Effect.*** Subject to the restrictions on transfer set forth herein, this Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective heirs, executors, administrators, successors and assigns.

15.6 ***Delivery of Documents and Notices.*** Any document relating to participation in the Plan, or any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given (except to the extent that this Agreement provides for effectiveness only upon actual receipt of such notice) upon personal delivery or electronic delivery at the e-mail address, if any, provided for the Participant by the Company or any Subsidiary, or, upon deposit in the U.S. Post Office or foreign postal service, by registered or certified mail, or with a nationally recognized overnight courier service with postage and fees prepaid, addressed to the other party at the address of such party set forth in the Grant Notice or at such other address as such party may designate in writing from time to time to the other party.

(a) ***Description of Electronic Delivery.*** The Plan documents, which may include but do not necessarily include: the Plan, the Grant Notice, this Agreement, and any reports of the Company provided generally to the Company's shareholders, may be delivered to the Participant electronically. In addition, if permitted by the Company, the Participant may deliver electronically the Grant Notice to the Company or to such third party involved in administering the Plan as the Company may designate from time to time. Such means of electronic delivery may include but do not necessarily include the delivery of a link to a Company intranet or the internet site of a third party involved in administering the Plan, the delivery of the document via e-mail or such other means of electronic delivery specified by the Company.

(b) ***Consent to Electronic Delivery.*** The Participant acknowledges that the Participant has read Subsection 15.6(a) of this Agreement and consents to the electronic delivery of the Plan documents and, if permitted by the Company, the delivery of the Grant Notice, as described in Subsection 15.6(a). The Participant acknowledges that he or she may receive from

the Company a paper copy of any documents delivered electronically at no cost to the Participant by contacting the Company by telephone or in writing. The Participant further acknowledges that the Participant will be provided with a paper copy of any documents if the attempted electronic delivery of such documents fails. Similarly, the Participant understands that the Participant must provide the Company or any designated third party administrator with a paper copy of any documents if the attempted electronic delivery of such documents fails. The Participant may revoke his or her consent to the electronic delivery of documents described in Subsection 15.6(a) or may change the electronic mail address to which such documents are to be delivered (if Participant has provided an electronic mail address) at any time by notifying the Company of such revoked consent or revised e-mail address by telephone, postal service or electronic mail. Finally, the Participant understands that he or she is not required to consent to electronic delivery of documents described in Subsection 15.6(a).

15.7 ***Integrated Agreement.*** The Grant Notice, this Agreement and the Plan, together with any employment, service or other agreement with the Participant and the Company or any Subsidiary referring to the PBRSUs, shall constitute the entire understanding and agreement of the Participant and the Company or any Subsidiary with respect to the subject matter contained herein or therein and supersede any prior agreements, understandings, restrictions, representations, or warranties among the Participant and the Company or any Subsidiary with respect to such subject matter. To the extent contemplated herein or therein, the provisions of the Grant Notice, this Agreement and the Plan shall survive any vesting of the PBRSUs and shall remain in full force and effect.

15.8 ***Applicable Law.*** This Agreement shall be governed by the laws of the State of California as such laws are applied to agreements between California residents entered into and to be performed entirely within the State of California.

15.9 ***Counterparts.*** The Grant Notice may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

GLAUKOS CORPORATION

DIRECTORS' COMPENSATION POLICY

(Effective December 13, 2017)

Directors of Glaukos Corporation, a Delaware corporation (the "Company"), who are not employed by the Company or one of its subsidiaries ("Non-Employee Directors") are entitled to the compensation set forth below for their service as a member of the Board of Directors (the "Board") of the Company. The Board has the right to amend this policy from time to time.

