UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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, 2024.

OR

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

For the transition period from _____ to _____.
Commission file number 001-33528

OPKO Health, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**75-2402409**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**

4400 Biscayne Blvd.
Miami, FL 33137
(Address of Principal Executive Offices) (Zip Code)
(305) 575-4100
(Registrant's Telephone Number, Including Area Code)

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

Title of Each Class	**Trading Symbol**	**Name of Each Exchange on Which Registered**
Common Stock, $.01 par value per share	**OPK**	**NASDAQ Global Select Market**

Securities registered pursuant to section 12(g) of the Act:

None

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 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, smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive- based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, as of the last business day of the registrant's most recently completed second fiscal quarter was: $414,913,527.

As of January 31, 2025, the registrant had 671,550,270 shares of its common stock, par value $0.01 per share ("Common Stock") outstanding.

Documents Incorporated by Reference

Portions of the registrant's definitive proxy statement for its 2025 Annual Meeting of Stockholders are incorporated by reference in Items 10, 11, 12, 13, and 14 of Part III of this Annual Report on Form 10-K.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains "forward-looking statements," as that term is defined under the Private Securities Litigation Reform Act of 1995 ("PSLRA"), Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Forward-looking statements include statements about our expectations, beliefs or intentions regarding our product development efforts, business, financial condition, results of operations, strategies or prospects, operating results, cash flows and/or financial condition. You can identify forward-looking statements by the fact that these statements do not relate strictly to historical or current matters. Rather, forward-looking statements relate to anticipated or expected events, activities, trends or results as of the date they are made. Because forward-looking statements relate to matters that have not yet occurred, these statements are inherently subject to risks and uncertainties that could cause our actual results to differ materially from any future results expressed or implied by the forward-looking statements. Many factors could cause our actual activities or results to differ materially from the activities and results anticipated in forward-looking statements. These factors include those described below and in "Item 1A-Risk Factors" of this Annual Report on Form 10-K. We do not undertake an obligation to update forward-looking statements. We intend that all forward-looking statements be subject to the safe-harbor provisions of the PSLRA. These forward-looking statements are only predictions and reflect our views as of the date they are made with respect to future events and financial performance.

Risks and uncertainties, the occurrence of which could adversely affect our business, include the following:

- we have had a history of losses and may not generate sustained positive cash flow sufficient to fund our operations and research and development programs;
- our need for, and ability to obtain, additional financing when needed on favorable terms, or at all;
- adverse results in material litigation matters or governmental inquiries;
- the risks inherent in developing, obtaining regulatory approvals for and commercializing new, commercially viable and competitive products and treatments;
- our research and development activities may not result in commercially viable products;
- that earlier clinical results of effectiveness and safety may not be reproducible or indicative of future results;
- that we may not generate or sustain profits or cash flow from our laboratory operations or substantial revenue from NGENLA (Somatrogon), *Rayaldee,* and our other pharmaceutical and diagnostic products;
- our ability to manage our changing operations;
- that our acquisition of ModeX Therapeutics, Inc. will be successful and the products in the R&D pipeline will ultimately be commercialized;
- that currently available over-the-counter and prescription products, as well as products under development by others, may prove to be as or more effective than our products for the indications being studied;
- our ability and our distribution and marketing partners' ability to comply with regulatory requirements regarding the sales, marketing and manufacturing of our products and product candidates and the operation of our laboratories;
- the performance of our third-party distribution partners, licensees and manufacturers over which we have limited control;
- changes in regulation and policies in the U.S. and other countries, including increasing downward pressure on healthcare reimbursement;
- increased competition, including price competition;

- our success is dependent on the involvement and continued efforts of our Chairman and Chief Executive Officer;
- integration challenges for acquired businesses;
- changing relationships with payors, including the various state and multi-state programs, suppliers and strategic partners;
- efforts by third-party payors to reduce utilization and reimbursement for clinical testing services;
- our ability to maintain reimbursement coverage for our products and services, including *Rayaldee* and the *4Kscore* test;
- failure to timely or accurately bill and collect for our services;
- the information technology systems that we rely on may be subject to unauthorized tampering, cyberattack or other data security or privacy incidents that could impact our billing processes or disrupt our operations;
- failure to obtain and retain new clients and business partners, or a reduction in tests ordered or specimens submitted by existing clients;
- failure to establish, and perform to, appropriate quality standards to assure that the highest level of quality is observed in the performance of our testing services;
- failure to maintain the security of patient-related information;
- our ability to obtain and maintain intellectual property protection for our products;
- our ability to defend our intellectual property rights with respect to our products;
- our ability to operate our business without infringing the intellectual property rights of others;
- our ability to attract and retain key scientific and management personnel;
- the risk that the carrying value of certain assets may exceed the fair value of the assets causing us to impair goodwill or other intangible assets;
- our ability to comply with the terms of our 2022 Corporate Integrity Agreement with the U.S. Office of Inspector General of the Department of Health and Human Services;
- failure to obtain and maintain regulatory approval for our products and services outside the U.S.;
- legal, economic, political, regulatory, currency exchange, and other risks associated with international operations; and
- disruptions to operations, including impact on employees, and business continuity, including physical damage or impaired access to company facilities, office of technology from the recent conflict in the Middle East;

Risk Factor Summary

Our business is subject to numerous risks and uncertainties, including those described in Item 1A "*Risk Factors*". These risks include, but are not limited to the following:

- We have had a history of operating losses and may not be able to achieve profitability in the near future;
- Our research and development activities may not result in commercially viable products;
- Failure to timely or accurately bill and collect for our services could have a material adverse effect on our revenues and our business;
- The information technology systems that we rely on may be subject to unauthorized tampering, cyberattack or other data security incidents that could impact our billing processes or disrupt our operations;
- Our success is dependent to a significant degree on the involvement, efforts and reputation of our Chairman and Chief Executive Officer;
- Business combinations may disrupt our business, distract our management, may not proceed as planned, and may also increase the risk of potential third party claims and litigation;
- If we are unable to obtain and enforce patent protection for our products, our business could be materially harmed;
- Failure to maintain the security of patient-related information or compliance with security requirements could damage our reputation with customers, cause us to incur substantial additional costs and become subject to litigation;
- Failure to obtain regulatory approval within and outside the U.S. will prevent us from marketing our products and product candidates domestically and abroad;
- We are subject to risks associated with doing business globally; and
- Funding may not be available for us to continue to make acquisitions, investments and strategic alliances in order to grow our business.

PART I

Unless the context otherwise requires, all references in this Annual Report on Form 10-K to the "Company", "OPKO", "we", "our", "ours", and "us" refer to OPKO Health, Inc., a Delaware corporation, including our wholly-owned subsidiaries.

ITEM 1. BUSINESS

OVERVIEW

We are a diversified healthcare company that seeks to establish industry-leading positions in large and rapidly growing medical markets. Our pharmaceutical business features Somatrogon (hGH-CTP), a once-weekly human growth hormone injection. We have partnered with Pfizer Inc. ("Pfizer") for further development and commercialization of Somatrogon (hGH-CTP). Regulatory approvals for Somatrogon (hGH-CTP) for the treatment of children and adolescents as young as three years of age with growth disturbance due to insufficient secretion of growth hormone, have been secured in more than 50 markets worldwide, including in the United States, European Union Member States, Japan, Canada, and Australia under the brand name NGENLA®. Also, through our pharmaceutical division, we manufacture and sell *Rayaldee*, a U.S. Food and Drug Administration ("FDA") approved treatment for secondary hyperparathyroidism ("SHPT") in adults with stage 3 or 4 chronic kidney disease ("CKD") and vitamin D insufficiency.

Our subsidiary, ModeX Therapeutics, Inc. ("ModeX"), which we acquired in May 2022, is a biotechnology company focused on developing innovative multi-specific immune therapies for cancer and infectious disease candidates. ModeX has a robust early-stage pipeline with assets in key areas of immuno-oncology and infectious diseases, and we intend to further expand our pharmaceutical product pipeline through ModeX's portfolio of development candidates.

Our diagnostics business, BioReference Health, LLC ("BioReference"), is a highly specialized laboratory in the United States, with a sales and marketing team focused on growth and new product integration, including the *4Kscore*® prostate cancer test. BioReference® offers a broad spectrum of diagnostic testing services for oncology, urology (*4Kscore*), and corrections nationwide, setting new standards with our industry-leading turnaround times. BioReference also provides comprehensive clinical and women's health testing in New York and New Jersey. Our test offerings are backed by a team of board-certified medical professionals and driven by the latest healthcare guidelines and standards-marketed directly to physicians, geneticists, hospitals, clinics, correctional facilities, and other healthcare providers. We market our laboratory testing services directly to physicians, geneticists, hospitals, clinics, correctional and other health facilities. On September 16, 2024 we consummated the sale of certain assets of BioReference to Laboratory Corporation of America Holdings ("Labcorp"), as described below.

We operate established, revenue-generating pharmaceutical platforms in Spain, Ireland, Chile, and Mexico, our most such significant platforms, which contribute to positive cash flow and facilitate future market entry for our products currently in development. In addition to these platforms, we have a development and commercial supply pharmaceutical company, as well as a global supply chain operation. We also manufacture specialty active pharmaceutical ingredients ("APIs") in Israel through our subsidiary, FineTech.

We have a highly experienced management team, composed of individuals with solid industry experience and extensive development, regulatory and commercialization expertise and relationships that provide access to commercial opportunities.

All product or service marks appearing in type form different from that of the surrounding text are trademarks or service marks owned, licensed to, promoted or distributed by OPKO, its subsidiaries or affiliates, except as noted. All other trademarks or services marks are those of their respective owners.

GROWTH STRATEGY

We expect to build a leading portfolio of next-generation therapies leveraging our proprietary technology and development strengths.

We have under development a broad and diversified portfolio of diagnostic tests, small molecules, and biologics targeting a broad range of unmet medical needs. We intend to continue to leverage our proprietary technology and our strengths in all phases of research and development to further develop and commercialize our portfolio of proprietary pharmaceutical and diagnostic products. In support of our strategy, we plan to:

- continue to enhance our commercialization capability in the U.S. and internationally;
- obtain requisite regulatory approval and compile clinical data for our most advanced product candidates;
- expand into other medical markets that provide significant opportunities and that we believe are complementary to and synergistic with our business;
- continue marketing and commercialization of *Rayaldee*, and potentially expand the label into additional indications;
- continue to support Pfizer's efforts to seek approval for additional indications for Somatrogon (hGH-CTP). Somatrogon under the brand name NGENLA® is currently sold by Pfizer in over 50 markets, including in the United States, European Union Member States, Japan, Canada, and Australia; and
- enter into collaborations and strategic partnerships designed to help advance and develop our product candidates.

Additionally, we plan to continue to leverage ModeX to further expand our pharmaceutical product line. ModeX is developing next-generation multispecific antibodies and vaccines for the treatment of cancer and infectious disease. ModeX's growing portfolio has been developed through its proprietary multispecific antibody technology. As compared to traditional approaches, ModeX's MSTAR platform unites the power of multiple biologic components in a single molecule to create multispecific antibodies and vaccines with greater versatility and potency to better fight complex disease. Its pipeline includes product candidates intended to treat both solid and liquid tumors, as well as several of the world's most pressing viral threats.

We also plan to continue to commercialize and increase adoption of our *4K score* test for use in men aged 45 and older who have not had a prior prostate biopsy or a biopsy negative and have an age specific abnormal total PSA or abnormal digital rectal exam. *4K score* is available through BioReference.

CORPORATE INFORMATION

We were originally incorporated in Delaware in October 1991 under the name Cytoclonal Pharmaceutics, Inc., which was later changed to eXegenics, Inc. On March 27, 2007, we were part of a merger with Froptix Corporation and Acuity Pharmaceuticals, Inc., both research and development companies. On June 8, 2007, we changed our name to OPKO Health, Inc. Our shares are publicly traded on the NASDAQ Stock Market under the ticker "OPK" and on the Tel Aviv Stock Exchange under the ticker "OPK". Our principal executive offices are located in leased office space in Miami, Florida.

We currently manage our operations in two reportable segments: diagnostics and pharmaceuticals. The pharmaceutical segment consists of the pharmaceutical operations we operate in Chile, Mexico, Ireland, Israel, Spain, Ecuador, France, the United States, and our global pharmaceutical research and development operations. The diagnostics segment primarily consists of the clinical laboratory operations of BioReference. There are no significant inter-segment sales. We evaluate the performance of each segment based on operating profit or loss. There is no inter-segment allocation of interest expense or income taxes. Refer to Note 18 of our audited consolidated financial statements contained in this Annual Report on Form 10-K (the "Consolidated Financial Statements") for financial information about our segments and geographic areas.

CURRENT PRODUCTS AND SERVICES AND RELATED MARKETS

Diagnostics

BioReference Health, LLC

BioReference has a legacy of scientific excellence, innovation, and world-class service in laboratory testing solutions. Healthcare has changed in recent years, and BioReference has evolved by adapting our services and solutions aimed at addressing the needs of today's customers. Laboratory testing and diagnostic excellence remain the cornerstones of the services we provide. As we challenge the limits of specialty diagnostics, we are making strategic efforts to continue to drive innovation and cultivate a unique customer experience at the same time focusing on expanding our reach to match the dynamic needs of an ever-changing healthcare system.

At BioReference, we offer comprehensive laboratory testing services utilized by healthcare providers in the detection, diagnosis, evaluation, monitoring, and treatment of diseases, including, but not limited to, the following: esoteric testing, molecular diagnostics, anatomical pathology, genetics, women's health and correctional healthcare. BioReference markets and sell these services to physician offices, clinics, hospitals, employers and governmental units. Our clinical and women's health testing services are concentrated in New York and New Jersey. For oncology, urology and corrections health services, we offer a full service menu with a national scope.

BioReference's laboratory testing business consists of routine and esoteric testing. Routine tests measure various health parameters, such as the functions of the heart, kidney, liver, thyroid and other organs, including such tests as blood cell counts, cholesterol levels, pregnancy, substance abuse and urinalysis. BioReference is in-network with the largest health plans in the United States and many regional plans throughout the country. We typically operate 24 hours per day, 365 days per year and perform and report most routine test results within 24 hours.

The esoteric tests we perform require sophisticated equipment and materials, highly skilled personnel and professional attention. Esoteric tests are ordered less frequently than routine tests and typically are priced higher than routine tests. Esoteric tests include tests related to endocrinology, genetics and genomics, immunology, microbiology, HIV tests, molecular diagnostics, next generation sequencing, oncology, serology, and toxicology.

Additionally, BioReference operates the following highly specialized laboratory departments:

- *GenPath (Urology).* Provides cutting-edge Uropathology, including the proprietary prostate cancer biomarker test, the *4Kscore* Test®. As a follow-up blood test after an abnormal PSA or DRE, the *4Kscore* Test helps assess the probability of finding aggressive prostate cancer on biopsy.

- *GenPath (Oncology).* A national leading provider of cutting-edge diagnostics with industry-leading turnaround times, GenPath offers a comprehensive test portfolio to provide a single-source solution to support the continuum of care of cancer patients. Backed by a team of specialized pathologists, GenPath Oncology delivers cutting-edge solutions that meet the unique needs of oncologist and pathologists, ranging from routine clinical and special coagulation to complex genomic testing for tumor sequencing and hereditary cancer syndromes. Core testing includes (but not limited to): FLOW, HIC, MicroArray, FISH , ISH, Morphology, and full-service oncology genomics menu.

- *GenPath (Women's Health).* Provides end-to-end laboratory solutions for all women at every stage in their lives. With an evidence-based portfolio designed for OBGYNs, MFMs, and women's healthcare providers in New York and New Jersey, GenPath Women's Health offers testing for cervical and vaginal health, reproductive health, and hereditary cancer screening.

BioReference has a sales and marketing team and operates a network of approximately 76 active patient service centers. Our sales and marketing groups are dedicated to urology, oncology, women's health, genetic testing, correctional health, and large institutions.

We expect the clinical laboratory testing industry will continue to experience growth in testing volumes due to aging of the population in the U.S., patient awareness of the value of laboratory tests, a decrease in the cost of tests, the development of sophisticated and specialized tests for detection and management of disease, increased recognition of early detection and prevention as a means of reducing healthcare costs, and ongoing research and development in genetics and genomics and personalized medicine. Our mission is to be recognized by our clients as the premier provider of clinical laboratory testing, information and related services.

BioReference provides us with a significant diagnostics commercial infrastructure for marketing and sales that reached approximately 6.5 million patients in 2024. In addition, its team of managed care experts complement our efforts to ensure that payors recognize the value of our diagnostic and laboratory tests for reimbursement purposes.

Disposition of Assets to Labcorp

On September 16, 2024, the Company and BioReference consummated the sale of select assets of BioReference to Labcorp (the "BioReference Transaction"). At closing, Labcorp paid us aggregate consideration of $237.5 million in cash, subject to certain adjustments as set forth in the related purchase agreement. These assets were part of our diagnostics segment and included BioReference's laboratory testing businesses focused on clinical diagnostics, reproductive health, and women's health across the United States, excluding BioReference's New York and New Jersey operations.

4Kscore Test

We offer the *4Kscore* test through BioReference. We began selling the *4Kscore* test in the U.S. in March 2014 and in Europe and Mexico in September 2014 and January 2015, respectively. The *4Kscore* test was approved by the FDA in December 2021 for use in men aged 45 and older who have not had a prior prostate biopsy or a biopsy negative and have an age specific abnormal total PSA or abnormal digital rectal exam ("DRE"). The *4Kscore* test is a laboratory developed test that measures the blood serum or plasma levels of four different prostate-derived kallikrein proteins: Total PSA, Free PSA, Intact PSA and Human Kallikrein-2 ("hK2"). These biomarkers are then combined with a patient's age, optional DRE status (nodule / no nodule), and prior negative biopsy status (yes, prior negative biopsy / no prior biopsy) using a proprietary algorithm to calculate the risk (probability) of finding a Gleason Score 7 or higher prostate cancer. The four kallikrein panel of biomarkers utilized in the *4Kscore* test is based on decades of research conducted by scientists at Memorial Sloan-Kettering Cancer Center and leading European institutions. Investigators at the Lund University, Sweden, University of Turku, Finland and Memorial Sloan Kettering Cancer Center, New York, have also demonstrated that the *4Kscore* test can risk stratify the 20-year risk for development of prostate metastases and mortality in men who present at age 50 to 60 years old with an elevated PSA.

The *4Kscore* test was developed by OPKO and validated in two prospective, blinded studies of 1,012 and 366 men, respectively. The first study was done in collaboration with 26 urology centers across the U.S. and the second study was conducted at eight VA centers in the U.S. with a predominantly African American cohort. African Americans are 1.7 times more likely to be diagnosed with prostate cancer than Caucasian men and 2.2 times more likely to die from the disease. Results showed that the *4Kscore* test was highly accurate for predicting the presence of high-grade cancer (Gleason Score 7 or higher) prior to prostate biopsy, regardless of race. The full data from the blinded, prospective U.S. clinical validation studies have been published in peer reviewed medical journals.

The clinical data from both studies demonstrated the ability of the *4Kscore* test to discriminate between men with high-grade, aggressive prostate cancer and those men who had no findings of cancer or had low-grade or indolent form of the disease. In separate clinical studies, use of the *4Kscore* test led to 64.6% fewer biopsies and was able to discriminate between men with high-grade aggressive prostate cancer and those with no findings of cancer.

The National Comprehensive Cancer Network has included the *4Kscore* test as a recommended test in its Guidelines for Prostate Cancer Early Detection since 2015. The panel making this recommendation concluded that the *4Kscore* test is indicated for use prior to a first prostate biopsy, or after a negative biopsy, to assist patients and physicians in further defining the probability of high-grade cancer. In addition, the European Association of Urology ("EAU") Prostate Cancer Guidelines Panel included the *4Kscore* test in their Guidelines for Prostate Cancer since 2018, concluding that the *4Kscore*, as a blood test with greater specificity over the PSA test, is indicated for use prior to a first prostate biopsy or after a negative biopsy to assist patients and physicians in further defining the probability of high-grade cancer.

The *4Kscore* test has been granted a Category I CPT® code by the AMA (CPT Code 81539). A CPT code is used by insurance companies and government payors to describe health care services and procedures. A Category I CPT code is critical to facilitate reimbursement in government programs such as Medicare and Medicaid, as well as private insurance programs. Effective December 30, 2019, Novitas Solutions ("Novitas"), the local Medicare Administrative Contractor for the *4Kscore* testing laboratory in New Jersey, provided positive coverage through a local coverage determination with defined coverage criteria. Since that date, *4Kscore* test orders meeting the coverage criteria have been reimbursed by Novitas and Medicare Advantage Health Plans.

Pharmaceutical Business

We currently have two commercial stage pharmaceutical products and several pharmaceutical compounds and technologies in various stages of research and development for a broad range of indications and conditions, including the following:

ModeX

In May 2022, we acquired ModeX Therapeutics, a biotech company developing multi-specific immune therapies focused on oncology, immunology and infectious diseases. ModeX utilizes several platforms in furtherance of its targets: the multispecific antibody platform MSTAR, which we believe can reliably and rapidly generate candidates that target up to six distinct biological pathways in a single molecule; and the Nanoparticle Vaccine platform, built on naturally occurring and self-assembling ferritin molecules, which ensures the right combination of antigens are presented in the right amount and in the right place to enhance the immune response. We believe the versatility and potency of our approaches will enable us to produce therapeutic candidates against complex diseases.

ModeX currently has a tetra-specific antibody developed utilizing its proprietary MSTAR technology targeting several types of refractory solid tumors; it is designed to activate and sustain the function of the T-cells, and simultaneously target two antigens highly expressed on diverse tumors. Dual targeting minimizes the chance of resistance due to tumor heterogeneity or downregulation of a single antigen . Major solid tumor opportunities include lung, ovarian, prostate, and other solid tumors. The antibody has demonstrated potent *in vitro* tumor cell killing in multiple cell lines and *in vivo* tumor regression in mice challenged with cancer cells. Phase 1 testing is ongoing.

ModeX also has an MSTAR antibody that targets two antigens for hematological tumors, such as several types of lymphomas and leukemias The antibody has demonstrated *in vitro* killing of tumor cells and *in vivo* anti-tumor efficacy in a disseminated mouse tumor model. This product is in the preclinical and CMC development stage in 2025. An additional antibody stimulates T cells and enhances their survival and proliferation, specifically activating antigen-specific memory T cells; and it could be used alone or in combination for immune-oncology, immunology and/or infectious disease indications. This project is in preclinical and CMC development stage in 2025.

On September 28, 2023, ModeX was awarded a contract (as amended, the “BARDA Contract”) by the Biomedical Advanced Research and Development Authority (“BARDA”), part of the Administration for Strategic Preparedness and Response at the U.S. Department of Health and Human Services. This contract aims to advance a platform and product candidates addressing various public health threats, specifically in viral infectious diseases. The funding enables the research, development, and clinical evaluation of multispecific antibodies based on ModeX's proprietary MSTAR technology.

In September 2024, ModeX entered into two amendments (the “BARDA Amendments”) to modify the scope and funding of the BARDA Contract. The BARDA Amendments structured the funding thereunder as cost-plus-fixed-fee, which includes a $26.9 million supplement to further advance the development of COVID-19 multispecific antibodies. This increased funding supports the ongoing development, manufacturing, and execution of a Phase 1 clinical trial for a next-generation MSTAR multispecific antibody with broad neutralizing activity against known SARS-CoV-2 variants. The BARDA Amendments also provided for BARDA's exercise of the option for the development of a multispecific antibody for prevention of influenza, with $24.1 million allocated to cover the expanded work under this exercised option. These modifications increased the total value of the BARDA Contract from $59.0 million to $110.0 million, with the potential value if BARDA exercises all options thereunder to expand ModeX's services, increasing from $168.6 million to $205 million.

ModeX’s Epstein Barr Virus (“EBV”) vaccine is developed using a nanoparticle vaccine platform built on naturally occurring and self-assembling ferritin molecules which enables the presentation of a 24-symmetrical array of each antigen that enhances the presentation of key components of the virus and stimulate durable protective immunity. The EBV vaccine presents antigens from four viral proteins involved in viral entry into host cells. These include an antigen based on the proteins gH, gL and gp42, as well as an antigen derived from gp350. By using ModeX’s multi-targeted approach, this combination is designed to elicit antibodies that inhibit infection in two cell types, B cells and epithelial cells.

In March 2023, ModeX, OPKO, and Merck Sharp & Dohme LLC ("Merck") entered into a License and Research Collaboration Agreement (the "Merck Agreement"), pursuant to which ModeX granted to Merck an exclusive, sublicensable, royalty-bearing license to certain patent rights and know-how in connection with the development of ModeX's preclinical nanoparticle vaccine candidate targeting the Epstein-Barr Virus. Certain of the rights subject to such license were obtained by ModeX from Sanofi pursuant to the Sanofi In-License Agreement, and a portion of the upfront payment, milestones and royalties received by ModeX under the Merck Agreement may be payable to Sanofi under the terms of the Sanofi In-License Agreement. In January 2025, ModeX announced that the first participant had been dosed in a Phase 1 study of an EBV vaccine candidate.

ModeX has a trispecific HIV mAb (SAR441236), licensed from Sanofi ("Sanofi"), pursuant to that certain License Agreement entered into as of July 1, 2019 ("Sanofi In-License Agreement") between ModeX and Sanofi, aimed at treatment of HIV infection. SAR441236 was evaluated in a phase I clinical trial sponsored by the National Institute of Allergy and Infectious Diseases.

Renal Products-Rayaldee

Rayaldee is a patented extended release product containing 30 mcg of a prohormone, called calcifediol (25-hydroxyvitamin D_3), for oral administration. We launched *Rayaldee*, our lead renal product, in the U.S. market in November 2016, following receipt in June 2016 of FDA approval for the treatment of SHPT in adults with stage 3 or 4 CKD and vitamin D insufficiency, defined as serum total 25-hydroxyvitamin D levels less than 30 ng/mL. The FDA approval of *Rayaldee* was supported by successful results from two identical randomized, double-blind, placebo-controlled, multi-site phase 3 studies which established the safety and efficacy of *Rayaldee* as a new treatment for SHPT in adults with stage 3 or 4 CKD and vitamin D insufficiency. Final data from these pivotal trials were published in the *American Journal of Nephrology* in 2016.

Vitamin D insufficiency can arise in CKD from many causes including obesity, proteinuria, and lifestyle changes that reduce exposure to sunlight. Studies in CKD patients have demonstrated that currently available over-the-counter and prescription vitamin D supplements (i.e., cholecalciferol or ergocalciferol) cannot reliably and sufficiently raise raise serum 25-hydroxyvitamin D concentrations to effectively prevent or treat SHPT, a condition commonly associated with declining kidney function in which the parathyroid glands secrete excessive amounts of parathyroid hormone ("PTH"). Prolonged elevation of blood PTH causes excessive calcium and phosphorus to be released from bone, leading to elevated serum calcium and phosphorus levels, softening of the bones (osteomalacia) or resulting in a loss of bone mineral density (osteoporosis), calcification of vascular and renal tissues, and acceleration of dialysis onset. SHPT affects 33% and 54% of patients with stage 3 and 4 CKD respectively, and approximately 95% of patients with stage 5 CKD.

We have a highly specialized sales, marketing and market access team dedicated to the commercialization of *Rayaldee*. In the fourth quarter of 2024, total *Rayaldee* prescriptions increased approximately 3.7% compared to third quarter of 2024. Sales of *Rayaldee* increased progressively during 2024 indicating an end to the lingering adverse effects of the COVID-19 pandemic on onboarding new patients, which we believe curtailed the growth of *Rayaldee* sales. Efforts are underway to obtain broader commercial and Part D insurance coverage for *Rayaldee*. We have negotiated payer contracts that afford unrestricted access for 52% and 72% of U.S. commercial and Medicare Part D covered lives as of the end of 2024.

In May 2016, we entered into a development and license agreement (as amended, the "VFMCRP Agreement") with Vifor Fresenius Medical Care Renal Pharma ("VFMCRP"), which, as amended, provides for the development and commercialization of *Rayaldee* in Europe, Canada, Australia, Japan and certain other international markets for the treatment of SHPT in patients with stage 3, 4 or 5 CKD and vitamin D insufficiency.

VFMCRP initiated the commercial launch of *Rayaldee* in Germany and Switzerland in February and March 2022, respectively, and received marketing authorization from eleven European countries to date. The launch in Germany triggered a $3 million payment to our wholly-owned subsidiary, EirGen Pharma Ltd. ("EirGen"), and another $7 million payment to EirGen in February 2023 tied to achievement of an acceptable final price in Germany as of the 1 year anniversary of launch. EirGen is eligible to receive up to an additional $15 million in regulatory milestones and $200 million in milestone payment tied to launch, pricing and sales of *Rayaldee*, and tiered, double-digit royalties.

In connection with the VFMCRP Agreement, the parties entered into a letter agreement pursuant to which EirGen granted to VFMCRP an exclusive option (the "Option") to acquire an exclusive license under certain EirGen patents and technology to use, import, offer for sale, sell, distribute and commercialize *Rayaldee* in the U.S. solely for the treatment of SHPT in dialysis patients (the "Dialysis Indication"). Upon exercise of the Option, VFMCRP has agreed to reimburse EirGen for all of the development costs incurred by EirGen with respect to *Rayaldee* for the Dialysis Indication in the U.S. VFMCRP would also pay EirGen up to an additional aggregate amount of $555 million of sales-based milestones upon the achievement of certain milestones and would be obligated to pay royalties at percentage rates that range from the mid-teens to the mid-twenties on sales of *Rayaldee* in the U.S. for the Dialysis Indication. To date, VFMCRP has not exercised the Option.

On June 18, 2021, EirGen and NICOYA Macau Limited ("Nicoya"), a Macau corporation and an affiliate of NICOYA Therapeutics, entered into a Development and License Agreement (as amended, the "Nicoya Agreement") granting Nicoya the exclusive rights for the development and commercialization of extended release calcifediol (the "Nicoya Product") in Greater China, which includes mainland China, Hong Kong, Macau, and Taiwan (collectively, the "Nicoya Territory"). The license grant to Nicoya covers the therapeutic and preventative use of the Nicoya Product for SHPT in non-dialysis and hemodialysis CKD patients (the "Nicoya Field"). Nicoya notified EirGen in February 2023 that it had submitted an IND for the Nicoya Product to the Chinese Center of Drug Evaluation ("CDE") which triggered a $2.5 million milestone payment to EirGen. The hard capsule formulation of *Rayaldee* received marketing approval in Macau in November 2024 and launch is expected by mid-2025. A phase 3 trial with *Rayaldee* in mainland China was completed in January 2025, and the analysis of data is ongoing.

OPKO and VFMCRP collaborated to complete a phase 2 study evaluating a higher strength dosage form of *Rayaldee* for the treatment of SHPT in hemodialysis patients. The study commenced in the 3rd quarter of 2018 and topline data were presented in an abstract titled "Initial Evaluation of High-Dose Extended-Release Calcifediol (ERC) in Patients with Stage 5 Chronic Kidney Disease on Hemodialysis" at the American Society of Nephrology (ASN) Kidney Week Annual Meeting in November 2021. Final data were submitted to a respected nephrology journal in February 2025 and publication is expected by mid-year. The data showed that Rayaldee safely restored normal vitamin D hormone production in these patients and halted the progression of SHPT. Further development of *Rayaldee* for hemodialysis patients is on hold in the U.S. due to unfavorable reimbursement for new drugs under the current Prospective Payment System established by the Centers for Medicare and Medicaid Services ("CMS").

We believe the CKD patient population is large and growing as a result of obesity, hypertension and diabetes; therefore, this patient population represents a significant global market opportunity. According to the 2024 U.S. Renal Data System Annual Report, CKD afflicts one in seven (14%) of U.S. adults and its prevalence is highest in non-Hispanic Black individuals (18.8%). An estimated 71-97% of CKD patients have vitamin D insufficiency which usually leads to SHPT and its debilitating consequences. Ineffective (or lack of) treatment for SHPT accelerates the onset of dialysis. Human and healthcare costs related to CKD represent a significant economic burden, which increases with disease severity, highlighting an urgent need to forestall CKD progression.

SARM

Through the acquisition of Transition Therapeutics, a Toronto-based biotechnology company ("Transition"), we acquired OPK88004, an orally administered selective androgen receptor modulator ("SARM"). The selective and potent effects of OPK88004 on the anabolic androgen receptors appear to be well suited to potentially increase lean body mass, physical function, and decrease fat mass, whereas the antagonistic effect on the prostate reduces the risk of prostate hyperplasia and volume in specific patient populations. In view of these properties, we believe that SARMs hold considerable promise as a new class of anabolic therapies for a variety of clinical indications resulting in the loss of muscle and physical function, such as frailty and functional limitations associated with aging and chronic illnesses, cancer and osteoporosis.

Oxyntomodulin

Our internal product development program is also currently focused on developing a once weekly administered oxyntomodulin for type 2 diabetes and obesity. Our most advanced oxyntomodulin analog product, OPK88003, a once-weekly administered peptide is a dual agonist of the Glucagon-Like Peptide-1 (GLP-1) and glucagon receptors. The receptors play an integral role in regulating appetite, food intake, satiety and energy utilization in the body. Stimulating both receptors, OPK88003 has demonstrated the potential to regulate blood glucose and reduce body weight.

OPK88003 has been evaluated in a phase 2 study enrolling 420 type 2 diabetes subjects in a 24 week study consisting of a 12-week randomized blinded stage followed by a 12-week open-label stage. The study included four once-weekly dose arms of OPK88003 (10mg, 15mg, 30mg, 50mg), a placebo arm, and an active comparator arm (exenatide extended release – 2mg). The study was completed in February 2016. Subjects receiving the highest dose of OPK88003 peptide once weekly in the study demonstrated significantly superior weight loss compared with currently approved extended release exenatide and placebo after 12 and 24 weeks of treatment. OPK88003 also provided a reduction in HbA1c, a marker of sugar metabolism, similar to exenatide at weeks 12 and 24.

We have evaluated OPK88003 in a dose escalation phase 2b trial in 110 type 2 diabetics with dose titration over 3 months for the purpose of dose optimization for adequate body weight reduction and minimize the adverse nausea and vomiting events. The patients were treated for a total of 30 weeks in the study. In March 2019, we announced positive topline results from that phase 2b trial, which demonstrated that OPK88003 met the primary objective with a statistically significant lowering of hemoglobin A1c (HbA1c) after 30 weeks of treatment versus placebo as well as an important secondary endpoint, statistically significant weight loss versus placebo. The safety profile was similar to that expected for the incretin class of drugs, with GI side effects such as nausea, vomiting and diarrhea mostly mild and occurring during the dose-escalation phase.

On September 14, 2021, we and LeaderMed Health Group Limited (“LeaderMed”), a pharmaceutical development company with operations based in Asia, announced the formation of a joint venture under which we granted the joint venture exclusive rights to develop, manufacture and commercialize (a) OPK88003, an oxyntomodulin analog being developed for the treatment of obesity and diabetes, and (b) Factor VIIa-CTP, a novel long-acting coagulation factor being developed to treat hemophilia, in exchange for a 47% ownership interest in the joint venture. In addition, we received an upfront payment of $1 million and will be reimbursed for clinical trial material and technical support provided to the joint venture.

LeaderMed is responsible for funding the joint venture’s operations, development and commercialization efforts and has with its syndicate partners, initially invested $11 million in exchange for a 53% ownership interest in the joint venture. We retain full rights to oxyntomodulin and Factor VIIa-CTP in all other geographies.

We believe oxyntomodulin analog has potential to be a safe, long term therapy for obesity and diabetes type 2 patients, representing significant market opportunities. More than 380 million are living with diabetes worldwide, of which approximately 90% have type 2 diabetes. According to the World Health Organization, there are more than 500 million severely overweight or obese people. In addition to diabetes and obesity, we are also considering development of this product candidate for additional indications, including treatment of non-alcoholic fatty liver disease and non-alcoholic steatohepatits.

More recently, we announced a research collaboration between OPKO Biologics and Entera Bio ("Entera"). Under the terms of a research collaboration agreement, OPKO supplied its long-acting GLP-2 peptide and oxyntomodulin analogs for the development of oral tablet formulations using Entera's proprietary oral delivery technology. The program is focused on developing the first oral dual agonist GLP-1/glucagon peptide as a potential once-daily treatment for patients with obesity, metabolic and fibrotic disorders. In September 2024, the parties announced topline pharmacokinetic/pharmacodynamic results. The parties completed in vivo proof-of-concept PK/PD studies in rodent and pig models. The studies' objectives were met, demonstrating that oral oxyntomodulin exhibited significant systemic exposure following a single dose. A favorable PK profile and bioavailability were also demonstrated with oral OXM.

Biologics-General

Our biologics business focuses on developing long-acting proprietary versions of approved therapeutic proteins or peptides. One of our innovative platform technologies uses a small peptide, carboxyl terminal peptide ("CTP") which is part of endogenous human chorionic gonadotropin hormone produced by the placenta during pregnancy. The effect of the additional CTP to is to increase the circulating half-life of luteinizing hormone. We are using the CTP technology to develop new, proprietary versions of certain existing therapeutic proteins that have longer life spans than therapeutic proteins without CTP. We have completed the development of CTP- attached human growth hormone, Somatrogon (hGH-CTP), which is approved in over 40 countries.

In addition to hGH-CTP and Factor VIIa-CTP, we believe that the CTP technology may also be broadly applicable to other therapeutic proteins in the market and provide a reduction in the number of injections required for treatment. We are currently engaged in research and development efforts to use the CTP technology for development of a long-acting CTP-IGF-1 for the Treatment of Severe Primary IGF-1 Deficiency. We are also developing long-acting therapies biologics molecule for once weekly therapies in rare diseases by different technologies to extend the circulating half-life of known therapeutic targets.

NGENLA® Somatrogon (hGH-CTP)

Our lead product candidate utilizing CTP, Somatrogon (hGH-CTP), is a recombinant human growth hormone product under development for the treatment of growth hormone deficiency ("GHD"), which is a pituitary disorder resulting in short stature in children and other physical ailments in both children and adults. GHD occurs when the production of growth hormone, secreted by the pituitary gland, is disrupted. Since growth hormone plays a critical role in stimulating body growth and development and is involved in the production of muscle protein and in the breakdown of fats, a decrease in the hormone affects numerous body processes. hGH is used for the long-term treatment of children and adults with inadequate secretion of endogenous growth hormone. The primary indications it treats in children are GHD, SGA, kidney disease, Prader-Willi Syndrome and Turner's Syndrome. In adults, the primary indications are replacement of endogenous growth hormone and the treatment of AIDS-induced weight loss. Patients using hGH receive daily injections six or seven times a week. This is particularly burdensome for pediatric patients. We believe a significant market opportunity exists for a longer-lasting version of hGH that would require fewer injections.

In December 2014, we entered into an exclusive worldwide agreement with Pfizer (the "Pfizer Transaction") for the development and commercialization of hGH-CTP for the treatment of GHD in adults ("Adult GHD") and in children ("Pediatric GHD"), as well as for the treatment of growth failure in children born small for gestational age ("SGA"). In connection with the Pfizer Transaction, we granted Pfizer an exclusive license to commercialize hGH-CTP worldwide, and we received non-refundable and non-creditable upfront payments aggregating $295 million and are eligible to receive up to an additional $275 million upon the achievement of certain regulatory milestones. These payments are structured to include $175 million for the achievement of milestones in Pediatric GHD and $50 million for milestones in SGA. To date, the Company has received the full $175 million associated with the Pediatric GHD milestones. Upon the launch of hGH-CTP we are entitled to either regional, tiered gross profit sharing for both hGH-CTP and Pfizer's Genotropin® once certain necessary pricing approvals are obtained, or tiered royalty payments on sales of Somatrogon (hGH-CTP) with percentage rates ranging from the high teens to mid-twenties until such necessary pricing approval are obtained.

We believe hGH-CTP represents a significant advancement in the treatment of children with GHD compared to the current standard of one injection per day that could enhance a patient's adherence to treatment and quality of life.

In addition to the phase 3 pediatric study, we have continued without interruption our ongoing phase 2 pediatric open label extension study for hGH-CTP. Most of the phase 2 pediatric patients have been treated with hGH-CTP for more than six years, and some patients for more than seven years. We have switched all of the pediatric patients in this study to a disposable pen device. A 44-patient Phase 3 study in Pediatric GHD patients in Japan was completed in the first quarter of 2020. The Japan Phase 3 clinical trial met its primary and secondary objectives, and demonstrated that the efficacy and safety of hGH-CTP administered weekly was comparable to Genotropin® as measured by annual height velocity after 12 months of treatment in pre-pubertal children with GHD. The findings were consistent with the results previously reported in the Phase 3 global study. The least squared means for the annual height velocity was higher in the Somatrogon group (9.65 cm/year) than in the Genotropin group (7.87 cm/year).

In June 2023, the FDA approved NGENLA (Somatrogon) in the United States. This followed earlier approvals in other major markets. In January 2022, the Ministry of Health, Labour and Welfare in Japan approved NGENLA® for the long-term treatment of pediatric patients who have growth failure due to an inadequate secretion of endogenous growth hormone. In February 2022, the European Commission granted marketing authorization in the EU for Somatrogon (hGH-CTP) under the brand name NGENLA® to treat children and adolescents from as young as three years of age with growth disturbance due to insufficient secretion of growth hormone. In October 2021, Health Canada approved NGENLA® for the long-term treatment of pediatric patients who have growth hormone deficiency, and in November 2021, Australia's Therapeutic Goods Administration approved NGENLA® for the long-term treatment of pediatric patients with growth disturbance due to insufficient secretion of growth hormone.

Regulatory approvals for Somatrogon (hGH-CTP) for the treatment of growth hormone deficiency in children and adolescents have now been secured in more than 50 markets, including the United States, European Union ("EU") Member States, Japan, Canada, and Australia, where it is marketed under the brand name NGENLA®

In December 2016, we announced preliminary topline data from our phase 3, double blind, placebo controlled study of hGH-CTP in adults with GHD. The multinational, multi-center study, which utilized a 2:1 randomization between hGH-CTP and placebo, enrolled 203 subjects, 198 of whom received at least one dose of study treatment. Treatment was administered through a weekly injection. The topline results showed:

- The active group had a mean change in trunk fat mass of -0.4kg and placebo group was 0;
- There was no statistically significant difference (≤ 0.05 (p value)) between the active and placebo group;
- 97% of hGH-CTP vs 6% of placebo group showed IGF-1 normalization; and
- The safety profile of hGH-CTP is consistent with that observed with those treated with daily growth hormone.

Although there was no statistically significant difference between hGH-CTP and placebo on the primary endpoint of change in trunk fat mass from baseline to 26 weeks, after unblinding the study, we identified an exceptional value of trunk fat mass reduction in the placebo group that may have affected the primary outcome. We have completed post-hoc sensitivity analyses to evaluate the influence of outliers on the primary endpoint results using multiple statistical approaches. Analyses that excluded outliers showed a statistically significant difference between hGH-CTP and placebo on the change in trunk fat mass. Additional analyses that did not exclude outliers showed mixed results. Further, significant changes were observed with hGH-CTP treatment in secondary endpoints such as % fat mass, lean body mass and normalization of IGF-1 levels compared to placebo. These data demonstrated that Somatrogon treatment improved key body composition parameters, meeting criteria recommended by the Endocrinology Association.

Factor VIIa-CTP

In addition to hGH-CTP, we have a product candidate to extend the duration of the biological activity of Factor VIIa (hemophilia) using our CTP technology. In February 2013, the FDA granted orphan drug designation to our longer-acting version of clotting Factor VIIa, Factor VIIa-CTP, for the treatment of bleeding episodes in patients with hemophilia A or B with inhibitors to Factor VIII or Factor IX. We have completed a phase 1 single dose subcutaneously administered Factor VIIa-CTP study in healthy volunteers and a phase 2a single dose trial in Hemophilia A patients. Factor VIIa-CTP exhibited a positive safety profile in both hemophiliac patients and healthy subjects following a single IV or subcutaneous injection respectively. Pharmacodynamic assessment of coagulation markers demonstrated pharmacological activity of Factor VIIa-CTP with an extended response. We will need to conduct additional toxicity studies before we are in a position to present a clinical study plan.

We also entered into a joint venture with LeaderMed on September 14, 2021, under which we granted the joint venture exclusive rights to develop, manufacture and commercialize (a) OPK88003, an oxyntomodulin analog being developed for the treatment of obesity and diabetes, and (b) Factor VIIa-CTP, a novel long-acting coagulation factor being developed to treat hemophilia.

Early Stage Biologics Pipeline

In addition to hGH-CTP and Factor VIIa-CTP, we believe that CTP technology may also be broadly applicable to other therapeutic proteins in the market and provide a reduction in the number of injections required for treatment. We are currently engaged in research and development efforts to use the CTP technology for development of a long-acting CTP-IGF-1 for the Treatment of Severe Primary IGF-1 Deficiency.

In addition to development efforts using the CTP platform, we are also focused on broadening the approaches used to develop long acting therapies for once weekly therapies in rare diseases.

Active Pharmaceutical Ingredients (APIs)

FineTech Pharmaceutical, Ltd. ("FineTech"), is our Israeli-based subsidiary that develops and manufactures high value, high potency specialty APIs. FineTech currently manufactures GMP grade APIs for sale or license to pharmaceutical companies in the United States, Latin America, Canada, Europe and Israel.

Commercial Operations

We may continue to leverage our global commercialization expertise to pursue acquisitions of commercial businesses that will both drive our growth and provide geographically diverse sales and distribution opportunities. During 2015, we acquired EirGen, a specialty pharmaceutical company based in Ireland. EirGen is focused on the development and commercial supply of high potency, high barrier to entry, pharmaceutical products. Through its facility in Waterford, Ireland, EirGen currently manufactures high potency pharmaceutical products and exports to over 50 countries. High potency drugs such as those used for cancer chemotherapy are typically unsuitable for manufacture in normal multi-product facilities due to cross contamination risks.

To date, EirGen and its commercial partners have filed several product applications with the FDA in Europe and in Japan. EirGen has a strong research and development portfolio of high barrier to entry drugs and we expect to expand its drug portfolio. We believe EirGen will play an important role in the development, manufacturing, distribution and approval of a wide variety of drugs in a variety of dosage forms with an emphasis on high potency products.

OPKO Health Europe operates primarily in Spain and has more than 23 years of experience in the development, manufacture, marketing and sale of pharmaceutical, nutraceutical and veterinary products in Europe and Latin America.

OPKO Mexico is engaged in the manufacture, marketing, sale and distribution of ophthalmic and other pharmaceutical products to private and public customers in Mexico and Chile. OPKO Mexico is commercializing food supplements and over the counter products and manufactures and sells products primarily in the generics and branded generics market in Mexico.

OPKO Chile markets, sells and distributes pharmaceutical products to the private, hospital, pharmacy and public institutional markets in Chile for a wide range of indications, including, cardiovascular products, vaccines, antibiotics, gastro- intestinal products and hormones, among others. ARAMA Natural Products Distribuidora Limitada ("ARAMA") is engaged in the business of importation, commercialization and distribution of pharmaceutical and OTC products for private and public markets in Chile. ARAMA (previously ALS Distribuidora Limitada) is a company with more than 30 years of experience in the pharmaceutical and OTC products market.

Strategic Investments

We have and may continue to make investments in other early stage companies that we perceive to have valuable proprietary technology and significant potential to create value for OPKO as a shareholder.

RESEARCH AND DEVELOPMENT EXPENSES

During the years ended December 31, 2024, 2023, and 2022, we incurred $105.2 million, $89.6 million, and $73.9 million, respectively, of research and development expenses related to our various product candidates. During the years ended December 31, 2024, 2023, and 2022, our research and development expenses primarily consisted of a pipeline of immuno-oncology and infectious disease programs, hGH-CTP, and *Rayaldee* development programs.

INTELLECTUAL PROPERTY

We believe that technological innovation is driving breakthroughs in healthcare. We have adopted a comprehensive intellectual property strategy which blends the efforts to innovate in a focused manner with the efforts of our business development activities to strategically in-license intellectual property rights. We develop, protect, and defend our own intellectual property rights as dictated by the developing competitive environment. We value our intellectual property assets and believe we have benefited from early and insightful efforts at understanding diagnostics, as well as the disease and the molecular basis of potential pharmaceutical intervention.

We actively seek, when appropriate and available, protection for our products and proprietary information by means of U.S. and foreign patents, trademarks, trade secrets, copyrights, and contractual arrangements. Patent protection in the pharmaceutical and diagnostic fields, however, can involve complex legal and factual issues. There can be no assurance that any steps taken to protect such proprietary information will be effective.

We own or license-in thousands of U.S. and foreign patents and applications for our products, product candidates and our outlicensed product candidates. These patents cover pharmaceuticals, diagnostics and other products and their uses, pharmaceutical and diagnostic compositions and formulations and product manufacturing processes. Our patents are filed in various locations worldwide as is appropriate to the particular patent and its use

Rayaldee

We have multiple U.S. patent families relating to *Rayaldee*. These patents are also filed in multiple countries worldwide. One patent family claims a sustained release oral dosage formulation and a method of treating 25-hydroxyvitamin D insufficiency or deficiency and will not expire until at least February 2027. A second patent family claims a method of administering 25-hydroxyvitamin D_3 by controlled release, a formulation for controlled release of a vitamin D compound, a controlled release oral dosage formulation of a vitamin D compound and a method of treatment, and will not expire until at least April 2028. We also have additional patents and patent applications pending relating to the sustained release formulation and its use which will expire in 2034. The patents issued in the U.S. covering *Rayaldee* are listed in the Approved Drug Products with Therapeutic Equivalence Evaluations, or the Orange Book. OPKO and/or its affiliates have entered into exclusive license agreements with respect to *Rayaldee* patents in certain territories outside of North America with VFMCRP (Europe and many other countries throughout the rest of the world), and Nicoya Macau Limited (China). We intend to seek patent term extensions in those countries for which such protection is potentially available. We also continue to file and seek patent protection on various uses of extended release dosage forms of 25-hydroxyvitamin D_3 and new formulations or presentations of this drug.

NGENLA® -- *Somatrogon (*hGH-CTP)

The hGH-CTP line of patents, which is exclusively licensed to Pfizer, includes multiple U.S. patent families that cover modified human grown hormone (Somatrogon), uses of Somatrogon (hGH-CTP) in adult and pediatric patient populations, and methods of making Somatrogon (hGH-CTP). Equivalent patents have also been filed in multiple countries around the world. One patent family covers certain CTP modified hGH polypeptides relating to growth hormones and their method of use and expires in February of 2027 (with the exception of two U.S. patents, namely US 8304386 and US 8097435, which expire in January 2028 and April 2027, respectively, due to Patent Term Adjustment for each). Additional U.S. patent applications are pending which cover Somatrogon (hGH-CTP) formulations, methods of manufacture and pediatric dosing regimens and, if granted, would expire in 2033. Equivalent patents are granted in Europe and Japan and which expire in 2032 and 2034. A subset of cases in the patent estate covers cytokine-based polypeptides relating to human growth hormone treatment and will expire in February 2027 (in the U.S., these cases include registered patents 8,048,849; 8,426,166; 8,999,670; and 9,896,494, and no Patent Term Adjustment was issued). Multiple other U.S. patents cover Somatrogon (hGH-CTP) and its uses or methods of making including U.S. Pat. Nos. 7,553,941; 8,450,269; 8,946,155; 10,351,615; and 11,197,915, where no Patent Term Adjustment was awarded by the USPTO. The equivalent foreign patents and applications are granted or pending in several major market countries and regions. In addition to the CTP patents and applications licensed to Pfizer, OPKO has multiple patent families covering similar biologicals with patents and applications pending in the U.S. and internationally. Patent term extensions and/or similar extensions such as supplementary protection certificates (SPCs) have been filed in the United States Patent and Trademark Office (USPTO) and in multiple foreign jurisdictions where NGENLA (Somatrogon) has been approved and have been granted and/or are pending.

OPK88003 and OPK88004

In 2016, we acquired Transition Therapeutics, which was developing multiple drug candidates that included OPK88003 (a long acting oxyntomodulin) and OPK88004 (SARM), each of which is licensed from Eli Lilly and has patents granted worldwide covering the compounds and their use in their respective indications. U.S. Pat. No. 8367607 covers OPK88003 and expires in December 2030, without extension. OPKO has also filed a formulation patent on a long acting oxyntomodulin formulation. U.S. Pat. No. 7968587 covers OPK88004 (SARM) and expires, without extension, in November 2027. In addition to the molecule patent covering the selective androgen receptor modulator, Transition Therapeutics exclusively licensed a method of use patent family covering its use in treating androgen deprivation therapy associated symptoms. These patents expire in 2035. OPKO has also filed additional patent applications on expanded uses of OPK88004. In addition, Transition Therapeutics and its affiliates have patented compounds (scyllo-inositol) for the treatment of Alzheimer's disease. The patents are pending or granted in many countries of the world. OPKO and/or its affiliates or licensees will seek all available patent term extensions for our product candidates and products.

New patents and applications continue to be filed covering new compositions of matter and/or new uses of the above compounds or variants thereof.

Multispecific Antibodies and Vaccines

Our affiliate, ModeX Therapeutics has multiple patents and/or patent applications either owned or co-owned by ModeX or licensed-in from a third party such as Sanofi, and which cover vaccine candidates such as a bivalent Epstein-Barr virus vaccine and its use in multiple indications (out-licensed to Merck & Co) or covers therapeutic multispecific antibodies for the treatment of various diseases or conditions such as infectious disease or cancer. ModeX has and will continue to file patent applications covering compositions and indications within their development program.

Because the patent positions of pharmaceutical, biotechnology, and diagnostics companies are highly uncertain and involve complex legal and factual questions, the patents owned and licensed by us, or any future patents, may not prevent other companies from developing similar or therapeutically equivalent products or ensure that others will not be issued patents that may prevent the sale of our products or require licensing and the payment of significant fees or royalties. Furthermore, to the extent that any of our future products or methods are not patentable, that such products or methods infringe upon the patents of third parties, or that our patents or future patents fail to give us an exclusive position in the subject matter claimed by those patents, we will be adversely affected. We may be unable to avoid infringement of third party patents and may have to obtain a license, defend an infringement action, or challenge the validity of the patents in court. A license may be unavailable on terms and conditions acceptable to us, if at all. Patent litigation is costly and time consuming, and we may be unable to prevail in any such patent litigation or devote sufficient resources to even pursue such litigation.

LICENSES AND COLLABORATIVE RELATIONSHIPS

Our strategy is to develop a portfolio of product candidates through a combination of internal development, acquisition, and external partnerships. Collaborations are key to our strategy and we continue to build relationships and forge partnerships in various areas where unmet medical need and commercial opportunities exist. In May 2021, VFMCRP entered into an agreement with us, pursuant to which it assumed our prior strategic partner's rights to develop and commercialize *Rayaldee* for the treatment of SHPT in non-dialysis and dialysis patients with CKD in Japan. Under the VFMCRP Agreement, as amended from time to time, we have a license and collaboration agreement for the development and commercialization of *Rayaldee* in Europe, Australia, and certain other international markets for the treatment of SHPT in patients with CKD and vitamin D insufficiency. In June 2021, we entered into a license agreement with Nicoya to distribute and sell *Rayaldee* in China and certain other countries. In July 2021, we licensed out our AntagoNAT portfolio owned by CURNA, INC. to CAMP4. In September 2021, we also entered into specific arrangements with LeaderMed in certain countries in Asia with respect to OPK-88003 and Factor VIIa. In November 2021, EirGen licensed out the *Rayaldee* patent estate to Progenetics Ltd. to distribute *Rayaldee* in Israel. In December 2014, we entered into the Pfizer Transaction for the development and commercialization of our long-acting hGH-CTP for the treatment of GHD in adults and children, as well as for the treatment of growth failure in children born small for gestational age. Previously, we (or entities we have acquired) have completed strategic licensing transactions with the President and Fellows of Harvard College, Academia Sinica, The Scripps Research Institute, TESARO, INEOS Healthcare, and Arctic Partners, among others. ModeX and Sanofi are parties to the Sanofi In-License Agreement pursuant to which ModeX licenses certain intellectual property underlying its Epstein-Barr Virus technology. ModeX and Merck are parties to the Merck Agreement, pursuant to which ModeX granted to Merck a license in connection with the development of ModeX's preclinical nanopartcile vaccine candidate targeting the Epstein-Barr Virus.