Cash Compensation	
Annual Retainer	$45,000
Annual Committee Member Retainer	$10,000
Annual Chairperson Retainer	$45,000
Annual Committee Chair Retainers	
Audit Committee Chair	$10,000
Compensation, Nominating and Governance Committee Chair	$10,000
Equity Compensation	
Annual Equity Award	$175,000
Initial Equity Award	$300,000

Cash Compensation

Each Non-Employee Director will be entitled to an annual cash retainer while serving on the Board in the amount set forth above (the "Annual Cash Retainer"). A Non-Employee Director who serves as a member of any standing committee of the Board will be entitled to an additional annual cash retainer for each such committee on which they are serving in the amount set forth above (the "Annual Committee Member Retainer"). A Non-Employee Director who serves as the Chairperson of the Board will be entitled to an additional annual cash retainer while serving in that position in the amount set forth above (the "Annual Chairperson Retainer"). A Non-Employee Director who serves as the Chairperson of the Audit Committee will be entitled to an additional annual cash retainer while serving in that position in the amount set forth above (the "Annual Audit Committee Chairperson Retainer"). A Non-Employee Director who serves as the Chairperson of the Compensation, Nominating and Governance Committee will be entitled to an additional annual cash retainer while serving in that position in the amount set forth above (the "Annual Compensation Committee Chairperson Retainer").

The amounts of the Annual Cash Retainer, Annual Committee Member Retainer, Annual Chairperson Retainer, Annual Audit Committee Chairperson Retainer and Annual Compensation Committee Chairperson Retainer are expressed as annualized amounts. These retainers will be paid on a quarterly basis, at the end of each quarter in arrears, and will be pro-rated if a Non-Employee Director serves (or serves in the corresponding position, as the case may be) for only a portion of the quarter (with the proration based on the number of calendar days in the quarter that the director served as a Non-Employee Director or held the particular position, as the case may be).

Equity Awards

Initial Equity Awards

For each new Non-Employee Director appointed or elected to the Board, on the date that the new Non-Employee Director first becomes a member of the Board, the new Non-Employee Director will automatically be granted an initial equity award consisting of restricted stock units with respect to a number of shares of the Company's common stock determined by dividing (1) the initial equity award amount set forth above by (2) the per-share closing price of the Company's common stock on the date the new Non-Employee Director first becomes a member of the Board, with the result rounded to the nearest whole unit (the "Initial Equity Award"). The Initial

Equity Award shall vest in substantially equal annual installments on each of the first three annual anniversaries of the grant date, subject to the Non-Employee Director's continued service through each vesting date. The unvested portion of the Initial Equity Award shall also become vested if the Non-Employee Director's service on the Board terminates as a result of the director's death or total and permanent disability. The Initial Equity Award shall be payable in shares of common stock as soon as practicable (and no later than 30 days) after each applicable vesting date.

An employee or former employee of the Company or one of its subsidiaries who ceases or has ceased to be so employed and becomes a Non-Employee Director will not be eligible for an initial equity award grant, but will be eligible for cash compensation and annual equity awards on the same basis as other Non-Employee Directors.

Annual Equity Awards for Continuing Board Members

On the date of each annual meeting of the Company's stockholders beginning with the annual meeting that occurs in the 2018 calendar year, each Non-Employee Director then in office following the meeting will automatically be granted an annual equity award consisting of restricted stock units with respect to a number of shares of the Company's common stock determined by dividing (1) the annual equity award amount set forth above by (2) the per-share closing price of the Company's common stock on the date of the applicable annual meeting, with the result rounded to the nearest whole unit (the "Annual Equity Award"). The Annual Equity Award shall vest in one annual installment on the first anniversary of the grant date (or on the date of the annual meeting in the following calendar year, if earlier), subject to the Non-Employee Director's continued service through the vesting date. The unvested portion of the Annual Equity Award shall also become vested if the Non-Employee Director's service on the Board terminates as a result of the director's death or total and permanent disability. The Annual Equity Award shall be payable in shares of common stock as soon as practicable (and no later than 30 days) after the applicable vesting date.

In the event that more than one annual meeting of the Company's stockholders occurs during a given calendar year, Annual Equity Awards will be made only in connection with the first such meeting to occur in that year.

Beginning after the annual meeting of the Company's stockholders that occurs in the 2018 calendar year, for each new Non-Employee Director appointed or elected to the Board other than on the date of an annual meeting of the Company's stockholders, on the date that the new Non-Employee Director first becomes a member of the Board, the new Non-Employee Director will automatically be entitled to a pro-rata portion of the Annual Equity Award (a "Pro-Rata Annual Award") determined by dividing (1) a pro-rata portion of the Annual Equity Award grant value set forth above by (2) the per-share closing price of the Company's common stock on the date the new Non-Employee Director first becomes a member of the Board. The pro-rata portion of the Annual Equity Award grant value for purposes of a Pro-Rata Annual Award will equal the Annual Equity Award grant value set forth above multiplied by a fraction (not greater than one), the numerator of which is 12 minus the number of whole months that as of the particular grant date had elapsed since the Company's last annual meeting of stockholders at which Annual Equity Awards were granted, and the denominator of which is 12, with the result to be rounded to the nearest whole unit. Each Pro-Rata Annual Award will vest on the same terms and otherwise be subject to the same terms set forth above for the Annual Equity Award.

Elective Grants of Equity Awards

Non-Employee Directors may elect, prior to the start of each applicable calendar year, to convert all or a portion of their Annual Cash Retainer, Annual Committee Member Retainer, Annual Chairperson Retainer, Annual Audit Committee Chairperson Retainer, and Annual Compensation Committee Chairperson Retainer (collectively, the "Retainers") payable with respect to the particular calendar year into the right to receive an award of restricted stock units of the Company (an "Elective Restricted Stock Unit Award"). The Elective Restricted Stock Unit Award shall automatically be granted on the first business day of each calendar year in an amount determined by dividing (1) the amount of the Retainers elected to be so converted multiplied by 115% (one hundred fifteen percent) by (2) the per-share closing price of the Company's common stock on the first business day of the year (rounded to the nearest whole share). Each Elective Restricted Stock Unit Award will vest in one annual installment on the first anniversary of the grant date, subject to the Non-Employee Director's continued service through the vesting date. The Elective Restricted Stock Unit Award shall be payable in shares of common stock as soon as practicable (and no

later than 30 days) after the vesting date.

In order to elect to receive an Elective Restricted Stock Unit Award, Non-Employee Directors must complete an election form in such form as the Board may prescribe from time to time (an "Election Form"), and file such completed form with the Company prior to the start of the applicable calendar year (i.e. if a director wants to convert his or her Retainers payable for the 2018 calendar year, the Election Form must be filed prior to December 31, 2017). Once an Election Form is validly filed with the Company, it shall automatically continue in effect for future calendar years unless the Non-Employee Director changes or revokes his or her Election Form prior to the beginning of any such future calendar years.

Provisions Applicable to All Outside Director Equity Awards

Each equity award will be made under and subject to the terms and conditions of the Company's 2015 Omnibus Incentive Compensation Plan (the "Plan") or any successor equity compensation plan approved by the Company's stockholders and in effect at the time of grant, and will be evidenced by, and subject to the terms and conditions of, any applicable award agreement form approved by the Board to evidence such type of grant pursuant to this policy.

Expense Reimbursement

All Non-Employee Directors will be entitled to reimbursement from the Company for their reasonable travel (including airfare and ground transportation), lodging and meal expenses incident to meetings of the Board or committees thereof or in connection with other Board related business.