COMPETITION

The pharmaceutical and diagnostic testing industries are highly competitive and require an ongoing, extensive search for technological innovation. The industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. They also require, among other things, the ability to effectively discover, develop, test and obtain regulatory approvals for products, as well as the ability to effectively commercialize, market and promote approved products.

Numerous companies, including major pharmaceutical companies, specialty pharmaceutical companies and specialized biotechnology companies, are engaged in the development, manufacture and marketing of pharmaceutical products competitive with those that we are or intend to commercialize ourselves and through our partners. Competitors to our diagnostics business include major diagnostic companies, reference laboratories, molecular diagnostic firms, universities and research institutions. Most of these companies have substantially greater financial and other resources, larger research and development staffs and more extensive marketing and manufacturing organizations than ours. This enables them, among other things, to make greater research and development investments and efficiently utilize their research and development costs, as well as their marketing and promotion costs, over a broader revenue base. This also provides our competitors with a competitive advantage in connection with the highly competitive product acquisition and product in-licensing process, which may include auctions in which the highest bidder wins. Our competitors may also have more experience and expertise in obtaining marketing approvals from the FDA and other regulatory authorities. In addition to product development, testing, approval, and promotion, other competitive factors in the pharmaceutical and diagnostics industry include industry consolidation, product quality and price, product technology, reputation, customer service, and access to technical information.

With regard to our pharmaceutical products, *Rayaldee's* competition includes, among other products, activated (1-alpha-hydroxylated) vitamin D analogs such as calcitriol, doxercalciferol, and paricalcitol, and vitamin D supplements such as ergocalciferol and cholecalciferol. Although we believe that *Rayaldee* offers substantial benefits over these products, *Rayaldee* may be competing with these and other lower priced products and products which are marketed by larger pharmaceutical companies with substantially greater resources.

There are two other pharmaceutical and biopharmaceutical companies that we are aware of that have successfully developed and commenced commercialization of products addressing areas that we are targeting with our long acting hGH-CTP. Additionally, a number of companies currently market generic daily human growth hormone products for GHD.

In our clinical laboratory operations, we compete with three types of providers in a highly fragmented and competitive industry: hospital laboratories, physician-office laboratories and other independent clinical laboratories. Our major competitors in the New York metropolitan area are two of the largest national laboratories, Quest Diagnostics and Laboratory Corporation of America. Although we are much smaller than these national laboratories, we believe that we compete successfully with them in our region due to our innovative testing services and our level of service.

We are commercializing our *4Kscore* product in the U.S. in a laboratory setting. Competitors to our diagnostics business are many and include major diagnostic companies, molecular diagnostic firms, universities, and research institutions.

Pricing and reimbursement coverage positions could substantially impact the competitiveness of the *4Kscore* test and our other diagnostic products. Our ability to commercialize our pharmaceutical and diagnostic test product candidates and compete effectively will depend, in large part, on:

- our ability to meet all necessary regulatory requirements to advance our product candidates through clinical trials and the regulatory approval process in the U.S. and abroad;
- the perception by physicians and other members of the health care community of the safety, efficacy, and benefits of our products compared to those of competing products or therapies;
- our ability to manufacture products we may develop on a commercial scale;
- the effectiveness of our sales and marketing efforts;
- the willingness of physicians to adopt a new diagnostic or treatment regimen represented by our technology;
- our ability to secure reimbursement for our product candidates;
- the price of the products we may develop and commercialize relative to competing products;
- our ability to accurately forecast and meet demand for our product candidates if regulatory approvals are achieved;
- our ability to develop a commercial scale infrastructure either on our own or with a collaborator, which would include expansion of existing facilities, including our manufacturing facilities, development of a sales and distribution network, and other operational and financial systems necessary to support our increased scale;
- ability to maintain a proprietary position in our technologies; and
- our ability to rapidly expand the existing information technology infrastructure and configure existing operational, manufacturing, and financial systems (on our own or with third party collaborators) necessary to support our increased scale, which would include existing or additional facilities and or partners.

GOVERNMENT REGULATION

The U.S. government regulates healthcare through various agencies, including but not limited to the following: (i) the FDA, which administers the Federal Food, Drug and Cosmetic Act ("FDCA"), as well as other relevant laws; (ii) the Centers for Medicare & Medicaid Services ("CMS"), which administers the Medicare and Medicaid programs; (iii) the Office of Inspector General ("OIG"), which enforces various laws aimed at curtailing fraudulent or abusive practices, including by way of example, the Anti-Kickback Statute, the Physician Self-Referral Law, commonly referred to as the Stark law, the Civil Monetary Penalty Law (including the beneficiary inducement prohibition) ("CMP"), and the laws that authorize the OIG to exclude healthcare providers and others from participating in federal healthcare programs; and (iv) the Office of Civil Rights, which administers the privacy aspects of the Health Insurance Portability and Accountability Act of 1996. All of the aforementioned are agencies within the Department of Health and Human Services ("HHS"). Healthcare is also provided or regulated, as the case may be, by the Department of Defense through its TRICARE program, the Department of Veterans Affairs, especially through the Veterans Health Care Act of 1992, the Public Health Service within HHS under Public Health Service Act § 340B (42 U.S.C. § 256b), the Department of Justice through the Federal False Claims Act (the "False Claims Act") and various criminal statutes, and state governments under the Medicaid and other state sponsored or funded programs and their internal laws regulating all healthcare activities.

The testing, manufacture, distribution, advertising, and marketing of drug and diagnostic products and medical devices, as well as the performance of clinical testing services, are subject to extensive regulation by federal, state, and local governmental authorities in the U.S., including the FDA, and by similar agencies in other countries. Any drug, diagnostic, or device product that we develop must receive all relevant regulatory approvals or clearances, as the case may be, before it may be marketed in a particular country.

Clinical Laboratory Operations

Our clinical laboratory operations are subject to regulations, which are designed to ensure the quality and reliability of clinical laboratories by mandating specific standards in the areas of personnel qualifications, administration and participation in proficiency testing, patient test management, quality control, quality assurance and inspections. Laboratories must undergo on-site surveys at least every two years, which may be conducted by CMS under the CLIA program or by a private CMS approved accrediting agency. The sanction for failure to comply with CLIA requirements may be suspension, revocation or limitation of a laboratory's CLIA certificate, which is necessary to conduct business, as well as significant fines and/or criminal penalties. We are also subject to regulation of laboratory operations under state clinical laboratory laws. State clinical laboratory laws may require that laboratories and/or laboratory personnel meet certain qualifications, specify certain quality controls or require maintenance of certain records. Certain states, such as New York, California, Maryland, Pennsylvania, and Rhode Island, each require that we obtain licenses to test specimens from patients residing in those states and additional states may require similar licenses in the future. Only Washington and New York State are exempt under CLIA, as these states have established laboratory quality standards at least as stringent as CLIA's. Potential sanctions for violation of these statutes and regulations include significant fines and the suspension or loss of various licenses, certificates and authorizations.

Our clinical laboratory operations are subject to complex laws, regulations and licensure requirements relating to billing and payment for laboratory services, sales and marketing interactions with ordering physicians and other health care providers, security and confidentiality of health information, and environmental and occupational safety, among others. Changes in regulations often increase the cost of testing or processing claims. Also, these laws may be interpreted or applied by a prosecutorial, regulatory or judicial authority in a manner that could require us to make changes in our operations, including in our pricing, billing and/or marketing practices in a manner that could adversely affect operations.

Drug Development

The regulatory process, which includes overseeing preclinical studies and clinical trials of each pharmaceutical compound to establish its safety and efficacy and confirmation by the FDA that good laboratory, clinical, and manufacturing practices were maintained during testing and manufacturing, can take many years, requires the expenditure of substantial resources, and gives larger companies with greater financial resources a competitive advantage over us. Delays or terminations of clinical trials that we undertake would likely impair our development of product candidates. Delays or terminations could result from a number of factors, including stringent enrollment criteria, slow rate of enrollment, size of patient population, having to compete with other clinical trials for eligible patients, geographical considerations, failure to meet anticipated clinical success, patient safety concerns, and others.

Although accelerated pathways for approval exist for certain drugs, generally, FDA review processes can be lengthy and unpredictable, and we may encounter delays or rejections of our applications when submitted. Generally, in order to gain FDA approval, we must first conduct preclinical studies in a laboratory and in animal models to obtain preliminary information on a compound and to identify any safety problems. The results of these studies are submitted as part of an IND application that the FDA must review before human clinical trials of an investigational drug can commence.

Clinical trials are normally done in three sequential phases and generally take two to five years or longer to complete. phase 1 consists of testing the drug product in a small number of humans, normally healthy volunteers, to determine preliminary safety and tolerable dose range. Phase 2 usually involves studies in a limited patient population to evaluate the effectiveness of the drug product in humans having the disease or medical condition for which the product is indicated, determine dosage tolerance and optimal dosage, and identify possible common adverse effects and safety risks. Phase 3 consists of additional controlled testing at multiple clinical sites to establish clinical safety and effectiveness in an expanded patient population of geographically dispersed test sites to evaluate the overall benefit-risk relationship for administering the product and to provide an adequate basis for product labeling. Phase 4 clinical trials may be conducted- and are sometimes required - after approval to gain additional experience from the treatment of patients in the intended therapeutic indication. There are also certain situations when drugs and biologics are eligible for one of FDA's expedited approval programs, designed to shorten review and development time.

After completion of clinical trials of a new drug product, FDA and foreign regulatory authority marketing approval must be obtained. Assuming that the clinical data support the product's safety and effectiveness for its intended use, a BLA or an NDA is submitted to the FDA for its review. Since the early 1990s, the FDA has managed a user fee program whereby sponsors of drug applications pay a fee to the agency and the agency commits to meeting a series of performance goals designed to reduce drug review times. Generally, it takes one to three years to obtain approval. If questions arise during the FDA review process, approval may take a significantly longer period of time. The testing and approval processes require substantial time and effort and we may not receive approval on a timely basis, if at all, or the approval that we receive may be for a narrower indication than we had originally sought, potentially undermining the commercial viability of the product. Even if regulatory approvals are obtained, a marketed product is subject to continual review, and later discovery of previously unknown problems or failure to comply with the applicable regulatory requirements may result in restrictions on the marketing of a product or withdrawal of the product from the market as well as possible civil or criminal sanctions. For marketing outside the U.S., we also will be subject to foreign regulatory requirements governing human clinical trials and marketing approval for pharmaceutical products. The requirements governing the conduct of clinical trials, product licensing, pricing, and reimbursement vary widely from country to country.

In addition to clinical trial rules, FDA imposes other requirements on applicants including obligations related to Good Manufacturing Practices (GMPs), proper labeling, and other issues related to manufacturing and marketing a drug.

Other than NGENLA (Somatrogon), which has been approved in the U.S., EU, Japan, Canada and Australia, *Rayaldee* is our only other proprietary pharmaceutical product under development that has been approved for marketing in the U.S. or elsewhere. We may not be able to obtain regulatory approval for any of our other products under development in a timely manner, if at all. Failure to obtain requisite governmental approvals or failure to obtain approvals of the scope requested will delay or preclude us, or our licensees or marketing partners, from marketing our products, or limit the commercial use of our products, and thereby would have a material adverse effect on our business, financial condition, and results of operations. See "Risk Factors — The results of pre-clinical trials and previous clinical trials for our products may not be predictive of future results, and our current and planned clinical trials may not satisfy the requirements of the FDA or other non-U.S. regulatory authorities."

Device Development

Medical devices are subject to varying levels of premarket regulatory control, the most comprehensive of which requires human clinical trials be conducted before a device receives approval for commercial distribution. The FDA classifies medical devices into one of three classes based upon their risk profile (both to the patient and provider): Class I devices are relatively simple "low risk" technologies, and can be manufactured and distributed with general controls without a premarket clearance or approval from the FDA; Class II devices are somewhat more complex "moderate risk" devices, and require greater scrutiny from the agency, requiring a premarket clearance from the FDA before market entry; Class III devices are "high risk" technologies inserted or implanted in the body, intended to treat life sustaining functions. These Class III technologies require a premarket approval from the FDA before market entry.

In the U.S., a company generally can obtain permission to distribute a new device in one of two ways. The first applies to a Class II device that is substantially equivalent to a device first marketed prior to May 1976, or to another device marketed after that date, but which was substantially equivalent to a pre-May 1976 device. To obtain FDA permission to distribute the device, a company generally must submit a section 510(k) premarket notification, and receive an FDA order finding substantial equivalence to a predicate device (pre-May 1976 or post-May 1976 device that was substantially equivalent to a pre-May 1976 device) and permitting commercial distribution of that device for its intended use. A 510(k) submission must provide information supporting a claim of substantial equivalence to the predicate device. If clinical data from human experience are required to support the 510(k) submission, these data must be gathered in compliance with investigational device exemption ("IDE"), regulations for investigations performed in the U.S. The 510(k) process is normally used for products of the type that the Company proposes distributing. The FDA review process for premarket notifications submitted pursuant to section 510(k) takes, on average, about 90 days, but it can take substantially longer if the FDA has concerns, and there is no guarantee that the FDA will "clear" the device for marketing, in which case the device cannot be distributed in the U.S. There is also no guarantee that the FDA will deem the applicable device subject to the 510(k) process, as opposed to the more time-consuming, resource-intensive and problematic, PMA process described below.

The second, more comprehensive, PMA process, which can take a year or longer, applies to a new device that is not substantially equivalent to a pre-1976 product or that is to be used in supporting or sustaining life or preventing impairment. These devices are normally Class III devices. For example, most implantable devices are subject to the approval process. Two steps of FDA approval are generally required before a company can market a product in the U.S. that is subject to approval, as opposed to clearance. First, a company must comply with IDE regulations in connection with any human clinical investigation of the device. These regulations permit a company to undertake a clinical study of a "non-significant risk" device without formal FDA approval. Prior express FDA approval is required if the device is a significant risk device. Second, the FDA must review the company's PMA application, which contains, among other things, clinical information acquired under the IDE. The FDA will approve the PMA application if it finds there is reasonable assurance that the device is safe and effective for its intended use. The PMA process takes substantially longer than the 510(k) process and it is conceivable that the FDA would not agree with our assessment that a device that we propose to distribute should be a Class I or Class II device. If that were to occur we would be required to undertake the more complex and costly PMA process. However, for either the 510(k) or the PMA process, the FDA could require us to run clinical trials, which would pose all of the same risks and uncertainties associated with the clinical trials of drugs, described abov

Even when a clinical study has been approved by the FDA or deemed approved, the study is subject to factors beyond a manufacturer's control, including, but not limited to the fact that the institutional review board at a given clinical site might not approve the study, might decline to renew approval which is required annually, or might suspend or terminate the study before the study has been completed. Also, the interim results of a study may not be satisfactory, leading the sponsor to terminate or suspend the study on its own initiative or the FDA may terminate or suspend the study. There is no assurance that a clinical study at any given site will progress as anticipated; there may be an insufficient number of patients who qualify for the study or who agree to participate in the study or the investigator at the site may have priorities other than the study. Also, there can be no assurance that the clinical study will provide sufficient evidence to assure the FDA that the product is safe and effective, a prerequisite for FDA approval of a PMA, or substantially equivalent in terms of safety and effectiveness to a predicate device, a prerequisite for clearance under 510(k). Even if the FDA approves or clears a device, it may limit its intended uses in such a way that manufacturing and distributing the device may not be commercially feasible. For marketing outside the U.S., we also will be subject to foreign regulatory requirements governing clinical trials and marketing approval for medical devices. The requirements governing the conduct of clinical trials, device clearance/approval, pricing, and reimbursement vary widely from country to country. In addition to the regulatory clearance and approval processes described herein, the FDA periodically issues draft guidance documents designed to provide additional detail on or reform aspects of the 510(k) and PMA clearance and approval processes. To the extent the FDA finalizes and implements these documents, the average 510(k) and PMA submission requirements and review times may change and devices that might previously have been cleared under the 510(k) process may require approval under the PMA process (and vice-versa). Additionally, since 2012, the FDA has collected user fees for the review of certain premarket submissions received on or after October 1, 2012, including 510(k) and PMA applications. These fees are intended to improve the device review process, but it is still too early to assess the actual impact on the industry.

After clearance or approval to market is given, the FDA and foreign regulatory agencies, upon the occurrence of certain events, are authorized under various circumstances to withdraw the clearance or approval or require changes to a device, its manufacturing process or its labeling or additional proof that regulatory requirements have been met.

A manufacturer of a device approved through the PMA is not permitted to make changes to the device, which affects its safety or effectiveness without first submitting a supplement application to its PMA and obtaining FDA approval for that supplement. In some instances, the FDA may require clinical trials to support a supplement application. A manufacturer of a device cleared through the 510(k) process must submit another premarket notification if it intends to make a change or modification in the device that could significantly affect the safety or effectiveness of the device, such as a significant change or modification in design, material, chemical composition, energy source or manufacturing process. Any change in the intended uses of a PMA device or a 510(k) device requires an approved PMA supplement or a cleared premarket notification. Exported devices are subject to the regulatory requirements of each country to which the device is exported, as well as certain FDA export requirements.

A company that intends to manufacture medical devices is required to register with the FDA before it begins to manufacture the device for commercial distribution. As a result, we and any entity that manufactures products on our behalf will be subject to periodic inspection by the FDA for compliance with the FDA's Quality System Regulation requirements and other regulations. In the European Community, we will be required to maintain certain International Organization for Standardization ("ISO"), certifications in order to sell products and we or our manufacturers undergo periodic inspections by notified bodies to obtain and maintain these certifications. These regulations require us or our manufacturers to manufacture products and maintain documents in a prescribed manner with respect to design, manufacturing, testing and control activities. Further, we are required to comply with various FDA and other agency requirements for labeling and promotion. The Medical Device Reporting regulations require that we provide information to the FDA whenever there is evidence to reasonably suggest that a device may have caused or contributed to a death or serious injury or, if a malfunction were to occur, could cause or contribute to a death or serious injury. In addition, the FDA prohibits us from promoting a medical device for unapproved indications.

Diagnostic Products

Certain of our diagnostic products in development are subject to regulation by the FDA and similar international health authorities. For these products, we have an obligation to adhere to the FDA's current good manufacturing practices ("cGMP") regulations. Additionally, we are subject to periodic FDA inspections, quality control procedures, and other detailed validation procedures. If the FDA finds deficiencies in the validation of our manufacturing and quality control practices, it may impose restrictions on marketing these specific products until corrected.

Regulation by governmental authorities in the U.S. and other countries may be a significant factor in how we develop, test, produce and market our diagnostic test products. Diagnostic tests like ours may not fall squarely within the regulatory approval process for pharmaceutical or device products as described above, and the regulatory pathway is not as clear. Although the FDA regulates in vitro diagnostic devices, some laboratory companies have successfully commercialized diagnostic tests for various conditions and disease states without seeking clearance or approval for such tests through a 510(k) or PMA approval process. These tests are known as laboratory developed tests ("LDTs") and are designed, manufactured, and used within a single laboratory that is certified under the CLIA. CLIA is a federal law that regulates clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for diagnostic, preventative or treatment purpose. Such LDT testing is currently under the purview of CMS and state agencies that provide oversight of the safe and effective use of LDTs. A large number of laboratory testing in the United States consists of LDTs.

On April 29, 2024, the FDA announced a final rule on LDTs. Under this final rule, FDA clarified that LDTs are regulated devices, subject to the FDA's oversight and regulation under the Federal Food, Drug, and Cosmetic Act. The FDA adopted a four-year phasing out of its blanket enforcement discretion policy for LDTs. At each phase out stage, FDA expects LDTs will become subject to specific regulatory requirements. We are evaluating whether this final rule is applicable to our operations and if so, the best ways to comply.

Previously, the FDA has consistently asserted that it has the regulatory authority to regulate LDTs despite historically exercising enforcement discretion. In furtherance of that position, the FDA issued two draft guidance documents in October 2014: (1) Framework for Regulatory Oversight of Laboratory Developed Tests; and (2) FDA Notification and Medical Device Reporting for Laboratory Developed Tests, but has taken no action on the draft guidance. Rather, Congress is considering various legislation that, if enacted, could formalize an FDA oversight role for LDTs, including both the Verifying Accurate Leading-edge IVCT Development (VALID) Act, and the Verified Innovative Testing in American Laboratories (VITAL) Act. The FDA has informally indicated that it is giving Congress the opportunity to develop a legislative solution.

If enacted, legislation such as the VALID Act or the VITAL Act may have a materially adverse effect on the time, cost, and risk associated with the Company's development and commercialization of LDTs for the U.S. market, and there can be no assurance that clearances or approvals sought by the Company will be granted and maintained. However, the FDA's authority to regulate LDTs continues to be challenged, the proposed VALID Act and VITAL Act have faced opposition, and the regulatory situation remains fluid. The FDA has indicated that it will continue dialogue with the industry, and the timeline and process for action by Congress or the FDA is unknown. We will continue to monitor changes to all domestic and international LDT regulatory policy so as to ensure compliance with the current regulatory scheme.

Impact of Regulation

The FDA in the course of enforcing the FDCA may subject a company to various sanctions for violating FDA regulations or provisions of the FDCA, including requiring recalls, issuing Warning Letters, seeking to impose civil money penalties, seizing devices that the agency believes are non-compliant, seeking to enjoin distribution of a specific drug or device seeking to revoke a clearance or approval, seeking disgorgement of profits and seeking to criminally prosecute a company and its officers and other responsible parties.

The levels of revenues and profitability of biopharmaceutical companies may be affected by the continuing efforts of government and third party payors to contain or reduce the costs of health care through various means. For example, in certain foreign markets, pricing or profitability of therapeutic and other pharmaceutical products is subject to governmental control. In the U.S., there have been, and we expect that there will continue to be, a number of federal and state proposals to implement similar governmental control. In addition, in the U.S. and elsewhere, sales of therapeutic and other pharmaceutical products are dependent in part on the availability and adequacy of reimbursement from third party payors, such as the government or private insurance plans. Third party payors are increasingly challenging established prices, and new products that are more expensive than existing treatments may have difficulty finding ready acceptance unless there is a clear therapeutic benefit. On April 1, 2014, the Protecting Access to Medicare Act of 2014 ("PAMA") was enacted into law. Under PAMA, Medicare payment for clinical diagnostic laboratory tests are established by calculating a weighted mean of private payor rates with new rates. Effective January 1, 2018, clinical laboratory fee schedule rates were based on weighted median private payor rates as required by PAMA. We cannot assure you that any of our products will be considered cost effective, or that reimbursement will be available or sufficient to allow us to sell them competitively and profitably.

State and Federal Security and Privacy Regulations

The privacy and security regulations under the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (the "HITECH Act", and collectively, "HIPAA"), establish comprehensive federal standards with respect to the uses and disclosures of protected health information, or PHI, by health plans and health care providers, in addition to setting standards to protect the confidentiality, integrity and availability of electronic PHI. The regulations establish a complex regulatory framework on a variety of subjects, including:

- the circumstances under which uses and disclosures of PHI are permitted or required without a specific authorization by the patient, including but not limited to treatment purposes, to obtain payments for services and health care operations activities;
- a patient's rights to access, amend and receive an accounting of certain disclosures of PHI;
- the content of notices of privacy practices for PHI; and
- administrative, technical and physical safeguards required of entities that use or receive PHI electronically.

The final omnibus rule implementing the HITECH Act took effect on March 26, 2013. The rule is broad in scope, but certain provisions are particularly significant in light of our business operations. For example, the final "omnibus" rule implementing the HITECH Act:

- Makes clear that situations involving impermissible access, acquisition, use or disclosure of protected health information are now presumed to be a breach unless the covered entity or business associate is able to demonstrate that there is a low probability that the information has been compromised;
- Defines the term "business associate" to include subcontractors and agents that receive, create, maintain or transmit protected health information on behalf of the business associate;
- Establishes new parameters for covered entities and business associates on uses and disclosures of PHI for fundraising and marketing; and
- Establishes clear restrictions on the sale of PHI without patient authorization.

As a provider of clinical laboratory services and as we launch commercial diagnostic tests, we must continue to implement policies and procedures related to compliance with the HIPAA privacy and security regulations, as required by law. The privacy and security regulations provide for significant fines and other penalties for wrongful use or disclosure of PHI, including potential civil and criminal fines and penalties.

Additionally, as we operate in Europe, we may be subject to laws governing the collection, use, disclosure and transmission of personal and/or patient information. In December 2015, the European Union approved a General Data Protection Regulation ("GDPR") to replace the current data protection directive, Directive 95/46/EC, which took effect May 25, 2018. The GDPR governs the use and transfer of personal data and imposes enhanced penalties for noncompliance. We have made, and will continue to make, certain adjustments to our operations so as to comply with the GDPR.

Anti-Kickback Laws, Physician Self-Referral Laws, False Claims Act, Civil Monetary Penalties

We are also subject to various federal, state, and international laws pertaining to health care "fraud and abuse," including anti-kickback laws and false claims laws. The federal Anti-Kickback Statute prohibits anyone from knowingly and willfully soliciting, receiving, offering, or paying any remuneration with the intent to refer, or to arrange for the referral or order of, services or items payable under a federal health care program, including the purchase or prescription of a particular drug or the use of a service or device. Recognizing that the Anti-Kickback Statute is broad and may technically prohibit many innocuous or beneficial arrangements, Congress authorized the U.S. Department of Health and Human Services Office of Inspector General, or OIG, to issue a series of regulations, known as "safe harbors." These safe harbors set forth requirements that, if met in their entirety, will assure health care providers and other parties that they will not be prosecuted under the Anti-Kickback Statute. The failure of a transaction or arrangement to fit precisely within one or more safe harbors does not necessarily mean that it is illegal, or that prosecution will be pursued. However, conduct and business arrangements that do not fully satisfy each applicable safe harbor may result in increased scrutiny by government enforcement authorities, such as the OIG.

Violations of the Anti-Kickback Statute are punishable by the imposition of criminal fines, civil money penalties, treble damages, and/or exclusion from participation in federal health care programs. Many states have also enacted similar anti-kickback laws. The Anti-Kickback Statute and similar state laws and regulations are expansive. If the government were to allege against or convict us of violating these laws, there could be a material adverse effect on our business, results of operations, financial condition, and our stock price. Even an unsuccessful challenge could cause adverse publicity and be costly to respond to, which could have a materially adverse effect on our business, results of operations and financial condition. We will consult counsel concerning the potential application of these and other laws to our business and our sales, marketing and other activities and will make good faith efforts to comply with them. However, given the broad reach of federal and state anti-kickback laws and the increasing attention given by law enforcement authorities, we are unable to predict whether any of our activities will be challenged or deemed to violate these laws.

We are also subject to the physician self-referral laws, commonly referred to as the Stark law, which is a strict liability statute that generally prohibits physicians from referring Medicare patients to providers of "designated health services," including clinical laboratories, with whom the physician or the physician's immediate family member has an ownership interest or compensation arrangement, unless an applicable exception applies. Moreover, many states have adopted or are considering adopting similar laws, some of which extend beyond the scope of the Stark law to prohibit the payment or receipt of remuneration for the prohibited referral of patients for designated healthcare services and physician self-referrals, regardless of the source of the payment for the patient's care. If it is determined that certain of our practices or operations violate the Stark law or similar statutes, we could become subject to civil and criminal penalties, including exclusion from the Medicare programs and loss of government reimbursement. The imposition of any such penalties could harm our business.

Another development affecting the health care industry is the increased use of the federal civil False Claims Act and, in particular, actions brought pursuant to the False Claims Act's "whistleblower" or "qui tam" provisions. The False Claims Act, as amended by the Fraud Enforcement and Recovery Act of 2009 and the Patient Protection and Affordable Care Act of 2010 ("Affordable Care Act"), imposes liability on any person or entity who, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment by a federal health care program. We submit claims for services performed at our laboratories. The qui tam provisions of the False Claims Act allow a private individual to bring actions on behalf of the federal government alleging that the defendant has submitted a false claim to the federal government, and to share in any monetary recovery. In recent years, the number of suits brought by private individuals has increased dramatically. In addition, various states have enacted false claim laws analogous to the False Claims Act. Many of these state laws apply where a claim is submitted to any third-party payor and not merely a federal health care program. When an entity is determined to have violated the False Claims Act, it may be required to pay up to three times the actual damages sustained by the government, plus civil penalties for each separate false claim. There are many potential bases for liability under the False Claims Act. Liability arises, primarily, when an entity knowingly submits, or causes another to submit, a false claim for reimbursement to the federal government. The False Claims Act has been used to assert liability on the basis of inadequate care, kickbacks and other improper referrals, improper use of Medicare numbers when detailing the provider of services, and allegations as to misrepresentations with respect to the services rendered. Our activities relating to the sale and marketing of our products may be subject to scrutiny under these laws. We are unable to predict whether we would be subject to actions under the False Claims Act or a similar state law, or the impact of such actions. However, the costs of defending such claims, as well as any sanctions imposed, could significantly adversely affect our financial performance.

Further, the beneficiary inducement prohibition of the federal Civil Monetary Penalty Law prohibits any entity from offering or transferring to a Medicare or Medicaid beneficiary any remuneration that the entity knows or should know is likely to influence the beneficiary's selection of a particular provider, practitioner or supplier of Medicare or Medicaid payable items or services, including waivers of copayments and deductible amounts (or any part thereof) and transfers of items or services for free or for other than fair market value. On December 7, 2016, the OIG released amendments to the CMP. Some of the amendments may impact our business, such as allowing certain remuneration to financially needy individuals. Entities found in violation may be liable for civil monetary penalties of up to $10,000 for each wrongful act. Although we believe that our sales and marketing practices are in material compliance with all applicable federal and state laws and regulations, relevant regulatory authorities may disagree and violation of these laws, or, our exclusion from such programs as Medicaid and other governmental programs as a result of a violation of such laws, could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Open Payments Program

With the launch of *Rayaldee*, part of our business is now subject to the federal Physician Payments Sunshine Act under the Affordable Care Act, and its implementing regulations, which is implemented though the physicians Open Payments Program (the "Open Payments Program"). The Open Payments Program requires manufacturers of drugs, devices, biological and medical supplies covered by Medicare, Medicaid or the Children's Health Insurance Program, to report information related to certain payments or other transfers of value made or distributed to physicians and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, the physicians and teaching hospitals. Manufacturers must also report, on an annual basis, certain ownership and investment interests held by physicians and their immediate family members and payments or other "transfers of value" made to such physician owners. A failure to report each payment, other transfer of value, or ownership/investment interest in a timely, accurate, and complete manner may result in civil monetary penalties of up to $150,000 annually. Further, the "knowing" failure to report each payment, other transfer of value, or ownership/investment interest may result in a one million dollar annual penalty. Several other states and a number of countries worldwide have adopted or are considering the adoption of similar transparency laws. Any failure by us to implement proper procedures to track and report on a timely basis transfers of value to physicians and teaching hospitals could result in substantial penalties.

Foreign Corrupt Practices Act

We are also subject to the U.S. Foreign Corrupt Practices Act ("FCPA"), which prohibits corporations and individuals from paying, offering to pay, or authorizing the payment of anything of value to any foreign government official, government staff member, political party, or political candidate in an attempt to obtain or retain business or to otherwise influence a person working in an official capacity. The FCPA also requires public companies to make and keep books and records that accurately and fairly reflect their transactions and to devise and maintain an adequate system of internal accounting controls. Our international activities create the risk of unauthorized payments or offers of payments by our employees, consultants, sales agents or distributors, even though they may not always be subject to our control. We discourage these practices from our employees and agents. However, our existing safeguards and any future improvements may prove to be less than effective, and our employees, consultants, sales agents or distributors may engage in conduct for which we might be held responsible. Any failure by us to adopt appropriate compliance procedures and ensure that our employees and agents comply with the FCPA and applicable laws and regulations in foreign jurisdictions could result in substantial penalties or restrictions on our ability to conduct business in certain foreign jurisdictions.

MANUFACTURING AND QUALITY

Our current pharmaceutical manufacturing facilities are located in Waterford, Ireland, Guadalajara, Mexico, Nesher, Israel, and Banyoles, Spain. In addition to such facilities, we have entered into agreements with various third parties for the formulation and manufacture of our pharmaceutical clinical supplies. These suppliers and their manufacturing facilities must comply with FDA regulations, current good laboratory practices and current good manufacturing practices ("cGMPs"). We plan to continue to outsource the manufacturing and formulation of our clinical supplies.

The FDA and similar regulatory bodies may inspect our facilities and the facilities of those who manufacture on our behalf worldwide. If the FDA or similar regulatory bodies inspecting our facilities or the facilities of our suppliers find regulatory violations in manufacturing and quality control practices or procedures they may require us to cease partial or complete manufacturing operations until the violations are corrected. They may also impose restrictions on distribution of specific products until the violations are corrected.

We are committed to providing high quality products to our customers, and we plan to meet this commitment by working diligently to continue implementing updated and improved quality systems and concepts throughout our organization.

SALES & MARKETING

Our diagnostics business includes BioReference's United States based sales and marketing team to drive growth and leverage new products. We have a highly specialized, field based sales and marketing team in the United States dedicated to the commercialization of *Rayaldee.* We also have limited sales and marketing personnel in Ireland, Chile, Spain, Mexico and Israel.

HUMAN CAPITAL RESOURCES

Employees and Labor Relations

As of December 31, 2024, we had 2,997 full-time employees worldwide. With the exception of an immaterial number of employees of OPKO Spain, none of our employees are represented by a collective bargaining agreement. Overall, we consider our employee relations to be good.

Health and Safety

As a company in the healthcare industry, employee safety is a key focus of our leadership, communications, and training. We are required to comply with the College of American Pathologists and CLIA laboratory safety requirements in addition to OSHA regulations. With a clear leader in our EHS Manager, direction, standards of practice, training and auditing are consolidated and then disseminated to our managers, supervisors and all employees. We continually align our health and safety goals with those prescribed by applicable regulatory agencies and balance these goals with the needs of our employees. For example, during the COVID-19 pandemic, we transitioned non-essential workers from the office to working from home, worked to ensure proper personal protective equipment using guidance provided by the CDC and OSHA where applicable, and we optimized our essential worker stations in our laboratories and other key process areas to provide for appropriate sanitation, social distancing and other appropriate measures to address the risks of the pandemic.

Competitive Pay and Benefits

We are committed to fair pay and we offer competitive medical benefits to all of our employees. Our U.S. health benefits package is above the competitive range for similar companies in our comparative industries and is one of the key tools we use for recruitment.

Talent Development

We recognize it is important that our employees are able to develop and grow their careers. We have a Head of Learning and Training whose responsibility is to enhance employee training and development as well as to ensure compliance while working in a collaborative environment. In addition, we have changed recruitment strategies to source from more diverse channels, which we anticipate will lead to more candidate hiring options, enhance our recruitment platform and eventually strengthen employee retention.

Available Information

We are required to file annual, quarterly and current reports, proxy statements and other information with the SEC. Information that we file with the Securities and Exchange Commission is available at the SEC's web-site at www.sec.gov. We also make available free of charge on or through our web site, at www.opko.com, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with the SEC. The information on our website is not, and shall not be deemed to be, a part hereof or incorporated into this or any of our other filings with the SEC.

ITEM 1A. RISK FACTORS.

You should carefully consider the risks described below, as well as other information contained in this report, including the Consolidated Financial Statements and the notes thereto and "Management's Discussion and Analysis of Financial Condition and Results of Operations." The occurrence of any of the events discussed below could significantly and adversely affect our business, prospects, results of operations, financial condition, and cash flows.

RISKS RELATED TO OUR BUSINESS

We have had a history of operating losses and may not be able to achieve profitability in the near future.

Other than for the fiscal years ended December 31, 2020 and 2021, during which time BioReference conducted a substantial number of COVID-19 tests, our consolidated operations have not historically been profitable. Our pharmaceutical business has historically generated only limited revenue from operations and we may not generate substantial revenue from the sale of proprietary pharmaceutical products or certain of our diagnostic products for some time, if at all. Other than NGENLA (Somatrogon), which has been approved in many territories including the U.S., EU, Japan, Canada and Australia, *Rayaldee* is our only other proprietary pharmaceutical product that has been approved for marketing in the U.S. or elsewhere. We continue to incur substantial research and development and general and administrative expenses related to our operations including our pre-clinical development activities and clinical trials. We may continue to incur losses from our operations in the future and these losses could increase as we continue our research activities and conduct development of, and seek regulatory approvals and clearances for, our product candidates, particularly if we are unable to generate or sustain profits and cash flow from sales of *Rayaldee,* NGENLA, or our operations at BioReference. If we are unable to generate or sustain profits and cash flow from our operations, our product candidates fail in clinical trials or do not gain regulatory approval or clearance, or if our approved products and product candidates do not achieve market acceptance, we may not achieve profitability. In particular, if we are unable to successfully commercialize *Rayaldee* or NGENLA, we may never generate substantial revenues from *Rayaldee* or NGENLA.

We may require additional funding, which may not be available to us on acceptable terms, or at all.

As of December 31, 2024, we had cash, cash equivalents and restricted cash of $445.6 million. Prior to 2020, we had not generated sustained positive cash flows sufficient to offset our operating and research and development expenses, and our primary sources of cash were the public and private placement of stock, the issuance of convertible notes, and credit facilities available to us.

If we are unable to generate a sufficient amount of product and service revenue to finance our cash requirements for research, development and operations, we will need to finance future cash needs primarily through public or private equity offerings, debt financings, or strategic collaborations. Our ability to obtain additional capital may depend on prevailing economic conditions and financial, business and other factors beyond our control, as well as our ability to comply with credit facilities and other loan requirements.

On July 17, 2024, the Company completed a private offering of $250 million aggregate principal amount of senior secured notes (the "2044 Notes"), pursuant to a note purchase agreement dated July 17, 2024 (the "2044 Note Purchase Agreement"), by and among the Company, certain purchasers from time to time party thereto, the Company's wholly owned subsidiaries OPKO Biologics ("OBL") and EirGen as guarantors (OBL and EirGen collectively, the "2044 Note Guarantors"), and HCR Injection SPV, LLC, as agent. The 2044 Note Purchase Agreement contains customary terms and covenants, including negative covenants, such as limitations on indebtedness, liens, amendments to certain material contracts and disposition of assets. Our ability to comply with these restrictions and covenants and similar provisions in agreements governing our indebtedness from time to time is uncertain and will be affected by the levels of cash flow from operations and other events or circumstances beyond our control. If market or other economic conditions deteriorate, our ability to comply with these covenants may be impaired. If we violate any provisions of our agreements governing such indebtedness that are not cured or waived within the appropriate time periods provided in such agreements, a significant portion of our indebtedness may become immediately due and payable. We might not have, or be able to obtain, sufficient funds to make these accelerated payments, which could have a material adverse effect on our financial condition.

Disruptions in the U.S. and global financial markets may also adversely impact the availability and cost of credit, as well as our ability to raise money in the capital markets. Economic conditions have been, and continue to be, volatile. Continued instability in these market conditions may limit our ability to replace, in a timely manner, maturing liabilities and access the capital necessary to fund and grow our business.

There can be no assurance that additional capital will be available to us on acceptable terms, or at all, which could adversely impact our business, results of operations, liquidity, capital resources and financial condition. If we are not able to secure additional funding when needed, we may have to delay, reduce the scope of, or eliminate one or more of our clinical trials or research and development programs or cease operations altogether. To the extent that we raise additional funds by issuing equity securities, our stockholders may experience additional significant dilution, and debt financing, if available, may involve restrictive covenants and other onerous terms. To the extent that we raise additional funds through collaboration and licensing arrangements, it may be necessary to relinquish some rights to our technologies or our products and product candidates or grant licenses on terms that may not be favorable to us.

Our research and development activities may not result in commercially viable products.

Many of our product candidates are in the early stages of development and are prone to the risks of failure inherent in drug, diagnostic, and medical device product development. These risks further include the possibility that such products would:

- be found to be ineffective, unreliable, or otherwise inadequate or otherwise fail to receive regulatory approval;
- be difficult or impossible to manufacture on a commercial scale;
- be uneconomical to market or otherwise not be effectively marketed;
- fail to be successfully commercialized if adequate reimbursement from government health administration authorities, private health insurers, and other organizations for the costs of these products is unavailable;
- be impossible to commercialize because they infringe on the proprietary rights of others or compete with products marketed by others that are superior; or
- fail to be commercialized prior to the successful marketing of similar products by competitors.

The results of pre-clinical trials and previous clinical trials for our products may not be predictive of future results, and our current and planned clinical trials may not satisfy the requirements of the FDA or other non-U.S. regulatory authorities.

Positive results from pre-clinical studies and early clinical trial experience should not be relied upon as evidence that later-stage or large-scale clinical trials will succeed. Likewise, there can be no assurance that the results of studies conducted by collaborators or other third parties will be viewed favorably or are indicative of our own future study results. We may be required to demonstrate with substantial evidence through well-controlled clinical trials that our product candidates are either (i) with respect to drugs or Class III devices, safe and effective for use in a diverse population for their intended uses or (ii) with respect to Class I or Class II devices, are substantially equivalent in terms of safety and effectiveness to devices that are already marketed under section 510(k) of the Food, Drug and Cosmetic Act. Success in early clinical trials does not mean that future clinical trials will be successful because product candidates in later-stage clinical trials may fail to demonstrate sufficient safety and efficacy to the satisfaction of the FDA and other non-U.S. regulatory authorities despite having progressed through initial clinical trials.

Further, our drug candidates may not be approved or cleared even if they achieve their primary endpoints in phase 3 clinical trials or registration trials. In addition, our diagnostic test candidates may not be approved or cleared, as the case may be, even though clinical or other data are, in our view, adequate to support an approval or clearance. The FDA or other non-regulatory authorities may disagree with our trial design and our interpretation of data from pre-clinical studies and clinical trials. In addition, any of these regulatory authorities may change requirements for the approval or clearance of a product candidate even after reviewing and providing comment on a protocol for a pivotal clinical trial that has the potential to result in FDA and other non-U.S. regulatory authorities' approval. Any of these regulatory authorities may also approve or clear a product candidate for fewer or more limited indications or uses than we request or may grant approval or clearance contingent on the performance of costly post-marketing clinical trials. The FDA or other non-U.S. regulatory authorities may not approve the labeling claims necessary or desirable for the successful commercialization of our product candidates.

The results of our clinical trials may show that our product candidates may cause undesirable side effects, which could interrupt, delay or halt clinical trials, resulting in the denial of regulatory approval by the FDA and other non-U.S. regulatory authorities.

We rely on licensing agreements with VFMCRP, Nicoya, and international partners for the international development and marketing of Rayaldee. Failure to maintain these license agreements could prevent us from successfully developing and commercializing Rayaldee worldwide.

In May 2016, EirGen, our wholly-owned subsidiary, partnered with VFMCRP through a Development and License Agreement for the development and marketing of *Rayaldee* in Europe, Canada, Mexico, Australia, South Korea and certain other international markets. The license to VFMCRP potentially covers all therapeutic and prophylactic uses of the product in human patients, provided that initially the license is for the use of the product for the treatment or prevention of secondary hyperparathyroidism related to patients with stage 3 or 4 chronic kidney disease and vitamin D insufficiency/deficiency. Effective May 5, 2020, we entered into the VFMCRP Amendment, pursuant to which the parties agreed to exclude Mexico, South Korea, the Middle East and all of the countries of Africa from the VFMCRP Territory (as defined in the VFMCRP Agreement). In May 2021, we further amended the VFMCRP Agreement for VFMCRP to assume all the rights to *Rayaldee* in Japan that had been previously granted to Japan Tobacco. In addition, the parties agreed to certain amendments to the milestone structure and to reduce minimum royalties payable. As revised, the Company is eligible to receive up to $15 million in regulatory milestones and $200 million in milestone payments tied to launch, pricing and sales of *Rayaldee*, and tiered, double-digit royalties. The success of the Development and License Agreement with VFMCRP is dependent in part on, among other things, the skills, experience and efforts of VFMCRP's employees responsible for the project, VFMCRP's commitment to the arrangement, and the financial condition of VFMCRP, all of which are beyond our control. In the event that VFMCRP, for any reason, including but not limited to early termination of the agreement, fails to devote sufficient resources to successfully develop and market *Rayaldee* internationally, our ability to earn milestone payments or receive royalty payments would be adversely affected, which would have a material adverse effect on our financial condition and prospects.

On June 18, 2021, EirGen and Nicoya entered into the Nicoya Agreement granting Nicoya the exclusive rights for the development and commercialization of the Nicoya Product in the Nicoya Territory. The license grant to Nicoya covers the therapeutic and preventative use of the Nicoya Product for SHPT in non-dialysis and hemodialysis chronic kidney disease patients. EirGen received an initial upfront payment of $5 million and was eligible to receive an additional $5 million upon the first to occur of (A) a predetermined milestone and (B) the first anniversary of the effective date (the "First Milestone"). However, the parties amended the Nicoya Agreement to provide that Nicoya pay $2.5 million plus accrued interest by October 31, 2022 in partial satisfaction of the First Milestone, and $2.5 million upon the earlier of (i) submission of the investigational new drug application by Nicoya or its affiliated party, and (ii) February 15, 2023. EirGen received the additional $2.5 million upon Nicoya's submission of an investigation new drug (IND) application to the center for drug evaluation of China in March 2023. EirGen is also eligible to receive up to an additional aggregate amount of $115 million upon the achievement of certain development, regulatory and sales-based milestones by Nicoya for the Nicoya Product in the Nicoya Territory. EirGen will also receive tiered, double digit royalty payments at rates in the low double digits on net product sales within the Nicoya Territory and in the Nicoya Field. Nicoya will, at its sole cost and expense, be responsible for performing all development activities necessary to obtain all regulatory approvals for the Nicoya Product in the Nicoya Territory and for all commercial activities pertaining to the Nicoya Product in the Nicoya Territory. The success of the Nicoya Agreement is dependent in part on, Nicoya's commitment to the product and our collaboration, as well as the experience of its employees, all of which are beyond our control.

Our exclusive worldwide agreement with Pfizer is important to our business. If we do not successfully develop Somatrogon (hGH- CTP) and/or Pfizer does not successfully commercialize Somatrogon (hGH-CTP), our business could be adversely affected.

In December 2014, we entered into a development and commercialization agreement with Pfizer relating to our long-acting hGH-CTP for the treatment of GHD in adults and children (the "Original Pfizer Agreement"). Under the Restated Pfizer Agreement, we are eligible to receive an aggregate of up to $275 million upon the achievement of certain regulatory milestones, of which the Company has received $175 million to date. We are also we are eligible to receive a regional, tiered gross profit share based upon sales of both Somatrogon (hGH-CTP) and Pfizer's Genotropin® (somatropin) following the launch of Somatrogon (hGH-CTP) for pediatric GHD and contingent upon certain other sales criteria. We are responsible for the development program and are obligated to pay for the development up to an agreed cap, which has been exceeded. In May 2020, we entered into an Amended and Restated Development and Commercialization License Agreement (the "Restated Pfizer Agreement") with Pfizer, effective January 1, 2020, pursuant to which the parties agreed, among other things, to share all costs for Manufacturing Activities, as defined in the Restated Pfizer Agreement, for developing a licensed product for the three indications included in the Restated Pfizer Agreement. The Restated Pfizer Agreement did not change the milestone payments, royalties and profit share provisions under the Original Pfizer Agreement. hGH-CTP has been approved in the U.S., EU, Japan, Canada and Australia under the name NGENLA. We are substantially dependent on Pfizer for the successful commercialization of such product. The success of the collaboration arrangement with Pfizer is dependent in part on, among other things, the skills, experience and efforts of Pfizer's employees responsible for the project and Pfizer's commitment to the arrangement. The Restated Pfizer Agreement is terminable for any reason by Pfizer upon ninety days written notice to OPKO. In the event that Pfizer terminates the Restated Pfizer Agreement or fails to devote sufficient resources to continue to successfully develop and commercialize any product resulting from the collaboration arrangement, our ability to earn milestone payments or receive royalty or profit sharing payments would be adversely affected, which would have a material adverse effect on our financial condition and prospects and the trading prices of our securities.

Our business is substantially dependent on our ability to achieve regulatory approval for the marketing of Somatrogon (hGH-CTP) in pediatric patients and the commercial success of this product.

On October 21, 2019, we and Pfizer announced that the global phase 3 trial evaluating Somatrogon (hGH-CTP) dosed once-weekly in pre-pubertal children with GHD met its primary endpoint of non-inferiority to daily Genotropin® (somatropin) for injection, as measured by annual height velocity at 12 months. In addition, change in height standard deviation scores at six and 12 months, key secondary endpoints, were higher in the hGH-CTP dosed once-weekly cohort in comparison to the Genotropin® (somatropin) dosed once-daily cohort. hGH-CTP was generally well tolerated in this study and comparable to Genotropin® (somatropin) dosed once-daily with respect to the types, numbers and severity of the adverse events observed between the treatment arms. Although the primary endpoint and key secondary endpoints were met and the safety profile for hGH-CTP was consistent with that observed with those treated with Genotropin® (somatropin), further testing and analysis, other clinical trials or patient use may undermine those determinations or unexpected side effects may arise. We previously announced topline data from an earlier phase 3, double blind, placebo controlled study of hGH-CTP in adults with GHD. Although there was no statistically significant difference between hGH-CTP and placebo on the primary endpoint of change in trunk fat mass from baseline to 26 weeks, after unblinding the study, we identified an exceptional value of trunk fat mass reduction in the placebo group that may have affected the primary outcome. We completed post-hoc sensitivity analyses for the adult study to evaluate the influence of outliers on the primary endpoint results using multiple statistical approaches. Analyses that excluded outliers showed a statistically significant difference between hGH-CTP and placebo on the change in trunk fat mass. Additional analyses that did not exclude outliers showed mixed results. There can be no assurance that the FDA or regulatory agencies in other countries will consider the sensitivity analysis or consider the product for approval for adults with GHD.

In June 2023, the FDA approved NGENLA (Somatrogon (hGH-CTP)) for the treatment of pediatric GHD in the United States. However, there can be no assurance that NGENLA (Somatrogon (hGH-CTP)) for the treatment of pediatric GHD will be commercially successful in the United States or that we will obtain marketing approval for the adult indication. Before it can be marketed, Somatrogon (hGH-CTP) for the adult indication must be approved by the FDA or similar foreign governmental agencies. The process for obtaining FDA marketing approval is both time-consuming and costly, with no certainty of a successful outcome. If we are unable to successfully commercialize NGENLA (Somatrogon (hGH-CTP)) to treat pediatric GHD and/or receive regulatory approval for hGH-CTP to treat adults with GHD, our business could be significantly adversely impacted.

NGENLA has been approved in over 50 territories for the long-term treatment of pediatric patients with growth disturbance. NGENLA may nevertheless fail to be successfully commercialized in these territories which would adversely impact our anticipated milestone payments under the Restated Pfizer Agreement and negatively affect our business, financial condition and results of operations.

Our business depends on our ability to generate profits and cash flow from our laboratory operations.

We compete in the clinical laboratory market through BioReference, primarily on the basis of the quality of testing, reporting and information systems, reputation in the medical community, the pricing of services and ability to employ qualified personnel. Our failure to successfully compete on any of these factors could result in the loss of clients and a reduction in our revenues and profits. To offset efforts by payors to reduce the cost and utilization of clinical laboratory services, we will need to obtain and retain new clients and business partners. Our laboratory operations have not been profitable, and our sale of certain assets to Labcorp in September 2024 in the BioReference Transaction has significantly reduced our diagnostic revenues.

While, in addition to the BioReference Transaction, we have engaged in significant cost reduction efforts, including reducing our workforce, in an effort to make the diagnostic business profitable and align our core business testing needs with the size of our operations we may not be able to return to and maintain adequate growth in our remaining testing business or client base, which could have a material adverse impact on our ability to generate profits and cash flow from the laboratory operations in the future.

Discontinuation or recalls of existing testing products, failure to develop, or acquire, licenses for new or improved testing technologies or our clients using new technologies to perform their own tests could adversely affect our business.

From time to time, manufacturers discontinue or recall reagents, test kits or instruments used by us to perform laboratory testing. Such discontinuations or recalls could adversely affect our costs, testing volume and revenue.

The clinical laboratory industry is subject to changing technology and new product introductions. Our success in maintaining a leadership position in advanced testing technologies will depend, in part, on our ability to develop, acquire or license new and improved technologies on favorable terms and to obtain appropriate coverage and reimbursement for these technologies. We may not be able to negotiate acceptable licensing arrangements and it cannot be certain that such arrangements will yield commercially successful diagnostic tests. If we are unable to license these testing methods at competitive rates, our research and development costs may increase as a result. In addition, if we are unable to license or develop new or improved technologies to expand our esoteric testing operations, our testing methods may become outdated when compared with our competition and testing volume and revenue may be materially and adversely affected.

Currently, most clinical laboratory testing is categorized as “high” or “moderate” complexity, and thereby is subject to extensive and costly regulation under CLIA. The cost of compliance with CLIA makes it impractical for most physicians to operate clinical laboratories in their offices, and other laws limit the ability of physicians to have ownership in a laboratory and to refer tests to such a laboratory. Manufacturers of laboratory equipment and test kits could seek to increase their sales by marketing point-of-care laboratory equipment to physicians and by selling test kits approved for home or physician office use to both physicians and patients. Diagnostic tests approved for home use are automatically deemed to be “waived” tests under CLIA and may be performed in physician office laboratories as well as by patients in their homes with minimal regulatory oversight. Other tests meeting certain FDA criteria also may be classified as “waived” for CLIA purposes. The FDA has regulatory responsibility over instruments, test kits, reagents and other devices used by clinical laboratories and has taken responsibility from the Centers for Disease Control for classifying the complexity of tests for CLIA purposes. Increased approval of “waived” test kits could lead to increased testing by physicians in their offices or by patients at home, which could affect our market for laboratory testing services and negatively impact our revenues. If our competitors develop and market products that are more effective, safer or less expensive than our products and product candidates, our net revenues, profitability and commercial opportunities will be negatively impacted.

If our competitors develop and market products or services that are more effective, safer or less expensive than our current and future products or services, our revenues, profitability and commercial opportunities will be negatively impacted.

Numerous companies, including major pharmaceutical companies, specialty pharmaceutical companies and specialized biotechnology companies, are engaged in the development, manufacture and marketing of pharmaceutical products competitive with those that we intend to commercialize ourselves and through our partners. Competitors to our diagnostics business include major diagnostic companies, reference laboratories, molecular diagnostic firms, universities and research institutions. Most of these companies have substantially greater financial and other resources, larger research and development staffs and more extensive marketing and manufacturing organizations than ours. This enables them, among other things, to make greater research and development investments and efficiently utilize their research and development costs, as well as their marketing and promotion costs, over a broader revenue base. This also provides our competitors with a competitive advantage in connection with the highly competitive product acquisition and product in-licensing process. Our competitors may also have more experience and expertise in obtaining marketing approvals from the FDA and other regulatory authorities. We cannot predict with accuracy the timing or impact of the introduction of potentially competitive products or their possible effect on our sales. In addition to product development, testing, approval, and promotion, other competitive factors in the pharmaceutical and diagnostics industry include industry consolidation, product quality and price, product technology, reputation, customer service, and access to technical information.

The clinical laboratory business is intensely competitive both in terms of price and service. Pricing of laboratory testing services is often one of the most significant factors used by health care providers and third-party payors in selecting a laboratory. As a result of the clinical laboratory industry undergoing significant consolidation, larger clinical laboratory providers are able to increase cost efficiencies afforded by large-scale automated testing. This consolidation results in greater price competition. We may be unable to increase cost efficiencies sufficiently, if at all, and as a result, our net earnings and cash flows could be negatively impacted by such price competition. Additionally, we may also face changes in contracting with third party payors, fee schedules, competitive bidding for laboratory services or other actions or pressures reducing payment schedules as a result of increased or additional competition.

If our competitors market products that are more effective, safer, easier to use or less expensive than our current products and product candidates, or that reach the market sooner than our products and product candidates, we may not achieve commercial success. In addition, the biopharmaceutical, diagnostic, medical device, and laboratory industries are characterized by rapid technological change. Because our research approach integrates many technologies, it may be difficult for us to stay abreast of the rapid changes in each technology. If we fail to stay at the forefront of technological change, we may be unable to compete effectively. Technological advances or products developed by our competitors may render our technologies, products or product candidates obsolete or less competitive.

Our product development activities could be delayed or stopped.

We do not know whether our current or planned pre-clinical and clinical studies will be completed on schedule, or at all. Furthermore, we cannot guarantee that our planned pre-clinical and clinical studies will begin on time or at all. The commencement of our planned clinical trials could be substantially delayed or prevented by several factors, including:

- a limited number of, and competition for, suitable patients with the particular types of disease required for enrollment in our clinical trials or that otherwise meet the protocol's inclusion criteria and do not meet any of the exclusion criteria;
- a limited number of, and competition for, suitable serum or other samples from patients with particular types of disease required for our validation studies;
- a limited number of, and competition for, suitable sites to conduct our clinical trials;
- delay or failure to obtain FDA or other non-U.S. regulatory authorities' approval or agreement to commence a clinical trial;
- delay or failure to obtain sufficient supplies of the product candidate for our clinical trials;
- requirements to provide the drugs, diagnostic tests, or medical devices required in our clinical trial protocols or clinical trials at no cost or cost, which may require significant expenditures that we are unable or unwilling to make;

- delay or failure to reach agreement on acceptable clinical trial agreement terms or clinical trial protocols with prospective sites or investigators;
- delay or failure to obtain institutional review board ("IRB") approval to conduct or renew a clinical trial at a prospective site; and
- insufficient liquidity to fund our preclinical and clinical studies.

The completion of our clinical trials could also be substantially delayed or prevented by several factors, including:

- slower than expected rates of patient recruitment and enrollment;
- failure of patients to complete the clinical trial;
- unforeseen safety issues;
- lack of efficacy evidenced during clinical trials;
- termination of our clinical trials by one or more clinical trial sites;
- inability or unwillingness of patients or medical investigators to follow our clinical trial protocols;
- inability to monitor patients adequately during or after treatment; and
- insufficient liquidity to fund ongoing studies.

Our clinical trials may be suspended or terminated at any time by the FDA, other regulatory authorities, the IRB for any given site, or us. Additionally, changes in regulatory requirements and guidance may occur and we may need to amend clinical trial protocols to reflect these changes with appropriate regulatory authorities. Amendments may require us to resubmit our clinical trial protocols to IRBs for re-examination, which may impact the costs, timing, or successful completion of a clinical trial. Any failure or significant delay in commencing or completing clinical trials for our product candidates could materially harm our results of operations and financial condition, as well as the commercial prospects for our product candidates.

Our inability to meet regulatory quality standards applicable to our manufacturing and quality processes and to address quality control issues in a timely manner could delay the production and sale of our products or result in recalls of products.

Manufacturing or design defects, unanticipated use of our products, or inadequate disclosure of risks relating to the use of our products could lead to injury or other adverse events. These events could lead to recalls or safety alerts relating to our products (either voluntary or required by governmental authorities) and could result, in certain cases, in the removal of a product from the market. Any recall could result in significant costs as well as negative publicity that could reduce demand for our products. Personal injuries relating to the use of our products can also result in product liability claims being brought against us. In some circumstances, such adverse events could also cause delays in new product approvals.

We are committed to providing high quality products to our customers, and we plan to meet this commitment by working diligently to continue implementing updated and improved quality systems and concepts throughout our organization. We cannot assure you that we will not have quality control issues in the future, which may result in warning letters and citations from the FDA. If we receive any warning letters from the FDA in the future, there can be no assurances regarding the length of time or cost it will take us to resolve such quality issues to our satisfaction and to the satisfaction of the FDA. If our remedial actions are not satisfactory to the FDA, we may have to devote additional financial and human resources to our efforts, and the FDA may take further regulatory actions against us including, but not limited to, assessing civil monetary penalties or imposing a consent decree on us, which could result in further regulatory constraints, including the governance of our quality system by a third party. Our inability to resolve these issues or the taking of further regulatory action by the FDA may weaken our competitive position and have a material adverse effect on our business, results of operations and financial condition.

We manufacture pharmaceutical products in Ireland, Mexico, Spain, and Israel. Any quality control issues at our facilities may weaken our competitive position and have a material adverse effect on our business results of operations and financial condition.

As a medical device manufacturer, we are required to register with the FDA and are subject to periodic inspection by the FDA for compliance with its Quality System Regulation ("QSR") requirements, which require manufacturers of medical devices to adhere to certain regulations, including testing, quality control and documentation procedures. Compliance with applicable regulatory requirements is subject to continual review and is monitored rigorously through periodic inspections by the FDA. In addition, most international jurisdictions have adopted regulatory approval and periodic renewal requirements for medical devices, and we must comply with these requirements in order to market our products in these jurisdictions. In the European Community, we are required to maintain certain ISO certifications in order to sell our products and must undergo periodic inspections by notified bodies to obtain and maintain these certifications. Further, some emerging markets rely on the FDA's Certificate for Foreign Government ("CFG") in lieu of their own regulatory approval requirements. Our failure, or our manufacturers' failure to meet QSR, ISO, or any other regulatory requirements or industry standards could delay production of our products and lead to fines, difficulties in obtaining regulatory clearances, recalls or other consequences, which could, in turn, have a material adverse effect on our business, results of operations, and our financial condition.

Failure to establish, and perform to, appropriate quality standards to assure that the highest level of quality is observed in the performance of our testing services could adversely affect the results of our operations and adversely impact our reputation.

The provision of clinical testing services, including anatomic pathology services, and related services, and the design, manufacture and marketing of diagnostic products involve certain inherent risks. The services that we provide and the products that we design, manufacture and market are intended to provide information for healthcare providers in providing patient care. Therefore, users of our services and products may have a greater sensitivity to errors than the users of services or products that are intended for other purposes.

Similarly, negligence in performing our services can lead to injury or other adverse events. We may be sued under physician liability or other liability law for acts or omissions by our pathologists, laboratory personnel and other employees. We are subject to the attendant risk of substantial damages awards and risk to our reputation.

Even after we receive regulatory approval or clearance to market our product candidates, the market may not be receptive to our products.

Our products may not gain market acceptance among physicians, patients, health care payors and/or the medical community. We believe that the degree of market acceptance will depend on a number of factors, including:

- timing of market introduction of competitive products;
- safety and efficacy of our product compared to other products;
- prevalence and severity of any side effects;
- potential advantages or disadvantages over alternative treatments;
- strength of marketing and distribution support;
- price of our products, both in absolute terms and relative to alternative treatments;
- availability of coverage and reimbursement from government and other third-party payors;
- potential product liability claims;
- limitations or warnings contained in a product's regulatory authority-approved labeling; and
- changes in the standard of care for the targeted indications for any of our products or product candidates, which could reduce the marketing impact of any claims that we could make following applicable regulatory authority approval.

In addition, our efforts to educate the medical community and health care payors on the benefits of our products and product candidates may require significant resources and may never be successful. If our products do not gain market acceptance, it would have a material adverse effect on our business, results of operations, and financial condition.

If our products are not covered and eligible for reimbursement from government and third party payors, we may not be able to generate significant revenue or achieve or sustain profitability.

The coverage and reimbursement status of newly approved or cleared drugs, diagnostic and laboratory tests is uncertain, and failure of our pharmaceutical products, diagnostic tests or laboratory tests to be adequately covered by insurance and eligible for adequate reimbursement could limit our ability to market any future product candidates we may develop and decrease our ability to generate revenue from any of our existing and future product candidates that may be approved or cleared. The commercial success of our existing and future products in both domestic and international markets will depend in part on the availability of coverage and adequate reimbursement from third-party payors, including government payors, such as the Medicare and Medicaid programs, managed care organizations, and other third-party payors, as well as our ability to obtain in network status with such payors. The government and other third-party payors are increasingly attempting to contain health care costs by limiting both insurance coverage and the level of reimbursement for new drugs and diagnostic tests and restricting in network status of laboratory providers. As a result, they may not cover or provide adequate payment for our product candidates. These payors may conclude that our products are less safe, less effective, or less cost-effective than existing or later-introduced products. These payors may also conclude that the overall cost of the procedure using one of our devices exceeds the overall cost of the competing procedure using another type of device, and third-party payors may not approve our products for insurance coverage and adequate reimbursement or approve our laboratory for in network status.

The failure to obtain adequate coverage or any reimbursement for our products, or health care cost containment initiatives that limit or restrict reimbursement for our products, may reduce any future product revenue. Even though a drug (not administered by a physician) may be approved by the FDA, this does not mean that a Prescription Drug Plan ("PDP"), a private insurer operating under Medicare Part D, will list that drug on its formulary or will set a reimbursement level. PDPs are not required to make every FDA-approved drug available on their formularies. If our drug products are not listed on sufficient number of PDP formularies or if the PDPs' levels of reimbursement are inadequate, our business, results of operations and financial condition could be materially adversely affected. Private health plans, such as managed care plans and pharmacy benefit management programs may also not include our products on formularies, and may use other techniques that restrict access to our products or set a lower reimbursement rate than anticipated.

A significant portion of our revenues come from government subsidized healthcare programs such as Medicaid and Medicare. Our failure to comply with applicable Medicare, Medicaid and other governmental payor rules could result in our inability to participate in a governmental payor program, our returning funds already paid to us, civil monetary penalties, criminal penalties and/or limitations on the operational function of our laboratory.

If we were unable to receive reimbursement under a governmental payor program, a substantial portion of our consolidated revenues would be lost, which would adversely affect our results of operations and financial condition. In addition, if a federal government shutdown were to occur for a prolonged period of time, federal government payment obligations, including its obligations under Medicaid and Medicare, may be delayed. Similarly, if state government shutdowns were to occur, state payment obligations may be delayed. If the federal or state governments fail to make payments under these programs on a timely basis, our business could suffer, and our financial position, results of operations or cash flows may be materially affected.

Our success is dependent to a significant degree upon the involvement, efforts and reputation of our Chairman and Chief Executive Officer, Phillip Frost, M.D.

Our success is dependent to a significant degree upon the efforts of our Chairman and CEO, Phillip Frost, M.D., who is essential to our business. The departure of our CEO for whatever reason or the inability of our CEO to continue to serve in his present capacity could have a material adverse effect upon our business, financial condition and results of operations. Our CEO has a highly regarded reputation in the pharmaceutical and medical industry and attracts business opportunities and assists both in negotiations with acquisition targets, investment targets and potential joint venture partners. Our CEO has also provided financing to us, both in terms of a credit agreement and equity investments. If we lost his services or if his reputation was damaged for whatever reason, including, but not limited to, as a result of the allegations underlying various past SEC and shareholder lawsuits against us and Dr. Frost, our relationships with acquisition and investment targets, joint ventures, customers and investors, as well as our ability to obtain additional funding on acceptable terms, or at all, may suffer and could cause a material adverse impact on our operations, financial condition and the value of our Common Stock.

If we fail to attract and retain key management and scientific personnel, we may be unable to successfully operate our business and develop or commercialize our products and product candidates.

We will need to expand and effectively manage our managerial, operational, sales, financial, development, and other resources in order to successfully operate our business and pursue our research, development, and commercialization efforts for our products and product candidates. Our success depends on our continued ability to attract, retain, and motivate highly qualified management and pre-clinical and clinical personnel. The loss of the services or support of any of our senior management could delay or prevent the development and commercialization of our products and product candidates.

Business combinations may disrupt our business, distract our management, may not proceed as planned, and may also increase the risk of potential third party claims and litigation.

One aspect of our business strategy calls for acquisitions of businesses and assets that complement or expand our current business and potential disposition of assets and businesses that may no longer help us meet our objectives, which may present greater risks for us than those faced by peer companies that do not consider acquisitions or dispositions as a part of their business strategy. We may not be able to identify attractive acquisition opportunities or, when we decide to sell assets or a business, we may encounter difficulty in finding buyers or alternative exit strategies on acceptable terms in a timely manner, or at all. Even if we do identify attractive opportunities, we or the buyer may not be able to complete the acquisition due to financing or other market constraints. If we acquire an additional business, we could have difficulty integrating its operations, systems, management and other personnel and technology with our own. There may also be unasserted claims or assessments that we failed or were unable to discover or identify in the course of performing due diligence investigations of target businesses, resulting in a loss of value. Dispositions may increase our exposure to third parties claims or litigation that may require expenditure of additional resources or negatively affect the successful outcome of the disposition. Dispositions may also involve continued financial involvement in the divested business, such as through guarantees, indemnities or other financial obligations. Under these arrangements, performance by the divested businesses or other conditions outside of our control could affect our future financial results. Moreover, seeking acquisition and divestiture opportunities and evaluating and completing them require significant investment of time and resources, may disrupt the Company's business and distract management's attention from day-to-day business operations.

If the FDA or other applicable regulatory authorities approve generic products that compete with any of our products or product candidates, the sale of our products or product candidates may be adversely affected.

Once an NDA is approved, the product covered thereby becomes a "listed drug" which, in turn can be relied upon by potential competitors in support of an approval of an abbreviated new drug application, or ANDA, or 505(b)(2) application. U.S. laws and other applicable policies provide incentives to manufacturers to create modified, non-infringing versions of a drug to facilitate the approval of an ANDA or other application for a generic substitute. These manufacturers might only be required to conduct a relatively inexpensive study to show that their product has the same active ingredient(s), dosage form, strength, route of administration, and conditions of use, or labeling, as our product or product candidate and that the generic product is bioequivalent to ours, meaning it is absorbed in the body at the same rate and to the same extent as our product or product candidate. These generic equivalents, which must meet the same quality standards as branded pharmaceuticals, would be significantly less costly than ours to bring to market and companies that produce generic equivalents are generally able to offer their products at lower prices. Thus, after the introduction of a generic competitor, a significant percentage of sales of any branded product is typically lost to the generic product. Accordingly, competition from generic equivalents to our products or product candidates would materially adversely impact our revenues, profitability and cash flows and substantially limit our ability to obtain a return on the investments that we have made in our products and product candidates.

We rely on third parties to manufacture and supply our pharmaceutical and diagnostic products and product candidates.

If our manufacturing partners are unable to produce our products in the amounts that we require, we may not be able to establish a contract and obtain a sufficient alternative supply from another supplier on a timely basis and in the quantities we require. We expect to continue to depend on third-party contract manufacturers for the foreseeable future.

Our products and product candidates require precise, high quality manufacturing. Any of our contract manufacturers will be subject to ongoing periodic unannounced inspection by the FDA and other non-U.S. regulatory authorities to ensure strict compliance with QSR regulations for devices or cGMPs for drugs, and other applicable government regulations and corresponding standards relating to matters such as testing, quality control, and documentation procedures. If our contract manufacturers fail to achieve and maintain high manufacturing standards in compliance with QSR or cGMPs, we may experience manufacturing errors resulting in patient injury or death, product recalls or withdrawals, delays or interruptions of production or failures in product testing or delivery, delay or prevention of filing or approval of marketing applications for our products, cost overruns, or other problems that could seriously harm our business.

Any performance failure on the part of our contract manufacturers could delay clinical development or regulatory approval or clearance of our product candidates or commercialization of our products and product candidates, depriving us of potential product revenue and resulting in additional losses. In addition, our dependence on a third party for manufacturing may adversely affect our future profit margins. Our ability to replace an existing manufacturer may be difficult because the number of potential manufacturers is limited and the FDA must approve any replacement manufacturer before it can begin manufacturing our products or product candidates. Such approval would result in additional non-clinical testing and compliance inspections. It may be difficult or impossible for us to identify and engage a replacement manufacturer on acceptable terms in a timely manner, or at all.

Independent clinical investigators and contract research organizations that we engage to conduct our clinical trials may not be diligent, careful or timely.

We depend on independent clinical investigators to conduct our clinical trials. Contract research organizations may also assist us in the collection and analysis of data. These investigators and contract research organizations are independent contractors and we will not be able to control, other than by contract, the amount of resources, including time, that they devote to products that we develop. If independent investigators fail to devote sufficient resources to the development of product candidates or clinical trials, or if their performance is substandard, it will delay the marketing approval or clearance and commercialization of any products that we develop. Further, the FDA requires that we comply with standards, commonly referred to as good clinical practice, for conducting, recording and reporting clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity, and confidentiality of trial subjects are protected. If our independent clinical investigators and contract research organizations fail to comply with good clinical practice, the results of our clinical trials could be called into question and the clinical development of our product candidates could be delayed.

Failure of clinical investigators or contract research organizations to meet their obligations to us or comply with federal regulations and good clinical practice procedures could adversely affect the clinical development of our product candidates and harm our business, results of operations, and financial condition.

Failure to timely or accurately bill and collect for our services could have a material adverse effect on our revenues and our business.

Billing for laboratory testing services is extremely complicated and is subject to extensive and non-uniform rules and administrative requirements. Depending on the billing arrangement and applicable law, we bill various payors, such as patients, insurance companies, Medicare, Medicaid, physicians, hospitals and employer groups. Changes in laws and regulations and payor practices increase the complexity and cost of our billing process. Additionally, in the U.S., third-party payors generally require billing codes on claims for reimbursement that describe the services provided. For laboratory services, the American Medical Association establishes most of the billing codes using a data code set called Current Procedural Terminology, or CPT, codes and the World Health Organization establishes diagnostic codes using a data set called International Statistical Classification of Diseases, or ICD-10, codes. Each third-party payor generally develops payment amounts and coverage policies for their beneficiaries or members that ties to the CPT code established for the laboratory test and the ICD-10 code selected by the ordering or performing physician. Therefore, coverage and reimbursement may differ by payor even if the same billing code is reported for claims filing purposes. For laboratory tests without a specific billing code, payors often review claims on a claim-by-claim basis and there are increased uncertainties as to coverage and eligibility for reimbursement.

In addition to the items described above, third-party payors, including government programs, may decide to deny payment or recoup payments for testing that they contend was improperly billed or not medically necessary, against their coverage determinations, or for which they believe they have otherwise overpaid (including as a result of their own error), and we may be required to refund payments already received. Our revenues may be subject to retroactive adjustment as a result of these factors among others, including without limitation, differing interpretations of billing and coding guidance and changes by government agencies and payors in interpretations, requirements, and “conditions of participation” in various programs.

We have in the ordinary course of business been the subject of recoupments by payors and have from time to time identified and reimbursed payors for overpayments.

Incorrect or incomplete documentation and billing information, as well as the other items described above, among other factors, could result in non-payment for services rendered or having to pay back amounts incorrectly billed and collected. Further, the failure to timely or correctly bill could lead to various penalties, including: (1) exclusion from participation in the CMS and other government programs; (2) asset forfeitures; (3) civil and criminal fines and penalties; and (4) the loss of various licenses, certificates and authorizations necessary to operate our business, any of which could have a material adverse effect on our results of operations or cash flows.

The information technology systems that we rely on may be subject to unauthorized tampering, cyberattack or other data security incidents that could impact our billing processes or disrupt our operations.

In addition to our internal information technology systems, we rely on the IT systems of certain third parties to whom we outsource certain of our services or functions, or with whom we store confidential information, including patient data. These IT systems are subject to potential cyberattacks or other security breaches. If such attacks are successful, they could disrupt our operations and result in unauthorized persons gaining access to confidential or proprietary information. A breach or security incident affecting these third parties could harm our business, results of operations and reputation, and subject us to liability, governmental investigation, significant damage to our reputation or otherwise adversely affect our business.

Although the Company has security measures implemented, cyber-attacks and threats against us and our third-party providers continue to evolve and are often not recognized until such attacks are launched against a potential target. A successful cybersecurity attack or other data security incident could result in the misappropriation and/or loss of confidential or personal information, create system interruptions, or deploy malicious software that attacks our systems. The unauthorized dissemination of sensitive personal information or proprietary or confidential information due to a breach of these IT systems could expose us or other third-parties to regulatory fines or penalties, litigation and potential liability, or otherwise harm our business. Any mitigation or remediation efforts that we undertake may require expenditures of significant resources and the diversion of the attention of management. In addition, we have taken, and continue to take, precautionary measures to reduce the risk of, and detect and respond to, future cyber threats, and prevent or minimize vulnerabilities in our IT systems. We have also taken, and will continue to take, measures to assess the cybersecurity protections implemented by our third-party providers. There can be no assurances that our precautionary measures or measures used by our third-party providers will prevent, contain or successfully defend against cyber or information security threats that could have a significant impact on our business, results of operations and reputation and subject us to liability.

Healthcare plans have taken steps to control the utilization and reimbursement of healthcare services, including clinical test services.

We also face efforts by non-governmental third-party payors, including healthcare plans, to reduce utilization and reimbursement for clinical testing services.

The healthcare industry has experienced a trend of consolidation among healthcare insurance plans, resulting in fewer but larger insurance plans with significant bargaining power to negotiate fee arrangements with healthcare providers, including clinical testing providers. These healthcare plans and independent physician associations, may demand that clinical testing providers accept discounted fee structures or assume all or a portion of the financial risk associated with providing testing services to their members through capped payment arrangements. In addition, some healthcare plans limit the laboratory network to only a single national or regional laboratory to obtain improved fee-for-service pricing. There is also an increasing number of patients enrolling in consumer driven products and high deductible plans that involve greater patient cost-sharing.

The increased consolidation among healthcare plans also has increased the potential adverse impact of ceasing to be a contracted provider with any such insurer.

We expect continuing efforts to limit the number of participating laboratories in payor networks, reduce reimbursements, to impose more stringent cost controls and to reduce utilization of clinical test services. These efforts, including future changes in third-party payor rules, practices and policies, or failing to become a contracted provider or ceasing to be a contracted provider to a healthcare plan, may have a material adverse effect on our business.

If we are unable to obtain and enforce patent protection for our products, our business could be materially harmed.

Our success depends, in part, on our ability to protect proprietary methods and technologies that we develop or license under the patent and other intellectual property laws of the U.S. and other countries, so that we can prevent others from unlawfully using our inventions and proprietary information. However, we may not hold proprietary rights to some patents required for us to commercialize our products and product candidates. Because certain U.S. patent applications are confidential, third parties may have filed patent applications for technology covered by our pending patent applications without our being aware of those applications, and our patent applications may not have priority over those applications. For this and other reasons, we or our third-party collaborators may be unable to secure desired patent rights, thereby losing desired exclusivity. If licenses are not available to us on acceptable terms, we may not be able to market the affected products or conduct the desired activities, unless we challenge the validity, enforceability, or infringement of the third-party patent or otherwise circumvent the third-party patent.

Our strategy depends on our ability to rapidly identify and seek patent protection for our discoveries. In addition, we will rely on third-party collaborators to file patent applications relating to proprietary technology that we develop jointly during certain collaborations. The process of obtaining patent protection is expensive and time-consuming. If our present or future collaborators fail to file and prosecute all necessary and desirable patent applications at a reasonable cost and in a timely manner, our business will be adversely affected. Unauthorized parties may be able to obtain and use information that we regard as proprietary.

The issuance of a patent does not guarantee that it is valid or enforceable. Any patents we have obtained, or obtain in the future, may be challenged, invalidated, unenforceable, or circumvented. In addition, court decisions may introduce uncertainty in the enforceability or scope of patents owned by biotechnology, pharmaceutical, and medical device companies. Any challenge to, finding of unenforceability or invalidation or circumvention of, our patents or patent applications would be costly, would require significant time and attention of our management, and could have a material adverse effect on our business, results of operations and financial condition.

We cannot assure you that any patents that have issued, that may issue, or that may be licensed to us will be enforceable or valid, or will not expire prior to the commercialization of our products and product candidates, thus allowing others to more effectively compete with us. Therefore, any patents that we own or license may not adequately protect our products and product candidates or our future products, which could have a material adverse effect on our business, results of operations, and financial condition. We cannot be assured that our filings for patent term extensions or supplementary protection certificates to potentially extend a patent term of a patent covering an approved drug or biological product will be granted in any particular jurisdiction in which the Company or its licensee obtains approval for a drug or biological product.

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

In addition to patent protection, we also rely on other proprietary rights, including protection of trade secrets, know-how, and confidential and proprietary information. To maintain the confidentiality of trade secrets and proprietary information, we will seek to enter into confidentiality agreements with our employees, consultants, and collaborators upon the commencement of their relationships with us. These agreements generally require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. Our agreements with employees also generally provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property.

However, we may not obtain these agreements in all circumstances, and individuals with whom we have these agreements may not comply with their terms. In the event of unauthorized use or disclosure of our trade secrets or proprietary information, these agreements, even if obtained, may not provide meaningful protection, particularly for our trade secrets or other confidential information. To the extent that our employees, consultants, or contractors use technology or know-how owned by third parties in their work for us, disputes may arise between us and those third parties as to the rights in related inventions.

Adequate remedies may not exist in the event of unauthorized use or disclosure of our confidential information. The disclosure of our trade secrets would impair our competitive position and may materially harm our business, financial condition, and results of operations.

We will rely heavily on licenses from third parties. Failure to comply with the provisions of these licenses could result in the loss of our rights under the license agreements.

Many of the patents and patent applications in our patent portfolio are not owned by us, but are licensed from third parties. Such license agreements give us rights for the commercial exploitation of the patents resulting from the respective patent applications, subject to certain provisions of the license agreements. Failure to comply with these provisions could result in the loss of our rights under these license agreements. Our inability to rely on these patents and patent applications, which are the basis of our technology, would have a material adverse effect on our business, results of operations and financial condition.

We license patent rights to certain of our technology from third-party owners. If such owners do not properly maintain or enforce the patents underlying such licenses, our competitive position and business prospects will be harmed.

We have obtained and may in the future obtain licenses from third party owners that are necessary or useful for our business. We cannot guarantee that no third parties will step forward and assert inventorship or ownership in our in-licensed patents. In some cases, we may rely on the assurances of our licensors that all ownership rights have been secured and that all necessary agreements are intact or forthcoming.

Our success will depend in part on our ability or the ability of our licensors to obtain, maintain, and enforce patent protection for our licensed intellectual property and, in particular, those patents to which we have secured exclusive rights in our field. We or our licensors may not successfully prosecute the patent applications which are licensed to us. Even if patents issue in respect of these patent applications, we or our licensors may fail to maintain these patents or may determine not to pursue litigation against other companies that are infringing these patents. Without protection for the intellectual property we have licensed, other companies might be able to offer substantially identical products for sale, which could adversely affect our competitive business position and harm our business, results of operations and financial condition.

Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties.

Other entities may have or obtain patents or proprietary rights that could limit our ability to develop, manufacture, use, sell, offer for sale or import products, or impair our competitive position. In addition, other entities may have or obtain patents or proprietary rights that cover our current research and preclinical studies. The U.S. case law pertaining to statutory exemptions to patent infringement for those who are using third party patented technology in the process of pursuing FDA regulatory approval changes over time. Lawsuits involving such exemptions are very fact intensive and it is currently unclear under U.S. case law whether preclinical studies would always qualify for such an exemption, and whether such exemptions would apply to research tools. To the extent that our current research and preclinical studies may be covered by the patent rights of others, the risk of suit may continue after such patents expire because the statute of limitations for patent infringement runs for six years. To the extent that a third party develops and patents technology that covers our products, we may be required to obtain licenses to that technology, which licenses may not be available or may not be available on commercially reasonable terms, if at all. If licenses are not available to us on acceptable terms, we will not be able to market the affected products or conduct the desired activities, unless we challenge the validity, enforceability or infringement of the third-party patent, or circumvent the third-party patent, which would be costly and would require significant time and attention of our management. Third parties may have or obtain by license or assignment valid and enforceable patents or proprietary rights that could block us from developing products using our technology. Our failure to obtain a license to any technology that we require may materially harm our business, financial condition, and results of operations.

If we become involved in patent litigation or other proceedings related to a determination of rights, we could incur substantial costs and expenses, substantial liability for damages or be required to stop our product development and commercialization efforts.

Third parties may sue us for infringing their patent rights. Likewise, we may need to resort to litigation to enforce a patent issued or licensed to us or to determine the scope and validity of proprietary rights of others. In addition, a third-party may claim that we have improperly obtained or used its confidential or proprietary information. Furthermore, in connection with our third-party license agreements, we may have agreed to indemnify the licensor for costs incurred in connection with litigation relating to intellectual property rights. The cost to us of any litigation or other proceeding relating to intellectual property rights, even if resolved in our favor, could be substantial, and the litigation would divert our management's efforts. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. Uncertainties resulting from the initiation and continuation of any litigation could limit our ability to continue our operations. Our involvement in patent litigation and other proceedings could have a material adverse effect on our business, results of operations, and financial condition.

If any parties successfully claim that our creation or use of proprietary technologies infringes upon their intellectual property rights, we might be forced to pay damages, potentially including treble damages, if we are found to have willfully infringed on such parties' patent rights. In addition to any damages we might have to pay, a court could require us to stop the infringing activity or obtain a license. Any license required under any patent may not be made available on commercially acceptable terms, if at all. In addition, such licenses are likely to be non-exclusive and, therefore, our competitors may have access to the same technology licensed to us. If we fail to obtain a required license and are unable to design around a patent, we may be unable to effectively market some of our technology and products, which could limit our ability to generate revenues or achieve profitability and possibly prevent us from generating revenue sufficient to sustain our operations.

We have faced, and may in the future face, intellectual property infringement claims that could be time-consuming and costly to defend, and could result in our loss of significant rights and the assessment of treble damages.

We may from time to time receive notices of claims of infringement and misappropriation or misuse of other parties' proprietary rights. Some of these additional claims may also lead to litigation. We cannot assure you that we will prevail in such actions, or that other actions alleging misappropriation or misuse by us of third-party trade secrets, infringement by us of third-party patents and trademarks or the validity of our patents, will not be asserted or prosecuted against us.

We may also initiate claims to defend our intellectual property or to seek relief on allegations that we use, sell, or offer to sell technology that incorporates third party intellectual property. Intellectual property litigation, regardless of outcome, is expensive and time-consuming, could divert management's attention from our business and have a material negative effect on our business, operating results or financial condition. If there is a successful claim of infringement against us, we may be required to pay substantial damages (including treble damages if we were to be found to have willfully infringed a third party's patent) to the party claiming infringement, develop non-infringing technology, stop selling our tests or using technology that contains the allegedly infringing intellectual property or enter into royalty or license agreements that may not be available on acceptable or commercially practical terms, if at all. Our failure to develop non-infringing technologies or license the proprietary rights on a timely basis could harm our business.

It is possible that in the patent laws related to the field of genomic-based products and diagnostics and patents covering such products changes to permit the patenting of genes and/or gene based products and/or related diagnostic methods. In such a case, we might be required to pay royalties, damages and costs to firms who own the rights to these patents, or we might be restricted from using any of the inventions claimed in those patents.

We may become subject to product liability claims for our diagnostic tests, clinical trials, pharmaceutical products and medical device products.

Our success depends on the market's confidence that we can provide reliable, high-quality pharmaceuticals, medical devices, and diagnostics tests. Our reputation and the public image of our products or technologies may be impaired if our products fail to perform as expected or our products are perceived as difficult to use. Our products are complex and may develop or contain undetected defects or errors. Furthermore, if a product or future product candidate harms people, or is alleged to be harmful, we may be subject to costly and damaging product liability claims brought against us by clinical trial participants, consumers, health care providers, corporate partners or others. We have product liability insurance covering commercial sales of current products and our ongoing clinical trials. Any defects or errors could lead to the filing of product liability claims, which could be costly and time-consuming to defend and result in substantial damages. If we experience a sustained material defect or error, this could result in loss or delay of revenues, delayed market acceptance, damaged reputation, diversion of development resources, legal claims, increased insurance costs or increased service and warranty costs, any of which could materially harm our business. We cannot assure you that our product liability insurance would protect our assets from the financial impact of defending a product liability claim. A product liability claim could have a serious adverse effect on our business, financial condition and results of operations.

Adverse results in material litigation matters or governmental inquiries could have a material adverse effect upon our business and financial condition.

We may from time to time become subject in the ordinary course of business to material legal action related to, among other things, intellectual property disputes, professional liability, contractual and employee-related matters, as well as inquiries from governmental agencies and Medicare or Medicaid carriers requesting comment and information on allegations of billing irregularities and other matters that are brought to their attention through billing audits, third parties or other sources. The health care industry is subject to substantial federal and state government regulation and audit.

From time to time, we may receive inquiries, document requests, Civil Investigative Demands ("CIDs") or subpoenas from the Department of Justice, the Office of Inspector General and Office for Civil Rights ("OCR") of the Department of Health and Human Services, the Centers for Medicare and Medicaid Services, various payors and fiscal intermediaries, and other state and federal regulators regarding investigations, audits and reviews. We are currently responding to CIDs, subpoenas or document requests for various matters relating to our laboratory operations. Some pending or threatened proceedings against us may involve potentially substantial amounts as well as the possibility of civil, criminal, or administrative fines, penalties, or other sanctions, which could be material. Settlements of suits involving the types of issues that we routinely confront may require monetary payments as well as corporate integrity agreements. For example, to resolve a investigation and related civil action concerning alleged fee-for-service claims for payment to Medicare, Medicaid, and the TRICARE Program, the Company and BioReference entered into (i) a settlement agreement (the "Settlement Agreement"), effective July 14, 2022, with the United States of America, acting through the United States Department of Justice and on behalf of the Office of Inspector General of the Department of Health and Human Services ("OIG-HHS"), and the Defense Health Agency, acting on behalf of the TRICARE Program, the Commonwealth of Massachusetts, the State of Connecticut, and the relator identified therein ("Relator"), and (ii) a Corporate Integrity Agreement, effective July 14, 2022 (the "CIA"), with the OIG-HHS. Under the Settlement Agreement, the Company and BioReference admitted only to having made payments to certain physicians and physicians' groups for office space rentals for amounts that exceeded fair market value, and that it did not report or return any such overpayments to the Federal Health Care Programs (the "Covered Conduct"). The Covered Conduct had commenced prior to the Company's acquisition of BioReference in 2015. With the exception of the Covered Conduct, the Company and BioReference expressly denied the allegations of the Relator as set forth in her civil action, and the Company agreed to pay a total of $10,000,000 plus accrued interest from September 24, 2021 at a rate of 1.5% per annum. Under the CIA, which has a term of 5 years, BioReference is required to, among other things: (i) maintain a Compliance Officer, a Compliance Committee, board review and oversight of certain federal healthcare compliance matters, compliance programs, and disclosure programs; (ii) provide management certifications and compliance training and education; (iii) establish written compliance policies and procedures to meet federal health care program requirements; (iv) create procedures designed to ensure compliance with the Anti-Kickback Statute and/or Stark Law; (v) engage an independent review organization to conduct a thorough review of BioReference' s systems, policies, processes and procedures related to certain arrangements; (vi) implement a risk assessment and internal review process; (vii) establish a disclosure program for whistleblowers; and (viii) report or disclose certain events and physician payments. The Company's or BioReference's failure to comply with its obligations under the CIA could result in monetary penalties and the exclusion from Medicare, Medicaid, and TRICARE.

Additionally, qui tam or "whistleblower" actions initiated under the civil False Claims Act may be pending but placed under seal by the court to comply with the False Claims Act's requirements for filing such suits. The Company generally has cooperated, and intends to continue to cooperate, with appropriate regulatory authorities as and when investigations, audits and inquiries arise.

Such legal actions and government investigations could result in substantial monetary damages, negatively impact our ability to obtain additional funding on acceptable terms, or at all, and damage to our reputation with customers, business partners and other third parties, all of which could have a material adverse effect upon our results of operations and financial position. Further, the legal actions and government investigations could damage our reputation with investors and adversely affect the trading prices of our securities.

The ongoing Russia-Ukraine conflict and the recent Israel-Hamas conflict may adversely impact our business operations and financial performance.

United States and global markets have experienced volatility and disruption following the geopolitical instability resulting from the ongoing Russia-Ukraine conflict and the Israel-Hamas conflict. In response to the ongoing Russia-Ukraine conflict, the North Atlantic Treaty Organization ("NATO") deployed additional military forces to eastern Europe, and the United States, the United Kingdom, the European Union and other countries have announced various sanctions and restrictive actions against Russia, Belarus and related individuals and entities, including the removal of certain financial institutions from the Society for Worldwide Interbank Financial Telecommunication (SWIFT) payment system. Certain countries, including the United States, have also provided and may continue to provide military aid or other assistance to Ukraine and to Israel, increasing geopolitical tensions among a number of nations. The foregoing conflicts and the resulting measures that have been taken, and could be taken in the future, by NATO, the United States, the United Kingdom, the European Union, Israel and its neighboring states and other countries have created global security concerns that could have a lasting impact on regional and global economies. Although the length and impact of the foregoing conflicts are highly unpredictable, they could lead to market disruptions, including significant volatility in commodity prices, and the credit and capital markets, as well as supply chain interruptions and increased cyber-attacks against U.S. companies. Additionally, any resulting sanctions could adversely affect the global economy and financial markets and lead to instability and lack of liquidity in the capital markets. These ongoing conflicts and the resulting geopolitical instability can adversely impact our business operations and financial performance.

RISKS RELATED TO REGULATORY COMPLIANCE

Our ability to successfully operate our laboratories and develop and commercialize certain of our diagnostic tests and LDTs will depend on our ability to maintain required regulatory licensures and comply with all the CLIA requirements.

In order to successfully operate our laboratory business and offer certain of our diagnostic tests and LDTs, we must maintain our CLIA certification and comply with all the CLIA requirements. CLIA is designed to ensure the quality and reliability of clinical laboratories by mandating specific standards in the areas of personnel qualifications, administration and participation in proficiency testing, patient test management, quality control, quality assurance and inspections. The sanction for failure to comply with CLIA requirements may be suspension, revocation or limitation of a laboratory's CLIA certificate, which is necessary to conduct business, as well as significant fines and/or criminal penalties. Laboratories must undergo on-site surveys at least every two years, which may be conducted by the Federal CLIA program or by a private CMS approved accrediting agency such as CAP, among others. Our laboratories are also subject to regulation of laboratory operations under state clinical laboratory laws as will be any new CLIA-certified laboratory that we establish or acquire. State clinical laboratory laws may require that laboratories and/or laboratory personnel meet certain qualifications, specify certain quality controls or require maintenance of certain records. Certain states, such as California, Florida, Maryland, New York, Pennsylvania and Rhode Island, require that laboratories obtain licenses to test specimens from patients residing in those states and additional states may require similar licenses in the future. If we are unable to obtain and maintain licenses from states where required, we will not be able to process any samples from patients located in those states. Only Washington and New York States are exempt under CLIA, as these states have established laboratory quality standards at least as stringent as CLIA's. Potential sanctions for violation of these statutes and regulations include significant fines and the suspension or loss of various licenses, certificates and authorizations, which could adversely affect our business and results of operations.

If we fail to comply with CLIA requirements, HHS or state agencies could require us to cease diagnostic testing. Even if it were possible for us to bring our laboratories back into compliance after failure to comply with such requirements, we could incur significant expenses and potentially lose revenues in doing so. Moreover, new interpretations of current regulations or future changes in regulations under CLIA may make it difficult or impossible for us to comply with the CLIA classification, which would significantly harm our business and materially adversely affect our financial condition.

The regulatory approval process is expensive, time consuming and uncertain and may prevent us or our collaboration partners from obtaining approvals for the commercialization of some or all of our product candidates.

The research, testing, manufacturing, labeling, approval, selling, marketing, and distribution of drug products, diagnostic products, or medical devices are subject to extensive regulation by the FDA and other non-U.S. regulatory authorities, which regulations differ from country to country. In general, we are not permitted to market our product candidates in the U.S. until we receive approval of a BLA, an approval of an NDA, a clearance letter under the premarket notification process, or 510(k) process, or an approval of a PMA from the FDA. To date, we have only submitted one NDA which was approved in June 2016, and one BLA which was approved for filing in January 2021. We have received FDA approval for our *4Kscore* test for use in men age 45 and older who have not had a prior prostate biopsy or are biopsy negative and have an age-specific abnormal total PSA and/or abnormal digital rectal exam, but we have not received marketing approval or clearance from FDA for any of our other diagnostic product candidates that we currently plan to market. Obtaining approval of an NDA or PMA can be a lengthy, expensive, and uncertain process. With respect to medical devices, while the FDA reviews and clears a premarket notification in as little as three months, there is no guarantee that our products will qualify for this more expeditious regulatory process, which is reserved for Class I and II devices, nor is there any assurance that even if a device is reviewed under the 510(k) process that the FDA will review it expeditiously or determine that the device is substantially equivalent to a lawfully marketed non-PMA device. If the FDA fails to make this finding, then we cannot market the device. In lieu of acting on a premarket notification, the FDA may seek additional information or additional data which would further delay our ability to market the product. Furthermore, we are not permitted to make changes to a device approved through the PMA or 510(k) which affects the safety or efficacy of the device without first submitting a supplement application to the PMA and obtaining FDA approval or cleared premarket notification for that supplement. In some cases, the FDA may require clinical trials to support a supplement application. In addition, failure to comply with FDA, non-U.S. regulatory authorities, or other applicable U.S. and non-U.S. regulatory requirements may, either before or after product approval or clearance, if any, subject our company to administrative or judicially imposed sanctions, including, but not limited to the following:

- restrictions on the products, manufacturers, or manufacturing process;
- adverse inspectional observations (Form 483), warning letters, or non-warning letters incorporating inspectional observations;

- civil and criminal penalties;
- injunctions;
- suspension or withdrawal of regulatory approvals or clearances;
- product seizures, detentions, or import bans;
- voluntary or mandatory product recalls and publicity requirements;
- total or partial suspension of production;
- imposition of restrictions on operations, including costly new manufacturing requirements; and
- refusal to approve or clear pending NDAs or supplements to approved NDAs, applications or pre-market notifications.

Regulatory approval of an NDA or NDA supplement, BLA, PMA, PMA supplement or clearance pursuant to a pre-market notification is not guaranteed, and the approval or clearance process, as the case may be, is expensive and may, especially in the case of an NDA or PMA application, take several years. The FDA also has substantial discretion in the drug and medical device approval and clearance process. Failure can occur at any stage, and we could encounter problems that cause us to abandon clinical trials or to repeat or perform additional pre-clinical studies and clinical trials. The number of pre-clinical studies and clinical trials that will be required for FDA approval or clearance varies depending on the drug or medical device candidate, the disease or condition that the drug or medical device candidate is designed to address, and the regulations applicable to any particular drug or medical device candidate. The FDA can delay, limit or deny approval or clearance of a drug or medical device candidate for many reasons, including:

- a drug candidate may not be deemed safe or effective;
- a medical device candidate may not be deemed to be substantially equivalent to a lawfully marketed non-PMA device, in the case of a premarket notification;
- the FDA may not find the data from pre-clinical studies and clinical trials sufficient;
- the FDA may not approve our or our third-party manufacturer’s processes or facilities; or
- the FDA may change its approval or clearance policies or adopt new regulations.

Beyond these risks, there is also a possibility that our licensees or collaborators could decide to discontinue a study at any time for commercial, scientific or other reasons.

The terms of approvals and ongoing regulation of our products may limit how we manufacture and market our products and product candidates, which could materially impair our ability to generate anticipated revenues.

We, our approved or cleared products, and the manufacturers of our products are subject to continual review. Our approved or cleared products may only be promoted for their indicated uses. Marketing, labeling, packaging, adverse event reporting, storage, advertising, and promotion for our approved products will be subject to extensive regulatory requirements. We train our marketing and sales force against promoting our products for uses outside of the cleared or approved indications for use, known as "off-label uses." If the FDA determines that our promotional materials or training constitute promotion of unsupported claims or an off-label use, it could request that we modify our training or promotional materials or subject us to regulatory or enforcement actions, including the issuance of an untitled letter, a warning letter, injunction, seizure, civil fine or criminal penalties. It is also possible that other federal, state or foreign enforcement authorities might take action if they consider our business activities to constitute promotion of an off-label use, which could result in significant penalties, including, but not limited to, criminal, civil and/or administrative penalties, damages, fines, disgorgement, exclusion from participation in government healthcare programs, and the curtailment of our operations.

We and the manufacturers of our products are also required to comply with current Good Manufacturing Practices ("cGMP") regulations or the FDA's QSR regulations, which include requirements relating to quality control and quality assurance as well as the corresponding maintenance of records and documentation. Moreover, device manufacturers are required to report adverse events by filing Medical Device Reports with the FDA, which reports are publicly available.

Further, regulatory agencies must approve manufacturing facilities before they can be used to manufacture our products, and these facilities are subject to ongoing regulatory inspection. If we fail to comply with the regulatory requirements of the FDA and other non-U.S. regulatory authorities, or if previously unknown problems with our products, manufacturers, or manufacturing processes are discovered, we could be subject to administrative or judicially imposed sanctions. Furthermore, any limitation on indicated uses for a product or product candidate or our ability to manufacture and promote a product or product candidate could significantly and adversely affect our business, results of operations, and financial condition.

In addition, the FDA and other non-U.S. regulatory authorities may change their policies and additional regulations may be enacted that could prevent or delay marketing approval or clearance of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the U.S. or abroad. If we are not able to maintain regulatory compliance, we would likely not be permitted to market our products or product candidates and we may not achieve or sustain profitability, which would materially impair our ability to generate anticipated revenues.

If we fail to comply with complex and rapidly evolving laws and regulations, we could suffer penalties, be required to pay substantial damages or make significant changes to our operations.

We are subject to numerous federal and state regulations, including, but not limited to:

- federal and state laws applicable to billing and claims payment;
- federal and state laboratory anti-mark-up laws;
- federal and state anti-kickback laws;
- physician self-referral law;
- federal and state false claims laws;
- federal self-referral and financial inducement prohibition laws, commonly known as the Stark Law, and the state equivalents;
- federal and state laws governing laboratory licensing and testing, including CLIA;
- federal and state laws governing the development, use and distribution of LDTs;

- HIPAA, along with the revisions to HIPAA as a result of the amendments from the Health Information Technology for Economic and Clinical Health Act of 2009 ("HITECH Act"), and analogous state laws and non-US laws, including the General Data Protection Regulation;
- federal, state and foreign regulation of privacy, security, electronic transactions and identity theft;
- federal, state and local laws governing the handling, transportation and disposal of medical and hazardous waste;
- Occupational Safety and Health Administration rules and regulations;
- changes to laws, regulations and rules as a result of the implementation and/or repeal of part or all of 2010 Health Care Reform Legislation; and
- changes to other federal, state and local laws, regulations and rules, including tax laws.

If we fail to comply with existing or future applicable laws and regulations, we could suffer civil or criminal penalties, including the loss of our licenses to operate our laboratories and our ability to participate in federal and state healthcare programs. Different interpretations and enforcement policies of existing statutes and regulations applicable to our business could subject our current practices to allegations of impropriety or illegality, or could require us to make significant changes to our operations. Under the False Claims Act ("FCA"), whistleblower or qui tam provisions allow a private individual to bring actions on behalf of the federal government alleging that the defendant has submitted a false claim to the federal government, and to share in any monetary recovery. In recent years, the number of suits brought by private individuals has increased dramatically and we may be subject to such suits. Violations of the FCA could result in enormous economic liability and could have a material impact on us. As a result of political, economic, and regulatory influences, the healthcare delivery industry in the U.S. is under intense scrutiny and subject to fundamental changes. We cannot predict which reform proposals will be adopted, when they may be adopted, or what impact they may have on us. The costs associated with complying with federal and state regulations could be significant and the failure to comply with any such legal requirements could have a material adverse effect on our financial condition, results of operations, and liquidity.

Failure to maintain the security of patient-related information or compliance with security requirements could damage our reputation with customers, cause us to incur substantial additional costs and become subject to litigation.

Pursuant to HIPAA, including the HITECH amendments thereunder, and certain similar state laws, we must comply with comprehensive privacy and security standards with respect to the use and disclosure of protected health information. If we do not comply with existing or new laws and regulations related to protecting privacy and security of personal or health information, we could be subject to monetary fines, civil penalties, or criminal sanctions.

We may also be required to comply with the data privacy and security laws of other countries in which we operate or from which we receive data transfers, including the General Data Protection Regulation ("GDPR"), which affects our European operations and possibly our laboratory and clinical development operations. The GDPR, which is wide-ranging in scope, governs the collection and use of personal data in the European Union and imposes operational requirements for companies that receive or process personal data of residents of the European Union that are different than those currently in place in the European Union. We have implemented policies and procedures required to comply with the new EU regulations but may be subject to penalties if we are found to be non-compliant.

We have had data and security breaches in the ordinary course and such breaches may continue to happen from time to time despite our best efforts to prevent such breaches and safeguard private information. Some of these other data and security breaches have been reported to OCR and we have received requests for information from OCR in connection with certain of these matters, or we are awaiting discussion, investigation or action by OCR. Any action by OCR may require us to pay fines or take remedial actions that may be expensive and require the attention of management, any of which may have a material adverse effect on us and our results of operations.

We have and will continue to receive certain personal and financial information about our clients and their patients. In addition, we depend upon the secure transmission of confidential information over public networks. While we take reasonable and prudent steps to protect this protected information, a compromise in our security systems that results in client or patient personal information being obtained by unauthorized persons or our failure to comply with security requirements for financial transactions could adversely affect our reputation with our clients and result in litigation against us or the imposition of penalties, all of which may adversely impact our results of operations, financial condition and liquidity.

Failure to comply with environmental, health and safety laws and regulations, including the Federal Occupational Safety and Health Administration Act, the Needlestick Safety and Prevention Act and the Comprehensive Medical Waste Management Act, could result in fines and penalties and loss of licensure, and have a material adverse effect upon our business.

We are subject to licensing and regulation under federal, state and local laws and regulations relating to the protection of the environment and human health and safety, including laws and regulations relating to the handling, transportation and disposal of medical specimens, infectious and hazardous waste and radioactive materials, as well as regulations relating to the safety and health of laboratory employees. The Federal Occupational Safety and Health Administration has established extensive requirements relating to workplace safety for health care employers, including clinical laboratories, whose workers may be exposed to blood-borne pathogens such as HIV and the hepatitis B virus. These requirements are designed to minimize exposure to, and transmission of, blood-borne pathogens. In addition, the Needlestick Safety and Prevention Act requires, among other things, that we include in our safety programs the evaluation and use of engineering controls such as safety needles if found to be effective at reducing the risk of needlestick injuries in the workplace.

Waste management is subject to federal and state regulations governing the transportation and disposal of medical waste including bodily fluids. In New Jersey, we are subject to the Comprehensive Medical Waste Management Act, which requires us to register as a generator of special medical waste. All of our medical waste is disposed of by a licensed interstate hauler. These records are audited by the State of New Jersey on a yearly basis. We are also subject to the Federal Hazardous Materials Transportation Law, and the Hazardous Materials Regulations. The federal government has classified hazardous medical waste as hazardous materials for the purpose of these regulations.

Failure to comply with such federal, state and local laws and regulations could subject us to denial of the right to conduct business, fines, criminal penalties and/or other enforcement actions, any of which could have a material adverse effect on our business. In addition, compliance with future legislation could impose additional requirements us, which may be costly.

Our failure or the failure of third-party payors or physicians to comply with ICD-10-CM Code Set, and our failure to comply with other emerging electronic transaction standards could adversely impact our business.

We continue our assessment of information systems, applications and processes for compliance with ICD-10-CM Code Set requirements. Clinical laboratories are typically required to submit health care claims with diagnosis codes to third party payors. The diagnosis codes must be obtained from the ordering physician for clinical laboratory testing and from the interpreting pathologist for anatomic pathology services. Our failure or the failure of third party payors or physicians to comply with these requirements could have an adverse impact on reimbursement, delay sales and cash collections.

Also, the failure of our IT systems to keep pace with technological advances may significantly reduce our revenues or increase our expenses. Public and private initiatives to create healthcare information technology (“HCIT”) standards and to mandate standardized clinical coding systems for the electronic exchange of clinical information, including test orders and test results, could require costly modifications to our existing HCIT systems. If we fail to adopt or delay in implementing HCIT standards, we could lose customers and business opportunities.

Failure to comply with complex federal and state laws and regulations related to submission of claims for clinical laboratory services could result in significant monetary damages and penalties and exclusion from the Medicare and Medicaid programs.

We are subject to extensive federal and state laws and regulations relating to the submission of claims for payment for clinical laboratory services, including those that relate to coverage of our services under Medicare, Medicaid and other governmental health care programs, the amounts that may be billed for our services and to whom claims for services may be submitted. These rules may also affect us in light of the practice management products that we market, to the extent that these products are considered to affect the manner in which our customers submit their own claims for services. Submission of our claims is particularly complex because we provide both anatomic pathology services and clinical laboratory tests, which generally are paid using different reimbursement principles. The clinical laboratory tests are often paid under a clinical laboratory fee schedule, and the anatomic pathology services are often paid under a physician fee schedule.

Our failure to comply with applicable laws and regulations could result in our inability to receive payment for our services or result in attempts by third-party payors, such as Medicare and Medicaid, to recover payments from us that have already been made. Submission of claims in violation of certain statutory or regulatory requirements can result in penalties, including substantial civil money penalties for each item or service billed to Medicare in violation of the legal requirement, and exclusion from participation in Medicare and Medicaid. Government authorities may also assert that violations of laws and regulations related to submission or causing the submission of claims violate the FCA or other laws related to fraud and abuse, including submission of claims for services that were not medically necessary. Under the FCA, whistleblower or qui tam provisions allow a private individual to bring actions on behalf of the federal government alleging that the defendant has submitted a false claim to the federal government, and to share in any monetary recovery. In recent years, the number of suits brought by private individuals has increased dramatically and we may be subject to such suits. Violations of the FCA could result in enormous economic liability. The FCA provides that all damages are trebled, and each false claim submitted is subject to a penalty of up to $21,916. For example, we could be subject to FCA liability if it was determined that the services we provided were not medically necessary and not reimbursable, particularly if it were asserted that we contributed to the physician's referrals of unnecessary services to us. It is also possible that the government could attempt to hold us liable under fraud and abuse laws for improper claims submitted by an entity for services that we performed if we were found to have knowingly participated in the arrangement that resulted in submission of the improper claims.

Changes in regulation and policies, including increasing downward pressure on health care reimbursement, may adversely affect reimbursement for diagnostic services and could have a material adverse impact on our business.

Reimbursement levels for health care services are subject to continuous and often unexpected changes in policies, and we face a variety of efforts by government payors to reduce utilization and reimbursement for diagnostic testing services. Changes in governmental reimbursement may result from statutory and regulatory changes, retroactive rate adjustments, administrative rulings, competitive bidding initiatives, and other policy changes.

The U.S. Congress has considered, at least yearly in conjunction with budgetary legislation, changes to one or both of the Medicare fee schedules under which we receive reimbursement, which include the physician fee schedule for anatomical pathology services, and the clinical laboratory fee schedule for our clinical laboratory services. For example, currently there is no copayment or coinsurance required for clinical laboratory services, although there is for our services that are paid under the physician fee schedule. However, Congress has periodically considered imposing a 20 percent coinsurance on laboratory services. If enacted, this would require us to attempt to collect this amount from patients, although in many cases the costs of collection would exceed the amount actually received.