Exhibit 21

Subsidiaries

Subsidiary Name	State of Incorporation / Formation	Country of Incorporation / Formation
Glaukos Germany GmbH		Germany
Glaukos Japan GK		Japan
Glaukos Australia Pty Ltd		Australia
Glaukos Canada Inc.		Canada
Glaukos France SAS		France
Glaukos Ireland Limited		Ireland
Glaukos Netherlands B.V.		Netherlands
Glaukos Produtos Médicos Ltda.		Brazil
Glaukos Sweden AB		Sweden
Glaukos UK Limited		England and Wales
Glaukos Singapore PTE. LTD.		Singapore
Glaukos Medical Spain, S.L.		Spain
Glaukos (Switzerland) AG		Switzerland
Glaukos Norway AS		Norway
GKOS Medical, Unipessoal LDA		Portugal
Glaukos Belgium		Belgium
DOSE Medical Corporation	Delaware	United States
Avedro, Inc.	Delaware	United States

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

(1) Registration Statement (Form S-8 No. 333-233807) pertaining to the Avedro, Inc. 2019 Equity Incentive Plan, the Avedro, Inc. 2012 Equity Incentive Plan, as amended, and the Avedro, Inc. (f/k/a ThermalVision, Inc.) 2003 Stock Plan, as amended;

(2) Registration Statement (Form S-8 No. 333-230017) pertaining to the Glaukos Corporation 2015 Omnibus Incentive Compensation Plan and 2015 Employee Stock Purchase Plan;

(3) Registration Statement (Form S-8 No. 333-224822) pertaining to the Glaukos Corporation 2015 Omnibus Incentive Compensation Plan and 2015 Employee Stock Purchase Plan;

(4) Registration Statement (Form S-8 No. 333-212106) pertaining to Glaukos Corporation 2015 Omnibus Incentive Compensation Plan and 2015 Employee Stock Purchase Plan; and

(5) Registration Statement (Form S-8 No. 333-205372) pertaining to the Glaukos Corporation 2015 Omnibus Incentive Compensation Plan, 2015 Employee Stock Purchase Plan, 2011 Stock Plan, and 2001 Stock Option Plan;

of our reports dated March 2, 2020, with respect to the consolidated financial statements of Glaukos Corporation and the effectiveness of internal control over financial reporting of Glaukos Corporation included in this Annual Report (Form 10-K) for the year ended December 31, 2019.

/s/ Ernst & Young LLP

Irvine, California
March 2, 2020

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO RULE 13a-14(a) AND RULE 15d-14(a) OF THE SECURITIES EXCHANGE ACT, AS AMENDED, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Thomas W. Burns, certify that:

1. I have reviewed this Annual Report on Form 10-K of Glaukos Corporation;

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.

Date: March 2, 2020

/s/ THOMAS W. BURNS
Name: Thomas W. Burns
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO RULE 13a-14(a) AND RULE 15d-14(a) OF THE SECURITIES EXCHANGE ACT, AS AMENDED, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Joseph E. Gilliam, certify that:

1. I have reviewed this Annual Report on Form 10-K of Glaukos Corporation;

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.

Date: March 2, 2020

/s/ JOSEPH E. GILLIAM
Name: Joseph E. Gilliam
Chief Financial Officer & Sr. Vice President, Corporate Development

Exhibit 32.1

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

I, Thomas W. Burns, President and Chief Executive Officer of Glaukos Corporation (the "Company"), certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) the Annual Report on Form 10-K for the year ended December 31, 2019 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 2, 2020

/s/ THOMAS W. BURNS

Name: Thomas W. Burns

President and Chief Executive Officer

This certification accompanies and is being "furnished" with this Report, shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to liability under that Section and shall not be deemed to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Report, irrespective of any general incorporation language contained in such filing.

Exhibit 32.2

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

I, Joseph E. Gilliam, Chief Financial Officer & Sr. Vice President, Corporate Development of Glaukos Corporation (the "Company"), certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) the Annual Report on Form 10-K for the year ended December 31, 2019 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 2, 2020

/s/ JOSEPH E. GILLIAM
Name: Joseph E. Gilliam
Chief Financial Officer & Sr. Vice President, Corporate Development

This certification accompanies and is being "furnished" with this Report, shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to liability under that Section and shall not be deemed to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Report, irrespective of any general incorporation language contained in such filing.