The Center for Medicare and Medicaid Services ("CMS") pays laboratories on the basis of a fee schedule that is reviewed and re-calculated on an annual basis. CMS may change the fee schedule upward or downward on billing codes that we submit for reimbursement on a regular basis. Our revenue and business may be adversely affected if the reimbursement rates associated with such codes are reduced. Even when reimbursement rates are not reduced, policy changes add to our costs by increasing the complexity and volume of administrative requirements. Medicaid reimbursement, which varies by state, is also subject to administrative and billing requirements and budget pressures. In recent years, state budget pressures have caused states to consider several policy changes that may impact our financial condition and results of operations, such as delaying payments, reducing reimbursement, restricting coverage eligibility and service coverage, and imposing taxes on our services.

Third party payors are increasingly challenging established prices, and new products that are more expensive than existing treatments may have difficulty finding ready acceptance unless there is a clear therapeutic benefit. On April 1, 2014, the PAMA was enacted into law. Under PAMA, Medicare payment for clinical diagnostic laboratory tests is established by calculating a weighted mean of private payor rates. Effective January 1, 2018, clinical laboratory fee schedule rates are based on weighted median private payor rates as required by PAMA. Even though the permitted annual decrease are capped through 2023, the cap does not apply to new tests or new advanced diagnostic tests. We cannot assure you that any of our products will be considered cost effective, or that reimbursement will be available or sufficient to allow us to sell them competitively and profitably.

The federal government is faced with significant economic decisions in the coming years. Some solutions being offered in the government could substantially change the way laboratory testing is reimbursed by government entities. We cannot be certain what or how any such government changes may affect our business.

Medicare legislation and future legislative or regulatory reform of the health care system may affect our ability to sell our products profitably.

In the U.S., there have been a number of legislative and regulatory initiatives, at both the federal and state government levels, to change the healthcare system in ways that, if approved, could affect our ability to sell our products and provide our laboratory services profitably. As such, we cannot assure you that reimbursement payments under governmental and private third party payor programs will remain at levels comparable to present levels or will be sufficient to cover the costs allocable to patients eligible for reimbursement under these programs. Any changes that lower reimbursement rates under Medicare, Medicaid or private payor programs could negatively affect our business.

In August 2022, President Joe Biden signed the Inflation Reduction Act (the "IRA") into law. Among other things, the IRA contains changes to drug product reimbursement by Medicare, and (i) directs HHS to negotiate the price of certain drugs covered by Medicare, (ii) imposes rebates under Medicare Part B and Medicare Part D to penalize price increases that outpaces inflation, and (iii) makes several changes to the Medicare Part D benefit, including a limit on annual out-of-pocket costs and a change in manufacturer liability under the program. Although there have been legal challenges to the IRA, the provisions began to take effect in 2023 and could impact pricing for any covered drug product.

To enhance compliance with applicable health care laws, and mitigate potential liability in the event of noncompliance, regulatory authorities, such as the U. S. Health and Human Services Department Office of Inspector General (the “OIG”), have recommended the adoption and implementation of a comprehensive health care compliance program that generally contains the elements of an effective compliance and ethics program. In addition, certain states, such as New York, require that certain health care providers have a compliance program that generally adheres to the standards set forth in a model compliance program. Also, under the 2010 Health Care Reform Legislation, the U.S. Department of Health and Human Services, or HHS, requires suppliers, such as us, to adopt, as a condition of Medicare participation, compliance programs that meet a core set of requirements. While we have adopted U.S. healthcare compliance and ethics programs that generally incorporate the OIG’s recommendations and train our employees in such compliance, having such a program can be no assurance that we will avoid any compliance issues.

RISKS RELATED TO INTERNATIONAL OPERATIONS

Failure to obtain regulatory approval outside the U.S. will prevent us from marketing our products and product candidates abroad.

We intend to market certain of our products and product candidates in non-U.S. markets. In order to market our products and product candidates in the European Union and many other non-U.S. jurisdictions, we must obtain separate regulatory approvals. We have had limited interactions with non-U.S. regulatory authorities, the approval procedures vary among countries and can involve additional testing, and the time required to obtain approval may differ from that required to obtain FDA approval or clearance. Approval or clearance by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one or more non-U.S. regulatory authority does not ensure approval by other regulatory authorities in other countries or by the FDA. The non-U.S. regulatory approval process may include all of the risks associated with obtaining FDA approval or clearance. We may not obtain non-U.S. regulatory approvals on a timely basis, if at all. We may not be able to file for non-U.S. regulatory approvals and may not receive necessary approvals to commercialize our products and product candidates in any market, which would have a material adverse effect on our business, results of operations and financial condition.

Non-U.S. governments often impose strict price controls, which may adversely affect our future profitability.

We intend to seek approval to market certain of our products and product candidates in both the U.S. and in non-U.S. jurisdictions. If we obtain approval in one or more non-U.S. jurisdictions, we will be subject to rules and regulations in those jurisdictions relating to our product. In some countries, particularly countries of the European Union, each of which has developed its own rules and regulations, pricing is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a drug or medical device candidate. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product and product candidates to other available products. If reimbursement of our products and product candidates is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, we may be unable to generate revenues and achieve or sustain profitability, which would have a material adverse effect on our business, results of operations and financial condition.

Potential political, economic and military instability in the State of Israel, where we have office, laboratory and manufacturing operations, may adversely affect our results of operations.

We maintain office, laboratory and manufacturing facilities in the State of Israel. Political, economic and military conditions in Israel may directly affect our ability to conduct business. Since the State of Israel was established in 1948, a number of armed conflicts have occurred between Israel and its neighbors. Any hostilities involving Israel or the interruption or curtailment of trade between Israel and its present trading partners, or a significant downturn in the economic or financial condition of Israel, could affect adversely our operations. Ongoing and revived hostilities or other Israeli political or economic factors could harm our operations and product development and cause our revenues to decrease.

Due to the international scope of our business activities, our results of operations may be significantly affected by currency fluctuations.

We derive a significant portion of our consolidated net revenues from international sales, subjecting us to risks relating to fluctuations in currency exchange rates. Currency variations can adversely affect margins on sales of our products in countries outside of the U.S. and margins on sales of products that include components obtained from suppliers located outside of the U.S. Through our subsidiaries, we operate in a wide variety of jurisdictions. Certain countries in which we operate or may operate have experienced geopolitical instability, economic problems and other uncertainties from time to time. To the extent that world events or economic conditions negatively affect our future sales to customers in these and other regions of the world, or the collectability of receivables, our future results of operations, liquidity and financial condition may be adversely affected. We may manage exposures arising in the normal course of business related to fluctuations in foreign currency exchange rates by entering into offsetting positions through the use of foreign exchange forward contracts. Certain firmly committed transactions are hedged with foreign exchange forward contracts whereby exchange rates change, gains and losses on the exposed transactions are partially offset by gains and losses related to the hedging contracts. However, our subsidiaries receive their income and pay their expenses primarily in their local currencies. To the extent that transactions of these subsidiaries are settled in their local currencies, a devaluation of those currencies versus the U.S. dollar could reduce the contribution from these subsidiaries to our consolidated results of operations as reported in U.S. dollars. For financial reporting purposes, such depreciation will negatively affect our reported results of operations since earnings denominated in foreign currencies would be converted to U.S. dollars at a decreased value. While we have employed economic cash flow and fair value hedges to minimize the risks associated with these exchange rate fluctuations, the hedging activities may be ineffective or may not offset more than a portion of the adverse financial impact resulting from currency variations. Accordingly, we cannot assure you that fluctuations in the values of the currencies of countries in which we operate will not materially adversely affect our future results of operations.

We may be exposed to liabilities under the Foreign Corrupt Practices Act, and any determination that we violated the Foreign Corrupt Practices Act could have a material adverse effect on our business.

We are subject to the FCPA and other laws that prohibit U.S. companies or their agents and employees from providing anything of value to a foreign official or political party for the purposes of influencing any act or decision of these individuals in their official capacity to help obtain or retain business, direct business to any person or corporate entity or obtain any unfair advantage. We have operations and agreements with third parties and we generate sales internationally. Our international activities create the risk of unauthorized and illegal payments or offers of payments by our employees, consultants, sales agents or distributors, even though they may not always be subject to our control. We discourage these practices by our employees and agents. However, our existing safeguards and any future improvements may prove to be less than effective, and our employees, consultants, sales agents or distributors may engage in conduct for which we might be held responsible. Any failure by us to adopt appropriate compliance procedures and ensure that our employees and agents comply with the FCPA and applicable laws and regulations in foreign jurisdictions could result in substantial penalties or restrictions on our ability to conduct business in certain foreign jurisdictions.

Violations of the FCPA may result in severe criminal or civil sanctions, and we may be subject to other liabilities, which could negatively affect our business, operating results and financial condition. In addition, the U.S. government may seek to hold our Company liable for successor liability FCPA violations committed by companies in which we invest or that we acquire.

We are subject to risks associated with doing business globally.

Our operations, both within and outside the U.S., are subject to risks inherent in conducting business globally and under the laws, regulations and customs of various jurisdictions and geographies. These risks differ in some respects from those associated with our U.S. business and our exposure to such risks may increase if our international business continues to grow. These risks include fluctuations in currency exchange rates, changes in exchange controls, loss of business in government tenders that are held annually in many cases, nationalization, increasingly complex labor environments, expropriation and other governmental actions, changes in taxation, including legislative changes in U.S. and international taxation of income earned outside of the U.S., importation limitations, export control restrictions, violations of U.S. or local laws, including the FCPA, dependence on a few government entities as customers, pricing restrictions, economic destabilization, political and economic instability and disruption or destruction in a significant geographic region - due to the location of manufacturing facilities, distribution facilities or customers - regardless of cause, including war, terrorism, riot, civil insurrection or social unrest, or natural or man-made disasters, including famine, flood, fire, earthquake, storm or disease.

Our international business is subject to both U.S. and foreign laws and regulations, including, without limitation, regulations relating to import-export controls, technology transfer restrictions, repatriation of earnings, data privacy and protection, investment, exchange rates and controls, the FCPA and other anti-corruption laws, the anti-boycott provisions of the U.S. Export Administration Act, labor and employment, works councils and other labor groups, taxes, environment, security restrictions, intellectual property, changes in taxation, including legislative changes in U.S. and international taxation of income earned outside of the U.S., handling of regulated substances, and other commercial activities. Failure by us, our employees, affiliates, partners or others with whom we work to comply with these laws and regulations could result in administrative, civil or criminal liabilities. New regulations and requirements, or changes to existing ones in the various countries in which we operate can significantly increase our costs and risks of doing business internationally. Failure to comply with the laws and regulations that affect our global operations, could have an adverse effect on our business, financial condition or results of operations.

Changes in regulations, political leadership and environment, or security risks may dramatically affect our ability to conduct or continue to conduct business in international markets. Our international business may also be impacted by changes in foreign national policies and priorities, which may be influenced by changes in the environment, geopolitical uncertainties, government budgets, and economic and political factors more generally, any of which could impact funding for programs or delay purchasing decisions or customer payments. The occurrence and impact of these factors is difficult to predict, but one or more of them could have a material adverse effect on our financial position, results of operations and/or cash flows.

RISKS RELATED TO ACQUISITIONS AND INVESTMENTS

We have a large amount of goodwill and other intangible assets on our balance sheet that are subject to periodic impairment evaluations.

We have a large amount of goodwill and other intangible assets and we are required to perform an annual, or in certain situations a more frequent, assessment for possible impairment for accounting purposes. At December 31, 2024, we have goodwill and other intangible assets of $724.3 million. Goodwill is tested at least annually for impairment or when events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable, by assessing qualitative factors or performing a quantitative analysis in determining whether it is more likely than not that its fair value exceeds the carrying value. Examples of qualitative factors include our share price, our financial performance compared to budgets, long-term financial plans, macroeconomic, industry and market conditions as well as the substantial excess of fair value over the carrying value of net assets from the annual impairment test previously performed.

Based on the current financial performance of our diagnostics segment and our Ireland reporting unit, which includes EirGen and *Rayaldee*, if future results are not consistent with our estimates and assumptions, then we may be exposed to impairment charges, which could be material. At December 31, 2024, the goodwill of our diagnostics segment totaled $219.7 million and the goodwill of our Ireland reporting unit totaled $79.4 million. There can be no assurance that future reviews of our goodwill and other intangible assets will not result in impairment charges. Any impairment charges in the future will adversely affect our results of operations. A significant write down of goodwill and/or other intangible assets would have a material adverse effect on our reported results of operations and net worth and the trading price of our securities.

RISKS RELATED TO OWNERSHIP OF OUR COMMON STOCK

The trading price of our Common Stock may fluctuate significantly.

The trading price of our Common Stock may fluctuate significantly in response to numerous factors, some of which are beyond our control, such as:

- the announcement of new products or product enhancements by us or our competitors;
- results of our clinical trials and other development efforts;
- developments concerning intellectual property rights and regulatory approvals;

- variations in our and our competitors' results of operations;
- changes in earnings estimates or recommendations by securities analysts, if our Common Stock is covered by analysts;
- developments in the biotechnology, pharmaceutical, diagnostic and medical device industry;
- the announcement and/or commencement and/or settlement of lawsuits or similar claims against us or any of our officers, directors and affiliates;
- the results of product liability or intellectual property lawsuits;
- future issuances of our Common Stock or other securities, including debt;
- purchases and sales of our Common Stock by our officers, directors or affiliates;
- the addition or departure of key personnel;
- announcements by us or our competitors of acquisitions, investments or strategic alliances; and
- general market conditions and other factors, including factors unrelated to our operating performance.

Further, the securities market in general, and the market for biotechnology, pharmaceutical, diagnostic and medical device companies in particular, has experienced extreme price and volume fluctuations in recent years. Continued market fluctuations could result in extreme volatility in the trading price of our Common Stock, which could cause a decline in the value of our securities and a loss of all or a portion of your investment in us.

Directors, executive officers, principal stockholders and affiliated entities own a substantial amount of our capital stock, and they may make decisions that you do not consider to be in the best interests of our stockholders.

As of January 31, 2025, our directors, executive officers, principal stockholders and affiliated entities beneficially owned, in the aggregate, approximately 55.46% of our outstanding voting securities. Phillip Frost, M.D., our Chairman and CEO, is deemed to beneficially own, in the aggregate, approximately 36.97% of our Common Stock as of January 31, 2025. As a result, Dr. Frost, acting with other members of management, would have the ability to significantly impact the election of our Board of Directors, the adoption or amendment of provisions in our Certificate of Incorporation, the approval of mergers and other significant corporate transactions and the outcome of issues requiring approval by our stockholders. This concentration of ownership may also have the effect of delaying or preventing a change in control of our company that may be favored by other stockholders. This could prevent transactions in which holders of our securities might otherwise recover a premium for their securities over current market prices.

A significant short position in our Common Stock could have a substantial impact on the trading price of our stock.

Historically, there has been a significant "short" position in our Common Stock. As of January 31, 2025, investors held a short position of approximately 88,641,089 shares of our Common Stock, which represented approximately 13.2% of our outstanding Common Stock as of such date. The anticipated downward pressure on our stock price due to actual or anticipated sales of our stock by some institutions or individuals who engage in short sales of our Common Stock could cause our stock price to decline. Such stock price decrease could encourage further short-sales that could place additional downward pressure on our stock price. This could lead to further increases in the already large short position in our Common Stock and cause additional volatility in our stock price.

The volatility of our stock may cause the value of a stockholder's investment to decline rapidly. Additionally, if our stock price declines, it may be more difficult for us to raise capital and may have other adverse effects on our business.

Failure to maintain effective internal controls in accordance with Section 404 of the Sarbanes-Oxley Act, including with respect to companies we acquire, could have a material adverse effect on our business and operating results. In addition, current and potential stockholders could lose confidence in our financial reporting, which could have a material adverse effect on the price of our Common Stock.

Section 404 of the Sarbanes-Oxley Act of 2002 requires annual management assessments of the effectiveness of our internal control over financial reporting and a report by our independent registered public accounting firm on the effectiveness of internal control over financial reporting as of year-end. We are required to report, among other things, control deficiencies that constitute material weaknesses or changes in internal control that, or that are reasonably likely to, materially affect internal control over financial reporting. A "material weakness" is a significant deficiency or combination of significant deficiencies that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected.

We have identified and remediated control deficiencies in the past, and we cannot assure you that we will at all times in the future be able to report that our internal controls are effective. In addition, material weaknesses in the design and operation of the internal control over financial reporting of companies that we acquire could have a material adverse effect on our business and operating results. If we cannot provide reliable financial reports or prevent fraud, our results of operation could be harmed. Our failure to maintain the effective internal control over financial reporting could cause the cost related to remediation to increase and could cause our stock price to decline. In addition, we may not be able to accurately report our financial results, may be subject to regulatory sanction, and investors may lose confidence in our financial statements.

Compliance with changing regulations concerning corporate governance and public disclosure may result in additional expenses.

There have been changing laws, regulations, and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002, the Dodd-Frank Act, regulations promulgated by the Securities and Exchange Commission and rules promulgated by the Nasdaq Global Select Market and the other national securities exchanges. These new or changed laws, regulations, and standards are subject to varying interpretations in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies, which could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. As a result, our efforts to comply with evolving laws, regulations, and standards are likely to continue to result in increased general and administrative expenses and a diversion of management time and attention from revenue-generating activities to compliance activities. Our board members, Chief Executive Officer, Chief Financial Officer, and Principal Accounting Officer could face an increased risk of personal liability in connection with the performance of their duties. As a result, we may have difficulty attracting and retaining qualified board members and executive officers, which could harm our business. If our efforts to comply with new or changed laws, regulations, and standards differ from the activities intended by regulatory or governing bodies, we could be subject to liability under applicable laws or our reputation may be harmed, which could materially adversely affect our business, results of operations and financial condition.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

None.

ITEM 1C. CYBERSECURITY.

Overview

OPKO Health, Inc. ("OPKO" or the "Company") is committed to the highest standards of cybersecurity, adhering to the SEC's definitions for 'Cybersecurity Incident,' 'Cybersecurity Threat,' and 'Information Systems.' Our focus is on safeguarding our digital infrastructure and sensitive data against unauthorized access and threats.

Risk Management and Strategy

1. Risk Assessment and Management: OPKO employs rigorous assessment and management of cybersecurity risks, aligning with NIST and other industry standards. Our strategy is integrated into our overall risk management program, reflecting our commitment to safeguarding data.
    a. Collaborative Approach: We utilize a cross-functional strategy, involving key security, risk, and compliance stakeholders, to preserve data confidentiality and manage cybersecurity threats.
    b. Technical Safeguards: Regular assessments and updates of technical safeguards are based on ongoing vulnerability analyses and threat intelligence.
    c. Incident Response and Recovery: We have established comprehensive incident response and recovery plans, ensuring readiness and effective response to cybersecurity incidents.
    d. Third-Party Risk Management: Rigorous controls are in place to mitigate risks associated with third-party service providers, including security risk assessments and contractual security requirements.
    e. Education and Awareness: Regular privacy and security training for employees is conducted to enhance awareness and response to cybersecurity threats.
    f. External Assessments and Attestations, and Certifications: Annual vulnerability and penetration tests and data privacy and protection reviews are performed by third-party experts. No significant findings were identified. OPKO maintains industry certifications such as SOC 2 Type 2 and PCI DSS attestations.
2. No Material Breaches or Incidents: There have been no material breaches or cybersecurity issues affecting the Company. Consequently, no risks from cybersecurity threats or previous cybersecurity incidents have materially affected, nor are they reasonably likely to materially affect, the company's business strategy, results of operations, or financial condition. As of the date of this filing, the company maintains that its cybersecurity measures have been effective in mitigating potential risks associated with cybersecurity threats.

Governance

1. Board Oversight: The Audit Committee of the Board has direct oversight, regularly reviews reports on cybersecurity risks and vulnerabilities. The Audit Committee is informed about risk assessments, progress of risk reduction initiatives, and feedback from external auditors. Our chief compliance & audit officer (“CCO/CAO”) and his direct report, chief information security officer (“CISO”), have primary responsibility for assessing and managing material cybersecurity risks. The CCO/CAO reports to the Audit Committee, which is the primary governing body that drives alignment on security decisions across the Company. The Audit Committee meets at least four times a year on cybersecurity and such meetings are attended by the CCO/CAO, CISO, in-house counsel, chief financial officer (“CFO”), corporate controller, associate general counsel, and other senior company executives as needed to review security performance metrics, identify security risks, and assess the status of approved security enhancements. The Audit Committee also considers and makes recommendations on security policies and procedures, security service requirements, and risk mitigation.
2. Expertise and Leadership: Our Chief Compliance & Audit Officer (CCO/CAO) possesses over 28 years of experience in Cyber Security and IT Controls across various complex organizations, including initial tenure at Boston University Medical Center, followed by roles at PricewaterhouseCoopers, Biogen, Vertex Pharmaceuticals, and currently OPKO Health for the past 7 years. The CCO/CAO has a master’s degree in Computer Science with a specialization in Cyber Security from Boston University, a qualifying UK law degree from the University of Edinburgh, an MBA in Accounting, and a Master's of Finance from Northeastern University, in addition to a BA in Economics from Dartmouth College.

The CISO brings over 28 years of experience in Cyber Security and IT Controls, with the last 16 years serving as CISO of the Company and previously at Everest Insurance Corp. Prior experience includes several years at PricewaterhouseCoopers as an IT auditor and Cyber Security consultant. The CISO holds comprehensive Cyber Security accreditations and certifications, including CISSP, CISA, CRISC, CHP, CDRE, and MBCI, and has completed undergraduate degrees in Accounting and Computer Information Systems from Baruch College. The CISO oversees a department comprising five cyber security engineers with extensive experience.

The Company's strategic approach to cybersecurity governance, characterized by our rigorous third-party assessments, industry certifications, and a clear organizational reporting structure, underscores our unwavering dedication to safeguarding sensitive information and maintaining trust.

ITEM 2. PROPERTIES.

Our principal corporate office is located at 4400 Biscayne Blvd, Miami, Florida. We lease this space from Frost Real Estate Holdings, LLC ("Frost Real Estate"), an entity which is controlled by Dr. Phillip Frost, our Chairman of the Board and Chief Executive Officer. Pursuant to the lease agreement with Frost Real Estate, we lease approximately 26,328 square feet, which encompasses space for our corporate offices and administrative services.

The table below summarizes certain information as to our significant physical properties as of December 31, 2024:

Location	Segment and Purpose	Type of Occupancy
Miami, FL	Diagnostics & Pharmaceutical: Corporate Headquarters	Leased
Weston, Massachusetts	Pharmaceuticals: Research and Development	Leased
Elmwood Park, NJ	Diagnostics: Main Laboratory	Leased
Kiryat Gat, Israel	Pharmaceuticals: Research and Development, CTP	Leased
Nesher, Israel	Pharmaceuticals: API Manufacturing	Leased
Guadalajara, Mexico	Pharmaceuticals: Pharmaceutical Manufacturing	Owned
Banyoles, Spain	Pharmaceuticals: Pharmaceutical Manufacturing	Owned
Palol de Revardit, Spain	Warehouse	Leased
Barcelona, Spain	Pharmaceuticals: Research and Development	Leased
Waterford, Ireland	Pharmaceuticals: Pharmaceutical Manufacturing	Leased
Santiago, Chile	Pharmaceuticals: Office; Warehouse	Leased

ITEM 3. LEGAL PROCEEDINGS.

We are involved from time to time in various claims and legal actions arising in the ordinary course of business. Please refer to Note 14, "Commitments and Contingencies" in the Consolidated Financial Statements for additional information.

In February 2023, the Office of the Attorney General for the State of Texas ("TX OAG") informed BioReference that it believes that, from 2005 to 2023, BioReference may have violated the Texas Medicaid Fraud Prevention Act with respect to claims it presented to Texas Medicaid for reimbursement. BioReference and the TX OAG entered into a Settlement Agreement in February 2025, pursuant to which BioReference agreed to pay $4,200,000 to settle the matter without admission of any wrongdoing.

On December 29, 2022, the Israel Tax Authority (the "ITA") issued an assessment against our subsidiary, OPKO Biologics in the amount of approximately $246 million (including interest) related to uncertain tax positions involving income recognition in connection with an examination of foreign tax returns for the 2014 through 2020 tax years. The ITA asserts in part that the classification of the commercialization rights in hGH CTP intellectual property should have been a sale, which would have constituted the sale of a capital asset, and accordingly, any royalty revenue calculation would have required adjustment. We have appealed this assessment and the parties have presented their respective arguments in Israeli court. Procedurally, the parties must now submit affidavits summarizing their arguments and then await a final judgment. We intend to continue to exhaust all judicial remedies necessary to finally resolve the matter, which could be a lengthy process. We cannot currently provide any assurance as to the outcome of this matter, including the likelihood of an unfavorable outcome.

On March 1, 2019, the Company received a Civil Investigative Demand ("CID") from the U.S. Department of Justice ("DOJ"), Washington, DC. The CID sets forth document requests and interrogatories in connection with allegations that the Company and certain of its affiliates violated the False Claims Act and/or the Anti-Kickback Statute. On January 13, 2022, the Federal Government notified the U.S.D.C., Middle District Florida, Jacksonville Division, that it is declining to intervene in the matter but retains the right, via the Attorney General, to consent to any proposed dismissal of the action by the Court. On February 9, 2022, the States of Florida, Georgia, and Commonwealth of Massachusetts notified the U.S.D.C., Middle District Florida, Jacksonville Division, that they are declining to intervene in the matter. Notwithstanding the above declinations, on February 17, 2022, the Company was served with the Relator's Summons and Complaint which alleges violations of the False Claims Act, the California Fraud Preventions Act, the Florida False Claims Act, the Massachusetts False Claims Act, the Georgia False Medicaid Claims Act, and illegal kickbacks. The case was dismissed in March 2023. However, the Relator filed an amended complaint in April 2023, which was subsequently dismissed, and a second amended complaint which was dismissed in January 2024. Relator then filed an appeal in the U.S. Eleventh Circuit Court of Appeals. On November 18, 2024, the Eleventh Circuit Court of Appeals issued an order affirming the Federal District Court's Dismissal with prejudice.

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.

Our Common Stock is traded publicly on the NASDAQ Stock Market ("NASDAQ") and the Tel Aviv Stock Exchange under the symbol "OPK".

As of January 31, 2025, there were approximately 346 holders of record of our Common Stock.

On July 18, 2024, the Company announced that its Board of Directors authorized the repurchase of up to $100 million of shares of Common Stock. Under this program, the Company may repurchase shares through various methods, including open market purchases, block trades, privately negotiated transactions, and accelerated share repurchases, as well as pursuant to pre-set trading plans meeting the requirements of Rule 10b5-1(c) of the Exchange Act, and otherwise in compliance with applicable laws. The timing and volume of repurchases will depend on market conditions, the Company's capital management, investment opportunities, and other factors. The program does not obligate the Company to repurchase any specific number of shares, has no set expiration date, and may be modified, suspended, or discontinued at the Company's discretion. Under this program, the Company repurchased an aggregate of 25,825,785 shares of Common Stock at an average price of $1.56 per share for approximately $40.2 million during the year ended December 31, 2024.

The following table presents our share repurchase activity for the quarter ended December 31, 2024 (dollars in thousands, except per share amounts).

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	Maximum Dollar Value that May Yet be Purchased Under the Plans or Programs (1)
October 1, 2024 to October 31, 2024	7,519,831	1.48	7,519,831	65,013,074
November 1, 2024 to November 30, 2024	3,412,928	1.50	3,412,928	59,776,326
December 1, 2024 to December 31, 2024	—	—	—	—
Total	10,932,759	$ 1.49	10,932,759	59,776,326

1. All repurchases were made on the open market at prevailing market rates plus related expenses under our stock repurchase program, which authorizes the repurchase of up to $100 million of our common stock. We publicly announced this program on July 18, 2024.

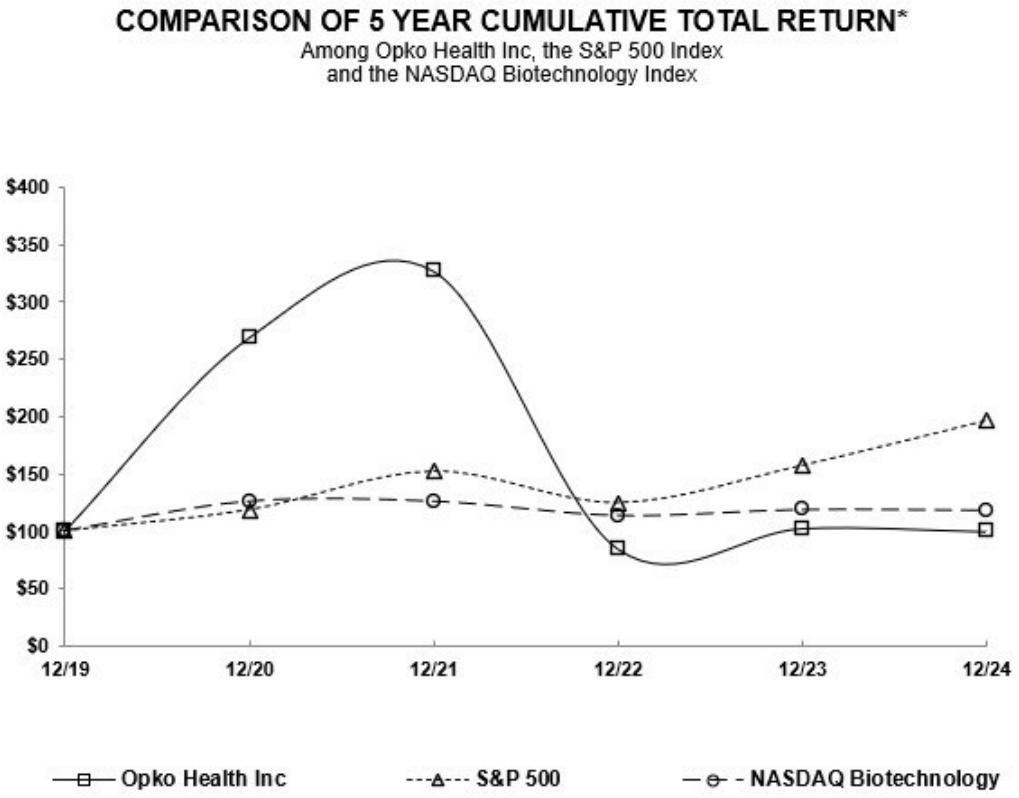
Recent Sales of Unregistered Securities

All sales prior to the fourth quarter of 2024 of unregistered securities were previously reported in a Current Report on Form 8-K or Quarterly Report on Form 10-Q.

We have not declared or paid any cash dividends previously on our Common Stock.

Stock Performance Graph

The following graph compares the five-year cumulative total return of our Common Stock with the S&P 500 Index and the NASDAQ Biotechnology Index. The graph assumes $100 invested on December 31, 2019 in our Common Stock and in each of the foregoing indices. The stock price performance reflected in the graph below is not necessarily indicative of future price performance.



*$100 invested on 12/31/19 in stock or index, including reinvestment of dividends.
Fiscal year ending December 31.

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	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024
OPKO Health, Inc.	$ 100.00	$ 268.71	$ 327.21	$ 85.03	$ 102.72	$ 100.00
S&P 500	100.00	118.40	152.39	124.79	157.59	197.02
NASDAQ Biotechnology	100.00	126.42	126.45	113.65	118.87	118.20

ITEM 6. [Reserved].

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

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 ("PSLRA"), Section 27A of the Securities Act of 1933, as amended, (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended, (the "Exchange Act"), about our expectations, beliefs, or intentions regarding our product development efforts, business, financial condition, results of operations, strategies and prospects. You can identify forward-looking statements by the fact that these statements do not relate to historical or current matters. Rather, forward-looking statements relate to anticipated or expected events, activities, trends or results and otherwise reflect our views related thereto only as of the date they are made. Because forward-looking statements relate to matters that have not yet occurred, these statements are inherently subject to risks and uncertainties that could cause our actual results to differ materially from any future results expressed or implied by the forward-looking statements. Many factors could cause our actual activities or results to differ materially from the activities and results anticipated in forward-looking statements. These factors include those contained in "Item 1A — Risk Factors" of this Annual Report on Form 10-K. We do not undertake any obligation to update forward-looking statements except as required by applicable law. We intend that all forward-looking statements be subject to the safe harbor provisions of PSLRA.

OVERVIEW

We are a diversified healthcare company that seeks to establish industry leading positions in large and rapidly growing medical markets. Our pharmaceutical business features Somatrogon (hGH-CTP), a once-weekly human growth hormone injection. We have partnered with Pfizer Inc. ("Pfizer") for the development and commercialization of Somatrogon (hGH-CTP). Regulatory approvals for Somatrogon (hGH-CTP) for the treatment of growth hormone deficiency in children and adolescents have been secured in more than 50 markets, including the United States, European Union ("EU") Member States, Japan, Canada, and Australia, where it is marketed under the brand name NGENLA®. We also manufacture and sell *Rayaldee*, an FDA approved treatment for secondary hyperparathyroidism ("SHPT") in adults with stage 3 or 4 chronic kidney disease ("CKD") and vitamin D insufficiency, through our pharmaceutical division. We have also expanded our pharmaceutical pipeline with early-stage immune therapies targeting cancer and infectious diseases through our 2022 acquisition of ModeX Therapeutics, Inc. ("ModeX").

Our diagnostics business, BioReference Health, LLC ("BioReference"), is a highly specialized laboratory in the United States, with a sales and marketing team focused on growth and new product integration, including the *4Kscore*® prostate cancer test. BioReference® offers a broad spectrum of diagnostic testing services for oncology, urology (*4Kscore*), and corrections nationwide, setting new standards with our industry-leading turnaround times. BioReference also provides comprehensive clinical and women's health testing in New York and New Jersey. Our test offerings are backed by a team of board-certified medical professionals and driven by the latest healthcare guidelines and standards- marketed directly to physicians, geneticists, hospitals, clinics, correctional facilities, and other healthcare providers. On September 16, 2024 we consummated the sale of certain assets of BioReference to Laboratory Corporation of America Holdings ("Labcorp"), as described below.

The Company maintains established, revenue-generating pharmaceutical platforms in Spain, Ireland, Chile, and Mexico, our most significant such platforms, contributing to positive cash flow and facilitating market entry for our development pipeline. In addition to these platforms, we operate a global pharmaceutical development and commercial supply company, a global supply chain operation, and manufacture specialty active pharmaceutical ingredients (API) in Israel through our subsidiary, FineTech.

Our management team possesses extensive industry experience in development, regulatory affairs, and commercialization. Their industry relationships support the identification and pursuit of commercial opportunities. Research and development activities are primarily conducted in facilities located in Weston, Massachusetts, Waterford, Ireland, Kiryat Gat, Israel, and Barcelona, Spain.

On March 27, 2024, the Company entered into a definitive agreement with Labcorp (the "Labcorp Asset Purchase Agreement"), pursuant to which Labcorp agreed to acquire select assets of BioReference (the "BioReference Transaction"). The BioReference Transaction closed on September 16, 2024, and upon closing, Labcorp paid to the Company aggregate consideration of $237.5 million in cash, subject to certain adjustments as set forth in the Labcorp Asset Purchase Agreement. These assets were part of our diagnostics segment and included BioReference's laboratory testing businesses focused on clinical diagnostics, reproductive health, and women's health across the United States, excluding BioReference's New York and New Jersey operations.

Pursuant to the Labcorp Asset Purchase Agreement, a total of approximately $23.7 million was withheld at closing and deposited by Labcorp into an escrow account to satisfy potential indemnity claims. The escrow will be released to the Company on the twelve-month anniversary of the closing date, subject to any outstanding or liquidated indemnity claims. The Company recorded the escrow within other current assets on the Condensed Consolidated Balance Sheet.

We recognized a gain of $121.5 million from the BioReference Transaction for the year ended December 31, 2024.

RESULTS OF OPERATIONS

Foreign Currency Exchange Rates

For the years ended December 31, 2024, 2023, and 2022, approximately 23.1%, 29.6%, and 21.6% of revenue, respectively, was denominated in currencies other than the U.S. Dollar (USD). Our financial statements are reported in USD; therefore, fluctuations in exchange rates affect the translation of revenues and expenses denominated in foreign currencies into USD for purposes of reporting our consolidated financial results. During the years ended December 31, 2024, 2023 and 2022, the most significant currency exchange rate exposures were to the Chilean Peso and Euro. Gross accumulated currency translation adjustments recorded as a separate component of shareholders' equity were $52.7 million and $34.6 million at December 31, 2024 and 2023, respectively.

We are subject to foreign currency translation risk for fluctuations in exchange rates during the period of time between the consummation and cash settlement of transactions. We limit foreign currency transaction risk through hedge transactions with foreign currency forward contracts. Under these forward contracts, for any rate above or below the rate fixed by the contract, we receive or pay the difference between the spot rate and the fixed rate for the given amount at the settlement date. At December 31, 2024, we held no open foreign exchange forward contracts. At December 31, 2023, we held 52 open foreign exchange forward contracts related to inventory purchases on letters of credit. These contracts matured monthly through January 2024 with a total notional value of approximately $2.9 million.

For The Years Ended December 31, 2024 and 2023

Our consolidated loss from operations for the years ended December 31, 2024 and 2023 was as follows:

	For the years ended December 31,			
(In thousands)	2024	2023	Change	% Change
Revenues:				
Revenue from services	$ 480,667	$ 515,275	$ (34,608)	(7)%
Revenue from products	155,111	167,557	(12,446)	(7)%
Revenue from transfer of intellectual property and other	77,364	180,663	(103,299)	(57)%
Total revenues	713,142	863,495	(150,353)	(17)%
Costs and expenses:				
Cost of revenue	494,632	545,368	(50,736)	(9)%
Selling, general and administrative	304,220	300,559	3,661	1%
Research and development	105,214	89,593	15,621	17%
Contingent consideration	-	(1,036)	1,036	100%
Amortization of intangible assets	82,634	86,032	(3,398)	(4)%
Gain on sale of assets	(121,493)	-	(121,493)	(100)%
Total costs and expenses	865,207	1,020,516	(155,309)	(15)%
Loss from operations	(152,065)	(157,021)	4,956	3%

Diagnostics

(In thousands)	For the years ended December 31, 2024	2023	Change	% Change
Revenues				
Revenue from services	$ 480,667	$ 515,275	$ (34,608)	(7)%
Total revenues	480,667	515,275	(34,608)	(7)%
Costs and expenses:				
Cost of revenue	402,109	445,827	(43,718)	(10)%
Selling, general and administrative	205,185	202,341	2,844	1%
Research and development	2,075	2,508	(433)	(17)%
Amortization of intangible assets	16,916	20,195	(3,279)	(16)%
Gain on sale of assets	(121,493)	-	(121,493)	(100)%
Total costs and expenses	504,792	670,871	(166,079)	(25)%
Loss from operations	(24,125)	(155,596)	131,471	84%

Revenue. Revenue from services for the year ended December 31, 2024 decreased by approximately $34.6 million, or 7%, compared to the year ended December 31, 2023. This decrease was primarily due to a $42.5 million decrease in clinical test volume, largely attributable to the BioReference Transaction, offset by a $7.9 million increase in clinical test reimbursement rates.

Estimated collection amounts are subject to the complexities and ambiguities of billing, reimbursement regulations and claims processing, as well as considerations unique to Medicare and Medicaid programs, and require us to consider the potential for retroactive adjustments when estimating variable consideration in the recognition of revenue for the period in which the related services are rendered. For the years ended December 31, 2024 and 2023, we recorded $1.5 million and $19.2 million, respectively, of negative revenue adjustments due to changes in estimates of implicit price concessions for performance obligations satisfied in prior periods mainly due to the composition of patient payer mix.

The composition of revenue from services by payor for the years ended December 31, 2024 and 2023 was as follows:

(In thousands)	For the years ended December 31, 2024	2023
Healthcare insurers	$ 289,158	$ 315,560
Government payers	82,421	82,502
Client payers	93,310	100,171
Patients	15,778	17,042
Total	$ 480,667	$ 515,275

Cost of revenue. Cost of revenue for the year ended December 31, 2024 decreased $43.7 million, a decrease of 10% compared to the year ended December 31, 2023. Cost of revenue decreased primarily due to lower employee headcount, reflecting our continued cost-reduction initiatives implemented at BioReference, changes in the mix of testing ordered during the period, and by a decrease in consumption reflecting the timing of the BioReference Transaction.

Selling, general and administrative expenses. Selling, general and administrative expenses for the years ended December 31, 2024 and 2023 were $205.2 million and $202.3 million, respectively, representing an increase of 1% from the prior period. The increase in expense is primarily related to $26.3 million in severance charges associated with cost reduction initiatives and $9.7 million in adjustments to the life of certain leases. This was partially offset by continued cost-reduction initiatives at BioReference, which included a reduction in employee headcount and the streamlining of certain smaller operations, resulting in an overall decrease in employee-related expenses and other operating efficiencies. The divestiture of certain laboratory operations also contributed to the reduction in employee-related expenses.

Research and development expenses. The following table summarizes the components of our research and development expenses:

Research and Development Expenses	For the years ended December 31,	
	2024	2023
External expenses:		
Research and development employee-related expenses	$ 1,333	$ 1,729
Other internal research and development expenses	742	779
Total research and development expenses	$ 2,075	$ 2,508

The decrease in research and development expenses for the year ended December 31, 2024 was primarily due to a decrease in employee-related expenses as a result of the continued cost-reduction initiatives implemented at BioReference and the BioReference Transaction.

Amortization of intangible assets. Amortization of intangible assets was $16.9 million and $20.2 million for the years ended December 31, 2024 and 2023, respectively. The decrease is primarily attributable to the BioReference Transaction, which impacted the amount of amortizable intangible assets.

Gain on sale of assets. Gain on sale of assets for the year ended December 31, 2024 was $121.5 million due to the BioReference Transaction which closed during the third quarter of 2024.

Pharmaceuticals

(In thousands)	For the years ended December 31, 2024	2023	Change	% Change
Revenues:				
Revenue from products	$ 155,111	$ 167,557	$ (12,446)	(7)%
Revenue from transfer of intellectual property and other	77,364	180,663	(103,299)	(57)%
Total revenues	232,475	348,220	(115,745)	(33)%
Costs and expenses:				
Cost of revenue	92,523	99,541	(7,018)	(7)%
Selling, general and administrative	58,007	55,687	2,320	4%
Research and development	103,022	87,007	16,015	18%
Contingent consideration	—	(1,036)	1,036	100%
Amortization of intangible assets	65,718	65,837	(119)	(0)%
Total costs and expenses	319,270	307,036	12,234	4%
(Loss) income from operations	(86,795)	41,184	(127,979)	311%

Revenue from products. Revenue from products for the year ended December 31, 2024 decreased $12.5 million, or 7%, compared to the year ended December 31, 2023. The decrease in product revenue was primarily driven by unfavorable foreign exchange fluctuations of approximately $8.9 million from our international operations and a $2.0 million decrease in *Rayaldee* sales. While we experienced higher sales volumes in 2024 compared to 2023, this increase was more than offset by unfavorable foreign exchange fluctuations. Revenue from sales of *Rayaldee* for the year ended December 31, 2024, was $29.0 million compared to $31.0 million for the year ended December 31, 2023.

Revenue from transfer of intellectual property and other. For the year ended December 31, 2024, we recorded $77.4 million in revenue from the transfer of intellectual property and other. Revenue for the year ended December 31, 2024 principally reflects $30.0 million from Pfizer, which includes $28.3 million from gross profit share and royalty payments for both NGENLA (somatrogon) and Pfizer's Genotropin® (somatropin). Revenue in 2024 also included $23.8 million from the BARDA Contract, a $12.5 million milestone payment from Merck, and $10.2 million from contract manufacturers' commercial milestones.

In comparison, for the year ended December 31, 2023, we recorded $180.7 million in revenue from the transfer of intellectual property and other. This was primarily driven by a $90.0 million milestone payment, triggered by the FDA approval of NGENLA (somatrogon), and $26.7 million in revenue that included $22.6 million from gross profit share and royalty payments for both NGENLA (somatrogon) and Pfizer's Genotropin® (somatropin). In 2023, revenue also included $50.0 million from Merck in consideration for the rights granted to Merck under the Merck Agreement, $7.0 million from VFMCRP triggered by the German price approval for *Rayaldee*, $2.5 million from Nicoya due to Nicoya's submission of the investigational new drug application to China's Center for Drug Evaluation, $2.4 million from contract manufacturers' commercial milestones and $1.2 million from the BARDA Contract.

Cost of revenue. Cost of revenue for the year ended December 31, 2024 decreased by 7% to $92.5 million compared to $99.5 million for the year ended December 31, 2023, which was primarily driven by favorable foreign exchange fluctuations. Despite increased sales volumes during 2024, which typically increases cost of revenue, we were able to limit this increase due to a combination of factors, including favorable foreign currency fluctuations and a reduction in *Rayaldee's* cost of revenue. Favorable foreign currency fluctuations positively impacted cost of revenue by approximately $6.1 million. The reduction in *Rayaldee's* cost of revenue resulted from a lower standard cost per bottle, achieved through ongoing process improvements and favorable raw material pricing.

Selling, general and administrative expenses. Selling, general and administrative expenses for the years ended December 31, 2024 and 2023 were $58.0 million and $55.7 million, respectively, representing an increase of 4% from the prior year period. The increase in selling, general and administrative expenses was due to higher employee-related, professional, and legal expenses related to our international operations.

Research and development expenses. Research and development expenses for the years ended December 31, 2024 and 2023 were $103.0 million and $87.0 million, respectively, representing an increase of 18% from the prior year. Research and development expenses include external and internal expenses, partially offset by third-party grants and funding arising from collaboration agreements. External expenses include clinical and non-clinical activities performed by contract research organizations, lab services, purchases of drug and diagnostic product materials and manufacturing development costs. We track external research and development expenses by individual program for phase 3 clinical trials for drug approval and premarket approval for diagnostics tests, if any. Internal expenses include employee-related expenses such as salaries, benefits and equity-based compensation expense. Other internal research and development expenses are incurred to support overall research and development activities and include expenses related to general overhead and facilities.

The following table summarizes the components of our research and development expenses:

Research and Development Expenses	For the years ended December 31,	
	2024	2023
External expenses:		
Manufacturing expense for biological products	$ 37,394	$ 14,687
Phase 3 studies	1,239	4,414
Post-marketing studies	713	591
Earlier-stage programs	29,882	45,476
Research and development employee-related expenses	37,650	33,719
Other internal research and development expenses	8,036	4,894
Third-party grants and funding from collaboration agreements	(11,892)	(16,774)
Total research and development expenses	$ 103,022	$ 87,007

Research and development expenses for the year ended December 31, 2024, increased primarily due to growth in our BARDA collaboration and higher employee-related expenses. These increases were partially offset by a one-time payment to Sanofi of $12.5 million made in 2023 pursuant to the Sanofi In-License Agreement, which was triggered as a result of the Merck Agreement, and lower costs related to Somatrogon (hGH-CTP) following the closure of open-label extension studies in countries where it has received marketing authorization.

Contingent consideration. Contingent consideration for the year ended December 31, 2023 reflected a reversal of expense of $1.0 million. This was primarily attributable to changes in assumptions regarding the timing of achievement of future milestones for OPKO Renal, and potential amounts payable to former stockholders of OPKO Renal in connection therewith, pursuant to our acquisition agreement in March 2013. We recorded no contingent consideration for the year ended December 31, 2024.

Amortization of intangible assets. Amortization of intangible assets was $65.7 million and $65.8 million, respectively, for the years ended December 31, 2024 and 2023. Amortization expense reflects the amortization of acquired intangible assets with defined useful lives. Our indefinite lived IPR&D assets will not be amortized until the underlying development programs are completed. Upon obtaining regulatory approval, IPR&D assets will be accounted for as a finite-lived intangible asset and amortized on a straight-line basis over its estimated useful life of approximately 12 years.

Corporate

	For the years ended December 31,			
(In thousands)	2024	2023	Change	% Change
Costs and expenses:				
Selling, general and administrative	$ 41,028	$ 42,531	$ (1,503)	(4)%
Research and development	117	78	39	50%
Total costs and expenses	41,145	42,609	(1,464)	(3)%
Loss from operations	$ (41,145)	$ (42,609)	$ 1,464	3%

Operating loss for our unallocated corporate operations for the years ended December 31, 2024 and 2023 was $41.4 million and $42.6 million, respectively, and principally reflect general and administrative expenses incurred in connection with our corporate operations.

Other

Interest income. Interest income for the years ended December 31, 2024 and 2023 was $8.4 million and $4.0 million, respectively. The increase reflects higher average cash and investment balances as a result of the cash received from the BioReference Transaction, the issuance of the 2044 Notes, and the sale of common stock of GeneDx Holdings Corp. (formerly, Sema4 Holdings Corp., ("GeneDx Holdings"). We originally acquired shares of GeneDx Holdings in the 2022 disposition of our former subsidiary, GeneDx LLC ("GeneDx") and subsequently acquired additional shares in an underwritten offering by GeneDx Holdings.

Interest expense. Interest expense for the years ended December 31, 2024 and 2023 was $47.5 million and $13.5 million, respectively. The increase was primarily driven by interest incurred on the 2029 Convertible Notes (as defined below) and the 2044 Notes, including amortization of deferred financing and debt issuance costs. This increase was partially offset by the extinguishment of our outstanding 2023 Convertible Notes (as defined below) in connection with their exchange for 2029 Convertible Notes and the repurchase of a significant portion of the outstanding 2025 Notes (as defined in Note 7 of the Consolidated Financial Statements) using a portion of the net proceeds from the issuance of 2029 Convertible Notes.

Fair value changes of derivative instruments, net. Fair value changes of derivative instruments, net for the years ended December 31, 2024 and 2023 were $26.2 million of expense and $0.8 million reversal of expense, respectively. Derivative expense for the years ended December 31, 2024 and 2023 was principally related to the change in fair value of the 2029 Convertible Notes and of foreign currency forward exchange contracts at OPKO Chile.

Other income (expense), net. Other income (expense), net for the years ended December 31, 2024 and 2023, was $206.9 million and ($17.0 million), respectively. The increase in 2024 was primarily driven by a $140.0 million gain related to the change in fair value of our investment in GeneDx Holdings and a $64.5 million gain from the sale of 2,937,762 shares of GeneDx Holdings. In 2023, the expense was primarily due to a $23.0 million loss related to the change in fair value of our investment in GeneDx Holdings, partially offset by a $6.7 million gain resulting from GeneDx Holdings achieving specific revenue target milestones. Foreign currency fluctuations resulted in a $3.8 million loss in 2024 and a $1.2 million gain in 2023.

Income tax benefit (provision). Our income tax benefit (provision) for the years ended December 31, 2024 and 2023 was ($42.8 million) and ($4.4 million), respectively. For the year ended December 31, 2024, the tax rate differed from the U.S. federal statutory rate of 21% primarily due to the relative mix in earnings and losses in the U.S. versus foreign tax jurisdictions, impact related to the BioReference Transaction, the impact of the payments under Merck Agreement, the impact of sales of the GeneDx investment, and operating results in tax jurisdictions which do not result in a tax benefit.

Loss from investments in investees. We have invested in certain early stage companies that we believe have valuable proprietary technology and significant potential to create value for us as an equityholder. We account for these investments under the equity method of accounting, resulting in the recording of our proportionate share of their losses until our share of their loss exceeds our investment. Until the investees' technologies are commercialized, if ever, we anticipate they will report net losses. Loss from investments in investees was $18.0 thousand and $107.0 thousand for the years ended December 31, 2024 and 2023, respectively.

For The Years Ended December 31, 2023 and 2022

Our consolidated income (loss) from operations for the years ended December 31, 2023 and 2022 is as follows:

	For the years ended December 31,			
(In thousands)	2023	2022	Change	% Change
Revenues:				
Revenue from services	$ 515,275	$ 755,630	$ (240,355)	(32)%
Revenue from products	167,557	142,845	24,712	17%
Revenue from transfer of intellectual property and other	180,663	105,721	74,942	71%
Total revenues	863,495	1,004,196	(140,701)	(14)%
Costs and expenses:				
Cost of revenue	545,368	715,977	(170,609)	(24)%
Selling, general and administrative	300,559	372,672	(72,113)	(19)%
Research and development	89,593	73,887	15,706	21%
Contingent consideration	(1,036)	(1,312)	276	21%
Amortization of intangible assets	86,032	87,784	(1,752)	(2)%
Gain on sale of assets	—	(18,559)	18,559	100%
Total costs and expenses	1,020,516	1,230,449	(209,933)	(17)%
Loss from operations	(157,021)	(226,253)	69,232	(31)%

Diagnostics

	For the years ended December 31,			
(In thousands)	2023	2022	Change	% Change
Revenues				
Revenue from services	$ 515,275	$ 755,630	(240,355)	(32)%
Total revenues	515,275	755,630	(240,355)	(32)%
Costs and expenses:				
Cost of revenue	445,827	627,559	(181,732)	(29)%
Selling, general and administrative	202,341	284,388	(82,047)	(29)%
Research and development	2,508	12,024	(9,516)	(79)%
Amortization of intangible assets	20,195	23,870	(3,675)	(15)%
Gain on sale of assets	—	(18,559)	18,559	100%
Total costs and expenses	670,871	929,282	(258,411)	(28)%
Loss from operations	(155,596)	(173,652)	18,056	10%

Revenue. Revenue from services for the year ended December 31, 2023 decreased by approximately $240.4 million, or 32%, compared to the year ended December 31, 2022. The decrease in revenue for the year ended December 31, 2023 primarily reflected lower demand for COVID-19 testing and lower COVID-19 reimbursement of $189.7 million and $5.1 million, respectively. The reduction in reimbursement reflects an increase in utilization of antigen point of care diagnostic tests as well as a change in the mix of customers, which pay varying contract prices depending on the level of services we provide. For the year ended December 31, 2023, clinical test volume increased $31.1 million, while clinical test reimbursement decreased $28.4 million, respectively, as a result of the mix of testing ordered. Furthermore, as a result of our sale of GeneDx in April 2022, genomic test revenues decreased by $48.3 million for the year ended December 31, 2023.

Estimated collection amounts are subject to the complexities and ambiguities of billing, reimbursement regulations and claims processing, as well as considerations unique to Medicare and Medicaid programs, and require us to consider the potential for retroactive adjustments when estimating variable consideration in the recognition of revenue for the period in which the related services are rendered. For the years ended December 31, 2023, and 2022, negative revenue adjustments due to changes in estimates of implicit price concessions for performance obligations satisfied in prior periods of $19.2 million and $21.5 million, respectively, were recognized. Revenue adjustments for the year ended December 31, 2023 were primarily due to lower reimbursements from Medicare payors and for the year ended December 31, 2022 were primarily due to lower COVID-19 test reimbursement estimates.

The composition of revenue from services by payor for the years ended December 31, 2023 and 2022 was as follows:

	For the years ended December 31,	
(In thousands)	2023	2022
Healthcare insurers	$ 315,560	$ 326,144
Government payers	82,502	97,191
Client payers	100,171	316,309
Patients	17,042	15,986
Total	$ 515,275	$ 755,630

Client payors include cities, states and companies for which BioReference provides COVID-19 testing services.

Revenue from transfer of intellectual property and other for the year ended December 31, 2022 represents grants received under the CARES Act totaling $16.2 million.

Cost of revenue. Cost of revenue for the year ended December 31, 2023 decreased $181.7 million, a decrease of 29% compared to the year ended December 31, 2022. Cost of revenue decreased primarily due to continued cost-reduction initiatives implemented at BioReference, a decline in the volume of COVID-19 tests performed during the year ended December 31, 2023 compared to 2022, and changes in the mix of testing ordered during the period. Furthermore, cost of revenue decreased by $34.9 million as a result of our sale of GeneDx in 2022.

Selling, general and administrative expenses. Selling, general and administrative expenses for the years ended December 31, 2023 and 2022 were $202.3 million and $284.4 million, respectively, respresenting a decrease of 29% from the prior period. Selling, general and administrative expenses in our diagnostics segment decreased primarily due to continued cost-reduction initiatives implemented at BioReference as we strive to return to profitability, as well as decreased expenses due to our sale of GeneDx in 2022.

Research and development expenses. The following table summarizes the components of our research and development expenses:

Research and Development Expenses	For the years ended December 31,	
	2023	2022
External expenses:		
Research and development employee-related expenses	$ 1,729	$ 8,691
Other internal research and development expenses	779	3,333
Total research and development expenses	$ 2,508	$ 12,024

The decrease in research and development expenses for the year ended December 31, 2023 was primarily due to the continued cost-reduction initiatives implemented at BioReference and partly as a result of the disposition of GeneDx.

Amortization of intangible assets. Amortization of intangible assets was $20.2 million and $23.9 million for the years ended December 31, 2023 and 2022, respectively. Amortization expense reflects the amortization of acquired intangible assets with defined useful lives. Amortization expense declined for the year ended December 31, 2023 due to the disposition of GeneDx and as a result of the full amortization of certain acquired intangible assets.

Gain on sale of assets. Gain on sale of assets for the year ended December 31, 2022 was $18.6 million due to the disposition of GeneDx. There was no comparable transaction for the year ended December 31, 2023.

Pharmaceuticals

(In thousands)	For the years ended December 31, 2023	2022	Change	% Change
Revenues:				
Revenue from products	$ 167,557	$ 142,845	$ 24,712	17%
Revenue from transfer of intellectual property and other	180,663	105,721	74,942	71%
Total revenues	348,220	248,566	99,654	40%
Costs and expenses:				
Cost of revenue	99,541	88,418	11,123	13%
Selling, general and administrative	55,687	49,232	6,455	13%
Research and development	87,007	61,275	25,732	42%
Contingent consideration	(1,036)	(1,312)	276	21%
Amortization of intangible assets	65,837	63,914	1,923	3%
Total costs and expenses	307,036	261,527	45,509	17%
Income (loss) from operations	41,184	(12,961)	54,145	418%

Revenue from products. Revenue from products for the year ended December 31, 2023 increased $24.7 million, or 17%, compared to the year ended December 31, 2022. The increase in revenue was driven by growing sales from our international operations, which were positively impacted by foreign exchange fluctuations of approximately $6.3 million, as well as increased sales of *Rayaldee*. Revenue from sales of *Rayaldee* for the years ended December 31, 2023, and 2022, was $31.0 million and $27.2 million, respectively, an increase of 14%.

Revenue from transfer of intellectual property and other. For the years ended December 31, 2023 and 2022, revenue from transfer of intellectual property and other principally reflects $90.0 million from Pfizer triggered by the FDA approval of NGENLA (Somatrogon) in 2023, and, in 2022, a $85.0 million regulatory milestone payment based on the commencement of sales from NGENLA (Somatrogon) in Europe and Japan, as well as gross profit share and royalty payments for both NGENLA (Somatrogon) and Pfizer's Genotropin® (Somatropin) of $22.6 million and $4.4 million for the years ended December 31, 2023 and 2022, respectively. For the years ended December 31, 2023 and 2022, revenue from transfer of intellectual property and other principally reflects $4.1 million and $9.3 million, respectively, of revenue related to the Pfizer Transaction. For the year ended December 31, 2023, revenue from transfer of intellectual property and other included $50.0 million from Merck in consideration for the rights granted to Merck under the Merck Agreement, $7.0 million from VFMCRP triggered by German price approval for *Rayaldee,* and $2.5 million from Nicoya due to Nicoya's submission of the investigational new drug application to China's Center for Drug Evaluation. For the year ended December 31, 2022, revenue from transfer of intellectual property and other included $3.0 million related to the achievement of a sales milestone pursuant to the VFMCRP Agreement, and $2.5 million from Nicoya tied to the first anniversary of the effective date of the Nicoya agreement.

Cost of revenue. Cost of revenue for the year ended December 31, 2023 increased by 13% to $99.5 million compared to the year ended December 31, 2022, which was driven by growing sales in our international operations due primarily to changes in product mix during the period and higher inventory costs compared to the prior period partially impacted by unfavorable foreign exchange fluctuations of $4.4 million.

Selling, general and administrative expenses. Selling, general and administrative expenses for the years ended December 31, 2023 and 2022 were $55.7 million and $49.2 million, respectively, representing an increase of 13% from the prior year period. The increase in selling, general and administrative expenses was due to higher employee-related expenses from our international operations and from higher employee-related expenses from *Rayaldee*.

Research and development expenses. Research and development expenses for the years ended December 31, 2023 and 2022 were $87.0 million and $61.3 million, respectively, representing an increase of 42% from the prior year. Research and development expenses include external and internal expenses, partially offset by third-party grants and funding arising from collaboration agreements. External expenses include clinical and non-clinical activities performed by contract research organizations, lab services, purchases of drug and diagnostic product materials and manufacturing development costs. We track external research and development expenses by individual program for phase 3 clinical trials for drug approval and premarket approval for diagnostics tests, if any. Internal expenses include employee-related expenses such as salaries, benefits and equity-based compensation expense. Other internal research and development expenses are incurred to support overall research and development activities and include expenses related to general overhead and facilities.

The following table summarizes the components of our research and development expenses:

Research and Development Expenses	For the years ended December 31,	
	2023	2022
External expenses:		
Manufacturing expense for biological products	$ 14,687	$ 10,038
Phase 3 studies	4,414	9,611
Post-marketing studies	591	35
Earlier-stage programs	45,476	14,347
Research and development employee-related expenses	33,719	25,440
Other internal research and development expenses	4,894	2,951
Third-party grants and funding from collaboration agreements	(16,774)	(1,147)
Total research and development expenses	$ 87,007	$ 61,275

The increase in research and development expenses for the year ended December 31, 2023 was primarily due to research expenses at ModeX driven by growth in our early-stage programs, including a $12.5 million payment to Sanofi under the Sanofi In-License Agreement and an increase in employee-related expenses, partially offset by lower expenses related to Somatrogon (hGH-CTP) due to the closure of the open-label extension studies in countries in which Somatrogon (hGH-CTP) received marketing authorization. Research and development expenses for the pharmaceutical segment for the years ended December 31, 2023 and 2022 included equity-based compensation expenses of $4.0 million and $2.6 million, respectively.

Contingent consideration. Contingent consideration for the years ended December 31, 2023 and 2022 reflected reversals of expense of $1.0 million and $1.3 million, respectively. Contingent consideration for the years ended December 31, 2023 and 2022, was primarily attributable to changes in assumptions regarding the timing of achievement of future milestones for OPKO Renal, and potential amounts payable to former stockholders of OPKO Renal in connection therewith, pursuant to our acquisition agreement in March 2013.

Amortization of intangible assets. Amortization of intangible assets was $65.8 million and $63.9 million, respectively, for the years ended December 31, 2023 and 2022. Amortization expense reflects the amortization of acquired intangible assets with defined useful lives. During the year ended December 31, 2022, we reclassified $590.2 million of IPR&D related to Somatrogon (hGH-CTP) from IPR&D in our Consolidated Balance Sheet upon the approval of NGENLA (Somatrogon) in Europe and Japan. The year ended December 2023 had a full year of amortization, while the year ended December 2022 had eleven months of amortization. The assets will be amortized on a straight-line basis over their estimated useful life of approximately 12 years.

Corporate

(In thousands)	For the years ended December 31, 2023	2022	Change	% Change
Costs and expenses:				
Selling, general and administrative	$ 42,531	$ 39,052	$ 3,479	9%
Research and development	78	588	(510)	(87)%
Total costs and expenses	42,609	39,640	2,969	7%
Loss from operations	$ (42,609)	$ (39,640)	$ (2,969)	(7)%

Operating loss for our unallocated corporate operations for the years ended December 31, 2023 and 2022 was $42.6 million and $39.6 million, respectively, and principally reflect general and administrative expenses incurred in connection with our corporate operations. The increase in operating loss for our unallocated corporate operations for the year ended December 31, 2023 was primarily due to an increase in employee-related and professional expenses, partially offset by a decrease in legal expenses.

Other

Interest income. Interest income for the years ended December 31, 2023 and 2022 was $4.0 million and $2.0 million, respectively. The increase is driven by having higher average cash and investment balances as a result of the cash received related to our sale of GeneDx, as well as higher interest rates.

Interest expense. Interest expense for the years ended December 31, 2023 and 2022 was $13.5 million and $12.1 million, respectively. Interest expense was principally related to interest incurred on the 2025 Notes, the 2023 Convertible Notes, the 2033 Senior Notes, and BioReference's outstanding debt under the BioReference Credit Agreement.

Fair value changes of derivative instruments, net. Fair value changes of derivative instruments, net for the years ended December 31, 2023 and 2022 were $0.8 million of expense and $0.7 million reversal of expense, respectively. Derivative expense for the years ended December 31, 2023 and 2022 was principally related to the change in fair value on foreign currency forward exchange contracts at OPKO Chile.

Other income (expense), net. Other income (expense), net for the years ended December 31, 2023 and 2022, was $17.0 million and $155.8 million of expense, respectively. Other income (expense), net for the years ended December 31, 2023 and 2022, included $23.0 million and $150.9 million, respectively, of expense as a result of a decrease in the fair value of our investment in GeneDx Holdings. For the year ended December 31, 2023, we recorded $6.7 million of income as a result of GeneDx Holdings achieving specific revenue target milestones for the fiscal year ended December 31, 2022. Foreign currency gains of $1.2 million and losses of $1.8 million were the majority of other expenses for the years ended December 31, 2023 and 2022, respectively.

Income tax benefit (provision). Our income tax benefit (provision) for the years ended December 31, 2023 and 2022 was ($4.4 million) provision and $63.5 million benefit, respectively. For the year ended December 31, 2023, the tax rate differed from the U.S. federal statutory rate of 21% primarily due to the relative mix in earnings and losses in the U.S. versus foreign tax jurisdictions, the impact of the payments under the Merck Agreement, and operating results in tax jurisdictions which do not result in a tax benefit. For the year ended December 31, 2022, the tax rate differed from the U.S. federal statutory rate of 21% primarily due to changes in the company's estimated tax liability, the impact from the IPR&D tax basis difference on deferred attribute realization as a result of the acquisition of ModeX, as well as the relative mix of earnings and losses in the U.S. versus foreign tax jurisdictions, and operating results in tax jurisdictions which do not result in a tax benefit.

Loss from investments in investees. We have made investments in certain early stage companies that we believe have valuable proprietary technology and significant potential to create value for us as a shareholder or member. We account for these investments under the equity method of accounting, resulting in the recording of our proportionate share of their losses until our share of their loss exceeds our investment. Until the investees' technologies are commercialized, if ever, we anticipate they will report net losses. Loss from investments in investees was $0.1 million and $0.4 million for the years ended December 31, 2023 and 2022, respectively.

LIQUIDITY AND CAPITAL RESOURCES

At December 31, 2024, we had cash, cash equivalents and restricted cash of approximately $445.6 million. Cash used in operations of $183.5 million for year ended December 31, 2024 principally reflects general and administrative expenses related to our corporate operations, research and development activities and sales and marketing activities related to our pharmaceutical and diagnostic business. Cash provided by investing activities was $352.2 million for the year ended December 31, 2024 primarily reflected both the proceeds from the BioReference Transaction and the sale of equity securities, offset by capital expenditures. Cash provided by financing activities of $184.2 million primarily reflected the issuance of our 2029 Convertible Notes and the issuance of the 2044 Notes, which was partially offset by the redemption of the 2025 Notes, repurchase of shares of our Common Stock, and net repayments on our lines of credit. We have historically not generated sustained positive cash flow sufficient to offset our operating and other expenses, and our primary sources of cash have been from the public and private placement of equity and debt, as well as credit facilities available to us.

On January 7th, 2025, ModeX announced the dosing of the first participant in a Phase 1 study of an EBV vaccine candidate being developed in collaboration with Merck. This achievement triggered a $12.5 million cash milestone payment from Merck to ModeX under the Merck Agreement, pursuant to which Merck obtained a license to certain patent rights and know-how in connection with the development of ModeX's preclinical nanoparticle vaccine candidate targeting the Epstein-Barr Virus. Under the terms of the Merck Agreement, ModeX is eligible to receive up to an additional $860.0 million upon the achievement of certain commercial and development milestones.

ModeX and Merck have established a strategic collaboration with a detailed research plan to guide the development of such a vaccine or related product. This plan includes the creation of a joint steering committee, and the potential use of third-party contract development and manufacturing organization carry out such activities unless otherwise agreed. Merck will reimburse ModeX for development costs incurred as part of this research plan. To date, we have incurred $25.0 million of development costs related to the Epstein-Barr Virus, which Merck has reimbursed in full.

In September 2024, ModeX entered into the BARDA Amendments which increased funding by $26.9 million, for the ongoing development, manufacturing, and execution of a Phase 1 clinical trial for a next-generation MSTAR multispecific antibody with broad neutralizing activity against known variants of SARS-CoV-2. The BARDA Amendments also included BARDA's exercise of an option for the development of a multispecific protein antibody for influenza or another pathogen, with the additional funding allocated to cover the expanded work. These modifications increased the total value of the BARDA Contract to $110.0 million, with a potential value of $205.0 million if BARDA exercises all options thereunder to expand ModeX's services. The BARDA Contract covers a five-year period through February 2028. We expect this funding will support the development of a second novel multispecific antibody to SARS-CoV-2, from preclinical through Phase 1 trials, as well as preclinical work on gene-based expression of multispecific antibodies to SARS-CoV-2, including mRNA and/or DNA vectors. In addition, ModeX plans to begin development of influenza multispecifics with gene and/or protein delivery modalities. As of December 31, 2024, the aggregate amount remaining to be funded by BARDA, which is subject to performance obligations and excluding unexercised contract options, was $85.0 million.

On September 16, 2024, the Company consummated the BioReference Transaction, pursuant to which Labcorp acquired select assets of BioReference. Labcorp paid to the Company aggregate consideration of $237.5 million in cash, subject to certain adjustments as set forth in the Labcorp Asset Purchase Agreement. The assets acquired by Labcorp included BioReference's laboratory testing businesses focused on clinical diagnostics, reproductive health, and women's health across the United States, excluding New York and New Jersey.

During the year ended December 31, 2024, the Company sold 2,937,762 shares of GeneDx Holdings common stock at various prices for approximately $166.6 million in aggregate proceeds. The sale reduced the Company's total ownership in GeneDx Holdings to 2.3% as of December 31, 2024. As of December 31, 2024, the aggregate value of our GeneDx Holdings investment was $47.7 million based on the closing market price of the GeneDx Holdings common stock on such date.

On July 18, 2024, our Board of Directors authorized the repurchase of up to $100 million of our Common Stock. Under this program, we may repurchase shares through various methods, including open market purchases, block trades, privately negotiated transactions and accelerated share repurchases, as well as pursuant to pre-set trading plans meeting the requirements of Rule 10b5-1(c) of the Exchange Act, and otherwise in compliance with applicable laws. The timing and volume of repurchases will depend on market conditions, our capital management, investment opportunities, and other factors. The program does not obligate us to repurchase any specific number of shares, has no set expiration date, and may be modified, suspended, or discontinued at our discretion. Through December 31, 2024, the Company repurchased an aggregate of 25,825,785 shares of Common Stock at an average price of $1.56 per share for approximately $40.2 million under this repurchase program.

On July 17, 2024, we completed a private offering of $250 million aggregate principal amount of the 2044 Notes in accordance with the terms of the 2044 Note Purchase Agreement. The 2044 Notes are secured by the Company’s profit share payments from Pfizer under the Restated Pfizer Agreement. The 2044 Notes bear interest at the 3-month SOFR plus 7.5%, subject to a minimum interest rate of 4.0% per annum. The 2044 Notes mature in July 2044, with interest-only payments required for the first four years.

In January 2024, we completed a private offering of $230.0 million aggregate principal amount of our 3.75% Convertible Senior Notes due 2029 (the “2029 Convertible 144A Notes”) in accordance with the terms of the note purchase agreement (the “144A Note Purchase Agreement”) entered into by and between the Company and J.P. Morgan Securities LLC (the "Initial Purchaser").

We received approximately $220.0 million of net proceeds from the issuance of the 2029 Convertible 144A Notes, after deducting fees and estimated offering expenses. We used approximately $50.0 million of the net proceeds to repurchase shares of our Common Stock from purchasers of the 2029 Convertible 144A Notes in privately negotiated transactions at a purchase price equal to the closing sale price per share of Common Stock on January 4, 2024, which was $0.9067. Contemporaneously with the pricing of the 2029 Convertible 144A Notes, we entered into separate, privately negotiated transactions with certain holders of the outstanding 2025 Notes to repurchase, on the closing date, approximately $144.4 million aggregate principal amount of such notes. We effected such repurchases for cash, using $146.3 million of the net proceeds from the offering of the 2029 Convertible 144A Notes, following which only $170 thousand aggregate principal amount of the 2025 Notes remained outstanding.

Additionally, we issued and sold approximately $71.1 million aggregate principal amount of our 3.75% Convertible Senior Notes due 2029 (the "2029 Convertible Affiliate Notes" and, together with the 2029 Convertible 144A Notes, the " 2029 Convertible Notes") pursuant to the terms of a note purchase agreement entered into on January 4, 2024 (the "Affiliate Note Purchase Agreement") by and among the Company and certain investors including, Frost Gamma Investments Trust, a trust controlled by Phillip Frost, M.D., the Company's Chairman and Chief Executive Officer, and Jane H. Hsiao, Ph.D., MBA, the Company's Vice-Chairman and Chief Technical Officer (collectively, the "Affiliate Purchasers"). Pursuant to the Affiliate Note Purchase Agreement, the Company issued and sold the 2029 Convertible Affiliate Notes to the Affiliate Purchasers in exchange for $55.0 million aggregate principal amount of the Company's existing 5% Convertible Promissory Notes (the "2023 Convertible Notes"), together with approximately $16.1 million of accrued but unpaid interest thereon, held by the Affiliate Purchasers. Following such exchange, no 2023 Convertible Notes remained outstanding.

At December 31, 2024, $280.6 million aggregate principal amount of the 2029 Convertible Notes was outstanding.

Holders may convert their 2029 Convertible Notes at their option prior to the close of business on the business day immediately preceding September 15, 2028 only under the following circumstances: (1) during any calendar quarter commencing after the calendar quarter ending on March 31, 2024 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the applicable conversion price on each applicable trading day; (2) during the five consecutive business day period after any ten consecutive trading day period (the "measurement period") in which the trading price per $1,000 principal amount of notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our Common Stock and the applicable conversion rate on each such trading day; or (3) upon the occurrence of specified corporate events specified in the indenture governing the 2029 Convertible Notes. On or after September 15, 2028 until the close of business on the business day immediately preceding the maturity date, holders may convert their notes at any time, regardless of the foregoing conditions. Upon conversion of a note, we will pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our Common Stock, at our election.

The conversion rate is initially equal to 869.5652 shares of Common Stock per $1,000 principal amount of notes (equivalent to an initial conversion price of approximately $1.15 per share of Common Stock). The conversion rate for the 2029 Convertible Notes is subject to adjustment upon the occurrence of certain events, but will not be adjusted for any accrued and unpaid interest. We may not redeem the 2029 Convertible Notes prior to the maturity date.

As of December 31, 2024, the total commitments under our lines of credit with financial institutions in Chile and Spain were $30.8 million, of which $13.5 million was drawn as of December 31, 2024. At December 31, 2024, the weighted average interest rate on these lines of credit was approximately 5.52%. These lines of credit are short-term and are used primarily as a source of working capital. The highest aggregate principal balance at any time outstanding during the year ended December 31, 2024, was $23.6 million. We intend to continue to draw on these lines of credit as needed. There is no assurance that these lines of credit or other funding sources will be available to us on acceptable terms, or at all, in the future.

Separately, on September 16, 2024, BioReference fully repaid its obligations and terminated the BioReference Credit Agreement. BioReference paid approximately $9.7 million to settle its obligations, incurring no prepayment premium or penalty.

In connection with our agreements with Merck, Pfizer, VFMCRP, and Nicoya, we are eligible to receive various milestone payments and royalty considerations. Under the terms of the Merck Agreement, we received an initial payment of $50.0 million and are also eligible to receive up to an additional $860.0 million upon the achievement of certain commercial and development milestones under several indications. We are also eligible to receive tiered royalty payments ranging from high single digits to low double digits upon achievement of certain sales targets of the Product (as defined in the Merck Agreement). On January 7, 2025, ModeX announced the dosing of the first participant in a Phase 1 study for an EBV vaccine candidate being developed in collaboration with Merck which triggered a $12.5 million milestone payment from Merck under the Merck Agreement. Under the terms of the Restated Pfizer Agreement, we have received or are eligible to receive up to an additional $275.0 million upon the achievement of certain regulatory milestones, including $90 million triggered by the FDA approval in the United States and $85 million due to the commencement of sales of NGENLA (Somatrogon) in Europe and Japan, which we received in 2022. In addition, we are eligible to receive regional, tiered gross profit sharing for both Somatrogon (hGH-CTP) and Pfizer's Genotropin®. Under the terms of the VFMCRP Agreement, we are entitled to receive up to an additional $15 million in regulatory milestones and $200 million in milestone payments tied to the launch, pricing and sales of *Rayaldee*, including a $7 million regulatory milestone payment we recorded in the first quarter of 2023 triggered by the German price approval for *Rayaldee* and $3 million regulatory milestone payment we recognized in 2022 following the first sale of *Rayaldee* in Europe. In addition, we are eligible to receive tiered, double-digit royalty payments. Under the terms of the Nicoya Agreement, we received an initial upfront payment of $5 million and are eligible to receive an aggregate of $5 million tied to the first anniversary of the effective date of the Nicoya Agreement, of which we have received $2.5 million. Furthermore, we received the additional $2.5 million upon Nicoya's submission of the investigational new drug application to the Center for Drug Evaluation of China in March 2023. We are also eligible to receive up to an additional aggregate amount of $115 million upon the achievement of certain development, regulatory and sales-based milestones by Nicoya for the Nicoya Product in the Nicoya Territory. We are also eligible to receive tiered, double digit royalty payments at rates in the low double digits on net product sales within the Nicoya Territory and in the Nicoya Field.

We believe that cash, cash equivalents and restricted cash on hand at December 31, 2024 are sufficient to meet our anticipated cash requirements for operations and debt service beyond the next 12 months. We based this estimate on assumptions that may prove to be wrong or are subject to change, and we may be required to use our available cash resources sooner than we currently expect. If we acquire additional assets or companies, accelerate our product development programs or initiate additional clinical trials, we will need additional funds. Our future cash requirements, and the timing of those requirements, will depend on a number of factors, including the approval and success of our products and products in development, particularly our long acting Somatrogon (hGH-CTP) for which we have received approval in over 50 markets, including the United States, Europe, Japan, Australia and Canada, the commercial success of *Rayaldee*, BioReference's financial performance, possible acquisitions and dispositions, the continued progress of research and development of our product candidates, the timing and outcome of clinical trials and regulatory approvals, the costs involved in preparing, filing, prosecuting, maintaining, defending, and enforcing patent claims and other intellectual property rights, the status of competitive products, the availability of financing, our success in developing markets for our product candidates and results of government investigations, payor claims, existing legal proceedings and those that may arise in the future. We have historically not generated sustained positive cash flow, and if we are not able to secure additional funding when needed, we may have to delay, reduce the scope of, or eliminate one or more of our clinical trials or research and development programs or possible acquisitions or reduce our marketing or sales efforts or cease operations.

The following table provides information as of December 31, 2024, with respect to the amounts and timing of our known contractual obligation payments due by period.

Contractual obligations (In thousands)	2025	2026	2027	2028	2029	Thereafter	Total
Open purchase orders	$ 33,812	$ 4,959	$ 415	$ —	$ —	$ —	$ 39,186
Operating leases	12,649	10,854	9,549	8,808	6,720	12,918	61,498
Finance leases	1,679	1,277	775	189	187	1,636	5,743
2029, 2025, and 2033 Convertible Notes	170	—	—	—	173,556	50	173,776
2044 Notes	—	—	—	—	—	245,576	245,576
Mortgages and other debts payable	1,384	1,001	763	778	461	—	4,387
Lines of credit	14,849	—	—	—	—	—	14,849
Interest commitments	10,737	10,717	10,701	10,715	441	—	43,311
Total	$ 75,280	$ 28,808	$ 22,203	$ 20,490	$ 181,365	$ 260,180	$ 588,326

The preceding table does not include information where the amounts of the obligations are not currently determinable, including the following:

- Contractual obligations in connection with clinical trials, which span over two years, and that depend on patient enrollment. The total amount of expenditures is dependent on the actual number of patients enrolled and as such, the contracts do not specify the maximum amount we may owe.

- Product license agreements effective during the lesser of 15 years or patent expiration whereby payments and amounts are determined by applying a royalty rate on uncapped future sales.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Use of estimates. The preparation of financial statements in conformity with accounting principles generally accepted in the U.S. requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ significantly from these estimates.

Goodwill and intangible assets. Goodwill, IPR&D and other intangible assets acquired in business combinations, licensing and other transactions was $1.3 billion and $1.5 billion at December 31, 2024 and 2023, respectively.

Assets acquired and liabilities assumed in business combinations, licensing and other transactions are generally recognized at the date of acquisition at their respective fair values. Any excess of the purchase price over the estimated fair values of the net assets acquired is recognized as goodwill. At acquisition, we generally determine the fair value of intangible assets, including IPR&D, using the “income method.” This method starts with a forecast of net cash flows, risk adjusted for estimated probabilities of technical and regulatory success (for IPR&D) and adjusted to present value using an appropriate discount rate that reflects the risk associated with the cash flow streams.

Subsequent to acquisition, goodwill and indefinite lived intangible assets are tested at least annually as of October 1 for impairment, or when events or changes in circumstances indicate it is more likely than not that the carrying amount of such assets may not be recoverable. Our annual assessment may consist of a qualitative or quantitative analysis to determine whether it is more likely than not that its fair value exceeds the carrying value. When performing qualitative analysis, the factors we consider include our share price, our financial performance compared to budgets, long-term financial plans, the timing and cost of development plans, macroeconomic, industry and market conditions as well as the excess of fair value over the carrying value of net assets from the annual impairment test previously performed.

When performing quantitative analysis, we use a combination of income and market valuation methods and may weigh the outcomes of valuation approaches when estimating fair value. Inputs and assumptions used to determine fair value are determined from a market participant view, which might be different than our specific views. The valuation process is complex and requires significant input and judgment using internal and external sources. Market approaches depend on the availability of guideline companies and representative transactions. When using the income approach, complex and judgmental matters applicable to the valuation process may include the following:

- Estimated useful life – The asset life expected to contribute meaningful cash flows is determined after considering expected regulatory approval dates (if unapproved), exclusivity periods and other legal, regulatory or contractual provisions.

- Projections – Future revenues are estimated after considering many factors such as historical results, market opportunity, pricing, sales trajectories to peak sales levels, competitive environment and product evolution. Future costs and expenses are estimated after considering historical factors such as the timing and level of development costs to obtain regulatory approvals, maintain or further enhance the product. For IPR&D projects, we generally assume initial positive cash flows to commence shortly after the receipt of expected regulatory approvals which typically may not occur for a number of years. Actual cash flows attributed to the project are likely to be different than those assumed since projections are subjected to multiple factors including trial results and regulatory matters which could materially change the ultimate commercial success of the asset as well as significantly alter the costs to develop the respective asset into commercially viable products.

- Tax rates – The expected future income is tax effected using a market participant tax rate. In determining the tax rate, we consider the jurisdiction in which the intellectual property is held and the location of the research and manufacturing infrastructure.

- Discount rate – Discount rates are selected after considering the risks inherent in the future cash flows; the assessment of the asset's life cycle and the competitive trends impacting the asset, including consideration of any Company specific technical, legal, regulatory, or economic barriers to entry.

Goodwill was $529.3 million and $598.3 million at December 31, 2024 and 2023, respectively. Estimating the fair value of a reporting unit for goodwill impairment is highly sensitive to changes in projections and assumptions and changes in assumptions could potentially lead to impairment. We perform sensitivity analyses around our assumptions in order to assess the reasonableness of the assumptions and the results of our testing. Ultimately, potential changes in these assumptions may impact the estimated fair value of a reporting unit and result in an impairment if the fair value of such reporting unit is less than its carrying value.

Net intangible assets other than goodwill were $811.6 million and $935.3 million at December 31, 2024 and 2023, respectively, including IPR&D of $195.0 million at December 31, 2024 and 2023. Intangible assets are highly vulnerable to impairment charges, particularly newly acquired assets for recently launched products and IPR&D. Considering the high risk nature of research and development and the industry's success rate of bringing developmental compounds to market, IPR&D impairment charges may occur in future periods. Estimating the fair value of IPR&D for potential impairment is highly sensitive to changes in projections and assumptions and changes in assumptions could potentially lead to impairment.

Upon obtaining regulatory approval, IPR&D assets are then accounted for as a finite-lived intangible asset and amortized on a straight-line basis over its estimated useful life. If the project is abandoned, the IPR&D asset is charged to expense. Finite lived intangible assets are tested for impairment when events or changes in circumstances indicate it is more likely than not that the carrying amount of such assets may not be recoverable. The testing includes a comparison of the carrying amount of the asset to its estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated undiscounted future cash flows, then an impairment charge is recognized for the amount by which the carrying amount of the asset exceeds the fair value of the asset. We believe that our estimates and assumptions in testing goodwill and other intangible assets, including IPR&D, for impairment are reasonable and otherwise consistent with assumptions that marketplace participants would use in their estimates of fair value. Based on the current financial performance of our diagnostic segment and our Ireland reporting unit, which includes Eirgen and *Rayaldee*, if future results are not consistent with our estimates and assumptions, then we may be exposed to impairment charges, which could be material. At December 31, 2024, the goodwill of our diagnostics segment totaled $219.7 million and the goodwill of our Ireland reporting unit totaled $79.4 million. No impairment charges were recognized for the years ended December 31, 2024, 2023, or 2022.

During the year ended December 31. 2022, we reclassified $590.2 million of IPR&D related to Somatrogon (hGH-CTP) from IPR&D in our Consolidated Balance Sheet upon the approval of NGENLA (Somatrogon) in Europe and Japan. The assets are being amortized on a straight-line basis over their estimated useful life of approximately 12 years.

We amortize intangible assets with definite lives on a straight-line basis over their estimated useful lives, ranging from 3 to 20 years. We use the straight-line method of amortization as there is no reliably determinable pattern in which the economic benefits of our intangible assets are consumed or otherwise used up. Amortization expense was $82.6 million, $86.0 million and $87.8 million for the years ended December 31, 2024, 2023 and 2022, respectively.

Revenue recognition. We generate revenues from services, products and intellectual property as follows:

Revenue from services. Revenue for laboratory services is recognized at the time test results are reported, which approximates when services are provided and the performance obligations are satisfied. Services are provided to patients covered by various third-party payor programs including various managed care organizations, as well as the Medicare and Medicaid programs. Billings for services are included in revenue net of allowances for contractual discounts, allowances for differences between the amounts billed and estimated program payment amounts, and implicit price concessions provided to uninsured patients which are all elements of variable consideration.

The following are descriptions of our payors for laboratory services:

Healthcare Insurers. Reimbursements from healthcare insurers are based on negotiated fee-for-service schedules. Revenues consist of amounts billed, net of contractual allowances for differences between amounts billed and the estimated consideration we expect to receive from such payors, which considers historical denial and collection experience and the terms of our contractual arrangements. Adjustments to the allowances, based on actual receipts from the third-party payors, are recorded upon settlement.

Government Payors. Reimbursements from government payors are based on fee-for-service schedules set by governmental authorities, including traditional Medicare and Medicaid. Revenues consist of amounts billed, net of contractual allowances for differences between amounts billed and the estimated consideration we expect to receive from such payors, which considers historical denial and collection experience and the terms of our contractual arrangements. Adjustments to the allowances, based on actual receipts from the government payors, are recorded upon settlement.

Client Payors. Client payors include physicians, hospitals, employers, and other institutions for which services are performed on a wholesale basis, and are billed and recognized as revenue based on negotiated fee schedules.

Patients. Uninsured patients are billed based on established patient fee schedules or fees negotiated with physicians on behalf of their patients. Insured patients (including amounts for coinsurance and deductible responsibilities) are billed based on fees negotiated with healthcare insurers. Collection of billings from patients is subject to credit risk and ability of the patients to pay. Revenues consist of amounts billed net of discounts provided to uninsured patients in accordance with our policies and implicit price concessions. Implicit price concessions represent differences between amounts billed and the estimated consideration that we expect to receive from patients, which considers historical collection experience and other factors including current market conditions. Adjustments to the estimated allowances, based on actual receipts from the patients, are recorded upon settlement.

The complexities and ambiguities of billing, reimbursement regulations and claims processing, as well as considerations unique to Medicare and Medicaid programs, require us to estimate the potential for retroactive adjustments as an element of variable consideration in the recognition of revenue in the period the related services are rendered. Actual amounts are adjusted in the period those adjustments become known. For the year ended December 31, 2024, and 2023, negative revenue adjustments due to changes in estimates of implicit price concessions for performance obligations satisfied in prior periods of $1.5 million and $19.2 million, respectively, were recognized. Revenue adjustments for the year ended December 31, 2024 were primarily due to the composition of patient pay mix and for the year ended December 31, 2023 were primarily due to lower reimbursements from Medicare payors.

Third-party payors, including government programs, may decide to deny payment or recoup payments for testing they contend were improperly billed or not medically necessary, against their coverage determinations, or for which they believe they have otherwise overpaid (including as a result of their own error), and we may be required to refund payments already received. Our revenues may be subject to retroactive adjustment as a result of these factors among others, including without limitation, differing interpretations of billing and coding guidance and changes by government agencies and payors in interpretations, requirements, and “conditions of participation” in various programs. We have processed requests for recoupment from third-party payors in the ordinary course of our business, and it is likely that we will continue to do so in the future. If a third-party payor denies payment for testing or recoups money from us in a later period, reimbursement for our testing could decline.

As an integral part of our billing compliance program, we periodically assess our billing and coding practices, respond to payor audits on a routine basis, and investigate reported failures or suspected failures to comply with federal and state healthcare reimbursement requirements, as well as overpayment claims which may arise from time to time without fault on the part of the Company. We may have an obligation to reimburse Medicare, Medicaid, and third-party payors for overpayments regardless of fault. We have periodically identified and reported overpayments, reimbursed payors for overpayments and taken appropriate corrective action.

Settlements with third-party payors for retroactive adjustments due to audits, reviews or investigations are also considered variable consideration and are included in the determination of the estimated transaction price for providing services. These settlements are estimated based on the terms of the payment agreement with the payor, correspondence from the payor and our historical settlement activity, including an assessment of the probability a significant reversal of cumulative revenue recognized will occur when the uncertainty is subsequently resolved. Estimated settlements are adjusted in future periods as adjustments become known (that is, new information becomes available), or as years are settled or are no longer subject to such audits, reviews, and investigations. As of December 31, 2024 and 2023, we have liabilities of approximately $2.0 million and $3.1 million within Accrued expenses and Other long-term liabilities related to reimbursements for payor overpayments.

Revenue from products. We recognize revenue from product sales when a customer obtains control of promised goods or services. The amount of revenue that is recorded reflects the consideration that we expect to receive in exchange for those goods or services. Our estimates for sales returns and allowances are based upon the historical patterns of product returns and allowances taken, matched against the sales from which they originated, and our evaluation of specific factors that may increase or decrease the risk of product returns. Product revenues are recorded net of estimated rebates, chargebacks, discounts, co-pay assistance and other deductions (collectively, "Sales Deductions") as well as estimated product returns which are all elements of variable consideration. Allowances are recorded as a reduction of revenue at the time product revenues are recognized. The actual amounts of consideration ultimately received may differ from our estimates. If actual results in the future vary from our estimates, we will adjust these estimates, which would affect Revenue from products in the period such variances become known.

Rayaldee is distributed in the U.S. principally through the retail pharmacy channel, which initiates with the largest wholesalers in the U.S. (collectively, "*Rayaldee* Customers"). In addition to distribution agreements with *Rayaldee* Customers, we have entered into arrangements with many healthcare providers and payors that provide for government-mandated and/or privately-negotiated rebates, chargebacks and discounts with respect to the purchase of *Rayaldee.*

We recognize revenue for shipments of *Rayaldee* at the time of delivery to customers after estimating Sales Deductions and product returns as elements of variable consideration utilizing historical information and market research projections. For the years ended December 31, 2024, 2023 and 2022, we recognized $29.0 million, $31.0 million and $27.2 million in net product revenue from sales of *Rayaldee*.

Taxes collected from customers related to revenues from services and revenues from products are excluded from revenues.

Revenue from intellectual property. We recognize revenues from the transfer of intellectual property generated through license, development, collaboration and/or commercialization agreements. The terms of these agreements typically include payment to us for one or more of the following: non-refundable, up-front license fees; development and commercialization milestone payments; funding of research and/or development activities; and royalties on sales of licensed products. Revenue is recognized upon satisfaction of a performance obligation by transferring control of a good or service to the customer.

For research, development and/or commercialization agreements that result in revenues, we identify all material performance obligations, which may include a license to intellectual property and know-how, and research and development activities. In order to determine the transaction price, in addition to any upfront payment, we estimate the amount of variable consideration at the outset of the contract either utilizing the expected value or most likely amount method, depending on the facts and circumstances relative to the contract. We constrain (reduce) our estimates of variable consideration such that it is probable that a significant reversal of previously recognized revenue will not occur throughout the life of the contract. When determining if variable consideration should be constrained, we consider whether there are factors outside of our control that could result in a significant reversal of revenue. In making these assessments, we consider the likelihood and magnitude of a potential reversal of revenue. These estimates are re-assessed each reporting period as required.

Upfront License Fees: If a license to our intellectual property is determined to be functional intellectual property distinct from the other performance obligations identified in the arrangement, we recognize revenue from nonrefundable, upfront license fees based on the relative value prescribed to the license compared to the total value of the arrangement. The revenue is recognized when the license is transferred to the customer and the customer is able to use and benefit from the license. For licenses that are not distinct from other obligations identified in the arrangement, we utilize judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time. If the combined performance obligation is satisfied over time, we apply an appropriate method of measuring progress for purposes of recognizing revenue from nonrefundable, upfront license fees. We evaluate the measure of progress each reporting period and, if necessary, adjust the measure of performance and related revenue recognition.

Development and Regulatory Milestone Payments: Depending on facts and circumstances, we may conclude that it is appropriate to include the milestone in the estimated transaction price or that it is appropriate to fully constrain the milestone. A milestone payment is included in the transaction price in the reporting period that we conclude that it is probable that recording revenue in the period will not result in a significant reversal in amounts recognized in future periods. We may record revenues from certain milestones in a reporting period before the milestone is achieved if we conclude that achievement of the milestone is probable and that recognition of revenue related to the milestone will not result in a significant reversal in amounts recognized in future periods. We record a corresponding contract asset when this conclusion is reached. Milestone payments that have been fully constrained are not included in the transaction price to date. These milestones remain fully constrained until we conclude that achievement of the milestone is probable and that recognition of revenue related to the milestone will not result in a significant reversal in amounts recognized in future periods. We re-evaluate the probability of achievement of such development milestones and any related constraint each reporting period. We adjust our estimate of the overall transaction price, including the amount of revenue recorded, if necessary.

Research and Development Activities: If we are entitled to reimbursement from our customers for specified research and development expenses, we account for them as separate performance obligations if distinct. We also determine whether the research and development funding would result in revenues or an offset to research and development expenses in accordance with provisions of gross or net revenue presentation. The corresponding revenues or offset to research and development expenses are recognized as the related performance obligations are satisfied.

BARDA Contract: Revenue from the BARDA contract is generated under terms that are cost plus fee. We recognize revenue using the incurred costs output method to measure progress. As the government has access to development research, it benefits incrementally as R&D activities occur. Revenue will only be recognized when research and development services are performed to the extent of actual costs incurred.

Sales-based Milestone and Royalty Payments: Our customers may be required to pay us sales-based milestone payments or royalties on future sales of commercial products. We recognize revenues related to sales-based milestone and royalty payments upon the later to occur of (i) achievement of the customer’s underlying sales or (ii) satisfaction of any performance obligation(s) related to these sales, in each case assuming the license to our intellectual property is deemed to be the predominant item to which the sales-based milestones and/or royalties relate.

Other Potential Products and Services: Arrangements may include an option for license rights, future supply of drug substance or drug product for either clinical development or commercial supply at the licensee’s election. We assess if these options provide a material right to the licensee and if so, they are accounted for as separate performance obligations at the inception of the contract and revenue is recognized only if the option is exercised and products or services are subsequently delivered or when the rights expire. If the promise is based on market terms and not considered a material right, the option is accounted for if and when exercised. If we are entitled to additional payments when the licensee exercises these options, any additional payments are generally recorded in license or other revenues when the licensee obtains control of the goods, which is upon delivery.

Revenue from the transfer of intellectual property and other, which includes milestone payments, royalties, and other collaboration revenues, totaled $77.4 million, $180.7 million, and $105.7 million for the years ended December 31, 2024, 2023, and 2022, respectively.

For the year ended December 31, 2024, such revenue included $30.0 million from Pfizer, inclusive of $28.3 million from gross profit share and royalty payments for both NGENLA (Somatrogon) and Pfizer's Genotropin® (Somatropin), $23.8 million from the BARDA Contract, a $12.5 million milestone payment from Merck under the Merck Agreement, and $10.2 million from contract manufacturers' commercial milestones.

For the year ended December 31, 2023, revenue from the transfer of intellectual property included $116.7 million from Pfizer, which included a $90.0 million milestone payment triggered by the FDA approval of NGENLA (Somatrogon), $22.6 million from gross profit share and royalty payments for both NGENLA (Somatrogon) and Pfizer's Genotropin® (Somatropin), $50.0 million from Merck in consideration for the rights granted under the Merck Agreement, $7.0 million from VFMCRP triggered by the German price approval for *Rayaldee*, $2.5 million from Nicoya due to Nicoya's submission of the investigational new drug application to China's Center for Drug Evaluation, $1.2 million from the BARDA Contract, and $2.4 million from contract manufacturers' commercial milestones.

For the year ended December 31, 2022, revenue from the transfer of intellectual property included $98.7 million from Pfizer, inclusive of an $85.0 million regulatory milestone payment based on the commencement of sales of NGENLA (Somatrogon) in Europe and Japan and $4.4 million from gross profit share and royalty payments for both NGENLA (Somatrogon) and Pfizer's Genotropin® (Somatropin), $3.0 million related to a sales milestone pursuant to the VFMCRP Agreement and $2.5 million from Nicoya tied to the first anniversary of the effective date of that agreement.

Concentration of credit risk and allowance for doubtful accounts. Financial instruments that potentially subject us to concentrations of credit risk consist primarily of accounts receivable. Substantially all of our accounts receivable are with either companies in the health care industry or patients. However, credit risk is limited due to the number of our clients as well as their dispersion across many different geographic regions.

While we have receivables due from federal and state governmental agencies, such receivables are not a credit risk because federal and state governments fund the related healthcare programs. Payment is primarily dependent upon submitting appropriate documentation. At December 31, 2024 and 2023, receivable balances (net of explicit and implicit price concessions) from Medicare and Medicaid were 4.8% and 6.7%, respectively, of our consolidated Accounts receivable, net.

The portion of our accounts receivable due from individual patients comprises the largest portion of credit risk. At December 31, 2024 and 2023, receivables due from patients represented approximately 1.7% and 2.0%, respectively, of our consolidated accounts receivable, net.

We assess the collectability of accounts receivable balances by considering factors such as historical collection experience, customer credit worthiness, the age of accounts receivable balances, regulatory changes and current economic conditions and trends that may affect a customer's ability to pay. Actual results could differ from those estimates. The allowance for credit losses was $1.3 million and $2.0 million at December 31, 2024 and 2023, respectively. The credit loss expense for the years ended December 31, 2024, 2023 and 2022 was $0.1 million, $0.3 million and $0.3 million, respectively.

Accounts receivable as of December 31, 2024 included $3.6 million of government contract revenue earned under the BARDA contract.

Income taxes. Income taxes are accounted for under the asset-and-liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and the respective tax bases and for operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in operations in the period that includes the enactment date. We periodically evaluate the realizability of our net deferred tax assets. Our tax accruals are analyzed periodically and adjustments are made as events occur to warrant such adjustment. Valuation allowances on certain U.S. deferred tax assets and non-U.S. deferred tax assets are established, because realization of these tax benefits through future taxable income does not meet the more-likely-than-not threshold.

Equity-based compensation. We measure the cost of services received in exchange for an award of equity instruments based on the grant-date fair value of the award. That cost is recognized in the Consolidated Statements of Operations over the period during which an employee is required to provide service in exchange for the award. We record excess tax benefits, realized from the exercise of stock options, as cash flows from operations. We estimate the grant-date fair value of our stock option grants using a valuation model known as the Black-Scholes-Merton formula or the "Black-Scholes Model." The Black-Scholes Model requires the use of several variables to estimate the grant-date fair value of stock options including expected term, expected volatility, expected dividends and risk-free interest rate. We perform analyses to calculate and select the appropriate variable assumptions used in the Black-Scholes Model. The selection of assumptions is subject to significant judgment and future changes to our assumptions and estimates which may have a material impact on our Consolidated Financial Statements.

Inventories. Inventories are valued at the lower of cost and net realizable value. Cost is determined by the first-in, first-out method. We consider such factors as the amount of inventory on hand, estimated time required to sell such inventories, remaining shelf-life, and current market conditions to determine whether inventories are stated at the lower of cost and net realizable value. Inventories at our diagnostics segment consist primarily of purchased laboratory supplies, which are used in our testing laboratories. Inventory obsolescence expense for the years ended December 31, 2024, 2023 and 2022 was $2.1 million, $8.1 million and $4.1 million, respectively.

RECENT ACCOUNTING PRONOUNCEMENTS

Accounting standards yet to be adopted

In December 2023, the FASB issued ASU No. 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures" ("ASU 2023-09"), which modifies the rules on income tax disclosures to require entities to disclose (i) specific categories in the rate reconciliation, (ii) the income or loss from continuing operations before income tax expense or benefit (separated between domestic and foreign) and (iii) income tax expense or benefit from continuing operations (separated by federal, state and foreign). ASU 2023-09 also requires entities to disclose their income tax payments to international, federal, state, and local jurisdictions, among other changes. The guidance is effective for annual periods beginning after December 15, 2024. Early adoption is permitted for annual financial statements that have not yet been issued or made available for issuance. ASU 2023-09 should be applied on a prospective basis, but retrospective application is permitted. We are currently evaluating the potential impact of adopting this new guidance on our consolidated financial statements and related disclosures.

Recently adopted accounting standards

In November 2023, the FASB issued ASU No 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures ("ASU 2023-07"). ASU 2023-07 enhances disclosures for significant segment expenses for all public entities required to report segment information in accordance with ASC 280. ASC 280 requires a public entity to report for each reportable segment a measure of segment profit or loss that its CODM uses to assess segment performance and to make decisions about resource allocations. ASU 2023-07 is effective for the Company beginning with the fiscal year ended December 31, 2024. The guidance is being applied prospectively.

In 2021, the Organization for Economic Co-operation and Development ("OECD") established an inclusive framework on base erosion and profit shifting and agreed on a two-pillar solution ("Pillar Two") to global taxation, focusing on global profit allocation and a 15% global minimum effective tax rate. On December 15, 2022, the EU member states agreed to implement the OECD's global minimum tax rate of 15%. The OECD issued Pillar Two model rules and continues to release guidance on these rules. The inclusive framework calls for tax law changes by participating countries to take effect in 2025. Various countries have enacted or have announced plans to enact new tax laws to implement the global minimum tax. We considered the applicable tax law changes on Pillar Two implementation in the relevant countries, and there is no material impact to our tax results for the period. We anticipate further legislative activity and administrative guidance in 2025, and will continue to evaluate the impacts of enacted legislation and pending legislation to enact Pillar Two Model Rules in the non-US tax jurisdictions we operate in.

In August 2020, the FASB issued ASU No. 2020-06, "Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40)." This standard simplified the accounting for convertible instruments. We adopted ASU 2020-06 on January 1, 2022, using the modified retrospective approach. This resulted in an increase of $21.6 million to the 2025 Convertible Notes, a reduction of $17.5 million to the Accumulated deficit, and a reduction of $39.1 million to Additional paid-in capital.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

In the normal course of doing business, we are exposed to the risks associated with foreign currency exchange rates and changes in interest rates.

Foreign Currency Exchange Rate Risk – We operate globally, and, we are subject to foreign exchange risk in our commercial operations as portions of our revenues are exposed to changes in foreign currency exchange rates, primarily those for the Chilean Peso, the Mexican Peso, and the Euro.

From time to time, we manage our exposure to fluctuations in foreign currency exchange rates by entering into offsetting positions through the use of foreign exchange forward contracts. Certain firmly committed transactions may be hedged with foreign exchange forward contracts. As exchange rates change, gains and losses on the exposed transactions are partially offset by gains and losses related to the hedging contracts. Both the exposed transactions and the hedging contracts are translated and fair valued, respectively, at current spot rates, with gains and losses included in earnings. We do not enter into foreign exchange or other derivative contracts for trading or speculative purposes.

Our derivative activities, which consist of foreign exchange forward contracts, are intended to economically hedge forecasted cash flows that are exposed to foreign currency risk. The foreign exchange forward contracts generally require us to exchange local currencies for foreign currencies based on pre-established exchange rates at the contracts' respective maturity dates. As exchange rates change, gains and losses on these contracts are generated based on the changes in the exchange rates that are recognized in the Consolidated Statements of Operations and offset the impact of the change in exchange rates on the foreign currency cash flows that are hedged. If the counterparties to the exchange contracts do not fulfill their obligations to deliver the contracted currencies, our results could be negatively impacted due to effectively unhedged currency related fluctuations. Our foreign exchange forward contracts primarily hedge exchange rates on the Chilean Peso to the U.S. dollar. If Chilean Pesos were to strengthen or weaken in relation to the U.S. dollar, our loss or gain on hedged foreign currency cash-flows would be offset by the derivative contracts, with a net effect of zero.

For the years ended December 31, 2024, 2023, and 2022, approximately 23.1%, 29.6%, and 21.6% of revenue was denominated in currencies other than the U.S. Dollar (USD). Our financial statements are reported in USD and, accordingly, fluctuations in exchange rates will affect the translation of revenues and expenses denominated in foreign currencies into USD for purposes of reporting our consolidated financial results. During the years ended December 31, 2024 and 2023, the most significant currency exchange rate exposures were to the Chilean Peso and Euro. Gross accumulated currency translation adjustments recorded as a separate component of shareholders' equity were $52.7 million and $34.6 million at December 31, 2024 and 2023, respectively. For information on such open foreign exchange forward contracts for the years ended December 31, 2024 and 2023 see "Management's Discussion and Analysis—Results of Operations— Foreign Currency Exchange Rates."

We do not engage in trading market risk sensitive instruments or purchasing hedging instruments or "other than trading" instruments that are likely to expose us to significant market risk, whether interest rate, foreign currency exchange, commodity price, or equity price risk.

Interest Rate Risk – Our exposure to interest rate risk relates to our cash and investments and to our borrowings. We generally maintain an investment portfolio of money market funds and marketable securities. The securities in our investment portfolio are not leveraged, and are, due to their very short-term nature, subject to minimal interest rate risk. We currently do not hedge interest rate exposure. Because of the short-term maturities of our investments, we do not believe that a change in market interest rates would have a significant negative impact on the value of our investment portfolio except for reduced interest income.

At December 31, 2024, we had cash, cash equivalents and restricted cash of $445.6 million. The weighted average interest rate related to our cash, cash equivalents and restricted cash for the year ended December 31, 2024 was approximately 3.4%. As of December 31, 2024, the principal outstanding balances under our Chilean and Spanish lines of credit was $13.5 million in the aggregate at a weighted average interest rate of approximately 5.52%. As of December 31, 2024, the principal outstanding balance under our 2044 Notes, which accrue interest at the 3-month SOFR, was $250.0 million at a weighted average interest rate of approximately 12.98%. Based on our outstanding balances at December 31, 2024, if our applicable interest rates on our variable rate debt increase by 1%, then our debt service on an annual basis would increase by approximately $2.5 million. Our other outstanding convertible senior notes have fixed rates of interest; therefore, we are not exposed to interest rate risk on those instruments. See Note 7 to the audited consolidated financial statements contained in this Annual Report on Form 10-K. The primary objective of our investment activities is to preserve the principal while at the same time maximizing yield without significantly increasing risk. To achieve this objective, we may invest our excess cash in debt instruments of the U.S. Government and its agencies, bank obligations, repurchase agreements and high-quality corporate issuers, and money market funds that invest in such debt instruments, and, by policy, restrict our exposure to any single corporate issuer by imposing concentration limits. To minimize the exposure due to adverse shifts in interest rates, we maintain investments at an average maturity of generally less than three months.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of OPKO Health, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of OPKO Health, Inc. and subsidiaries (the Company) as of December 31, 2024 and 2023, the related consolidated statements of operations, comprehensive income (loss)**,** equity and cash flows for each of the three years in the period ended December 31, 2024, 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, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024, 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, 2024, 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 3, 2025 expressed an unqualified opinion thereon.

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 Matter

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

Variable Consideration in Determining Revenue from Services

Description of the Matter	For the year ended December 31, 2024, the Company recorded revenue from services of $480.7 million. As discussed in Note 15 to the consolidated financial statements, revenue from services includes amounts due under third-party and government payer programs, net of estimates for explicit and implicit price concessions and other elements of variable consideration. The Company estimates variable consideration by evaluating, among other factors, recent collections experience as well as changes in reimbursement regulations, claims processing and coverage determinations.

	Auditing revenue from services is complex and highly judgmental due to the estimation required to measure the variable consideration. In particular, management applies judgment in evaluating whether changes in reimbursement regulations, claims processing and coverage determinations affect the estimate of the revenue management expects to be entitled to collect. This resulted in significant auditor judgment in the performance of our procedures.
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 variable consideration estimation process, including management's review of collections experience and the evaluation of factors that would affect the amount of variable consideration described above. To test the variable consideration estimate, we performed audit procedures that included, among others, assessing the methodology used and testing the underlying data used by the Company in its analysis. We assessed the historical accuracy of management's estimate and reviewed management's sensitivity analyses to evaluate the changes in variable consideration that would result from changes in the expected collection rates used and the corresponding effect on revenue from services.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2007.

Miami, Florida
March 3, 2025

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of OPKO Health, Inc.

Opinion on Internal Control over Financial Reporting

We have audited OPKO Health, Inc. and subsidiaries' internal control over financial reporting as of December 31, 2024, 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, OPKO Health, Inc. and subsidiaries (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2024 consolidated financial statements of the Company and our report dated March 3, 2025 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

Miami, Florida
March 3, 2025

OPKO Health, Inc. and Subsidiaries
CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share data)

	December 31,	
	2024	2023
ASSETS		
Current assets:		
Cash, cash equivalents and current restricted cash	$ 431,936	$ 95,881
Accounts receivable, net	118,017	123,379
Inventory, net	56,797	65,697
Other current assets and prepaid expenses	55,339	24,519
Total current assets	662,089	309,476
Property, plant and equipment, net	70,134	75,429
Intangible assets, net	616,613	740,283
In-process research and development	195,000	195,000
Goodwill	529,252	598,260
Investments	54,584	16,082
Operating lease right-of-use assets	54,003	68,088
Other assets	18,537	9,080
Total assets	$ 2,200,212	$ 2,011,698
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$ 47,071	$ 69,677
Accrued expenses	118,357	90,086
Current maturities of operating leases	12,649	12,996
Current portion of convertible notes	170	—
Current portion of lines of credit and notes payable	14,849	27,293
Total current liabilities	193,096	200,052
Operating lease liabilities	48,849	54,140
Long term portion of convertible notes	173,606	214,325
Senior secured notes	245,576	—
Deferred tax liabilities	140,799	126,773
Other long-term liabilities, principally contingent consideration and lines of credit	32,838	27,189
Total long-term liabilities	641,668	422,427
Total liabilities	834,764	622,479
Equity:		
Common Stock - $0.01 par value, 1,250,000,000 shares authorized; 701,350,447 and 781,936,885 shares issued at December 31, 2024 and 2023, respectively	7,015	7,820
Treasury Stock, - 29,799,907 shares at December 31, 2024 and 2023, respectively	(1,791)	(1,791)
Additional paid-in capital	3,481,364	3,433,006
Accumulated other comprehensive loss	(56,130)	(38,030)
Accumulated deficit	(2,065,010)	(2,011,786)
Total shareholders' equity	1,365,448	1,389,219
Total liabilities and equity	$ 2,200,212	$ 2,011,698

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

OPKO Health, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except share and per share data)

	For the years ended December 31,		
	2024	2023	2022
Revenues:			
Revenue from services	$ 480,667	$ 515,275	$ 755,630
Revenue from products	155,111	167,557	142,845
Revenue from transfer of intellectual property and other	77,364	180,663	105,721
Total revenues	713,142	863,495	1,004,196
Costs and expenses:			
Cost of service revenue	402,109	445,830	627,548
Cost of product revenue	92,523	99,538	88,429
Selling, general and administrative	304,220	300,559	372,672
Research and development	105,214	89,593	73,887
Contingent consideration	—	(1,036)	(1,312)
Amortization of intangible assets	82,634	86,032	87,784
Gain on sale of assets	(121,493)	—	(18,559)
Total costs and expenses	865,207	1,020,516	1,230,449
Operating loss	(152,065)	(157,021)	(226,253)
Other income and (expense), net:			
Interest income	8,426	3,983	1,981
Interest expense	(47,465)	(13,506)	(12,056)
Fair value changes of derivative instruments, net	(26,161)	(781)	649
Other income (expense), net	206,903	(16,994)	(155,842)
Other income (expense), net	141,703	(27,298)	(165,268)
Loss before income taxes and investment losses	(10,362)	(184,319)	(391,521)
Income tax (provision) benefit	(42,844)	(4,437)	63,499
Net loss before investment losses	(53,206)	(188,756)	(328,022)
Loss from investments in investees	(18)	(107)	(383)
Net loss	$ (53,224)	$ (188,863)	$ (328,405)
Loss per share basic and diluted:			
Loss per share	$ (0.08)	$ (0.25)	$ (0.46)
Weighted average number of common shares outstanding, basic and diluted	694,019,535	751,765,915	719,060,942

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

OPKO Health, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)

	For the years ended December 31,		
	2024	2023	2022
Net loss	$ (53,224)	$ (188,863)	$ (328,405)
Other comprehensive income (loss), net of tax:			
Change in foreign currency translation and other comprehensive income (loss)	(18,100)	5,293	(12,828)
Comprehensive loss	$ (71,324)	$ (183,570)	$ (341,233)

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

OPKO Health, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF EQUITY
(In thousands, except share and per share data)
For the years ended December 31, 2024, 2023, 2022

	Common Stock		Treasury		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total
	Shares	Dollars	Shares	Dollars				
Balance at December 31, 2021	690,082,283	$ 6,901	(8,655,082)	(1,791)	$ 3,222,487	$ (30,495)	$ (1,511,976)	$ 1,685,126
Equity-based compensation expense	—	—	—	—	18,509	—	—	18,509
Exercise of common stock options	629,837	6	—	—	(780)	—	—	(774)
Adoption of ASU 2020-06	—	—	—	—	(39,100)	—	17,458	(21,642)
ModeX Acquisition	90,594,044	906	—	—	220,756	—	—	221,662
Net loss	—	—	—	—	—	—	(328,405)	(328,405)
Other comprehensive loss	—	—	—	—	—	(12,828)	—	(12,828)
Balance at December 31, 2022	781,306,164	$ 7,813	(8,655,082)	(1,791)	$ 3,421,872	$ (43,323)	$ (1,822,923)	$ 1,561,648

	Common Stock		Treasury		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total
	Shares	Dollars	Shares	Dollars				
Balance at December 31, 2022	781,306,164	$ 7,813	(8,655,082)	$ (1,791)	$ 3,421,872	$ (43,323)	$ (1,822,923)	$ 1,561,648
Equity-based compensation expense	—	—	—	—	11,413	—	—	11,413
Exercise of common stock options	630,721	7	—	—	(279)	—	—	(272)
Net loss	—	—	—	—	—	—	(188,863)	(188,863)
Other comprehensive income	—	—	—	—	—	5,293	—	5,293
Balance at December 31, 2023	781,936,885	$ 7,820	(8,655,082)	$ (1,791)	$ 3,433,006	$ (38,030)	$ (2,011,786)	$ 1,389,219

	Common Stock		Treasury		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total
	Shares	Dollars	Shares	Dollars				
Balance at December 31, 2023	781,936,885	$ 7,820	(8,655,082)	(1,791)	$ 3,433,006	$ (38,030)	$ (2,011,786)	$ 1,389,219
Equity-based compensation expense	—	—	—	—	11,048	—	—	11,048
Exercise of common stock options/vesting of restricted stock units	384,378	4	—	—	(212)	—	—	(208)
2025 Notes	—	—	(21,144,825)	—	—	—	—	—
2029 Convertible Notes	—	—	—	—	152,041	—	—	152,041
Repurchase of 2029 Convertible Notes	—	—	—	—	(25,105)	—	—	(25,105)
Shares repurchase	(80,970,816)	(809)	—	—	(89,414)	—	—	(90,223)
Net loss	—	—	—	—	—	—	(53,224)	(53,224)
Other comprehensive loss	—	—	—	—	—	(18,100)	—	(18,100)
Balance at December 31, 2024	701,350,447	$ 7,015	(29,799,907)	(1,791)	$ 3,481,364	$ (56,130)	$ (2,065,010)	$ 1,365,448

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

OPKO Health, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	For the years ended December 31,		
	2024	2023	2022
Cash flows from operating activities:			
Net loss	$ (53,224)	$ (188,863)	$ (328,405)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization	98,176	105,297	108,655
Non-cash interest	17,547	2,750	2,750
Amortization of deferred financing costs	1,974	1,222	1,161
Losses from investments in investees	18	107	383
Equity-based compensation – employees and non-employees	11,048	11,413	18,509
Realized loss (gain) on disposal of fixed assets and sales of equity securities	(63,397)	1,321	(455)
Change in fair value of equity securities and derivative instruments	(114,429)	17,647	153,835
Loss on conversion convertible senior notes	(6,628)	—	—
Change in fair value of contingent consideration	—	(1,036)	(1,312)
Deferred income tax provision	14,744	146	(74,405)
Gain on sale of assets	(121,493)	—	(18,559)
Changes in assets and liabilities, net of the effects of acquisitions:			
Accounts receivable, net	(220)	3,411	128,602
Inventory, net	4,217	15,197	13,662
Other current assets and prepaid expenses	(3,979)	7,164	(3,416)
Other assets	237	(288)	1,935
Accounts payable	(20,662)	2,828	(9,388)
Foreign currency measurement	3,899	(1,036)	2,369
Accrued expenses and other liabilities	48,683	(5,477)	(91,110)
Net cash used in operating activities	(183,489)	(28,197)	(95,189)
Cash flows from investing activities:			
Investments in investees	—	(5,000)	—
Proceeds from sale of investments	166,604	364	115,423
Acquisition of businesses, net of cash acquired	—	—	(1,758)
Proceeds from the sale of property, plant and equipment	242	2,713	1,951
Capital expenditures	(25,010)	(16,275)	(24,578)
Proceeds from LabCorp Sale	210,378	—	—
Net cash provided by (used in) investing activities	352,214	(18,198)	91,038
Cash flows from financing activities:			
Issuance of 3.00% convertible senior notes, net (including related parties)	230,000	—	—
Issuance of 2044 Notes	250,000	—	—
Debt issuance costs	(13,385)	—	—
Share repurchase	(90,223)	—	—
Net activity from the exercise of common stock options and warrants	(208)	(272)	(774)
Repurchase of 2029 Convertible Notes	(30,102)	—	—
Borrowings on lines of credit	459,432	671,678	1,059,519
Repayments of lines of credit	(475,061)	(679,709)	(1,035,774)
Redemption of 2025 Notes and 2033 Senior Notes	(146,287)	(3,000)	—
Net cash provided by (used in) financing activities	184,166	(11,303)	22,971
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(3,157)	388	(339)
Net decrease in cash, cash equivalents and restricted cash	349,734	(57,310)	18,481
Cash, cash equivalents and restricted cash at beginning of period	95,881	153,191	134,710
Cash, cash equivalents and restricted cash at end of period	$ 445,615	$ 95,881	$ 153,191
SUPPLEMENTAL INFORMATION:			
Interest paid	$ 20,883	$ 8,135	$ 7,420
Income taxes paid, net of refunds	$ 10,008	$ 3,712	$ 8,037
Operating lease right-of-use assets obtained in exchange for lease obligations	$ —	$ 29,363	$ —
Assets acquired by finance leases	$ —	$ 203	$ 4,717
Non-cash financing:			
Shares issued upon the conversion of:			
Common Stock options and warrants, surrendered in net exercise	$ 529	$ 301	$ 1,268
Issuance of common stock for acquisition of ModeX	$ —	$ —	$ 221,662
Fair value of shares included in consideration from GeneDx Holdings	$ —	$ 6,689	$ 172,000

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

OPKO Health, Inc. and Subsidiaries
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 Business and Organization

We are a diversified healthcare company that seeks to establish industry leading positions in large and rapidly growing medical markets. Our pharmaceutical business features Somatrogon (hGH-CTP), a once-weekly human growth hormone injection. We have partnered with Pfizer Inc. ("Pfizer") for the development and commercialization of Somatrogon (hGH-CTP). Regulatory approvals for Somatrogon (hGH-CTP) for the treatment of growth hormone deficiency in children and adolescents have been secured in more than 50 markets, including the United States, European Union ("EU") Member States, Japan, Canada, and Australia, where it is marketed under the brand name NGENLA®. Through our pharmaceutical business, we also manufacture and sell *Rayaldee*, a U.S. Food and Drug Administration ("FDA") approved treatment for secondary hyperparathyroidism ("SHPT") in adults with stage 3 or 4 chronic kidney disease ("CKD") and vitamin D insufficiency. Through our 2022 acquisition of ModeX Therapeutics, Inc. ("ModeX"), we have expanded our pharmaceutical pipeline with early-stage immune therapies targeting cancer and infectious diseases.

Our diagnostics business, BioReference Health, LLC ("BioReference"), is a highly specialized laboratory in the United States, with a sales and marketing team focused on growth and new product integration, including the *4Kscore*® prostate cancer test. BioReference® offers a broad spectrum of diagnostic testing services for oncology, urology (*4Kscore*), and corrections nationwide, setting new standards with our industry-leading turnaround times. BioReference also provides comprehensive clinical and women's health testing in New York and New Jersey. Our test offerings are backed by a team of board-certified medical professionals and driven by the latest healthcare guidelines and standards- marketed directly to physicians, geneticists, hospitals, clinics, correctional facilities, and other healthcare providers. On September 16, 2024 we consummated the sale of certain assets of BioReference to Laboratory Corporation of America Holdings ("Labcorp"), as described below.

The Company maintains established, revenue-generating pharmaceutical platforms in Spain, Ireland, Chile, and Mexico, contributing to positive cash flow and facilitating market entry for our development pipeline. In addition to these platforms, we operate a global pharmaceutical development and commercial supply company, a global supply chain operation, and manufacture specialty active pharmaceutical ingredients (API) in Israel through our subsidiary, FineTech.

Our management team possesses extensive industry experience in development, regulatory affairs, and commercialization. Their industry relationships support the identification and pursuit of commercial opportunities. Research and development activities are primarily conducted in facilities located in Weston, Massachusetts, Waterford, Ireland, Kiryat Gat, Israel, and Barcelona, Spain.

On March 27, 2024, the Company entered into a definitive agreement with Labcorp (the "Labcorp Asset Purchase Agreement"), pursuant to which Labcorp agreed to acquire select assets of BioReference (the "BioReference Transaction"). The BioReference Transaction closed on September 16, 2024, and upon closing, Labcorp paid to the Company aggregate consideration of $237.5 million in cash, which is subject to certain adjustments as set forth in the Labcorp Asset Purchase Agreement. These assets were part of our diagnostics segment and include BioReference's laboratory testing businesses focused on clinical diagnostics, reproductive health, and women's health across the United States, excluding BioReference's New York and New Jersey operations.

Pursuant to the Labcorp Asset Purchase Agreement, a total of approximately $23.7 million was withheld at closing and deposited by us into an escrow account to satisfy potential indemnity claims under the Labcorp Asset Purchase Agreement. The escrow will be released to the Company on the twelve-month anniversary of the closing date, subject to any outstanding or liquidated indemnity claims. The Company recorded the escrow within other current assets on the Condensed Consolidated Balance Sheet as of December 31, 2024.

We recognized a gain of $121.5 million from the BioReference Transaction for the year ended December 31, 2024.

Note 2 Foreign exchange rates

For the years ended December 31, 2024, 2023, and 2022, approximately 23.1%, 29.6%, and 21.6% of revenue was denominated in currencies other than the U.S. Dollar (USD). Our financial statements are reported in USD and, accordingly, fluctuations in exchange rates affect the translation of revenues and expenses denominated in foreign currencies into USD for purposes of reporting our consolidated financial results. During the years ended December 31, 2024, 2023 and 2022, the most significant currency exchange rate exposures were to the Chilean Peso and Euro. Gross accumulated currency translation adjustments recorded as a separate component of shareholders' equity were $52.7 million and $34.6 million at December 31, 2024 and 2023, respectively.

We are subject to foreign currency translation risk for fluctuations in exchange rates during the period of time between the consummation and cash settlement of transactions. We limit foreign currency transaction risk through hedge transactions with foreign currency forward contracts. Under these forward contracts, for any rate above or below the fixed rate, we receive or pay the difference between the spot rate and the fixed rate for the given amount at the settlement date. As of December 31, 2024, we held no open foreign exchange forward contracts relating to inventory purchases on letters of credit. At December 31, 2023, we had 52 open foreign exchange forward contracts relating to inventory purchases on letters of credit. These contracts matured monthly through January 2024 with a notional value totaling approximately $2.9 million.

Note 3 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 U.S. and with the instructions to Form 10-K and of Regulation S-X.

Principles of consolidation. The accompanying Consolidated Financial Statements include the accounts of OPKO Health, Inc. and of our wholly-owned subsidiaries. All intercompany accounts and transactions are eliminated in consolidation.

Use of estimates. The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ significantly from these estimates.

Cash, cash equivalents and restricted cash. Cash, cash equivalents and restricted cash include short-term, interest-bearing instruments with original maturities of 90 days or less at the date of purchase. We also consider all highly liquid investments with original maturities at the date of purchase of 90 days or less as cash equivalents. These investments include money markets, bank deposits, certificates of deposit and U.S. treasury securities.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the Condensed Consolidated Balance Sheet to the sum of such amounts in the Condensed Consolidated Statements of Cash Flows:

	December 31, 2024	December 31, 2023
Cash and cash equivalents	$ 426,582	$ 95,881
Restricted cash, current	5,354	—
Restricted cash, long-term	13,679	—
Total cash, cash equivalents, and restricted cash shown in the Condensed Consolidated Statements of Cash Flows	$ 445,615	$ 95,881

The Company classifies cash deposits related to letters of credit securing insurance and lease obligations as restricted cash, which is included in other assets, non-current, within the Consolidated Balance Sheet.

Inventories. Inventories are valued at the lower of cost and net realizable value. Cost is determined by the first-in, first-out method. We consider such factors as the amount of inventory on hand, estimated time required to sell such inventories, remaining shelf-life, and current market conditions to determine whether inventories are stated at the lower of cost and net realizable value. Inventories at our diagnostics segment consist primarily of purchased laboratory supplies, which are used in our testing laboratories. Inventory obsolescence expense for the years ended December 31, 2024, 2023 and 2022 was $2.1 million, $8.1 million and $4.1 million, respectively.

Goodwill and intangible assets. Goodwill represents the difference between the purchase price and the estimated fair value of the net assets acquired accounted for by the acquisition method of accounting. Refer to Note 6. Goodwill, in-process research and development ("IPR&D") and other intangible assets acquired in business combinations, licensing and other transactions was $1.3 billion and $1.5 billion at December 31, 2024 and 2023, respectively.

Assets acquired and liabilities assumed in business combinations, licensing and other transactions are generally recognized at the date of acquisition at their respective fair values. Any excess of the purchase price over the estimated fair values of the net assets acquired is recognized as goodwill. At acquisition, we generally determine the fair value of intangible assets, including IPR&D, using the "income method."

Subsequent to acquisition, goodwill and indefinite lived intangible assets are tested at least annually as of October 1 for impairment, or when events or changes in circumstances indicate it is more likely than not that the carrying amount of such assets may not be recoverable.

Estimating the fair value of a reporting unit for goodwill impairment is highly sensitive to changes in projections and assumptions and changes in assumptions could potentially lead to impairment. We perform sensitivity analyses around our assumptions in order to assess the reasonableness of the assumptions and the results of our testing. Ultimately, potential changes in these assumptions may impact the estimated fair value of a reporting unit and result in an impairment if the fair value of such reporting unit is less than its carrying value. Goodwill was $529.3 million and $598.3 million, respectively, at December 31, 2024 and 2023.

Net intangible assets other than goodwill were $811.6 million and $935.3 million at December 31, 2024 and 2023, respectively, including IPR&D of $195.0 million at December 31, 2024 and 2023. Intangible assets are highly vulnerable to impairment charges, particularly newly acquired assets for recently launched products and IPR&D. Considering the high risk nature of research and development and the industry's success rate of bringing developmental compounds to market, IPR&D impairment charges may occur in future periods. Estimating the fair value of IPR&D for potential impairment is highly sensitive to changes in estimates and assumptions, and changes in such estimates or assumptions could potentially lead to impairment.

Upon regulatory approval, IPR&D assets are classified as finite-lived intangible assets. These assets are then amortized on a straight-line basis over their estimated useful lives. If a project is abandoned, the associated IPR&D costs are immediately expensed. We also regularly assess finite-lived intangible assets for impairment. This assessment involves comparing the carrying amount of an asset, which is its cost minus accumulated amortization, to its estimated future undiscounted cash flows. If an asset's carrying amount exceeds its estimated future cash flows, then an impairment charge is recognized to reflect the difference between the asset's carrying amount and its fair value.

While we believe our estimates and assumptions used in impairment testing (including for goodwill and IPR&D) are reasonable and reflect those used by market participants, there is a potential risk of material impairment charges. Based on the current financial performance of our diagnostics segment and our Ireland reporting unit (which includes Eirgen and Rayaldee), we could be subject to such charges if their future performance deviates from our current estimates and assumptions as recently experienced. For reference, the goodwill of our diagnostics segment totaled $219.7 million and $283.0 million at December 31, 2024 and 2023, respectively, while the goodwill of our Ireland reporting unit totaled $79.4 million and $84.3 million at December 31, 2024 and 2023, respectively. No impairment charges were recognized for the years ended December 31, 2024, 2023, or 2022.

During the year ended December 31, 2022, upon the approval of NGENLA (Somatrogon) in Europe and Japan, we reclassified $590.2 million of IPR&D related to Somatrogon (hGH-CTP) from IPR&D in our Consolidated Balance Sheet to finite-lived intangible assets. We are amortizing the assets on a straight-line basis over their estimated useful lives of approximately 12 years.

We amortize intangible assets with definite lives on a straight-line basis over their estimated useful lives, ranging from 3 to 20 years. We use the straight-line method of amortization as there is no reliably determinable pattern in which the economic benefits of our intangible assets are consumed or otherwise used up. Amortization expense was $82.6 million, $86.0 million and $87.8 million for the years ended December 31, 2024, 2023 and 2022, respectively. Amortization expense from operations for our intangible assets is expected to be $79.9 million, $78.5 million, $76.2 million, $63.1 million and $59.7 million for the years ended December 31, 2025, 2026, 2027, 2028 and 2029, respectively.

Fair value measurements. The carrying amounts of our cash, cash equivalents, restricted cash, accounts receivable, accounts payable and short-term debt approximate their fair value due to the short-term maturities of these instruments. Investments that are considered equity securities as of December 31, 2024 and 2023 are predominately carried at fair value. Our debt under the BioReference Credit Agreement (as defined in Note 7) approximated fair value due to the variable rate of interest applicable to such debt.

In evaluating the fair value information, considerable judgment is required to interpret the market data used to develop the estimates. The use of different market assumptions and/or different valuation techniques may have a material effect on the estimated fair value amounts. Accordingly, the estimates of fair value presented herein may not be indicative of the amounts that could be realized in a current market exchange. Refer to Note 19.

Contingent consideration. Each period we revalue the contingent consideration obligations associated with certain prior acquisitions to their fair value and record increases in the fair value as contingent consideration expense and decreases in the fair value as a reduction in contingent consideration expense. Changes in contingent consideration result from changes in the assumptions regarding probabilities of successful achievement of related milestones, the estimated timing in which the milestones are achieved and the discount rate used to estimate the fair value of the liability. Contingent consideration may change significantly as our development programs progress, revenue estimates evolve and additional data is obtained, impacting our assumptions. The assumptions used in estimating fair value require significant judgment. The use of different assumptions and judgments could result in a materially different estimate of fair value which may have a material impact on our results from operations and financial position.

Derivative financial instruments. We record derivative financial instruments on our Consolidated Balance Sheet at their fair value and recognize the changes in the fair value in our Consolidated Statement of Operations when they occur, the only exception being derivatives that qualify as hedges. For the derivative instrument to qualify as a hedge, we are required to meet strict hedge effectiveness and contemporaneous documentation requirements at the initiation of the hedge and assess the hedge effectiveness on an ongoing basis over the life of the hedge. At December 31, 2024 and 2023, our foreign currency forward contracts held to economically hedge inventory purchases did not meet the documentation requirements to be designated as hedges. Accordingly, we recognize all changes in the fair values of our derivatives instruments, net, in our Consolidated Statement of Operations. Refer to Note 20.

Property, plant and equipment. Property, plant and equipment are recorded at cost or fair value if acquired in a business combination. Depreciation is provided using the straight-line method over the estimated useful lives of the assets and includes amortization expense for assets capitalized under finance leases. The estimated useful lives by asset class are as follows: software - 3 years, machinery, medical and other equipment - 5-8 years, furniture and fixtures - 5-12 years, leasehold improvements - the lesser of their useful life or the lease term, buildings and improvements - 10-40 years, and automobiles - 3-5 years. Expenditures for repairs and maintenance are charged to expense as incurred. Assets held under finance leases are included within Property, plant and equipment, net in our Consolidated Balance Sheets and are amortized over the shorter of their useful lives or the expected term of their related leases. Depreciation expense was $15.6 million, $19.3 million and $20.9 million for the years ended December 31, 2024, 2023 and 2022, respectively. Assets held under finance leases are included within Property, plant and equipment, net in our Consolidated Balance Sheets and are amortized over the shorter of their useful lives or the expected term of their related leases.

Impairment of long-lived assets. Long-lived assets, such as property and equipment and assets held for sale, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, then an impairment charge is recognized for the amount by which the carrying amount of the asset exceeds the fair value of the asset. During the year ended December 31, 2024, the Company determined the carrying amount of certain long-lived assets within our Finetech subsidiary was not recoverable. As a result, we recognized an impairment charge of $1.2 million related to these assets included in our pharmaceutical segment.

Income taxes. Income taxes are accounted for under the asset-and-liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and the respective tax bases and for operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in operations in the period that includes the enactment date. We periodically evaluate the realizability of our net deferred tax assets. Our tax accruals are analyzed periodically and adjustments are made as events occur to warrant such adjustment. Valuation allowances on certain U.S. deferred tax assets and non-U.S. deferred tax assets are established, because realization of these tax benefits through future taxable income does not meet the more-likely-than-not threshold.

We operate in various countries and tax jurisdictions globally. For the year ended December 31, 2024, the tax rate differed from the U.S. federal statutory rate of 21% primarily due to the valuation allowance against certain U.S. and non-U.S. deferred tax assets, the relative mix in earnings and losses in the U.S. versus foreign tax jurisdictions, and the impact of certain discrete tax events and operating results in tax jurisdictions which do not result in a tax benefit.

Included in Other long-term liabilities is an accrual of $9.9 million related to uncertain tax positions involving income recognition. In connection with an examination of foreign tax returns for the 2015 through 2021 tax years, a foreign taxing authority has issued an income tax assessment of approximately $246 million (including interest). We are appealing this assessment, as we believe, other than for uncertain tax positions for which we have reserved, the issues are without technical merit. We intend to exhaust all judicial remedies necessary to resolve the matter, as necessary, which could be a lengthy process. There can be no assurance that this matter will be resolved in our favor, and an adverse outcome, or any future tax examinations involving similar assertions, could have a material effect on our financial condition, results of operations and cash flows.

Revenue recognition. We recognize revenue when a customer obtains control of promised goods or services in accordance with Accounting Standards Codification Topic 606, *Revenue from Contracts with Customers* ("Topic 606"). The amount of revenue that is recorded reflects the consideration that we expect to receive in exchange for those goods or services. We apply the following five-step model in order to determine this amount: (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 apply the five-step model to contracts when it is probable that we will collect the consideration we are entitled to in exchange for the goods or services we transfer to the customer. At contract inception, once the contract is determined to be within the scope of Topic 606, we review the contract to determine which performance obligations we must deliver and which of these performance obligations are distinct. We recognize as revenue the amount of the transaction price that is allocated to the respective performance obligation when the performance obligation is satisfied or as it is satisfied. For a complete discussion of accounting for Revenues from services, Revenues from products and Revenue from transfer of intellectual property and other, refer to Note 15.

Concentration of credit risk and allowance for credit losses. Financial instruments that potentially subject us to concentrations of credit risk consist primarily of accounts receivable. Substantially all of our accounts receivable are with either companies in the healthcare industry or patients. However, credit risk is limited due to the number of our clients as well as their dispersion across many different geographic regions.

While we have receivables due from federal and state governmental agencies, such receivables are not a credit risk because federal and state governments fund the related healthcare programs. Payment is primarily dependent upon submitting appropriate documentation. At December 31, 2024 and 2023, receivable balances (net of explicit and implicit price concessions) from Medicare and Medicaid were 4.8% and 6.7%, respectively, of our consolidated Accounts receivable, net. The portion of our accounts receivable due from individual patients comprises the largest portion of credit risk. At December 31, 2024 and 2023, receivables due from patients represented approximately 1.7% and 2.0%, respectively, of our consolidated Accounts receivable, net.

We assess the collectability of accounts receivable balances by considering factors such as historical collection experience, customer credit worthiness, the age of accounts receivable balances, regulatory changes and current economic conditions and trends that may affect a customer's ability to pay. Actual results could differ from those estimates. The allowance for credit losses was $1.3 million and $2.0 million at December 31, 2024 and 2023, respectively. The credit loss expense for the years ended December 31, 2024, 2023 and 2022 was $0.1 million, $0.3 million and $0.3 million, respectively.

As of December 31, 2024, accounts receivable included $3.6 million of revenue earned under the BARDA Contract (as defined in Note 16). As of December 31, 2023, accounts receivable included $0.6 million under this contract. Refer to Note 15, Government Contract Revenue for further information government contracts and to Note 16, Strategic Alliances for further information.

Equity-based compensation. We measure the cost of services received in exchange for an award of equity instruments based on the grant-date fair value of the award. That cost is recognized in the Consolidated Statement of Operations over the period during which an employee is required to provide service in exchange for the award. We record excess tax benefits realized from the exercise of stock options as cash flows from operations. For the years ended December 31, 2024, 2023 and 2022, we recorded $11.0 million, $11.4 million and $18.5 million, respectively, of equity-based compensation expense.

Research and development expenses. Research and development expenses include external and internal expenses. External expenses include clinical and non-clinical activities performed by contract research organizations, lab services, purchases of drug and diagnostic product materials and manufacturing development costs. Research and development employee-related expenses include salaries, benefits and equity-based compensation expense. Other internal research and development expenses are incurred to support overall research and development activities and include expenses related to general overhead and facilities. We expense these costs in the period in which they are incurred. We estimate our liabilities for research and development expenses in order to match the recognition of expenses to the period in which the actual services are received. As such, accrued liabilities related to third party research and development activities are recognized based upon our estimate of services received and degree of completion of the services in accordance with the specific third party contract.

Research and development expense includes costs for in-process research and development projects acquired in asset acquisitions which have not reached technological feasibility, and which have no alternative future use. For in-process research and development projects acquired in business combinations, the in-process research and development project is capitalized and evaluated for impairment until the development process has been completed. Once the development process has been completed the asset will be amortized over its remaining estimated useful life.

Segment reporting. Our chief operating decision-maker ("CODM") is Phillip Frost, M.D., our Chairman and Chief Executive Officer. Our CODM reviews our operating results and operating plans and makes resource allocation decisions on a Company-wide or aggregate basis. We manage our operations in two reportable segments, pharmaceutical and diagnostics. The pharmaceutical segment consists of our pharmaceutical operations in Chile, Mexico, Ireland, Israel and Spain, *Rayaldee* product sales and our pharmaceutical research and development. The diagnostics segment primarily consists of clinical and genomics laboratory operations through BioReference and point-of-care operations. There are no significant inter-segment sales. We evaluate the performance of each segment based on operating profit or loss. There is no inter-segment allocation of interest expense or income taxes. Refer to Note 18.

Shipping and handling costs. We do not charge customers for shipping and handling costs. Shipping and handling costs are classified as Cost of revenues in the Consolidated Statement of Operations.

Foreign currency translation. The financial statements of certain of our foreign operations are measured using the local currency as the functional currency. The local currency assets and liabilities are generally translated at the rate of exchange to the U.S. dollar on the balance sheet date, and the local currency revenues and expenses are translated at average rates of exchange to the U.S. dollar during the reporting periods. Foreign currency transaction gains (losses) have been reflected as a component of Other income (expense), net within the Consolidated Statement of Operations and foreign currency translation gains (losses) have been included as a component of the Consolidated Statement of Comprehensive Income (Loss). We recorded foreign currency transaction gains and losses of ($3.8 million), $1.2 million, and ($1.8 million) for the years ended December 31, 2024, 2023 and 2022, respectively.

Variable interest entities. The consolidation of a variable interest entity ("VIE") is required when an enterprise has a controlling financial interest. A controlling financial interest in a VIE will have both of the following characteristics: (a) the power to direct the activities of a VIE that most significantly impact the VIE's economic performance and (b) the obligation to absorb losses of the VIE that could potentially be significant to the VIE. Refer to Note 5.

Investments. We have made strategic investments in development stage and emerging companies. We record these investments as equity method investments or as equity securities based on our percentage of ownership and whether we have significant influence over the operations of the investees. For investments classified under the equity method of accounting, we record our proportionate share of their losses in Losses from investments in investees in our Consolidated Statement of Operations. Refer to Note 5. For investments classified as equity securities, we record changes in their fair value as Other income (expense) in our Consolidated Statement of Operations based on their closing price per share at the end of each reporting period, unless the equity security does not have a readily determinable fair value. Refer to Note 5.

Accounting standards yet to be adopted.

In December 2023, the FASB issued ASU No. 2023-09, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures" ("ASU 2023-09"), which modifies the rules on income tax disclosures to require entities to disclose (i) specific categories in the rate reconciliation, (ii) the income or loss from continuing operations before income tax expense or benefit (separated between domestic and foreign) and (iii) income tax expense or benefit from continuing operations (separated by federal, state and foreign). ASU 2023-09 also requires entities to disclose their income tax payments to international, federal, state, and local jurisdictions, among other changes. The guidance is effective for annual periods beginning after December 15, 2024. Early adoption is permitted for annual financial statements that have not yet been issued or made available for issuance. ASU 2023-09 should be applied on a prospective basis, but retrospective application is permitted. We are currently evaluating the potential impact of adopting this new guidance on our consolidated financial statements and related disclosures.

Recently adopted accounting standards.

In November 2023, the FASB issued ASU No 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures ("ASU 2023-07"). ASU 2023-07 enhances disclosures for significant segment expenses for all public entities required to report segment information in accordance with ASC 280. ASC 280 requires a public entity to report for each reportable segment a measure of segment profit or loss that its CODM uses to assess segment performance and to make decisions about resource allocations. ASU 2023-07 is effective for the Company beginning with the fiscal year ended December 31, 2024. This guidance is being applied prospectively.

In 2021, the Organization for Economic Co-operation and Development ("OECD") established an inclusive framework on base erosion and profit shifting and agreed on a two-pillar solution ("Pillar Two") to global taxation, focusing on global profit allocation and a 15% global minimum effective tax rate. On December 15, 2022, the EU member states agreed to implement the OECD's global minimum tax rate of 15%. The OECD issued Pillar Two model rules and continues to release guidance on these rules. The inclusive framework calls for tax law changes by participating countries to take effect in 2025. Various countries have enacted or have announced plans to enact new tax laws to implement the global minimum tax. We considered the applicable tax law changes on Pillar Two implementation in the relevant countries, and there is no material impact to our tax results for the period. We anticipate further legislative activity and administrative guidance in 2025, and will continue to evaluate the impacts of enacted legislation and pending legislation to enact Pillar Two Model Rules in the non-US tax jurisdictions we operate in.

In August 2020, the FASB issued ASU No. 2020-06, "Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40)." This standard simplified the accounting for convertible instruments. We adopted ASU 2020-06 on January 1, 2022, using the modified retrospective approach. This resulted in an increase of $21.6 million to the 2025 Convertible Notes, a reduction of $17.5 million to the Accumulated deficit, and a reduction of $39.1 million to Additional paid-in capital.

Note 4 Income (loss) Per Share

Basic income (loss) per share is computed by dividing our net income (loss) by the weighted average number of shares of our Common Stock outstanding during the period. Shares of Common Stock outstanding under the share lending arrangement entered into in conjunction with the 2025 Notes (as defined in Note 7) have been excluded from the calculation of basic and diluted earnings per share because the borrower of the shares is required under the share lending arrangement to refund any dividends paid on the shares lent. We terminated the share lending arrangement on January 22, 2024. Refer to Note 7. For diluted earnings per share, the dilutive impact of stock options and warrants is determined by applying the "treasury stock" method. The dilutive impact of the 2029 Convertible Notes, 2033 Senior Notes, the 2023 Convertible Notes and the 2025 Notes (each, as defined and discussed in Note 7) has been considered using the "if converted" method. For periods in which their effect would have been antidilutive, no effect is given in the dilutive computation to Common Stock issuable under outstanding options or warrants or the potentially dilutive shares issuable pursuant to the 2029 Convertible Notes, 2033 Senior Notes, the 2023 Convertible Notes and the 2025 Notes.

A total of 291,185,409, 82,843,173 and 55,582,089 potential shares of Common Stock have been excluded from the calculation of diluted net income (loss) per share for the years ended December 31, 2024, 2023 and 2022, respectively, because their inclusion would be antidilutive. A full presentation of diluted earnings per share has not been provided because the required adjustments to the numerator and denominator resulted in diluted earnings per share equivalent to basic earnings per share.

During the year ended December 31, 2024, no options were exercised, and 549,687 restricted stock units vested, resulting in the issuance of 384,378 shares of Common Stock. Of the 549,687 restricted stock units settled, 165,309 shares of Common Stock were surrendered in lieu of a cash payment via the net exercise feature of the agreements.

During the year ended December 31, 2023, 18,750 options were exercised, and 549,680 restricted stock units vested, resulting in the issuance of 405,721 shares of Common Stock. Of the 549,680 restricted stock units settled, 162,709 shares of Common Stock were surrendered in lieu of a cash payment via the net exercise feature of the agreements.

During the year ended December 31, 2022, an aggregate of 211,187 options were exercised and 1,599,212 restricted stock units were settled, resulting in the issuance of 1,316,570 shares of Common Stock. Of the 1,810,399 exercised and restricted stock units settled, 493,829 shares of Common Stock were surrendered in lieu of a cash payment via the net exercise feature of the related agreements.

Note 5 Investments

Investments

The following table reflects the accounting method, carrying value and underlying equity in net assets of our unconsolidated investments as of December 31, 2024 and 2023:

(in thousands)	As of December 31, 2024		As of December 31, 2023	
Investment type	Investment Carrying Value	Underlying Equity in Net Assets	Investment Carrying Value	Underlying Equity in Net Assets
Equity securities	$ 49,655	1,329	$ 116	2,942
Equity securities with no readily determinable fair value	4,139	—	5,382	420
Equity method investments	(0)		(0)	
Variable interest entity, equity method	787		796	
Equity method investments - FV option	—		9,786	
Warrants and options	3		2	
Total carrying value of investments	$ 54,584		$ 16,082	

Investments in Equity securities

We hold investments in various equity securities, which are accounted for based on the Company's level of influence over the investee and whether the equity security has a readily determinable fair value. We have determined that our ownership in these entities, along with that of related parties, does not provide the Company with significant influence over their operations, except as noted below. Accordingly, we account for our investments in these entities as equity securities and records changes in their fair value in other income (expense) each reporting period. Equity securities with readily determinable fair values are measured at fair value, while those without are adjusted to fair value when there is an observable price change.

GeneDx Holdings

During the year ended December 31, 2024, we sold 2,937,762 shares of GeneDx common stock at various prices per share for an aggregate of $166.6 million. As a result, our ownership in GeneDx had decreased to 2.2% as of December 31, 2024. This reduction, coupled with the absence of a contractual agreement for continued board representation, led to us concluding we could no longer exercise significant influence over GeneDx Holdings. Accordingly, we changed our accounting method for our investment in GeneDx Holdings from the equity method to the fair value method for equity securities.

For the year ended December 31, 2024, we recognized $140.0 million in net income related to the change in fair value of our GeneDx Holdings investment. For the years ended December 31, 2023 and 2022, we recognized $23.0 million and $150.9 million, respectively, of expense related to the change in fair value of our GeneDx Holdings investment. As of December 31, 2024, the aggregate value of our GeneDx Holdings investment was $47.7 million based on the quoted market price of GeneDx Holdings common stock.

Xenetic Biosciences, Inc.

During the fourth quarter of 2024, our investment in Xenetic Biosciences, Inc. ("Xenetic"), representing a 2.9% interest was reclassified from an equity method investment to an equity security with a readily determinable fair value. This reclassification resulted from the loss of purported influence over Xenetic due to loss in board representation.

CAMP4 Therapeutics Corporation

During 2024, CAMP4 Therapeutics Corporation ("CAMP4"), in which we hold a 1.5% interest, completed an initial public offering, resulting in its common stock now having a readily determinable fair value. Accordingly, we changed our accounting method for our investment in CAMP4 from the measurement alternative for equity securities without readily determinable fair values to the fair value method for equity securities.

Other Equity Securities

We hold equity securities in ChromaDex Corporation ("ChromaDex") (0.05%), and Eloxx Pharmaceuticals, Inc. ("Eloxx") (1.0%). Our investment in HealthSnap, Inc. (3.8%) is accounted for under the measurement alternative for equity securities without readily determinable fair values.

We also held equity securities in VBI Vaccines Inc. (0.2%) prior to that company filing for bankruptcy, as a result of which we no longer hold any interest in such company. During the year ended December 31, 2024, we recorded a $30 thousand impairment loss from our investment in VBI Vaccines Inc. due to that company's bankruptcy.

Net gains and losses on our equity securities for the year ended December 31, 2024, 2023 and 2022 were as follows:

	For the year ended December 31		
(in thousands)	2024	2023	2022
Equity Securities:			
Net gains and (losses) recognized during the period on equity securities	$ 73,873	$ (532)	$ (3,578)
Less: Net gains realized during the period on equity securities	(54,026)	—	—
Unrealized net gains and losses recognized during the period on equity securities still held at the reporting date	$ 19,847	$ (532)	$ (3,578)

Investments in variable interest entities

We have determined that we hold variable interests in LeaderMed and Zebra Biologics, Inc. ("Zebra") based on our assessment that they do not have sufficient resources to carry out their principal activities without additional financial support.

In September 2021, we and LeaderMed, a pharmaceutical development company with operations based in Asia, formed a joint venture to develop, manufacture and commercialize two of OPKO's clinical stage, long-acting drug products in Greater China and eight other Asian territories. Under the terms of the agreements, we granted the joint venture exclusive rights to develop, manufacture and commercialize (a) OPK88003, an oxyntomodulin analog being developed for the treatment of obesity and diabetes, and (b) Factor VIIa-CTP, a novel long acting coagulation factor being developed to treat hemophilia, in exchange for 4,703 shares 47% ownership interest in the joint venture. In addition, we received an upfront payment of $1.0 million and will be reimbursed for clinical trial material and technical support we provide the joint venture.

In order to determine the primary beneficiary of the joint venture, we evaluated our investment and our related parties' investment, as well as our investment combined with the related parties' investment to identify if we had the power to direct the activities that most significantly impact the economic performance of the joint venture. Based on the capital structure, governing documents and overall business operations of the joint venture, we determined that, while a VIE, we do not have the power to direct the activities that most significantly impact the joint venture's economic performance and do not have an obligation to fund expected losses. We did determine that we can significantly influence control of the joint venture through our board representation and voting power. Therefore, we have the ability to exercise significant influence over the joint venture's operations and account for our investment in the joint venture under the equity method.

We own 1,260,000 shares of Zebra Series A-2 Preferred Stock and 900,000 shares of Zebra restricted common stock (ownership 28.5% at December 31, 2024 and 2023). Zebra is a privately held biotechnology company focused on the discovery and development of biosuperior antibody therapeutics and complex drugs. Dr. Richard Lerner, M.D., a former member of our Board of Directors, was a founder of Zebra. Dr. Frost serves as a member of Zebra's Board of Directors.

In order to determine the primary beneficiary of Zebra, we evaluated our investment and our related parties' investment, as well as our investment combined with the related parties' investment to identify if we had the power to direct the activities that most significantly impact the economic performance of Zebra. Based on the capital structure, governing documents and overall business operations of Zebra, we determined that, while a VIE, we do not have the power to direct the activities that most significantly impact Zebra's economic performance and have no obligation to fund expected losses. We determined, however, that we can significantly influence control of Zebra through our board representation and voting power. Therefore, we have the ability to exercise significant influence over Zebra's operations and account for our investment in Zebra under the equity method.

Sales of investments

Gains (losses) included in earnings from sales of our investments are recorded in Other income (expense), net in our Consolidated Statement of Operations. The cost of securities sold is based on the specific identification method.

Warrants and options

In addition to our equity method investments and equity securities, we hold options to purchase 47 thousand shares of BioCardia, all of which were vested as of December 31, 2024 and 2023. We recorded the changes in the fair value of these options and warrants in Fair value changes of derivative instruments, net in our Consolidated Statement of Operations. We also recorded the fair value of the options and warrants in Investments, net in our Consolidated Balance Sheet. See further discussion of the Company's options and warrants in Note 19 and Note 20.

Equity method investments

The Company accounts for certain investments under the equity method when it has the ability to exercise significant influence over the investee's operating and financial policies. This influence may be indicated by factors such as board representation or voting power. Under the equity method, we recognized our proportionate share of the investee's net income or loss in the Consolidated Statement of Operations.

Our equity method investments consist of investments in Pharmsynthez (ownership 5.8%), Cocrystal Pharma, Inc. ("COCP") (2.2%), Non-Invasive Monitoring Systems, Inc. ("NIMS") (0.5%), BioCardia, Inc. ("BioCardia") (0.3%), and LeaderMed Health Group Limited ("LeaderMed") (47.0%).

Neovasc, Inc., in which we owned 0.0% as of December 31, 2023, was acquired by Shockwave Medical, Inc. in April 2023. We received $363 thousand in merger consideration in exchange for its shares.

The aggregate amount of assets, liabilities, and net losses of these equity method investees as of and for the year ended December 31, 2024 was $50.9 million, $18.3 million, and $31.1 million, respectively. The aggregate amount of assets, liabilities, and net losses of these equity method investees as of and for the year ended December 31, 2023 was $85.5 million, $20.8 million, and $37.7 million, respectively. The aggregate value of our equity method investments based on the quoted market prices of their respective shares of common stock and the number of shares held by us as of December 31, 2024 and 2023 was $0.5 million and 0.7 million, respectively.

Note 6 Composition of Certain Financial Statement Captions

(In thousands)	For the years ended December 31, 2024	2023
Accounts receivable, net		
Accounts receivable	$ 119,284	$ 125,379
Less: allowance for doubtful accounts	(1,267)	(2,000)
	$ 118,017	$ 123,379
Inventories, net		
Finished products	$ 32,310	$ 35,582
Consumable supplies	15,488	25,864
Work in-process	2,355	1,731
Raw materials	9,418	8,981
Less: inventory reserve	(2,774)	(6,461)
	$ 56,797	$ 65,697
Other current assets and prepaid expenses		
Escrow receivable	$ 23,750	$ —
Prepaid supplies	6,785	6,177
Prepaid insurance	3,818	3,848
Taxes recoverable	8,266	4,211
Other receivables	2,015	2,610
Other	10,705	7,673
	$ 55,339	$ 24,519
Property, plant and equipment, net:		
Machinery, medical and other equipment	$ 122,064	$ 138,776
Leasehold improvements	20,942	28,058
Furniture and fixtures	9,074	12,046
Building	13,062	18,885
Software	14,171	14,410
Automobiles and aircraft	8,054	12,701
Land	2,238	2,425
Construction in process	19,228	5,255
Less: accumulated depreciation	(138,699)	(157,127)
	$ 70,134	$ 75,429
Intangible assets, net:		
Technologies	$ 806,858	$ 831,509
Customer relationships	255,430	315,799
Trade names	49,726	49,758
Covenants not to compete	12,906	12,916
Licenses	6,316	6,205
Product registrations	6,172	6,790
Other	5,729	6,000
Less: accumulated amortization	(526,524)	(488,694)
	$ 616,613	$ 740,283

(In thousands)	For the years ended December 31, 2024	2023
Accrued expenses:		
Employee benefits and severance	$ 34,167	$ 28,952
Gross to net provision	6,920	9,420
Accrued interest	8,313	2,601
Inventory received but not invoiced	2,146	1,653
Taxes payable	22,275	1,384
Commitments and contingencies	9,850	8,088
Clinical trials	6,104	7,624
Finance leases short-term	1,679	2,827
Royalties	563	1,544
Professional fees	2,521	3,470
Commissions	1,434	1,822
Other	22,385	20,701
	$ 118,357	$ 90,086
Other long-term liabilities:		
Employee severance	$ 14,269	$ —
Mortgages and other debts payable	3,002	7,709
Finance leases long-term	4,064	7,274
Contract liabilities	6	7
Other	11,497	12,199
	$ 32,838	$ 27,189

Our intangible assets and goodwill relate principally to our completed acquisitions of OPKO Renal, OPKO Biologics, EirGen, BioReference and ModeX. We amortize intangible assets with definite lives on a straight-line basis over their estimated useful lives. The estimated useful lives by asset class are as follows: technologies - 7-17 years; customer relationships - 5-20 years; product registrations - 7-10 years; covenants not to compete - 5 years; trade names - 5-10 years; and other 9-13 years. We do not anticipate capitalizing the cost of product registration renewals, rather we expect to expense these costs, as incurred. Our goodwill is not tax deductible for income tax purposes in any jurisdiction in which we operate.

During the year ended December 31, 2022, upon the approval of NGENLA (Somatrogon (hGH-CTP)) in Europe and Japan, we reclassified $590.2 million of IPR&D related to Somatrogon (hGH-CTP) from IPR&D in our Consolidated Balance Sheet. The assets will be amortized on a straight-line basis over their estimated useful life of approximately 12 years. Other changes in value of the intangible assets and goodwill on December 31, 2024 and 2023, were primarily due to foreign currency fluctuations between the Euro, and the Chilean Peso against the U.S. dollar.

The following table reflects the changes in the allowance for doubtful accounts, provision for inventory reserve and tax valuation allowance accounts:

(In thousands)	Beginning balance	Charged to expense	Written-off	Charged to other	Ending balance
2024					
Allowance for doubtful accounts	$ (2,000)	(49)	782	—	$ (1,267)
Inventory reserve	$ (6,461)	(2,095)	5,782	—	$ (2,774)
Tax valuation allowance	$ (294,563)	61,165	—	6,795	$ (226,603)
2023					
Allowance for doubtful accounts	$ (4,162)	(247)	2,408	—	$ (2,000)
Inventory reserve	$ (3,574)	(8,100)	5,213	—	$ (6,461)
Tax valuation allowance	$ (279,212)	(11,128)	—	(4,223)	$ (294,563)

The following table summarizes the changes in Goodwill by reporting unit during the years ended December 31, 2024 and 2023.

	2024					2023				
(In thousands)	Gross goodwill at January 1	Cumulative impairment at January 1	Acquisitions, dispositions and other	Foreign exchange and other	Balance at December 31st	Gross goodwill at January 1	Cumulative impairment at January 1	Acquisitions, dispositions and other	Foreign exchange and other	Balance at December 31st
Pharmaceuticals										
CURNA	$ 4,827	$ (4,827)	$ —	$ —	$ —	$ 4,827	$ (4,827)	$ —	$ —	$ —
Rayaldee	84,273	—	—	(4,840)	79,433	81,786	—	—	2,487	84,273
FineTech	11,698	(11,698)	—	—	—	11,698	(11,698)	—	—	—
ModeX	80,260	—	—	—	80,260	80,432	—	(172)	—	80,260
OPKO Biologics	139,784	—	—	—	139,784	139,784	—	—	—	139,784
OPKO Chile	3,642	—	—	(422)	3,220	3,767	—	—	(125)	3,642
OPKO Health Europe	7,276	—	—	(428)	6,848	7,057	—	—	219	7,276
OPKO Mexico	100	(100)	—	—	—	100	(100)	—	—	—
Transition Therapeutics	3,421	(3,421)	—	—	—	3,421	(3,421)	—	—	—
Diagnostics										
BioReference	283,025	—	(63,318)	—	219,707	283,025	—	—	—	283,025
OPKO Diagnostics	17,977	(17,977)	—	—	—	17,977	(17,977)	—	—	—
	$636,283	$ (38,023)	$ (63,318)	$ (5,690)	$529,252	$633,874	$ (38,023)	$ (172)	$ 2,581	$598,260

Note 7 Debt

As of December 31, 2024 and 2023, our debt consisted of the following:

(In thousands)	As of December 31, 2024	As of December 31, 2023
2044 Notes	$ 245,576	$ —
2029 Convertible Notes	173,556	—
2025 Notes	170	143,250
2033 Senior Notes	50	50
2023 Convertible Notes	—	71,025
JPMorgan Chase Bank line of credit	—	12,671
Chilean and Spanish lines of credit	13,465	12,629
Current portion of notes payable	1,384	1,993
Long term portion of notes payable	3,002	7,727
Total	$ 437,203	$ 249,345
Balance sheet captions		
Current portion of convertible notes	$ 170	$ —
Long term portion of convertible notes	173,606	214,325
Current portion of lines of credit and notes payable	14,849	27,293
Long Term notes payable included in long-term liabilities	248,578	7,727
Total	$ 437,203	$ 249,345

2044 Note Purchase Agreement

On July 17, 2024, the Company completed a private offering of $250 million aggregate principal amount of senior secured notes (the "2044 Notes"), pursuant to a note purchase agreement dated July 17, 2024 (the "2044 Note Purchase Agreement), by and among the Company, certain purchasers from time to time party thereto, the Company's wholly owned subsidiaries OPKO Biologics ("OBL") and EirGen as guarantors (OBL and EirGen collectively, the "2044 Note Guarantors"), and HCR Injection SPV, LLC, as agent.

The 2044 Notes mature on July 17, 2044 and bear interest at the 3-month Secured Overnight Financing Rate (SOFR) subject to a 4.0% per annum floor, plus 7.5% per annum. Interest is payable on the 2044 Notes on a quarterly basis determined by profit share payments received by EirGen pursuant to the profit share arrangement with Pfizer, Inc. (the "Royalty Payments") set forth in the Restated Pfizer Agreement (as defined and described in Note 14). In the event that the aggregate amount of the Royalty Payments received by EirGen during the quarter preceding any quarterly interest payment date are less than the accrued and unpaid interest payable on such date, the excess interest payable on such date shall be paid-in-kind and added to the outstanding principal amount of the 2044 Notes. The Company will be required to pay the noteholders a 3% exit fee in connection with any repayment in full of the 2044 Notes, whether at maturity or otherwise. In addition, in the event that the Company repays the 2044 Notes in full prior to the maturity date, the Company will be required to pay the noteholders a make whole payment in an amount necessary such that the noteholders shall have received aggregate payments of principal, interest and fees in respect of the 2044 Notes equal to at least 150% of the initial principal amount of the 2044 Notes, in the event that such prepayment shall occur on or prior to July 17, 2029, or 200% of the initial principal amount of the 2044 Notes, in the event that such prepayment shall occur following July 17, 2029. If the 2044 Notes have not been fully repaid by the maturity date, the Company may elect to either repay the unpaid balance of the principal amount in full, together with any accrued and unpaid interest thereon and the 3% exit fee, or elect to transfer 80% of all future Royalty Payments to the agent and the noteholders in satisfaction of the outstanding 2044 Notes. The Company may authorize the issuance of up to $50,000,000 aggregate principal amount of additional 2044 Notes to the purchasers on the same terms and conditions of the initial 2044 Notes. The 2044 Notes are secured by the Royalty Payments, and the 2044 Note Guarantors have guaranteed the obligations under the 2044 Notes by granting a security interest in certain assets of the 2044 Note Guarantors. The 2044 Note Purchase Agreement contains customary terms and covenants, including negative covenants, such as limitations on indebtedness, liens, amendments to certain material contracts and disposition of assets.

2029 Convertible 144A Notes

In January 2024, we completed a private offering of $230.0 million aggregate principal amount of our 3.75% Convertible Senior Notes due 2029 (the "2029 Convertible 144A Notes") in accordance with the terms of a note purchase agreement (the "144A Note Purchase Agreement") entered into by and between the Company and J.P. Morgan Securities LLC (the "Initial Purchaser").

Net proceeds from the issuance of the 2029 Convertible 144A Notes totaled approximately $222.0 million after deducting fees and estimated offering expenses payable by us. We used approximately $50.0 million of the net proceeds to repurchase shares of our Common Stock. These repurchases were from purchasers of the 2029 Convertible 144A Notes in privately negotiated transactions effected with or through the Initial Purchaser or its affiliate. The purchase price per share of the Common Stock in these transactions equaled the closing sale price of $0.9067 per share of Common Stock on January 4, 2024.

Contemporaneously with the closing of the offering of the 2029 Convertible 144A Notes on January 9, 2024, we issued and sold approximately $71.1 million aggregate principal amount of our 3.75% Convertible Senior Notes due 2029 (the "2029 Convertible Affiliate Notes" and, together with the 2029 Convertible 144A Notes, the "2029 Convertible Notes") pursuant to the terms of a note purchase agreement entered into on January 4, 2024 (the "Affiliate Note Purchase Agreement") by and among the Company and certain investors, Frost Gamma Investments Trust, a trust controlled by Dr. Phillip Frost, and Dr. Jane H. Hsiao (collectively, the "Affiliate Purchasers"). Pursuant to the Affiliate Note Purchase Agreement, we issued and sold the 2029 Convertible Affiliate Notes to the Affiliate Purchasers in exchange for the entirety of the $55.0 million aggregate principal amount of our outstanding 2023 Convertible Notes held by the Affiliate Purchasers, together with approximately $16.1 million of accrued but unpaid interest thereon.

On January 9th, 2024, we recorded the $125.6 million value of the embedded derivative liability within the 2029 Convertible Notes as a debt discount. To determine the fair value of this derivative, we employed the Binomial Lattice model. Key inputs and assumptions for this valuation included our common stock price, the derivative's exercise price, risk-free interest rate, volatility, annual coupon rate, and remaining contractual term. We are amortizing the debt discount as non-cash interest expense over the term of the Notes.

From the date the Notes were issued through March 31, 2024, we observed an increase in the market price of our Common Stock which resulted in a $26.25 million increase in the estimated fair value of our embedded derivatives recorded in Fair value changes of derivative instruments, net in our Condensed Consolidated Statements of Operations. Effective April 1, 2024, the conversion option contained in the 2029 Convertible Notes met the requirements for classification as an equity component. As a result, we reclassified $151.9 million of the embedded derivative liability from debt, non-current, to additional paid-in capital in stockholders' equity on our Condensed Consolidated Balance Sheet as of December 31, 2024.

As of December 31, 2024 the 2029 Convertible 144A Notes were convertible. Holders may convert their 2029 Convertible Notes at their option prior to the close of business on the business day immediately preceding September 15, 2028 only under the following circumstances: (1) during any calendar quarter commencing after the calendar quarter ended on March 31, 2024 (and only during such calendar quarter), if the last reported sale price of our Common Stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the applicable conversion price on each applicable trading day; (2) during the five consecutive business day period after any ten consecutive trading day period (the "measurement period") in which the trading price per $1,000 principal amount of notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our Common Stock and the applicable conversion rate on each such trading day; or (3) upon the occurrence of specified corporate events specified in the indenture governing the 2029 Convertible Notes. On or after September 15, 2028 until the close of business on the business day immediately preceding the maturity date, holders may convert their notes at any time, regardless of the foregoing conditions. Upon conversion of a note, we will pay or deliver, as the case may be, cash, shares of our Common Stock or a combination of cash and shares of our Common Stock, at our election.

The conversion rate is initially equal to 869.5652 shares of Common Stock per $1,000 principal amount of notes (equivalent to an initial conversion price of approximately $1.15 per share of Common Stock). The conversion rate for the 2029 Convertible Notes will be subject to adjustment upon the occurrence of certain events but will not be adjusted for any accrued and unpaid interest. In addition, following certain corporate events that occur prior to the maturity date of the notes, in certain circumstances we will increase the conversion rate of the 2029 Convertible Notes for a holder who elects to convert its notes in connection with such a corporate event.

We may not redeem the notes prior to the maturity date, and no sinking fund is provided for the notes. If we undergo a fundamental change, holders may require us to purchase the notes in whole or in part for cash at a fundamental change purchase price equal to 100% of the principal amount of the notes to be purchased, *plus* accrued and unpaid interest, if any, to, but excluding, the fundamental change purchase date. The 2029 Convertible Notes are our senior unsecured obligations and rank senior in right of payment to any indebtedness that is expressly subordinated in right of payment to the notes, and equal in right of payment with all of our existing and future unsecured indebtedness that is not so subordinated. The notes are effectively subordinated to all of our existing and future secured indebtedness to the extent of the value of the assets securing such indebtedness and structurally subordinated to all existing and future liabilities of our subsidiaries.

The indenture governing the notes provides for customary events of default which include (subject in certain cases to customary grace and cure periods), among others, the following: nonpayment of principal or interest; breach of covenants or other agreements in the indenture; defaults in failure to pay certain other indebtedness; judgment defaults; and certain events of bankruptcy or insolvency. Generally, if an event of default occurs and is continuing under the indenture, the trustee thereunder or the holders of at least 25% in aggregate principal amount of the notes then outstanding may declare 100% of the principal of and accrued and unpaid interest, if any on all then-outstanding notes to be immediately due and payable. In certain circumstances, we may, for a period of time, elect to pay additional interest on the notes as the sole remedy to holders of the notes in the case of an event of default related to certain failures by us to comply with certain reporting covenants in the indenture.

The following table sets forth information related to the 2029 Convertible Notes which is included in our Condensed Consolidated Balance Sheet as of December 31, 2024:

(In thousands)	2029 convertible notes	Embedded conversion option	Discount	Debt Issuance Costs	Total
Balance at December 31, 2023	$ —	$ —	$ —	$ —	$ —
Issuance of 3.75% 2029 Convertible Notes	301,054	125,620	(125,620)	(8,562)	292,492
Amortization of debt discount and debt issuance costs	—		17,210	1,771	18,981
Change in fair value of embedded derivative	—	26,250	—	—	26,250
Reclassification of embedded derivative to equity	—	(151,870)	—	—	(151,870)
Repurchase	(20,460)	—	7,531	632	(12,297)
Balance at December 31, 2024	$ 280,594	$ —	$ (100,879)	$ (6,159)	$ 173,556

During the year ended December 31, 2024, the Company repurchased $20.5 million in aggregate principal amount of the 2029 Convertible 144A Notes for $29.8 million in cash. Such convertible debt repurchase resulted in a gain of $7.6 million, which included unamortized discount of $7.5 million and debt issuance costs of $0.6 million.

2025 Convertible Notes

In February 2019, we issued $200.0 million aggregate principal amount of Convertible Senior Notes due 2025 (the "2025 Notes") in an underwritten public offering. The 2025 Notes bear interest at a rate of 4.50% per year, payable semiannually in arrears on February 15 and August 15 of each year. The 2025 Notes mature on February 15, 2025, unless earlier repurchased, redeemed or converted.

In May 2021, we entered into an agreement with certain holders of the 2025 Notes pursuant to which the holders exchanged $55.4 million in aggregate principal amount of the outstanding 2025 Notes for 19,051,270 shares of our Common Stock (the "Exchange").

Contemporaneously with the closing of our offering of the 2029 Convertible Notes, we repurchased approximately $144.4 million aggregate principal amount of the 2025 Notes for cash, using $146.3 million of the net proceeds from our issuance and sale of the 2029 Convertible 144A Notes, following which only $170 thousand aggregate principal amount of the 2025 Notes remained outstanding.

On January 22, 2024, we terminated our share lending agreement, dated February 4, 2019, with Jefferies Capital Services, LLC ("Share Borrower"). Through this agreement, we had lent the Share Borrower approximately 30 million shares of our Common Stock related to our 2019 issuance of the 2025 Notes. With the termination of this agreement, all remaining borrowed shares of Common Stock have been returned to us and are now held as treasury shares.

In August 2020, the FASB issued ASU No. 2020-06, "Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40)." This standard simplified the accounting for convertible instruments. We adopted ASU 2020-06 on January 1, 2022, using the modified retrospective approach. This resulted in an increase of $21.6 million to the 2025 Convertible notes, a reduction of $17.5 million to the Accumulated deficit, and a reduction of $39.1 million to Additional paid-in capital.

2023 Convertible Notes

In February 2018, we issued a series of 5% Convertible Promissory Notes (the "2023 Convertible Notes") in the aggregate principal amount of $55.0 million. Purchasers of the 2023 Convertible Notes included an affiliate of Dr. Phillip Frost, M.D., our Chairman and Chief Executive Officer, and Dr. Jane H. Hsiao, Ph.D., MBA, our Vice-Chairman and Chief Technical Officer. The original maturity of the 2023 Convertible Notes was five years following the date of issuance. Each holder of a 2023 Convertible Note originally had the option to convert all or any portion of the outstanding principal balance of such 2023 Convertible Note, together with accrued and unpaid interest thereon, into shares of our Common Stock at a conversion price of $5.00 per share.

On February 10, 2023, we amended the 2023 Convertible Notes to extend the maturity to January 31, 2025 and reset the conversion price to $1.66 per share.

In connection with the closing of the 2029 Convertible Notes offering, the Company issued approximately $71.1 million aggregate principal amount of its 2029 Convertible Affiliate Notes in exchange for all issued and outstanding 2023 Convertible notes, following which no 2023 Convertible Notes remained outstanding.

2033 Senior Notes

In January 2013, we issued an aggregate of $175.0 million of our 3.0% Senior Notes due 2033 (the "2033 Senior Notes") in a private placement. The 2033 Senior Notes bear interest at the rate of 3.0% per year, payable semiannually on February 1 and August 1 of each year and mature on February 1, 2033, unless earlier repurchased, redeemed or converted. From 2013 to 2016, holders of the 2033 Senior Notes converted $143.2 million in aggregate principal amount into Common Stock, and, on February 1, 2019, approximately $28.8 million aggregate principal amount of 2033 Senior Notes were tendered by holders pursuant to such holders' option to require us to repurchase the 2033 Senior Notes. During the first quarter of 2023, we paid approximately $3.0 million to purchase 2033 Senior Notes in accordance with the indenture governing the 2033 Senior Notes, following which $50.6 thousand 2033 Senior Notes remained outstanding.

BioReference Credit Agreement

In November 2015, BioReference and certain subsidiaries established a credit agreement with JPMorgan Chase Bank, N.A. ("CB") as lender and administrative agent (the "BioReference Credit Agreement"). As amended, the BioReference Credit Agreement provided for a $50.0 million secured revolving credit facility, including a $20.0 million sub-facility for swingline loans and a $20.0 million sub-facility for letters of credit.

On September 16, 2024, BioReference fully repaid its obligations and terminated the BioReference Credit Agreement. BioReference paid approximately $9.7 million to settle its obligations, incurring no prepayment premium or penalty.

International Line of Credit Agreements

The Company had line of credit agreements with twelve other financial institutions as of December 31, 2024 and December 31, 2023 in the U.S., Chile and Spain. These lines of credit are used primarily as a source of working capital for inventory purchases.

The following table summarizes the amounts outstanding under the BioReference, Chilean and Spanish lines of credit:

(Dollars in thousands)			Balance Outstanding	
Lender	Interest rate on borrowings at December 31, 2024	Credit line capacity	December 31, 2024	December 31, 2023
Itau Bank	5.50%	$ 2,363	$ 200	$ 1,264
Bank of Chile	6.60%	2,500	2,202	1,728
BICE Bank	5.50%	2,500	2,418	1,734
Scotiabank	5.50%	5,500	3,497	981
Santander Bank	5.50%	5,000	1,926	450
Security Bank	5.50%	1,400	133	—
Estado Bank	5.50%	4,000	1,154	3,303
BCI Bank	5.00%	2,500	673	1,626
Internacional Bank	5.50%	1,500	1,130	1,197
Consorcio Bank	5.00%	2,000	133	346
Banco De Sabadell	1.75%	519	—	—
Santander Bank	5.36%	519	—	—
La Caixa Bank	4.09%	519	—	—
JPMorgan Chase	—	—	—	12,671
Total		$ 30,820	$ 13,466	$ 25,300

At December 31, 2024 and 2023, the weighted average interest rate on our lines of credit was approximately 5.52% and 7.5%, respectively.

At December 31, 2024 and 2023, we had notes payable and other debt (excluding the 2033 Senior Notes, the 2023 Convertible Notes, the 2025 Notes, the BioReference Credit Agreement and amounts outstanding under lines of credit described above) as follows:

(In thousands)	December 31, 2024	December 31, 2023
Current portion of notes payable	$ 1,384	$ 1,993
Other long-term liabilities	3,002	7,727
Total	$ 4,386	$ 9,720

The notes and other debt mature at various dates ranging from 2025 through 2032 bearing variable interest rates from 0.7% up to 4.5%. The weighted average interest rate on the notes and other debt was 1.8% and 2.9% on December 31, 2024 and 2023. The notes are partially secured by our office space in Barcelona.

Note 8 Shareholders' Equity

Our authorized capital stock consists of 1,250,000,000 shares of Common Stock, par value $0.01 per share, and 10,000,000 shares of Preferred Stock, par value $0.01 per share.

Common Stock

Subject to the rights of the holders of any shares of Preferred Stock currently outstanding or which may be issued in the future, the holders of the Common Stock are entitled to receive dividends from our funds legally available when, as and if declared by our Board of Directors, and are entitled to share ratably in all of our assets available for distribution to holders of Common Stock upon the liquidation, dissolution or winding-up of our affairs subject to the liquidation preference, if any, of any then outstanding shares of Preferred Stock. Holders of our Common Stock do not have any preemptive, subscription, redemption or conversion rights. Holders of our Common Stock are entitled to one vote per share on all matters which they are entitled to vote upon at meetings of stockholders or upon actions taken by written consent pursuant to Delaware corporate law. The holders of our Common Stock do not have cumulative voting rights, which means that the holders of a plurality of the outstanding shares can elect all of our directors. All of the shares of our Common Stock currently issued and outstanding are fully-paid and nonassessable. No dividends have been paid to holders of our Common Stock since our incorporation, and no cash dividends are anticipated to be declared or paid on our Common Stock in the reasonably foreseeable future.

Preferred Stock

Under our certificate of incorporation, our Board of Directors has the authority, without further action by stockholders, to designate up to 10 million shares of Preferred Stock in one or more series and to fix or alter, from time to time, the designations, powers and rights of each series of Preferred Stock and the qualifications, limitations or restrictions of any series of Preferred Stock, including dividend rights, dividend rate, conversion rights, voting rights, rights and terms of redemption (including sinking fund provisions), redemption price or prices, and the liquidation preference of any wholly issued series of Preferred Stock, any or all of which may be greater than the rights of the Common Stock, and to establish the number of shares constituting any such series.

Of the authorized Preferred Stock, 4,000,000 shares, 500,000 shares and 2,000,000 shares were designated Series A Preferred Stock, Series C Preferred Stock and Series D Preferred Stock, respectively. As of December 31, 2024 and 2023, there were no shares of Series A Preferred Stock, Series C Preferred Stock or Series D Preferred Stock issued or outstanding.

Stock Repurchase Program

On July 18, 2024, the Company announced that its Board of Directors authorized the repurchase of up to $100 million of shares of Common Stock. Under this program, the Company may repurchase shares through various methods, including open market purchases, block trades, privately negotiated transactions, and accelerated share repurchases, as well as pursuant to pre-set trading plans meeting the requirements of Rule 10b5-1(c) of the Exchange Act, and otherwise in compliance with applicable laws. The timing and volume of repurchases will depend on market conditions, the Company's capital management, investment opportunities, and other factors. The program does not obligate the Company to repurchase any specific number of shares, has no set expiration date, and may be modified, suspended, or discontinued at the Company's discretion. The Company repurchased 25,825,785 shares at an average price per share of $1.56 for approximately $40.2 million during the year ended December 31, 2024 under this repurchase program.

Common Stock repurchase

In conjunction with the completion of the 2029 Convertible 144A Notes, we used approximately $50.0 million from net proceeds to repurchase shares of our Common Stock in privately negotiated transactions with purchasers of the 2029 Convertible 144A Notes, facilitated by the Initial Purchaser or its affiliate. The purchase price per share was $0.9067, equivalent to the closing sale price of our Common Stock on January 4, 2024.

Note 9 Accumulated Other Comprehensive Income (Loss)

For the year ended December 31, 2024, changes in Accumulated other comprehensive income (loss), net of tax, were as follows:

(In thousands)	Foreign currency translation
Balance at December 31, 2023	$ (38,030)
Other comprehensive loss	(18,100)
Balance at December 31, 2024	$ (56,130)

For the year ended December 31, 2023, changes in Accumulated other comprehensive income, net of tax, were as follows:

(In thousands)	Foreign currency translation
Balance at December 31, 2022	$ (43,323)
Other comprehensive income	5,293
Balance at December 31, 2023	$ (38,030)

Note 10 Equity-Based Compensation

We maintain two equity-based incentive compensation plans, the 2016 Equity Incentive Plan and the 2007 Equity Incentive Plan that provide for grants of stock options and restricted stock to our directors, officers, key employees and certain outside consultants. Equity awards granted under our 2016 Equity Incentive Plan are exercisable for a period of up to 10 years from the date of grant. Equity awards granted under our 2007 Equity Incentive Plan are exercisable for a period of either 7 years or 10 years from the date of grant. Vesting periods range from immediate to 4 years. We currently grant equity awards under the 2016 Equity Incentive Plan only.

We classify the cash flows resulting from the tax benefit that arises when the tax deductions exceed the compensation cost recognized for those equity awards (excess tax benefits) as cash flows from operations. There were no excess tax benefits for the years ended December 31, 2024, 2023, and 2022.

Valuation and Expense Information

We recorded equity-based compensation expense of $11.0 million, $11.4 million and $18.5 million for the years ended December 31, 2024, 2023, and 2022, respectively, all of which were reflected as operating expenses. Of the $11.1 million of equity-based compensation expense recorded for the year ended December 31, 2024, $5.9 million was recorded as selling, general and administrative expenses, $4.5 million was recorded as research and development expenses and $0.6 million was recorded as a cost of revenue. Of the $11.4 million of equity-based compensation expense recorded for the year ended December 31, 2023, $6.5 million was recorded as selling, general and administrative expense, $4.2 million was recorded as research and development expenses and $0.7 million was recorded as a cost of revenue. Of the $18.5 million of equity-based compensation expense recorded for the year ended December 31, 2022, $12.3 million was recorded as selling, general and administrative expense, $3.8 million was recorded as research and development expenses and $2.4 million was recorded as cost of revenue.

As of December 31, 2024, there was $22.6 million of unrecognized compensation cost related to the equity awards granted under our equity-based incentive compensation plans. Such cost is expected to be recognized over a weighted-average period of approximately 1.92 years.

Stock Options

We estimate the fair value of each stock option on the date of grant using the Black-Scholes-Merton Model option-pricing formula and amortize the fair value to expense over the stock option's vesting period using the straight-line attribution approach. We account for forfeitures as they occur and apply the following assumptions in our Black-Scholes-Merton Model option-pricing formula:

	Year Ended December 31, 2024	Year Ended December 31, 2023	Year Ended December 31, 2022
Expected term (in years)	3.74 - 5.98	3.74 - 10.0	3.74 - 10.0
Risk-free interest rate	3.45% - 4.32%	3.61% - 4.72%	1.71% - 4.02%
Expected volatility	65.45% - 76.47%	63.11% - 76.43%	58.63% - 78.52%
Expected dividend yield	0%	0%	%

Expected Term: For the expected term of options grants, we used an estimate of the expected option life based on historical experience.

Risk-Free Interest Rate: The risk-free interest rate is based on the rates paid on securities issued by the U.S. Treasury with a term approximating the expected life of the option.

Expected Volatility: The expected volatility for stock options was based on the historical volatility of our Common Stock.

Expected Dividend Yield: We do not intend to pay dividends on Common Stock for the foreseeable future. Accordingly, we used a dividend yield of zero in the assumptions.

We maintain incentive stock plans that provide for the grants of equity awards to our directors, officers, employees and non-employee consultants. As of December 31, 2024, there were 28,867,632 shares of Common Stock reserved for issuance under our equity-based incentive plans. We intend to issue new shares upon the exercise of stock options. Stock options granted under these plans were granted at an option exercise price equal to the closing market value of the Common Stock on the applicable date of the grant. Stock options granted under these plans to employees typically become exercisable over four years in equal annual installments after the date of grant, and stock options granted to non-employee directors become exercisable in full one-year after the grant date, subject to, in each case, continuous service with us during the applicable vesting period. We assumed stock options to grant Common Stock as part of the mergers with Acuity Pharmaceuticals, Inc., Froptix, Inc., OPKO Biologics and BioReference, which reflected various vesting schedules, including monthly vesting to employees and non-employee consultants.

A summary of option activity under our stock option plans as of December 31, 2024, and the change during the year is presented below:

Options	Number of options	Weighted average exercise price	Weighted average remaining contractual term (years)	Aggregate intrinsic value (in thousands)
Outstanding at December 31, 2023	51,857,006	$ 4.94	5.32	$ 63
Granted	315,000	$ 1.21		
Exercised	—	$ —		
Forfeited	(903,638)	$ 2.53		
Expired	(5,780,625)	$ 7.24		
Outstanding at December 31, 2024	45,487,743	$ 4.67	4.93	$ 114
Vested and expected to vest at December 31, 2024	45,487,743	$ 4.67	4.93	$ 114
Exercisable at December 31, 2024	34,232,527	$ 5.49	3.93	$ 11

A summary of restricted stock unit activity as of December 31, 2024, and the change during the year is presented below:

Restricted stock units	Number of options	Weighted average fair value	Weighted average remaining contractual term (years)	Aggregate intrinsic value (in thousands)
Unvested at December 31, 2023	1,874,063	$ 3.05	8.41	$ 2,830
Granted	9,679,250	$ 1.36		
Forfeited	(60,223)	$ 1.68		
Actual vested	(549,687)	$ 3.20		
Unvested and expected to vest at December 31, 2024	10,943,403	$ 1.55	9.34	$ 16,087

The total intrinsic value of stock options exercised for the years ended December 31, 2024, 2023, and 2022 was $0.0 million, $0.0 million and $0.2 million, respectively.

The weighted average grant date fair value of stock options granted for the years ended December 31, 2024, 2023, and 2022 was $0.77, $0.99, and $1.29, respectively. The weighted average grant date fair value of restricted stock units granted for the years ended December 31, 2024, 2023, and 2022 was $1.36, $0.00 and $3.11, respectively.

The total fair value of stock options vested during the years ended December 31, 2024, 2023, and 2022 was $8.8 million, $8.5 million and $17.7 million, respectively. The total fair value of restricted stock units vested during the years ended December 31, 2024, 2023, and 2022 was $1.7 million, $1.8 million and $5.5 million, respectively.

During the year ended December 31, 2022, we modified the terms of certain outstanding stock options for 95 grantees, including options issued to GeneDx employees, to accelerate the vesting period of the stock options. For the year ended December 31, 2022, we recognized additional equity-based compensation expense of $7.1 million as a result of the stock option modifications.

Note 11 Income Taxes

We operate and are required to file tax returns in the U.S. and various foreign jurisdictions.

The benefit (provision) for incomes taxes consists of the following:

(In thousands)	For the years ended December 31, 2024	2023	2022
Current			
Federal	$ (5,306)	$ (487)	$ —
State	(19,129)	946	(394)
Foreign	(3,665)	(4,750)	(10,512)
	(28,100)	(4,291)	(10,906)
Deferred			
Federal	(21,536)	(52)	40,750
State	(3,375)	298	12,078
Foreign	10,167	(392)	21,577
	(14,744)	(146)	74,405
Total, net	$ (42,844)	$ (4,437)	$ 63,499

Deferred income tax assets and liabilities as of December 31, 2024 and 2023 were comprised of the following:

(In thousands)	December 31, 2024	December 31, 2023
Deferred income tax assets:		
Federal net operating loss	$ 6,482	$ 70,779
State net operating loss	26,253	59,650
Foreign net operating loss	17,298	13,315
Research and development expense	37,247	21,431
Tax credits	16,074	20,827
Stock options	28,373	30,431
Accruals	9,481	4,743
Equity investments	3,964	25,718
Bad debts	206	348
Lease liability	648	1,578
Foreign credits	9,659	9,653
Available-for-sale securities	2,622	2,642
Operating lease asset	17,588	17,141
Fixed assets	1,081	318
Other	1,615	3,558
Deferred income tax assets	178,591	282,132
Deferred income tax liabilities:		
Intangible assets	(73,023)	(91,020)
Operating lease liability	(15,428)	(16,773)
Other	(1,985)	(3,067)
Deferred income tax liabilities	(90,436)	(110,860)
Net deferred income tax assets	88,155	171,272
Valuation allowance	(226,603)	(294,563)
Net deferred income tax assets (liabilities)	$ (138,448)	$ (123,291)

Note: Net deferred income tax liability balances at December 31, 2024 and 2023 include $2.4 million and $3.5 million, respectively, recorded to Other assets on the Consolidated Balance Sheets.

As of December 31, 2024, we had federal, state and foreign net operating loss carryforwards of approximately $51.6 million, $438.1 million and $77.3 million, respectively, that expire at various dates through 2040 unless indefinite in nature. As of December 31, 2024, we have research and development tax credit carryforwards of approximately $16.1 million that expire in varying amounts through 2043. As of each reporting date, management considers new evidence, both positive and negative, that could affect its view of the future realization of deferred tax assets. We have determined a valuation allowance is required against all of our net deferred tax assets that we do not expect to be utilized by the reversing of deferred income tax liabilities.

Under Section 382 of the Internal Revenue Code of 1986, as amended ("IRC" or the "Internal Revenue Code"), certain significant changes in ownership may restrict the future utilization of our income tax loss carryforwards and income tax credit carryforwards in the U.S. The annual limitation is equal to the value of our stock immediately before the ownership change, multiplied by the long-term tax-exempt rate (i.e., the highest of the adjusted federal long-term rates in effect for any month in the three-calendar-month period ending with the calendar month in which the change date occurs). This limitation may be increased under the IRC Section 338 Approach (IRS approved methodology for determining recognized Built-In Gain). As a result, federal net operating losses and tax credits may expire before we are able to fully utilize them.

During 2008, we conducted a study to determine the impact of the various ownership changes that occurred during 2007 and 2008. As a result, we have concluded that the annual utilization of our net operating loss carryforwards (“NOLs”) and tax credits is subject to a limitation pursuant to Internal Revenue Code Section 382. Under the tax law, such NOLs and tax credits are subject to expiration from 15 to 20 years after they were generated. As a result of the annual limitation that may be imposed on such tax attributes and the statutory expiration period, some of these tax attributes may expire prior to our being able to use them. There is no current impact on these financial statements as a result of the annual limitation. This study did not conclude whether OPKO’s predecessor, eXegenics, Inc., pre-merger NOLs were limited under Section 382. As such, of the $51.6 million of federal net operating loss carryforwards, at least approximately $16.6 million may not be able to be utilized.

During 2020, we conducted a study to determine whether any ownership changes occurred from 2009 through 2020. In 2024, the study was updated and we concluded that the annual utilization of our NOLs and tax credits is not subject to a limitation pursuant to Internal Revenue Code Section 382.

We file federal income tax returns in the U.S. and various foreign jurisdictions, as well as with various U.S. states and the Ontario and Nova Scotia provinces in Canada. We are subject to routine tax audits in all jurisdictions for which we file tax returns. Tax audits by their very nature are often complex and can require several years to complete. Other than the Israeli tax matter, we did not have any U.S. or foreign audits as of December 31, 2024.

U.S. Federal: Under the tax statute of limitations applicable to the Internal Revenue Code, we are no longer subject to U.S. federal income tax examinations by the Internal Revenue Service for years before 2021. However, because we are carrying forward income tax attributes, such as net operating losses and tax credits from those years, these attributes can still be audited when utilized on returns filed in the future.

State: Under the statute of limitations applicable to most state income tax laws, we are no longer subject to state income tax examinations by tax authorities for years before 2020 in states in which we have filed income tax returns. Certain states may take the position that we are subject to income tax in such states even though we have not filed income tax returns in such states and, depending on the varying state income tax statutes and administrative practices, the statute of limitations in such states may extend to years before 2020.

Foreign: Under the statute of limitations applicable to our foreign operations, we are generally no longer subject to tax examination for years before 2019 in jurisdictions where we have filed income tax returns.

Tax Cuts and Jobs Act

On December 22, 2017, the 2017 Tax Cuts and Jobs Act (the "2017 Tax Act") was enacted into law, and the new legislation contained several key tax provisions, including a reduction of the corporate income tax rate from 35% to 21% effective January 1, 2018 and a one-time mandatory transition tax on accumulated foreign earnings, among others. We were required to recognize the effect of the tax law changes in the period of enactment, such as remeasuring our U.S. deferred tax assets and liabilities, as well as reassessing the net realizability of our deferred tax assets and liabilities.

The 2017 Tax Act provides for a Global Intangible Low Taxed Income provision ("GILTI"). Under the GILTI provision, certain foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary's tangible assets are included in U.S. taxable income. The Company has not recorded any deferred taxes for future GILTI inclusions as any future inclusions are expected to be treated as a period expense and offset by net operating loss carryforwards in the U.S, if available.

Unrecognized Tax Benefits

As of December 31, 2024, 2023, and 2022, the total amount of gross unrecognized tax benefits was approximately $16.5 million, $16.9 million, and $14.8 million, respectively. As of December 31, 2024, the total amount of unrecognized tax benefits that, if recognized, would affect our effective income tax rate was $(9.9) million. We account for any applicable interest and penalties on uncertain tax positions as a component of income tax expense and we recognized $0.3 million and $0.1 million of interest expense for the years ended December 31, 2024 and 2023, respectively. As of December 31, 2023 and 2022, $(9.9) million and $(10.8) million of the unrecognized tax benefits, if recognized, would have affected our effective income tax rate. We do not expect any unrecognized tax benefits will be recognized within the next twelve months.

The following summarizes the changes in our gross unrecognized income tax benefits.

	For the years ended December 31,	
(In thousands)	2024	2023
Unrecognized tax benefits at beginning of period	$ 16,931	$ 14,843
Gross increases – tax positions in current period	265	3,991
Gross decreases – tax positions in prior period	—	(348)
Settlements	—	(1,360)
Lapse of Statute of Limitations	(687)	(195)
Unrecognized tax benefits at end of period	$ 16,509	$ 16,931

Other Income Tax Disclosures

The significant elements contributing to the difference between the federal statutory tax rate and the effective tax rate are as follows:

	For the years ended December 31,		
	2024	2023	2022
Federal statutory rate	21.0%	21.0%	21.0%
State income taxes, net of federal benefit	(268.6)%	4.7%	4.0%
Foreign income tax	(18.6)%	(2.5)%	(2.0)%
Income Tax Refunds	—%	(0.4)%	—%
Research and development tax credits	6.9%	0.7%	0.2%
GeneDx Disposition	—%	—%	0.8%
Valuation allowance	583.4%	(7.0)%	(6.3)%
Rate change effect	(21.0)%	0.4%	5.2%
Non-deductible items	(4.8)%	(0.6)%	0.6%
Unrecognized tax benefits	1.7%	0.7%	(0.7)%
GILTI	(441.7)%	(14.8)%	(4.9)%
Convertible Debt	(71.8)%	—%	—%
Stock options excess tax benefit, cancellations & expirations	(39.7)%	(2.3)%	(0.3)%
Imputed interest	(19.7)%	(0.8)%	(0.4)%
Tax on deemed dividend	—%	—%	(1.0)%
True-Up to Adjustments	(12.3)%	(2.3)%	—%
BioReference Asset Sale	(133.9)%	—%	—%
Other	6.3%	0.8%	—%
Total	(412.8)%	(2.4)%	16.2%

Certain operations in Israel have been granted “Beneficiary Enterprise” status by the Israeli Income Tax Authority, which makes us eligible for tax benefits under the Israeli Law for Encouragement of Capital Investments, 1959. Under the terms of the Beneficiary Enterprise program, beneficiary income that is attributable to our operations in Kiryat Gat, Israel will be exempt from income tax through 2023. For the year ended December 31, 2024 the tax holiday had expired.

The following table reconciles our income (loss) before income taxes between U.S. and foreign jurisdictions:

	For the years ended December 31,		
(In thousands)	2024	2023	2022
Pre-tax income (loss):			
U.S.	$ 45,796	$ (198,394)	$ (389,439)
Foreign	(56,176)	13,968	(2,465)
Total	$ (10,380)	$ (184,426)	$ (391,904)

In 2021, we revised our position regarding unrepatriated foreign earnings to a partially reinvested assertion. We assert that all foreign earnings will be indefinitely reinvested, with the exception of certain foreign investments in which earnings and cash generation are in excess of local needs, and if opportunities exist to repatriate funds in a tax efficient manner. With the passage of the Tax Act, dividends of earnings from non-U.S. operations are generally no longer subject to U.S. income tax. We continue to analyze and adjust the estimated impact of the non-U.S. income and withholding tax liabilities based on the source of these earnings, as well as the expected means through which those earnings may be taxed. As of December 31, 2024, we do not maintain any accrued withholding tax related to earnings that are not deemed to be permanently reinvested.

Note 12 Related Party Transactions

We lease office space from Frost Real Estate Holdings, LLC (“Frost Holdings”) in Miami, Florida, where our principal executive offices are located. Effective August 1, 2024, we entered into an amendment to our lease agreement with Frost Holdings to decrease the lease space from approximately 29,500 square feet to approximately 26,328 square feet of space. The amended lease provides for payments of approximately $91 thousand per month in the first year increasing annually to $103 thousand per month in the fifth year, plus applicable sales tax. The rent is inclusive of operating expenses, property taxes and parking.

In January 2024, in connection with the closing of the offering of the 2029 Convertible Notes, we issued and sold approximately $71.1 million aggregate principal amount of the 2029 Convertible Affiliate Notes to the Affiliate Purchasers, in exchange for $55.0 million aggregate principal amount of the 2023 Convertible Notes, together with approximately $16.1 million accrued but unpaid interest thereon, held by such Affiliate Purchasers. See Note 7 for additional information. Dr. Frost, an Affiliate Purchaser, subsequently purchased 2029 Convertible Notes on the open market in September 2024.

On October 12, 2023, the Company entered into an E-Commerce Distribution Agreement with NextPlat Corp ("NextPlat"), a global e-commerce provider, in which Dr. Frost owns more than a 20% interest. Under the terms of the agreement, NextPlat has agreed to launch an OPKO Health-branded online storefront on the Alibaba Group Holding Limited Tmall Global e-commerce platform in China, featuring an assortment of nutraceutical and veterinary products sold and distributed by OPKO Health Europe SLU, our wholly-owned subsidiary. The Company and NextPlat amended the agreement in October 2024 to extend the term of the agreement to 2026, and permit NextPlat to launch an online storefront on additional e-commerce platforms throughout Asia.

On May 4, 2023, the Company entered into an Assignment and Assumption Agreement (the "Assignment Agreement") with Ruen-Hui Biopharmaceuticals, Inc., a Taiwanese entity ("Ruen-Hui") in which Dr. Hsiao owns more than a 10% interest. Ruen-Hui assumed the Company's obligations under an exclusive license agreement with Academia Sinica in exchange for a number of potential milestone payments up to $1 million, commercial milestones ranging from low to double digit millions, and royalty payments. Ruen Hui is also responsible for any outstanding payment obligations under such license agreement, including patent maintenance costs, and any payments due to Academia Sinica.

On April 29, 2022, upon consummation of our sale of GeneDx, the Company entered into a Transition Services Agreement (the "Transition Services Agreement") with GeneDx, pursuant to which the Company agreed to provide, at cost, certain customary support services in respect of GeneDx's business through August 31, 2023, including human resources, information technology support, and finance and accounting. As of December 31, 2023, the Company had incurred aggregate expenses of $2.5 million for services rendered under the Transition Services Agreement. For the year ended December 31, 2024, the Company did not incur expenses for services rendered under the Transition Services Agreement. As of December 31, 2024, GeneDx had no outstanding balance payable to the Company under the Transition Services Agreement.

The Company owns approximately 6% of Pharmsynthez and Pharmsynthez holds shares of Xenetic, in which the Company has a 2.9% ownership interest as of December 31, 2024. See further discussion of our Xenetic investment in Note 5

We hold investments in Zebra (ownership 28.5%), ChromaDex Corporation (0.05%), COCP (2%), NIMS (0.5%), Eloxx (1.0%), BioCardia (0.3%) and LeaderMed Health Group Limited (47.0%). Neovasc, Inc., in which we owned 0.0% as of December 31, 2023, was acquired by Shockwave Medical, Inc. in April 2023. We received $363 thousand in merger consideration in exchange for its shares. These investments were considered related party transactions as a result of our executive management's ownership interests and/or board representation in these entities. We also hold an investment in GeneDx Holdings (Nasdaq: WGS) representing an 2.2% ownership interest as a result of our sale of GeneDx, Inc. and subsequent participation in an underwritten offering by GeneDx Holdings. Richard Pfenniger who sits on our Board also sits on the GeneDx Board. See further discussion of our investments in Note 5.

Dr. Elias Zerhouni, our Vice Chairman and President, sits on the board of directors of Danaher Corporation ("Danaher"). Our subsidiary, BioReference, routinely procures products and services from several subsidiaries of Danaher, including Beckman Coulter, Integrated DNA Technologies Inc., and Leica Microsystems Inc., to which BioReference has paid $3.2 million, $4.7 million, and $0.3 million, respectively, during the year ended December 31, 2024.

BioReference purchases and uses certain products acquired from InCellDx, a company in which we hold a 29% interest.

We reimburse Dr. Frost for Company-related use by Dr. Frost and our other executives of an airplane owned by a company that is beneficially owned by Dr. Frost. We reimburse Dr. Frost for out-of-pocket operating costs for the use of the airplane by Dr. Frost or Company executives for Company-related business. We do not reimburse Dr. Frost for personal use of the airplane by Dr. Frost or any other executive. For the years ended December 31, 2024, 2023, and 2022, we recognized approximately $131 thousand, $79 thousand, and $152 thousand, respectively, for Company-related travel by Dr. Frost and other OPKO executives.

Note 13 Employee Benefit Plans

Effective January 1, 2007, the OPKO Health Savings and Retirement Plan (the "Plan") permits employees to contribute up to 100% of qualified pre-tax annual compensation up to annual statutory limitations. The discretionary company match for employee contributions to the Plan is 100% up to the first 4% of the participant's earnings contributed to the Plan. Our matching contributions to our plans, including the Plan and predecessor plans for BioReference, were approximately $6.7 million, $7.3 million and $10.6 million for the years ended December 31, 2024, 2023, and 2022, respectively.

Note 14 Commitments and Contingencies

In February 2023, the Office of the Attorney General for the State of Texas ("TX OAG") informed BioReference that it believes that, from 2005 to 2023, BioReference may have violated the Texas Medicaid Fraud Prevention Act with respect to claims it presented to Texas Medicaid for reimbursement. BioReference and the TX OAG entered into a settlement agreement in February 2025 for $4.2 million, under which BioReference did not admit any wrongdoing

On December 29, 2022, the Israel Tax Authority (the "ITA") issued an assessment against our subsidiary, OPKO Biologics in the amount of approximately $246 million (including interest) related to uncertain tax positions involving income recognition in connection with an examination of foreign tax returns for the 2014 through 2020 tax years. We recognize that local tax law is inherently complex and the local taxing authorities may not agree with certain tax positions taken. We are appealing this assessment, as we believe, other than for uncertain tax positions for which we have reserved, the issues are without technical merit. The matter is currently before the courts. The trial has concluded; however, there are certain other procedural matters under Israeli law that must occur before a judgment is rendered. We intend to continue to exhaust all judicial remedies necessary to resolve the matter, as necessary, which could be a lengthy process. There can be no assurance that this matter will be resolved in our favor, and an adverse outcome, or any future tax examinations involving similar assertions, could have a material effect on our financial condition, results of operations and cash flows.

The Company and BioReference entered into (i) a settlement agreement (the "Settlement Agreement"), effective July 14, 2022, with the United States of America, acting through the United States Department of Justice and on behalf of the Office of Inspector General of the Department of Health and Human Services ("OIG-HHS"), and the Defense Health Agency, acting on behalf of the TRICARE Program (collectively, the "United States"), the Commonwealth of Massachusetts , the State of Connecticut, and the relator identified therein ("Relator"), and (ii) a Corporate Integrity Agreement, effective July 14, 2022 (the "CIA"), with the OIG-HHS, to resolve the investigation and related civil action concerning alleged fee-for-service claims for payment to the Medicare Program, the Medicaid Program, and the TRICARE Program (collectively, the "Federal Health Care Programs").

Under the Settlement Agreement, the Company and BioReference admitted only to having made payments to certain physicians and physicians' groups for office space rentals for amounts that exceeded fair market value, and that it did not report or return any such overpayments to the Federal Health Care Programs (the "Covered Conduct"). The Covered Conduct had commenced prior to the Company's acquisition of BioReference in 2015. With the exception of the Covered Conduct, the Company and BioReference expressly deny the allegations of the Relator as set forth in her civil action. The Company has paid a total of $10,000,000 plus accrued interest from September 24, 2021 at a rate of 1.5% per annum (the "Settlement Amount"). The Settlement Amount consists of $9,853,958 payable to the United States, $141,041 payable to the Commonwealth and $5,001 payable to Connecticut, in each case plus interest and was paid on July 18, 2022. Conditioned upon payment of the Settlement Amount, the United States, Massachusetts and Connecticut agreed to release the Company and BioReference from any civil or administrative monetarily liability arising from the Covered Conduct. Upon payment of the Settlement Amount and the amount due under a separate agreement with the Relator, the Relator released the Company and BioReference from any and all claims and potential claims. Further, in consideration of the obligations of the Company and BioReference in the Settlement Agreement and the CIA, the OIG-HHS released and refrained from instituting any administrative action seeking to exclude the Company or BioReference from participating in Medicare, Medicaid or other Federal health care programs as a result of the Covered Conduct.

Under the CIA, which has a term of 5 years, BioReference is required to, among other things: (i) maintain a Compliance Officer, a Compliance Committee, board review and oversight of certain federal healthcare compliance matters, compliance programs, and disclosure programs; (ii) provide management certifications and compliance training and education; (iii) establish written compliance policies and procedures to meet federal health care program requirements; (iv) create procedures designed to ensure compliance with the Anti-Kickback Statute and/or Stark Law; (v) engage an independent review organization to conduct a thorough review of BioReference' s systems, policies, processes and procedures related to certain arrangements; (vi) implement a risk assessment and internal review process; (vii) establish a disclosure program for whistleblowers; and (viii) report or disclose certain events and physician payments. The Company's or BioReference's failure to comply with its obligations under the CIA could result in monetary penalties and the exclusion from participation in Federal Health Care Programs. The CIA does not apply to any of the Company's subsidiaries other than BioReference, and its scope is generally limited to "focus arrangements", which are those "arrangements" (as defined in the CIA) (i) between BioReference and any actual source or recipient of health care business or referrals and involves, directly or indirectly, the offer, payment, or provision of anything of value, or (ii) is between BioReference and any physician (or a physician's immediate family member). Most of these measures have already been implemented at BioReference. Following its acquisition of BioReference, the Company and BioReference implemented robust compliance measures that substantially align with those actions required under the CIA.

GeneDx, the Company's former subsidiary, received a letter dated May 26, 2022 from the Texas Medicaid Office of the Inspector General stating that certain testing provided by GeneDx was not eligible for reimbursement by the Texas Medicaid program, because the testing was considered non-covered by the Texas Medicaid program at the time the tests were performed and/or GeneDx did not hold the requisite CLIA subspecialty classifications for the testing. This matter was settled in November 2023 for approximately $231 thousand.

On March 1, 2019, the Company received a Civil Investigative Demand ("CID") from the U.S. Department of Justice ("DOJ"), Washington, DC. The CID sets forth document requests and interrogatories in connection with allegations that the Company and certain of its affiliates violated the False Claims Act and/or the Anti-Kickback Statute. On January 13, 2022, the Federal Government notified the U.S.D.C., Middle District Florida, Jacksonville Division, that it is declining to intervene in the matter but retains the right, via the Attorney General, to consent to any proposed dismissal of the action by the Court. On February 9, 2022, the States of Florida, Georgia, and Commonwealth of Massachusetts notified the U.S.D.C., Middle District Florida, Jacksonville Division, that they are declining to intervene in the matter. Notwithstanding the above declinations, on February 17, 2022, the Company was served with the Relator's Summons and Complaint which alleges violations of the False Claims Act, the California Fraud Preventions Act, the Florida False Claims Act, the Massachusetts False Claims Act, the Georgia False Medicaid Claims Act, and illegal kickbacks. The case was dismissed in March 2023. However, the Relator filed an amended complaint in April 2023, which was subsequently dismissed, and a second amended complaint which was dismissed in January 2024. Relator then filed an appeal in the U.S. Eleventh Circuit Court of Appeals. On November 18, 2024, the Eleventh Circuit Court of Appeals issued an order affirming the Federal District Court's Dismissal with prejudice.

From time to time, we may receive inquiries, document requests, CIDs or subpoenas from the Department of Justice, OCR, CMS, various payors and fiscal intermediaries, and other state and federal regulators regarding investigations, audits and reviews. In addition to the matters discussed in this note, we are currently responding to CIDs, subpoenas, payor audits, and document requests for various matters relating to our laboratory operations. Some pending or threatened proceedings against us may involve potentially substantial amounts as well as the possibility of civil, criminal, or administrative fines, penalties, or other sanctions, which could be material. Settlements of suits involving the types of issues that we routinely confront may require monetary payments as well as corporate integrity agreements. Additionally, qui tam or "whistleblower" actions initiated under the civil False Claims Act may be pending but placed under seal by the court to comply with the False Claims Act's requirements for filing such suits. Also, from time to time, we may detect issues of non-compliance with federal healthcare laws pertaining to claims submission and reimbursement practices and/or financial relationships with physicians, among other things. We may avail ourselves of various mechanisms to address these issues, including participation in voluntary disclosure protocols. Participating in voluntary disclosure protocols can have the potential for significant settlement obligations or even enforcement action. The Company generally has cooperated, and intends to continue to cooperate, with appropriate regulatory authorities as and when investigations, audits and inquiries arise.

We are a party to other litigation in the ordinary course of business. While we cannot predict the ultimate outcome of legal matters, we accrue a liability for legal contingencies when we believe that it is both probable that a liability has been incurred and that we can reasonably estimate the amount of the loss. It's reasonably possible the ultimate liability could exceed amounts currently estimated and we review established accruals and adjust them to reflect ongoing negotiations, settlements, rulings, advice of legal counsel and other relevant information. To the extent new information is obtained and our views on the probable outcomes of claims, suits, assessments, investigations or legal proceedings change, changes in our accrued liabilities would be recorded in the period in which such determination is made. Because of the high degree of judgment involved in establishing loss estimates, the ultimate outcome of such matters will differ from our estimates and such differences may be material to our business, financial condition, results of operations, and cash flows.

At December 31, 2024, we were committed to make future purchases for inventory and other items in 2025 that occur in the ordinary course of business under various purchase arrangements with fixed purchase provisions aggregating approximately $39.2 million.

Note 15 Revenue Recognition

We generate revenues from services, products and intellectual property as follows:

Revenue from services

Revenue for laboratory services is recognized at the time test results are reported, which approximates when services are provided and the performance obligations are satisfied. Services are provided to patients covered by various third-party payor programs including various managed care organizations, as well as the Medicare and Medicaid programs. Billings for services are included in revenue net of allowances for contractual discounts, allowances for differences between the amounts billed and estimated program payment amounts, and implicit price concessions provided to uninsured patients which are all elements of variable consideration.

The following are descriptions of our payors for laboratory services:

Healthcare Insurers. Reimbursements from healthcare insurers are based on negotiated fee-for-service schedules. Revenues consist of amounts billed, net of contractual allowances for differences between amounts billed and the estimated consideration we expect to receive from such payors, which considers historical denial and collection experience and the terms of our contractual arrangements. Adjustments to the allowances, based on actual receipts from the third-party payors, are recorded upon settlement.

Government Payors. Reimbursements from government payors are based on fee-for-service schedules set by governmental authorities, including traditional Medicare and Medicaid. Revenues consist of amounts billed, net of contractual allowances for differences between amounts billed and the estimated consideration we expect to receive from such payors, which considers historical denial and collection experience and the terms of our contractual arrangements. Adjustments to the allowances, based on actual receipts from the government payors, are recorded upon settlement.

Client Payors. Client payors include physicians, hospitals, employers, and other institutions for which services are performed on a wholesale basis, and are billed and recognized as revenue based on negotiated fee schedules.

Patients. Uninsured patients are billed based on established patient fee schedules or fees negotiated with physicians on behalf of their patients. Insured patients (including amounts for coinsurance and deductible responsibilities) are billed based on fees negotiated with healthcare insurers. Collection of billings from patients is subject to credit risk and ability of the patients to pay. Revenues consist of amounts billed net of discounts provided to uninsured patients in accordance with our policies and implicit price concessions. Implicit price concessions represent differences between amounts billed and the estimated consideration that we expect to receive from patients, which considers historical collection experience and other factors including current market conditions. Adjustments to the estimated allowances, based on actual receipts from the patients, are recorded upon settlement.

The complexities and ambiguities of billing, reimbursement regulations and claims processing, as well as considerations unique to Medicare and Medicaid programs, require us to estimate the potential for retroactive adjustments as an element of variable consideration in the recognition of revenue in the period the related services are rendered. Actual amounts are adjusted in the period those adjustments become known. For the year ended December 31, 2024, and 2023, negative revenue adjustments due to changes in estimates of implicit price concessions for performance obligations satisfied in prior periods of $1.5 million and $19.2 million, respectively, were recognized. Revenue adjustments for the year ended December 31, 2024 were primarily due to the composition of patient pay mix and for the year ended December 31, 2023 were primarily due to lower reimbursements from Medicare payors.

Third-party payors, including government programs, may decide to deny payment or recoup payments for testing they contend were improperly billed or not medically necessary, against their coverage determinations, or for which they believe they have otherwise overpaid (including as a result of their own error), and we may be required to refund payments already received. Our revenues may be subject to retroactive adjustment as a result of these factors among others, including without limitation, differing interpretations of billing and coding guidance and changes by government agencies and payors in interpretations, requirements, and "conditions of participation" in various programs. We have processed requests for recoupment from third-party payors in the ordinary course of our business, and it is likely that we will continue to do so in the future. If a third-party payor denies payment for testing or recoups money from us in a later period, reimbursement for our testing could decline.

As an integral part of our billing compliance program, we periodically assess our billing and coding practices, respond to payor audits on a routine basis, and investigate reported failures or suspected failures to comply with federal and state healthcare reimbursement requirements, as well as overpayment claims which may arise from time to time without fault on the part of the Company. We may have an obligation to reimburse Medicare, Medicaid, and third-party payors for overpayments regardless of fault. We have periodically identified and reported overpayments, reimbursed payors for overpayments and taken appropriate corrective action.

Settlements with third-party payors for retroactive adjustments due to audits, reviews or investigations are also considered variable consideration and are included in the determination of the estimated transaction price for providing services. These settlements are estimated based on the terms of the payment agreement with the payor, correspondence from the payor and our historical settlement activity, including an assessment of the probability a significant reversal of cumulative revenue recognized will occur when the uncertainty is subsequently resolved. Estimated settlements are adjusted in future periods as adjustments become known (that is, new information becomes available), or as years are settled or are no longer subject to such audits, reviews, and investigations. As of December 31, 2024 and 2023, we have liabilities of approximately $2.0 million and $3.1 million within Accrued expenses and Other long-term liabilities related to reimbursements for payor overpayments.

The composition of Revenue from services by payor for the years ended December 31, 2024, 2023 and 2022 was as follows:

	For the years ended December 31,		
(In thousands)	2024	2023	2022
Healthcare insurers	$ 289,158	$ 315,560	$ 326,144
Government payors	82,421	82,502	97,191
Client payors	93,310	100,171	316,309
Patients	15,778	17,042	15,986
Total	$ 480,667	$ 515,275	$ 755,630

Revenue from products

We recognize revenue from product sales when a customer obtains control of promised goods or services. The amount of revenue that is recorded reflects the consideration that we expect to receive in exchange for those goods or services. Our estimates for sales returns and allowances are based upon the historical patterns of product returns and allowances taken, matched against the sales from which they originated, and our evaluation of specific factors that may increase or decrease the risk of product returns. Product revenues are recorded net of estimated rebates, chargebacks, discounts, co-pay assistance and other deductions (collectively, "Sales Deductions") as well as estimated product returns which are all elements of variable consideration. Allowances are recorded as a reduction of revenue at the time product revenues are recognized. The actual amounts of consideration ultimately received may differ from our estimates. If actual results in the future vary from our estimates, we will adjust these estimates, which would affect Revenue from products in the period such variances become known.

Rayaldee is distributed in the U.S. principally through the retail pharmacy channel, which initiates with the largest wholesalers in the U.S. (collectively, "*Rayaldee* Customers"). In addition to distribution agreements with *Rayaldee* Customers, we have entered into arrangements with many healthcare providers and payors that provide for government-mandated and/or privately-negotiated rebates, chargebacks and discounts with respect to the purchase of *Rayaldee*.

We recognize revenue for shipments of *Rayaldee* at the time of delivery to customers after estimating Sales Deductions and product returns as elements of variable consideration utilizing historical information and market research projections. For the years ended December 31, 2024, 2023 and 2022, we recognized $29.0 million, $31.0 million and $27.3 million in net product revenue from sales of *Rayaldee*.

The following table presents an analysis of product sales allowances and accruals as contract liabilities for the years ended December 31, 2024, 2023 and 2022:

(In thousands)	Chargebacks, discounts, rebates and fees	Governmental	Returns	Total
Balance at December 31, 2023	$ 2,578	$ 6,150	$ 2,192	$ 10,920
Provision related to current period sales	15,877	23,042	1,386	40,305
Credits or payments made	(16,385)	(23,827)	(1,113)	(41,325)
Balance at December 31, 2024	$ 2,070	$ 5,365	$ 2,465	$ 9,900
Total gross Rayaldee sales				$ 69,299
Provision for Rayaldee sales allowances and accruals as a percentage of gross Rayaldee sales				58%

(In thousands)	Chargebacks, discounts, rebates and fees	Governmental	Returns	Total
Balance at December 31, 2022	$ 1,532	$ 5,063	$ 1,683	$ 8,278
Provision related to current period sales	14,606	20,589	1,351	36,546
Credits or payments made	(13,560)	(19,502)	(842)	(33,904)
Balance at December 31, 2023	$ 2,578	$ 6,150	$ 2,192	$ 10,920
Total gross Rayaldee sales				$ 67,547
Provision for Rayaldee sales allowances and accruals as a percentage of gross Rayaldee sales				54%

(In thousands)	Chargebacks, discounts, rebates and fees	Governmental	Returns	Total
Balance at December 31, 2021	$ 2,014	$ 5,499	$ 2,639	$ 10,152
Provision related to current period sales	12,995	18,165	1,170	32,330
Credits or payments made	(13,477)	(18,601)	(2,126)	(34,204)
Balance at December 31, 2022	$ 1,532	$ 5,063	$ 1,683	$ 8,278
Total gross Rayaldee sales				$ 59,557
Provision for Rayaldee sales allowances and accruals as a percentage of gross Rayaldee sales				54%

Taxes collected from customers related to revenues from services and revenues from products are excluded from revenues.

Revenue from intellectual property and other

We recognize revenues from the transfer of intellectual property generated through license, development, collaboration and/or commercialization agreements. The terms of these agreements typically include payment to us for one or more of the following: non-refundable, up-front license fees; development and commercialization milestone payments; funding of research and/or development activities; and royalties on sales of licensed products. Revenue is recognized upon satisfaction of a performance obligation by transferring control of a good or service to the customer.

For research, development and/or commercialization agreements that result in revenues, we identify all material performance obligations, which may include a license to intellectual property and know-how, and research and development activities. In order to determine the transaction price, in addition to any upfront payment, we estimate the amount of variable consideration at the outset of the contract either utilizing the expected value or most likely amount method, depending on the facts and circumstances relative to the contract. We constrain (reduce) our estimates of variable consideration such that it is probable that a significant reversal of previously recognized revenue will not occur throughout the life of the contract. When determining if variable consideration should be constrained, we consider whether there are factors outside of our control that could result in a significant reversal of revenue. In making these assessments, we consider the likelihood and magnitude of a potential reversal of revenue. These estimates are re-assessed each reporting period as required.

Upfront License Fees: If a license to our intellectual property is determined to be functional intellectual property distinct from the other performance obligations identified in the arrangement, we recognize revenue from nonrefundable, upfront license fees based on the relative value prescribed to the license compared to the total value of the arrangement. The revenue is recognized when the license is transferred to the customer and the customer is able to use and benefit from the license. For licenses that are not distinct from other obligations identified in the arrangement, we utilize judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time. If the combined performance obligation is satisfied over time, we apply an appropriate method of measuring progress for purposes of recognizing revenue from nonrefundable, upfront license fees. We evaluate the measure of progress each reporting period and, if necessary, adjust the measure of performance and related revenue recognition.

Research and Development Activities: If we are entitled to reimbursement from our customers for specified research and development expenses, we account for them as separate performance obligations if distinct. We also determine whether the research and development funding would result in revenues or an offset to research and development expenses in accordance with provisions of gross or net revenue presentation. The corresponding revenues or offset to research and development expenses are recognized as the related performance obligations are satisfied.

BARDA Contract: Revenue from the BARDA Contract is generated under terms that are cost plus fee. We recognize revenue using the incurred costs output method to measure progress. Revenue will only be recognized when research and development services are performed to the extent of actual costs incurred.

Sales-based Milestone and Royalty Payments: Our customers may be required to pay us sales-based milestone payments or royalties on future sales of commercial products. We recognize revenues related to sales-based milestone and royalty payments upon the later to occur of (i) achievement of the customer's underlying sales or (ii) satisfaction of any performance obligation(s) related to these sales, in each case assuming the license to our intellectual property is deemed to be the predominant item to which the sales-based milestones and/or royalties relate.

Other Potential Products and Services: Arrangements may include an option for license rights, future supply of drug substance or drug product for either clinical development or commercial supply at the licensee's election. We assess if these options provide a material right to the licensee and if so, they are accounted for as separate performance obligations at the inception of the contract and revenue is recognized only if the option is exercised and products or services are subsequently delivered or when the rights expire. If the promise is based on market terms and not considered a material right, the option is accounted for if and when exercised. If we are entitled to additional payments when the licensee exercises these options, any additional payments are generally recorded in license or other revenues when the licensee obtains control of the goods, which is upon delivery.

Revenue from the transfer of intellectual property and other: includes milestone payments, royalties, and other collaboration revenues, which totaled $77.4 million, $180.7 million, and $105.7 million for the years ended December 31, 2024, 2023, and 2022, respectively.

For the year ended December 31, 2024, such revenue totaled $77.4 million, which included $30.0 million from Pfizer, inclusive of $28.3 million from gross profit share and royalty payments for both NGENLA (Somatrogon) and Pfizer's Genotropin® (Somatropin), $23.8 million from the BARDA Contract, a $12.5 million milestone payment from Merck under the Merck Agreement, $10.2 million from contract manufacturers' commercial milestones.

For the year ended December 31, 2023, revenue from the transfer of intellectual property and other totaled $180.7 million, which included $116.7 million from Pfizer, which included a $90.0 million milestone payment triggered by the FDA approval of NGENLA (Somatrogon), $22.6 million from gross profit share and royalty payments for both NGENLA (Somatrogon) and Pfizer's Genotropin® (Somatropin), $50.0 million from Merck in consideration for the rights granted under the Merck Agreement, $7.0 million from VFMCRP triggered by the German price approval for *Rayaldee*, $2.5 million from Nicoya due to Nicoya's submission of the investigational new drug application to China's Center for Drug Evaluation, $1.2 million from the BARDA Contract and $2.4 million from contract manufacturers' commercial milestones.

For the year ended December 31, 2022, revenue from the transfer of intellectual property and other totaled $105.7 million, which included $98.7 million from Pfizer, inclusive of an $85.0 million regulatory milestone payment based on the commencement of sales of NGENLA (Somatrogon) in Europe and Japan and $4.4 million from gross profit share and royalty payments for both NGENLA (Somatrogon) and Pfizer's Genotropin® (Somatropin), $3.0 million related to a sales milestone pursuant to the VFMCRP Agreement and $2.5 million from Nicoya tied to the first anniversary of the effective date of that agreement.

Note 16 Strategic Alliances

Biomedical Advanced Research and Development Authority

On September 28, 2023**,** ModeX was awarded a contract (as amended as decribed below, the “BARDA Contract”) by the Biomedical Advanced Research and Development Authority ("BARDA"), part of the Administration for Strategic Preparedness and Response at the U.S. Department of Health and Human Services. This contract aims to advance a platform and product candidates addressing various public health threats, specifically in viral infectious diseases. The funding enables the research, development, and clinical evaluation of multispecific antibodies based on ModeX's proprietary MSTAR technology. MSTAR is a flexible, plug-and-play platform capable of incorporating multiple independent antibody binding sites into a single molecule, expanding its therapeutic potential and enabling rapid responses to emerging infections, including viral variants like COVID-19, influenza, and other pathogens.

In September 2024, ModeX entered into two amendments (the “BARDA Amendments”) to modify the scope and funding of the BARDA Contract. The BARDA Amendments structured the funding thereunder as cost-plus-fixed-fee, which includes a $26.9 million supplement to further advance the development of COVID-19 multispecific antibodies. This increased funding supports the ongoing development, manufacturing, and execution of a Phase 1 clinical trial for a next-generation MSTAR multispecific antibody with broad neutralizing activity against known SARS-CoV-2 variants. The BARDA Amendments also provided for BARDA's exercise of the option for the development of a multispecific protein antibody for influenza or another pathogen, with $24.1 million allocated to cover the expanded work under this exercised option. These modifications increased the total value of the BARDA Contract from $59.0 million to $110.0 million, with the potential value if BARDA exercises all options thereunder to expand ModeX's services, increasing from $168.6 million to $205 million.

As part of the research program, gene-based delivery methods for the multispecific antibodies will be developed using mRNA or DNA vectors to leverage the body's natural protein production processes. BARDA will make periodic progress assessments, and the continuation of the BARDA Contract depends on ModeX’s performance, the timeliness and quality of deliverables, and other factors. The BARDA Contract contains customary government contract provisions, including BARDA's right to terminate the contract in its discretion.

The Company evaluated the BARDA Contract under ASC Topic 606, *Revenue from Contracts with Customers* (“ASC 606”), and determined that the U.S. government meets the definition of a customer. The scope of the BARDA Contract includes preclinical, clinical, and manufacturing activities, as well as regulatory, quality assurance, management, and administrative activities. The research and development effort will progress in stages covering base and option segments, with ModeX completing specific tasks in each segment.

The Company identified three potential material promises under the BARDA Contract: (i) development of a tetravalent trispecific antibody for COVID-19; (ii) development of a multispecific protein antibody for influenza or another pathogen; and (iii) nucleic acid delivery of a multispecific antibody for influenza or another pathogen. The Company determined the promise to develop a tetravalent trispecific antibody for COVID-19 is a separate performance obligation, as it is distinct within the contract and provides standalone value. Similarly, the exercised option to develop a multispecific protein antibody for influenza or another pathogen is also a separate performance obligation. However, the Company determined that the nucleic acid delivery option does not offer incremental discounts beyond those typically provided for such goods and services, and therefore does not represent a material right. As such, the options in (iii) were not considered performance obligations at the outset of the BARDA Contract.

The Company concluded that research and development services performed under the BARDA Contract would be recognized as revenue when research and development services are performed to the extent of actual costs incurred including a fixed fee and will be reimbursed by BARDA. Costs incurred represent work performed, which corresponds with, and thereby best depicts, the transfer of control of the research and development to BARDA. Types of contract costs include labor, material, and third-party services. As such, the related BARDA revenue is recognized as revenue from transfer of intellectual property and other within the Company's Consolidated Statements of Operations. For the years ended December 31, 2024 and 2023, we recorded $23.8 million and $1.2 million in revenue under the BARDA Contract. As of December 31, 2024, the aggregate amount of transaction price allocated to remaining performance obligations, excluding unexercised contract options, was $85.0 million. We expect to recognize this amount as revenue through February 2028.

Merck

On March 8, 2023, ModeX, the Company (with respect to certain sections), and Merck Sharp & Dohme LLC ("Merck") entered into a License and Research Collaboration Agreement (the "Merck Agreement") pursuant to which ModeX granted to Merck a license to certain patent rights and know-how in connection with the development of ModeX's preclinical nanoparticle vaccine candidate targeting the Epstein-Barr Virus.

Under the terms of the Merck Agreement, ModeX granted to Merck an exclusive, sublicensable, royalty-bearing license to certain intellectual property to develop, manufacture, use and commercialize (i) a multivalent or monovalent vaccine assembled using our platform for Epstein-Barr Virus ("Vaccine"), and (ii) any pharmaceutical or biological preparation in final form containing a Vaccine for sale or for administration to human patients in a clinical trial for all uses ("Product").

ModeX received an initial payment of $50.0 million and is eligible to receive up to an additional $860.0 million upon the achievement of certain commercial and development milestones. On January 7, 2025, ModeX announced the dosing of the first participant in a Phase 1 study for an EBV vaccine candidate being developed in collaboration with Merck. This achievement triggered a $12.5 million milestone payment from Merck. ModeX is also eligible to receive tiered royalty payments ranging from high single digits to low double digits upon the achievement of certain sales targets of the Product.

Certain of the rights subject to the license provided by us under the Merck Agreement were obtained by us from Sanofi pursuant to that certain License Agreement entered into as of July 1, 2021 ("Sanofi In-License Agreement") between us and Sanofi, a French corporation ("Sanofi"), and a portion of the upfront payment and royalties received by us under the Merck Agreement may be payable to Sanofi under the terms of the Sanofi In-License Agreement. As a result of such obligations under the Sanofi In-License Agreement, we paid $12.5 million to Sanofi during the year ended December 31, 2023.

As part of their strategic collaboration, ModeX and Merck have put in place a research plan to manage research and other development activities related to the development of a Vaccine or Product including a joint steering committee to facilitate the research program. As part of the research plan, they will use a third-party contract development and manufacturing organization ("CDMO") to carry out such activities unless otherwise agreed. Development costs incurred by ModeX in furtherance of these development activities will be reimbursed by Merck. To date, we have spent $25.0 million of development costs related to the Epstein -Barr Virus, for which Merck has provided or will provide reimbursement.

The Merck Agreement will remain in effect until one or more Products receive marketing authorization, and, thereafter, until the expiration of all royalty obligations unless earlier terminated as permitted under the Merck Agreement. In addition to termination rights for material breach and bankruptcy, Merck is permitted to terminate the Merck Agreement in its entirety without cause after a specified notice period. If Merck terminates the Merck Agreement for convenience or by us for Merck's uncured material breach, we may elect to receive a reversion license such that we can continue its work with Vaccines and Products which have not been terminated due to a material safety issue.

LeaderMed

On September 14, 2021, we and LeaderMed announced the formation of a joint venture to develop, manufacture and commercialize two of OPKO's clinical stage, long-acting drug products in Greater China and eight other Asian territories.

Under the terms of the agreements, we have granted the joint venture exclusive rights to develop, manufacture and commercialize (a) OPK88003, an oxyntomodulin analog being developed for the treatment of obesity and diabetes, and (b) Factor VIIa-CTP, a novel long-acting coagulation factor being developed to treat hemophilia, in exchange for a 47% ownership interest in the joint venture. In addition, during 2021 we received an upfront payment of $1 million and will be reimbursed for clinical trial material and technical support we provide the joint venture.

LeaderMed is responsible for funding the joint venture's operations, development and commercialization efforts and, together with its syndicate partners, initially invested $11 million in exchange for a 53% ownership interest. We retain full rights to oxyntomodulin and Factor VIIa-CTP in all other geographies.

NICOYA Macau Limited

On June 18, 2021, EirGen, our wholly owned subsidiary, and NICOYA Macau Limited ("Nicoya"), a Macau corporation and an affiliate of NICOYA Therapeutics, entered into a Development and License Agreement (the "Nicoya Agreement") granting Nicoya the exclusive rights for the development and commercialization of extended release calcifediol (the "Nicoya Product") in Greater China, which includes mainland China, Hong Kong, Macau, and Taiwan (collectively, the "Nicoya Territory"). Extended release calcifediol is marketed in the U.S. by OPKO under the tradename *Rayaldee*. The license grant to Nicoya covers the therapeutic and preventative use of the Nicoya Product for SHPT in non-dialysis and hemodialysis chronic kidney disease patients (the "Nicoya Field").

EirGen received an initial upfront payment of $5 million and is eligible to receive an aggregate additional amount of $5 million tied to the first anniversary of the effective date of the Nicoya Agreement, as amended, of which EirGen has received $2.5 million plus accrued interest for the delayed payment. Furthermore, EirGen received the additional $2.5 million upon Nicoya's submission of an investigational new drug (IND) application to the Center for Drug Evaluation (CDE) of China in March 2023. EirGen is also eligible to receive up to an additional aggregate amount of $115 million upon the achievement of certain development, regulatory and sales-based milestones by Nicoya for the Nicoya Product in the Nicoya Territory. EirGen is eligible to receive tiered, double digit royalty payments at rates in the low double digits on net product sales within the Nicoya Territory and in the Nicoya Field.

Nicoya is, at its sole cost and expense, responsible for performing all development activities necessary to obtain all regulatory approvals for the Nicoya Product in the Nicoya Territory and will be responsible for all commercial activities pertaining to the Nicoya Product in the Nicoya Territory.

Unless earlier terminated, the Nicoya Agreement will remain in effect until such time as all royalty payment terms and extended payment terms have expired, and Nicoya shall have no further payment obligations to EirGen under the terms of the Nicoya Agreement. Nicoya's royalty obligations expire on the later of (i) expiration of the last to expire valid patent claim covering the Nicoya Product sold in the Nicoya Territory, (ii) expiration of all regulatory and data exclusivity applicable to the Nicoya Product in the Nicoya Territory, and (iii) on a product-by-product basis, ten (10) years after such Nicoya Product's first commercial sale in the Nicoya Territory. In addition to termination rights for material breach and bankruptcy, Nicoya is permitted to terminate the Nicoya Agreement after a specified notice period.

VFMCRP

In May 2016, EirGen and Vifor Fresenius Medical Care Renal Pharma Ltd. ("VFMCRP") entered into a Development and License Agreement (the "VFMCRP Agreement") for the development and commercialization of *Rayaldee* (the "Product") worldwide, except for (i) the United States and Canada, (ii) any country in Central America or South America (including Mexico), (iii) Russia, (iv) China, (v) South Korea, (vi) Ukraine, (vii) Belorussia, (viii) Azerbaijan, (ix) Kazakhstan, (x) Taiwan (xi) the Middle East, and (xii) all countries of Africa (the "VFMCRP Territory"), as amended. The license to VFMCRP potentially covers all therapeutic and prophylactic uses of the Product in human patients (the "VFMCRP Field"), provided that initially the license is for the use of the Product for the treatment or prevention of SHPT related to patients with CKD and vitamin D insufficiency/deficiency (the "VFMCRP Initial Indication").

In January 2023, the German Association of Statutory Health Insurance funds (GKV-SV) granted price approval for *Rayaldee*. This triggered a milestone payment of $7.0 million. In 2022, we recognized a separate milestone payment of $3.0 million in revenue from the transfer of intellectual property and other for the first sale of *Rayaldee* in Europe.

Effective May 23, 2021, we entered into an amendment to the VFMCRP Agreement pursuant to which the parties thereto agreed to include Japan as part of the VFMCRP Territory.

Effective May 5, 2020, we entered into an amendment to the VFMCRP Agreement pursuant to which the parties agreed to exclude Mexico, South Korea, the Middle East and all of the countries of Africa from the VFMCRP Territory. In addition, the parties agreed to certain amendments to the milestone structure and to reduce minimum royalties payable. As revised, the Company has received a $3 million payment triggered by the first marketing approval of *Rayaldee* in Europe, $7.0 million payment triggered by the Germany price approval by the local sick fund association, and is eligible to receive up to an additional $15 million in regulatory milestones and $200 million in milestone payments tied to launch, pricing and sales of *Rayaldee*, and tiered, double-digit royalties.

We plan to share responsibility with VFMCRP for the conduct of trials specified within an agreed-upon development plan, with each company leading certain activities within the plan. EirGen will lead the manufacturing activities within and outside the VFMCRP Territory and the commercialization activities outside the VFMCRP Territory and outside the VFMCRP Field in the VFMCRP Territory and VFMCRP will lead the commercialization activities in the VFMCRP Territory and the VFMCRP Field. For the initial development plan, the companies have agreed to certain cost sharing arrangements. VFMCRP will be responsible for all other development costs that VFMCRP considers necessary to develop the Product for the use of the Product for the VFMCRP Initial Indication in the VFMCRP Territory in the VFMCRP Field except as otherwise provided in the VFMCRP Agreement. The first of the clinical studies provided for in the development activities commenced in September 2018.

In connection with the VFMCRP Agreement, the parties entered into a letter agreement pursuant to which EirGen granted to VFMCRP an exclusive option (the “Option”) to acquire an exclusive license under certain EirGen patents and technology to use, import, offer for sale, sell, distribute and commercialize the Product in the U.S. solely for the treatment of SHPT in dialysis patients with CKD and vitamin D insufficiency (the “Dialysis Indication”). Upon exercise of the Option, VFMCRP has agreed to reimburse EirGen for all of the development costs incurred by EirGen with respect to the Product for the Dialysis Indication in the U.S. VFMCRP would also pay EirGen up to an additional aggregate amount of $555 million of sales-based milestones upon the achievement of certain milestones and would be obligated to pay royalties at percentage rates that range from the mid-teens to the mid-twenties on sales of the Product in the U.S. for the Dialysis Indication. To date, VFMCRP has not exercised the Option.

Payments received for regulatory milestones and sales milestones are non-refundable. The regulatory milestones are payable if and when VFMCRP obtains approval from certain regulatory authorities and will be recognized as revenue in the period in which the associated milestone is achieved, assuming all other revenue recognition criteria are met. We account for the sales milestones as royalties and sales milestones payments will be recognized as revenue in the period in which the associated milestone is achieved or sales occur, assuming all other revenue recognition criteria are met.

Pfizer Inc.

In December 2014, we entered into an exclusive worldwide agreement with Pfizer for the development and commercialization of our long-acting Somatrogon (hGH-CTP) for the treatment of growth hormone deficiency (“GHD”) in adults and children, as well as for the treatment of growth failure in children born small for gestational age (the “Pfizer Transaction”). In May 2020, we entered into an amended and restated development and commercialization license with Pfizer, effective January 1, 2020 (the “Restated Pfizer Agreement”), pursuant to which the parties agreed, among other things, to share all costs for Manufacturing Activities, as defined in the Restated Pfizer Agreement, for developing a licensed product for the three indications included in the Restated Pfizer Agreement.

In June 2023, the FDA approved NGENLA (Somatrogon (hGH-CTP)) a once-weekly injection to treat pediatric growth hormone deficiency in the United States. In early 2022, the European Commission and Ministry of Health, Labour and Welfare in Japan approved NGENLA (Somatrogon). We have also received pricing approvals in Germany and Japan. NGENLA (Somatrogon (hGH-CTP)) is approved for the treatment of pediatric GHD in more than 50 markets, including Canada, Australia, Japan, and EU Member States. With the achievement of these milestones, in 2023 we recorded revenue of $90 million, and in 2022 we recorded $85.0 million, in each case under the Restated Pfizer Agreement.

On October 21, 2019, we and Pfizer announced that the global phase 3 trial evaluating Somatrogon dosed once-weekly in prepubertal children with GHD met its primary endpoint of non-inferiority to daily Genotropin® (somatropin) for injection, as measured by annual height velocity at 12 months.

Under the terms of the Restated Pfizer Agreement we received non-refundable and non-creditable upfront payments of $295.0 million and are eligible to receive up to an additional $275.0 million upon the achievement of certain regulatory milestones. Pfizer received the exclusive license to commercialize Somatrogon worldwide. In addition, we are eligible to receive regional, tiered gross profit sharing for both Somatrogon and Pfizer's Genotropin® (somatropin) in all global markets, with the U.S. region commencing gross profit sharing in August 2023.

The Restated Pfizer Agreement will remain in effect until the last sale of the licensed product, unless earlier terminated in accordance with its terms. In addition to termination rights for material breach and bankruptcy, Pfizer is permitted to terminate the Restated Pfizer Agreement in its entirety, or with respect to one or more world regions, without cause after a specified notice period. If the Restated Pfizer Agreement is terminated by us for Pfizer's uncured material breach, or by Pfizer without cause, provision has been made for transition of product and product responsibilities to us for the terminated regions, as well as continued supply of product by Pfizer or transfer of supply to us in order to support the terminated regions.

We recognized the non-refundable $295.0 million upfront payments as revenue as the research and development services were completed. As of December 31, 2024, we had no contract liabilities related to the Pfizer Transaction.

The Restated Pfizer Agreement outlines up to $275.0 million in potential milestone payments. These payments are structured to include $175 million for the achievement of milestones in Pediatric GHD and $50 million for milestones in SGA. Pfizer received the exclusive license to commercialize Somatrogon worldwide. In addition, we are eligible to receive regional, tiered gross profit sharing for both Somatrogon and Pfizer's Genotropin® (somatropin) in all global markets, with the U.S. region commencing gross profit sharing in August 2023. Individual milestone amounts within these allocations range from $20.0 million to $90.0 million and are triggered by regulatory approval in the U.S., as well as regulatory and price approvals in other major markets. Milestone payments are recognized as revenue in the period of achievement, provided all other revenue recognition criteria are met. To date, $175.0 million in milestone revenue has been recognized, attributable to the Pediatric GHD indication.

Other

We have completed strategic deals with numerous institutions and commercial partners. In connection with these agreements, upon the achievement of certain milestones we are obligated to make certain payments and have royalty obligations upon sales of products developed under the license agreements. At this time, we are unable to estimate the timing and amounts of payments as the obligations are based on future development of the licensed products.

Note 17 Leases

We have operating leases for office space, laboratory operations, research and development facilities, manufacturing locations, warehouses and certain equipment. We determine if a contract contains a lease at inception or modification of a contract. Our leases generally do not provide an implicit interest rate, and we therefore use our incremental borrowing rate as the discount rate when measuring operating lease liabilities. The incremental borrowing rate represents an estimate of the interest rate we would incur at lease commencement to borrow an amount equal to the lease payments on a collateralized basis over the term of the lease within a particular currency environment. We used the incremental borrowing rates as of January 1, 2019 for operating leases that commenced prior to that date. Many of our leases contain rental escalation, renewal options and/or termination options that are factored into our determination of lease payments as appropriate. Variable lease payment amounts that cannot be determined at the commencement of the lease are not included in the right-to-use assets or liabilities.

We elected the use of permitted practical expedients of not recording leases on our Consolidated Balance Sheet when the leases have terms of 12 months or less, and we elected not to separate nonlease components from lease components and instead account for each separate lease component and the nonlease components associated with that lease component as a single lease component.

On January 2, 2023, ModeX entered into a 10-year office lease agreement that commenced in October 2023. ModeX was previously located in Natick, Massachusetts and relocated to Weston, Massachusetts, upon lease commencement. The new location is approximately 33,056 square feet of office space. ModeX has two options to extend the lease term for an additional five years per extension, which would commence upon the expiration of the term in October 2033. Straight-line monthly expense for the lease is $243.5 thousand.

The following table presents the lease balances within the Consolidated Balance Sheet as of December 31, 2024 and 2023:

(in thousands)	Classification on the Balance Sheet	December 31, 2024	December 31, 2023
Assets			
Operating lease assets	Operating lease right-of-use assets	$ 54,003	$ 68,088
Finance lease assets	Property, plant and equipment, net	5,743	10,101
Liabilities			
Current			
Operating lease liabilities	Current maturities of operating leases	12,649	12,996
Accrued expenses	Current maturities of finance leases	1,679	2,827
Long-term			
Operating lease liabilities	Operating lease liabilities	48,849	54,140
Other long-term liabilities	Finance lease liabilities	$ 4,064	$ 7,274
Weighted average remaining lease term			
Operating leases (years)		6.4	7.1
Finance leases (years)		7.1	6.2
Weighted average discount rate			
Operating leases		6.6%	5.4%
Finance leases		5.3%	3.8%

The following table reconciles the undiscounted future minimum lease payments (displayed by year and in the aggregate) under noncancelable operating leases with terms of more than one year to the total operating lease liabilities recognized on our Consolidated Balance Sheet as of December 31, 2024:

(in thousands)	Operating	Finance
2025	$ 12,345	$ 1,807
2026	11,500	1,353
2027	11,185	829
2028	11,087	239
2029	8,820	240
Thereafter	18,865	1,810
Total undiscounted future minimum lease payments	73,802	6,278
Less: Difference between lease payments and discounted lease liabilities	12,304	535
Total lease liabilities	$ 61,498	$ 5,743

Expense under operating leases and finance leases was $30.6 million and $3.0 million, respectively, for the year ended December 31, 2024, which includes $1.9 million of variable lease costs. Expense under operating leases and finance leases was $16.6 million and $2.9 million, respectively, for the year ended December 31, 2023, which includes $1.4 million of variable lease costs. Expense under operating leases and finance leases was $16.6 million and $2.7 million, respectively, for the year ended December 31, 2022, and includes $2.6 million of variable lease costs. Operating lease costs and finance lease costs are included within Operating loss in the Consolidated Statement of Operations. Short-term lease costs were not material.

Supplemental cash flow information is as follows:

(in thousands)	For the years ended December 31,	
	2024	2023
Operating cash out flows from operating leases	$ 17,536	$ 16,112
Operating cash out flows from finance leases	443	416
Financing cash out flows from finance leases	2,534	2,214
Total	$ 20,513	$ 18,742

Note 18 Segments

We manage our operations in two reportable segments - pharmaceutical and diagnostics. The following is a brief description of our reportable segments and a description of business activities conducted by our corporate operations.

Pharmaceutical — segment consists of our operations in Chile, Mexico, Ireland, Israel, Spain, Brazil, and Uruguay, *Rayaldee* product sales, NGENLA royalty and profit-sharing sales, and our pharmaceutical research and development.

Diagnostics — segment primarily consists of clinical laboratory operations through BioReference and our point-of-care operations.

To provide greater transparency into the factors affecting segment profitability, the Company discloses significant expense categories for each reportable segment in the tables below. Our CODM is Phillip Frost, M.D., our Chairman and Chief Executive Officer. Dr. Frost reviews our operating results and operating plans and makes resource allocation decisions on a Company-wide or aggregate basis. Our CODM may discuss and review financial information at the Pharmaceutical and Diagnostic operating segment level. The CODM uses segment information to evaluate segment profitability, monitor trends, identify risks and opportunities, allocate resources (such as capital expenditures and R&D funding), and set strategic priorities (including new product development and market expansion). These expenses, along with segment revenue, are used to calculate gross margin, a key profitability metric that the CODM uses to assess segment performance. In computing operating income, none of the following items have been included: interest expense, other non-operating income and expenses, and income taxes. Segment operating income (expense) is total revenue, less cost of revenue and operating expenses relative to each segment. There are no significant inter-segment sales, nor is there any inter-segment allocation of interest expense or income taxes.

The following are descriptions of the significant expense categories included in the segment reporting tables below:

For the pharmaceutical segment:

- Cost of product revenue: Represents the direct costs of manufacturing and distributing pharmaceutical products, including raw materials, manufacturing overhead, and distribution costs.
- Selling, general and administrative (SG&A) expenses: Encompasses operating expenses such as salaries, marketing and advertising costs, and administrative overhead.
- Research and development (R&D) expenses: Incurred in developing new pharmaceutical products, including costs related to research, clinical trials, and regulatory approvals.
- Intangible asset amortization: Represents the periodic expensing of acquired intangible assets, such as patents and licenses.
- Other segment items: relates to contingent consideration attributable to changes in assumptions regarding the timing of achievement of future milestones
- Depreciation: Relates to the depreciation of property, plant, and equipment used in the segment's operations.

For the diagnostics segment:

- Cost of service revenue: Includes the direct costs of providing diagnostic testing services, such as laboratory supplies, equipment costs, and labor costs.
- Selling, general and administrative (SG&A) expenses: Similar to the Pharmaceuticals segment, includes salaries, marketing expenses, and administrative overhead.
- Research and development (R&D) expenses: Incurred in developing new diagnostic products and services, including costs related to research, clinical studies, regulatory submissions, and new technology development.
- Intangible asset amortization: Represents the periodic expensing of acquired intangible assets, such as intellectual property and customer relationships.
- Other segment items: primarily consists of gains and losses recognized on the sale of businesses or assets.
- Depreciation: Relates to the depreciation of property, plant, and equipment used in the segment's operations.

The tables below present information about reported segments, unallocated corporate operations as well as geographic information for the years ended December 31, 2024, 2023 and 2022.

(In thousands)	For the years ended December 31, 2024	2023	2022
Revenue from services:			
Pharmaceutical	$ —	$ —	$ —
Diagnostics	480,667	515,275	755,630
Corporate	—	—	—
	$ 480,667	$ 515,275	$ 755,630
Revenue from products:			
Pharmaceutical	$ 155,111	$ 167,557	$ 142,845
Diagnostics	—	—	—
Corporate	—	—	—
	$ 155,111	$ 167,557	$ 142,845
Revenue from transfer of intellectual property and other:			
Pharmaceutical	$ 77,364	$ 180,663	$ 105,721
Diagnostics	—	—	—
Corporate	—	—	—
	$ 77,364	$ 180,663	$ 105,721
Cost of revenue:			
Pharmaceutical	$ 92,523	$ 99,538	$ 88,429
Diagnostics	402,109	445,830	627,548
Corporate	—	—	—
	$ 494,632	$ 545,368	$ 715,977
Gross margin:			
Pharmaceutical	$ 139,953	$ 248,682	$ 160,137
Diagnostics	78,558	69,445	128,082
Corporate	—	—	—
	$ 218,511	$ 318,127	$ 288,219
Selling, general and administrative:			
Pharmaceutical	$ 58,007	$ 55,687	$ 49,232
Diagnostics	205,185	202,341	284,388
Corporate	41,028	42,531	39,052
	$ 304,220	$ 300,559	$ 372,672
Research and development:			
Pharmaceutical	$ 103,022	$ 87,007	$ 61,275
Diagnostics	2,075	2,508	12,024
Corporate	117	78	588
	$ 105,214	$ 89,593	$ 73,887
Amortization of intangible assets:			
Pharmaceutical	$ 65,718	$ 65,837	$ 63,914
Diagnostics	16,916	20,195	23,870
Corporate	—	—	—
	$ 82,634	$ 86,032	$ 87,784
Other segment items:			
Pharmaceutical	$ —	$ (1,036)	$ (1,312)
Diagnostics	(121,493)	—	(18,559)
Corporate	—	—	—
	$ (121,493)	$ (1,036)	$ (19,871)
Segment operating income (loss):			
Pharmaceutical	$ (86,795)	$ 41,184	$ (12,961)
Diagnostics	(24,125)	(155,596)	(173,652)
Corporate	(41,145)	(42,609)	(39,640)
	$ (152,065)	$ (157,021)	$ (226,253)

(In thousands)	For the years ended December 31, 2024	2023	2022
Depreciation and amortization:			
Pharmaceutical	$ 71,958	$ 71,548	$ 68,618
Diagnostics	26,218	33,749	40,037
Corporate	—	—	—
	$ 98,176	$ 105,297	$ 108,655
Revenues:			
U.S.	$ 546,300	$ 597,822	$ 783,207
Ireland	48,397	141,465	117,214
Chile	65,049	68,491	62,044
Spain	24,634	23,517	22,477
Israel	1,772	9,738	3,845
Mexico	23,867	20,216	14,546
Other	3,123	2,246	863
	$ 713,142	$ 863,495	$ 1,004,196

Segment assets for the two reportable segments in which we operate are shown in the following tables. Corporate assets are principally cash and are not allocated to an operating segment. Identifiable assets by segment are those assets that are used in our operations in each segment. The accounting policies of the segments are the same as those described in Note 3 summary of significant accounting policies.

(In thousands)	December 31, 2024	December 31, 2023
Assets:		
Pharmaceutical	$ 1,359,270	$ 1,331,764
Diagnostics	493,898	630,753
Corporate	347,044	49,181
	$ 2,200,212	$ 2,011,698
Goodwill:		
Pharmaceutical	$ 309,545	$ 315,235
Diagnostics	219,707	283,025
	$ 529,252	$ 598,260

No customer represented more than 10% of our total consolidated revenue during the years ended December 31, 2024, 2023 and 2022. As of December 31, 2024 and 2023, no customer represented more than 10% of our accounts receivable balance.

The following table reconciles our Property, plant and equipment, net between U.S. and foreign jurisdictions:

(In thousands)	December 31, 2024	December 31, 2023
PP&E:		
U.S.	$ 26,685	$ 39,852
Foreign	43,449	35,577
Total	$ 70,134	$ 75,429

Note 19 Fair Value Measurements

We record fair values at 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 determined based on assumptions that market participants would use in pricing an asset or liability. We utilize a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers are: Level 1, defined as observable inputs such as quoted prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

As of December 31, 2024, we have equity securities and an equity method fair value option (refer to Note 5), forward foreign currency exchange contracts for inventory purchases (refer to Note 20). In connection with our investment and our consulting agreement with BioCardia, we record the related BioCardia options at fair value as well as the warrants from COCP. In addition, restricted cash collateralized by money market funds is a financial asset measured at fair value as a Level 1 financial instrument under the fair value hierarchy. In addition, restricted cash collateralized by money market funds is a financial asset measured at fair value as a Level 1 financial instrument under the fair value hierarchy.

Our financial assets and liabilities measured at fair value on a recurring basis are as follows:

	Fair value measurements as of December 31, 2024			
(In thousands)	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
Assets:				
Money market funds	$ 282,121	$ —	$ —	$ 282,121
Equity securities	49,655	—	—	49,655
Common stock options/warrants	—	3	—	3
Total assets	$ 331,776	$ 3	$ —	$ 331,779

	Fair value measurements as of December 31, 2023			
(In thousands)	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
Assets:				
Money market funds	$ 32,404	$ —	$ —	$ 32,404
Equity securities	116	—	—	116
Equity Method - fair value option	9,786	—	—	9,786
Common stock options/warrants	—	2	—	2
Total assets	$ 42,306	$ 2	$ —	$ 42,308
Liabilities:				
Forward contracts	$ —	$ 29	$ —	$ 29
Total liabilities	$ —	$ 29	$ —	$ 29

The carrying amount and estimated fair value of our 2029 Convertible Notes and 2025 Notes, as well as the applicable fair value hierarchy tiers, are contained in the table below. Additionally, the fair value of the 2029 Convertible Notes and 2025 Notes is determined using inputs other than quoted prices in active markets that are directly observable.

	December 31, 2024				
(In thousands)	Carrying Value	Total Fair Value	Level 1	Level 2	Level 3
2029 Convertible Notes	$ 173,556	$ 394,207	$ —	$ 394,207	$ —
2025 Notes	$ 170	$ 170	$ —	$ 170	$ —

There have been no transfers between Level 1 and Level 2 and no transfers to or from Level 3 of the fair value hierarchy.

The following tables reconcile the beginning and ending balances of our Level 3 assets and liabilities as of December 31, 2024:

(In thousands)	Embedded conversion option
Balance at December 31, 2023	$ —
Additions	125,620
Change in fair value:	
Included in results of operations	26,250
Reclassification of embedded derivatives to equity	(151,870)
Balance at December 31, 2024	$ —

Note 20 Derivative Contracts

The following table summarizes the fair values and the presentation of our derivative financial instruments in the Consolidated Balance Sheets:

(In thousands)	Balance Sheet Component	December 31, 2024	December 31, 2023
Derivative financial instruments:			
Common stock options/warrants	Investments, net	$ 3	$ 2
Forward contracts	Unrealized gains on forward contracts are recorded in Other current assets and prepaid expenses. Unrealized (losses) on forward contracts are recorded in Accrued expenses.	$ —	$ (29)

We enter into foreign currency forward exchange contracts with respect to the risk of exposure to exchange rate differences arising from inventory purchases on letters of credit. Under these forward contracts, for any rate above or below the fixed rate, we receive or pay the difference between the spot rate and the fixed rate for the given amount at the settlement date.

To qualify the derivative instrument as a hedge, we are required to meet strict hedge effectiveness and contemporaneous documentation requirements at the initiation of the hedge and assess the hedge effectiveness on an ongoing basis over the life of the hedge. At December 31, 2024 and 2023, our derivative financial instruments did not meet the documentation requirements to be designated as hedges. Accordingly, we recognized the changes in Fair value of derivative instruments, net in our Consolidated Statement of Operations. The following table summarizes the losses and gains recorded for the years ended December 31, 2024, 2023 and 2022:

	For the years ended December 31,		
(In thousands)	2024	2023	2022
Derivative gain (loss):			
Notes	$ (26,250)	$ —	$ —
Common stock options/warrants	1	(25)	12
Forward contracts	88	(756)	637
Total	$ (26,161)	$ (781)	$ 649

Note 21 Selected Quarterly Financial Data (Unaudited)

	For the 2024 Quarters Ended			
(In thousands, except per share data)	March 31	June 30	September 30	December 31
Total revenues	$ 173,686	$ 182,186	$ 173,632	$ 183,638
Total costs and expenses	245,158	243,856	159,416	216,777
Net income (loss)	(81,836)	(10,305)	24,890	14,027
Earnings (loss) per share, basic	$ (0.12)	$ (0.01)	$ 0.04	$ 0.02
Earnings (loss) per share, diluted	$ (0.12)	$ (0.01)	$ 0.03	$ 0.01

	For the 2023 Quarters Ended			
(In thousands, except per share data)	March 31	June 30	September 30	December 31
Total revenues	$ 237,577	$ 265,418	$ 178,595	$ 181,905
Total costs and expenses	268,171	258,393	243,002	250,949
Net income (loss)	(18,267)	(19,640)	(84,473)	(66,483)
Earnings (loss) per share, basic and diluted	$ (0.02)	$ (0.03)	$ (0.11)	$ (0.09)

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, have evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of December 31, 2024. Our disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the rules and forms of the Securities and Exchange Commission. 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, as appropriate to allow timely decisions regarding required disclosure. Based on this evaluation, management concluded that our disclosure controls and procedures were effective as of December 31, 2024.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our 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. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined effective could provide only reasonable assurance with respect to financial statement preparation and presentation.

Our management conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2024, based on the framework in the Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on such evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2024.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2024 has been audited by Ernst & Young LLP, our independent registered public accounting firm, which also audited our Consolidated Financial Statements included in this Annual Report on Form 10-K, as stated in their report which appears with our accompanying Consolidated Financial Statements.

Changes to the Company's Internal Control Over Financial Reporting

There have been no changes to the Company's internal control over financial reporting that occurred during quarter ended December 31, 2024 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

During the quarter ended December 31, 2024, none of our officers or directors adopted or terminated any contract, instruction or written plan for the purchase or sale of securities that was intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act or any "non-Rule 10b5-1 trading arrangement", as defined in Item 408 of Regulation S-K.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

Except to the extent included below, the information required in Items 10 (Directors, Executive Officers and Corporate Governance), Item 11 (Executive Compensation), Item 12 (Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters), Item 13 (Certain Relationships and Related Transactions, and Director Independence), and Item 14 (Principal Accounting Fees and Services) is incorporated by reference to the Company's definitive proxy statement for the 2025 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission within 120 days of December 31, 2024.

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

Code of Ethics

We have adopted a Code of Business Conduct and Ethics. We require all employees, including our principal executive officer, principal financial officer, principal accounting officer and other senior officers and our employee directors, to read and to adhere to the Code of Business Conduct and Ethics in discharging their work-related responsibilities. Employees are required to report any conduct that they believe in good faith to be an actual or apparent violation of the Code of Business Conduct and Ethics. The Code of Business Conduct and Ethics is available on our website at http://www.OPKO.com. Any amendment to, or waivers of, the Code of Business Conduct and Ethics will be disclosed on our website promptly following the date of such amendment or waiver.

Insider Trading Policy

We have adopted an Insider Trading Policy which governs the purchase, sale and/or any other dispositions of our securities by the Company and its directors, officers and employees and is reasonably designed to promote compliance with insider trading laws, rules and regulations and applicable exchange listing standards. A copy of our Insider Trading Policy is filed as Exhibit 19.1 to this Annual Report on Form 10-K.

PART IV.

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES.

(1) Exhibits: See Index to Exhibits below.

INDEX TO EXHIBITS

Exhibit Number	Description
2.1+	Agreement and Plan of Merger, dated January 28, 2011, by and among CURNA, Inc., KUR, LLC, OPKO Pharmaceuticals, LLC, OPKO CURNA, LLC, and certain individuals named therein, filed with the Company's Quarterly Report on Form 10-Q/A filed with the Securities and Exchange Commission on July 25, 2011, and incorporated herein by reference.
2.2	Agreement and Plan of Merger and Reorganization, dated as of January 14, 2022, by and among the Company, Sema4 Holdings Corp., Orion Merger Sub I, Inc., Orion Merger Sub II, LLC, GeneDx Inc. and GeneDx Holding 2, Inc., filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 18, 2022, and incorporated herein by reference.
2.3	Agreement and Plan of Merger, dated as of May 9, 2022, by and among the Company, ModeX Therapeutics, Inc., Orca Acquisition Sub, Inc. and Gary J. Nabel, solely in the capacity of a representative of the Stockholders, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 13, 2022, and incorporated herein by reference.
2.4++	Asset Purchase Agreement, dated as of March 27, 2024 by and among BioReference Health, LLC, OPKO Health, Inc. and Laboratory Corporation of America Holdings, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on March 28, 2024, and incorporated herein by reference.
3.1	Amended and Restated Certificate of Incorporation, as amended, filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 12, 2013 for the Company's three-month period ended September 30, 2013, and incorporated herein by reference.
3.2	Amended and Restated Bylaws, filed with the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on February 18, 2021, and incorporated herein by reference.
3.3	Certificate of Designation of Series D Preferred Stock, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on September 24, 2009, and incorporated herein by reference.
3.4	Amendment to Amended and Restated Certificate of Incorporation, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on June 21, 2019, and incorporated herein by reference.
3.5	Composite Amended and Restated Certificate of Incorporation of OPKO Health, Inc., filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 7, 2024, and incorporated herein by reference.

4.1	Indenture, dated January 30, 2013, between OPKO Health, Inc. and Wells Fargo Bank, National Association, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 5, 2013, and incorporated herein by reference.
4.2	Base Indenture related to the 4.50% Convertible Senior Notes due 2025, dated as of February 7, 2019, by and between OPKO Health, Inc. and U.S. Bank National Association, as trustee, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 7, 2019, and incorporated herein by reference.
4.3	Supplemental Indenture related to the 4.50% Convertible Senior Notes due 2025, dated as of February 7, 2019, by and between OPKO Health, Inc. and U.S. Bank National Association, as trustee, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 7, 2019, and incorporated herein by reference.
4.4	Description of Securities, filed with the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on February 18, 2021, and incorporated herein by reference.
4.5	Indenture, dated January 9, 2024, by and between OPKO Health, Inc. and U.S. Bank Trust Company, National Association, as Trustee, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 9, 2024, and incorporated herein by reference.
4.6	Form of 3.75% Convertible Senior Note due 2029, incorporated by reference to Exhibit A of the Indenture filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 9, 2024.
10.1	Form of Director Indemnification Agreement, filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 8, 2008 for the Company's three-month period ended June 30, 2008, and incorporated herein by reference.
10.2	Form of Officer Indemnification Agreement, filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 8, 2008 for the Company's three-month period ended June 30, 2008, and incorporated herein by reference.
10.3*	Form of Restricted Share Award Agreement for Directors, filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 9, 2009 for the Company's three-month period ended September 30, 2009, and incorporated herein by reference.
10.4+	Exclusive License Agreement by and between TESARO, Inc. and OPKO Health, Inc. dated December 10, 2010, filed with the Company's Annual Report on Form 10-K/A filed with the Securities and Exchange Commission on July 28, 2011, and incorporated herein by reference.
10.5	OPKO Health, Inc. 2016 Equity Incentive Plan, filed with the Company's Definitive Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on March 25, 2016, and incorporated herein by reference.
10.6	Development and License Agreement between OPKO Health, Inc. and Vifor Fresenius Medical Care Renal Pharma Ltd., dated May 8, 2016, filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 8, 2016 for the Company's three-month period ended June 30, 2016, and incorporated herein by reference.
10.7	Form of 5% Convertible Promissory Note dated February 27, 2018, filed with the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 1, 2018, and incorporated herein by reference.

10.8	Share Lending Agreement, dated February 4, 2019, by and between the OPKO Health, Inc. and Jefferies Capital Services, LLC, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 7, 2019, and incorporated herein by reference.
10.9	Amendment to Development and License Agreement between EirGen Pharma Ltd. and Vifor Fresenius Medical Care Renal Pharma Ltd., dated May 5, 2020, filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on July 31, 2020 for the Company's three-month period ended June 30, 2020, and incorporated herein by reference.
10.10	Amended and Restated Development and Commercialization License Agreement by and between Pfizer Inc. and OPKO Ireland Ltd., dated May 12, 2020, filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on July 31, 2020 for the Company's three-month period ended June 30, 2020, and incorporated herein by reference.
10.11	Asset Purchase Agreement, dated June 16, 2021, among EirGen Pharma Limited, Horizon Therapeutics Ireland DAC, and OPKO Health, Inc. (with respect to certain sections), filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on July 29, 2021 for the Company's three-month period ended June 30, 2021, and incorporated herein by reference.
10.12	License Agreement by and among EirGen Pharma Limited and Nicoya Macau Limited, dated June 18, 2021, filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on July 29, 2021 for the Company's three-month period ended June 30, 2021, and incorporated herein by reference.
10.13	Exclusive License Agreement, dated July 6, 2021, by and between OPKO Health, Inc. and CAMP4 Therapeutics Corporation, filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on July 29, 2021 for the Company's three-month period ended June 30, 2021, and incorporated herein by reference.
10.14	Amended and Restated Credit Agreement, dated August 30, 2021, by and among by and among BioReference Laboratories, Inc., certain of its subsidiaries, and JPMorgan Chase Bank, N.A., filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on September 3, 2021, and incorporated herein by reference.
10.15	Shareholder Agreement, dated January 14, 2022, by and between OPKO Health, Inc. and SEMA4 Holdings Corp., filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 18, 2022, and incorporated herein by reference.
10.16	Lock-up and Voting Agreement, dated as of May 9, 2022, by and among the Company, Dr. Phillip Frost, Dr. Jane Hsiao and Frost Gamma Investments Trust.
10.17	Offer Letter, dated May 9, 2022, by and between the Company and Dr. Zerhouni.
10.18	Offer Letter, dated May 9. 2022, by and between the Company and Dr. Nabel.
10.19	Waiver Under and Amendment No. 1 to Amended and Restated Credit Agreement between BioReference Health, LLC, GeneDx, LLC, the other Subsidiary Borrowers party hereto, the other Loan Parties party hereto, the Lenders party hereto, and JPMorgan Chase Bank, N.A., as the administrative agent for the Lenders, dated April 29, 2022, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 4, 2022, and incorporated herein by reference.

10.20	Settlement Agreement between United States of America, acting through the United States Department of Justice and on behalf of the Office of Inspector General of the Department of Health and Human Services, and the Defense Health Agency, acting on behalf of the TRICARE Program, the Commonwealth of Massachusetts, acting through the Medicaid Fraud Division of the Office of Attorney General and on behalf of the Executive Office of Health and Human Services, limited to its role as the single state agency for Medicaid, the State of Connecticut, acting through the Attorney General of the State of Connecticut, BioReference Health, LLC and OPKO Health, Inc., and Jean Marie Crowley, effective July 14, 2022, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on July 15, 2022, and incorporated herein by reference.
10.21	Form of Amended 5% Convertible Promissory Note dated February 10, 2023, filed as Exhibit 10.22 filed with the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on February 27, 2023, and incorporated herein by reference.
10.22	Waiver and Amendment No. 2 to the Amended and Restated Credit Agreement, dated June 29, 2023, by and among BioReference Health, LLC, certain of its subsidiaries, and JPMorgan Chase Bank, N.A., filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 3, 2023 for the Company's three-month period ended June 30, 2023, and incorporated herein by reference.
10.23++	License and Research Collaboration Agreement by and between ModeX Therapeutics, Inc., OPKO Health, Inc. (with respect to certain sections), and Merck Sharp & Dohme LLC dated March 7, 2023, filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 3, 2023 for the Company's three-month period ended March 31, 2023, and incorporated herein by reference.
10.24++	Purchase Agreement, dated January 4, 2024, by and between the Company and J.P. Morgan Securities LLC, as representative of the Initial Purchasers named therein, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 9, 2024, and incorporated herein by reference.
10.25++	Convertible Note Purchase Agreement, dated as of January 4, 2024, by and among the Company and certain investors, including Frost Gamma Investments Trust and Jane H. Hsiao, Ph.D., MBA, filed with the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on January 9, 2024, and incorporated herein by reference.
10.26+++	Note Purchase Agreement dated July 17, 2024 by and among the Company, certain purchasers party thereto, OPKO Biologics Limited, Eirgen Pharma Ltd. and HCR Injection SPV, LLC as agent, filed with the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 7, 2024, and incorporated herein by reference.
10.27	Form of Note dated July 17, 2024, filed with the Company's Quarterly Report on Form 10Q filed with the Securities and Exchange Commission on August 7, 2024, and incorporated herein by reference.
19.1**	OPKO Health, Inc. Related Party Transaction Policy.
21**	Subsidiaries of the Company.
23.1**	Consent of Ernst & Young LLP.

31.1**	Certification by Phillip Frost, Chief Executive Officer, pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities and Exchange Act of 1934 as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 for the year ended December 31, 2024.
31.2**	Certification by Adam Logal, Chief Financial Officer, pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities and Exchange Act of 1934 as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 for the year ended December 31, 2024.
32.1**	Certification by Phillip Frost, Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 for the year ended December 31, 2024.
32.2**	Certification by Adam Logal, Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 for the year ended December 31, 2024.
97.1	OPKO Health, Inc. Mandatory Recovery of Compensation Policy filed with the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 1, 2024, and incorporated herein by reference.
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Denotes management contract or compensatory plan or arrangement.

** Filed herewith.

+ Certain confidential material contained in the document has been omitted and filed separately with the Securities and Exchange Commission.

++ Pursuant to Item 601(a)(5) of Regulation S-K, schedules and similar attachments to this exhibit have been omitted because they do not contain information material to an investment or voting decision and such information is not otherwise disclosed in such exhibit. The Company will supplementally provide a copy of any omitted schedule or similar attachment to the U.S. Securities and Exchange Commission or its staff upon request.

+++ Pursuant to Item 601(b)(10)(iv) of Regulation S-K, portions of this exhibit have been omitted because the Company customarily and actually treats the omitted portions as private or confidential, and such portions are not material. The Company will supplementally provide a copy of an unredacted copy of this exhibit to the U.S. Securities and Exchange Commission or its staff upon request.

Item 16. FORM 10-K SUMMARY.

None.

SIGNATURES

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

Date: March 3, 2025

OPKO HEALTH, INC.

By: /s/ Phillip Frost, M.D.
Phillip Frost, M.D.
Chairman of the Board and
Chief Executive Officer

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

Signature	Title	Date
/s/ Phillip Frost, M.D. Phillip Frost, M.D.	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	March 3, 2025
/s/ Jane H. Hsiao, Ph.D., MBA Jane H. Hsiao, Ph.D., MBA	Vice Chairman and Chief Technical Officer	March 3, 2025
/s/ Elias A. Zerhouni, M.D. Elias A. Zerhouni, M.D.	Vice Chairman and President	March 3, 2025
/s/ Steven D. Rubin Steven D. Rubin	Director and Executive Vice President – Administration	March 3, 2025
/s/ Adam Logal Adam Logal	Senior Vice President, Chief Financial Officer, Chief Accounting Officer and Treasurer (Principal Financial Officer)	March 3, 2025
/s/ Gary J. Nabel, M.D., Ph.D. Gary J. Nabel, M.D., Ph.D.	Director, Chief Innovation Officer	March 3, 2025
/s/ Richard Krasno, Ph.D. Richard Krasno, Ph.D.	Director	March 3, 2025
/s/ Prem A. Lachman, M.D. Prem A. Lachman M.D.	Director	March 3, 2025
/s/ Roger J. Medel, M.D. Roger J. Medel, M.D.	Director	March 3, 2025
/s/ John A. Paganelli John A. Paganelli	Director	March 3, 2025
/s/ Richard C. Pfenniger, Jr. Richard C. Pfenniger, Jr.	Director	March 3, 2025
/s/ Alice Lin-Tsing Yu, M.D., Ph.D. Alice Lin-Tsing Yu, M.D., Ph.D.	Director	March 3, 2025

Exhibit Number	Description
19.1	OPKO Health, Inc. Related Party Transaction Policy.
21	Subsidiaries of the Company.
23.1	Consent of Independent Registered Public Accounting Firm.
31.1	Certification by Phillip Frost, Chief Executive Officer, pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities and Exchange Act of 1934 as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 for the year ended December 31, 2024.
31.2	Certification by Adam Logal, Chief Financial Officer, pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities and Exchange Act of 1934 as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 for the year ended December 31, 2024.
32.1	Certification by Phillip Frost, Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 for the year ended December 31, 2024.
32.2	Certification by Adam Logal, Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 for the year ended December 31, 2024.
Exhibit 101.INS	Inline XBRL Instance Document
Exhibit 101.SCH	Inline XBRL Taxonomy Extension Schema Document
Exhibit 101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
Exhibit 101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
Exhibit 101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
Exhibit 101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
Exhibit 104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

Exhibit 19.1

OPKO HEALTH, INC.

Related Party Transaction Policies and Procedures

(Revised May 3, 2022)

Policy

OPKO Health, Inc. (the "*Company*") recognizes that "*Related Party Transactions*" (as defined below) may raise questions as to whether those transactions are consistent with the best interests of the Company. It is the Company's policy to enter into or ratify Related Party Transactions only when the Board of Directors, acting through the Audit Committee or as otherwise described herein, determines that the Related Party Transaction in question is in, or is not inconsistent with, the best interests of the Company. This may include situations where the Company may obtain products or services of a nature, quantity or quality, or on terms, that are not readily available from alternative sources or when the Company provides products or services to "*Related Persons*" (as defined below) on an arm's length basis on terms comparable to those provided to unrelated third parties or on terms comparable to those provided to employees generally. Therefore, the Company has adopted the procedures set forth below for the review, approval or ratification of Related Party Transactions.

This policy has been approved by the Board of Directors, and shall be administered by the Audit Committee of the Board of Directors (the "*Committee*"). The Committee will review and may amend this policy from time to time.

Procedures

The Committee will review the material facts of all Related Party Transactions that require the Committee's approval and either approve or disapprove of the entry into the Related Party Transaction, subject to the exceptions described below. If advance Committee approval of a Related Party Transaction is not feasible, then the Related Party Transaction will be considered and, if the Committee determines it to be appropriate, ratified at the Committee's next regularly scheduled meeting. In the event that the Company proceeds with a Related Party transaction without advance approval, then the terms of such Related Party Transaction must permit termination by the Company without further material obligation in the event that Committee ratification is not forthcoming at the Committee's next regularly scheduled meeting.

In determining whether to approve or ratify a Related Party Transaction, the Committee will take into account, among other factors it deems appropriate, whether the Related Party Transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the Related Person's interest in the transaction.

The Committee has reviewed the Related Party Transactions described below in "Standing Pre-Approval for Certain Related Party Transactions" and determined that each of the Related Party Transactions described therein will be deemed to be pre-approved or ratified (as applicable) by the Committee under the terms of this policy.

In connection with each regularly scheduled meeting of the Committee, a summary of each Related Party Transaction deemed pre-approved pursuant to paragraph (3) or (4) under "Standing Pre-Approval for Certain Related Party Transactions" below will be provided to the Committee for its review.

No director may participate in any discussion or approval of a Related Party Transaction for which he or she is a Related Person, except that the director must provide all material information concerning the Related Party Transaction to the Committee. If a Related Party Transaction will be ongoing, the Committee may in its discretion establish guidelines for the Company's management to follow in its ongoing dealings with the Related Person. In such event, the Committee should periodically review and assess ongoing relationships with the Related Person to see that they are in compliance with the Committee's guidelines and that the Related Party Transaction remains appropriate.

The Committee will provide periodic updates to the Board of Directors on Related Party Transactions.

Definitions

"Related Party Transaction" means any transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which the Company (including any of its subsidiaries) was, is or will be a participant and the amount involved exceeds $120,000, and in which any Related Person had, has or will have a direct or indirect material interest.

For purposes of this Policy, a "*Related Person*" means:

1. any person who is, or at any time since the beginning of the Company's last fiscal year was, a director or executive officer of the Company or a nominee to become a director of the Company;

2. any person who is known to be the beneficial owner of more than 5% of any class of the Company's voting securities or securities exchangeable for the Company's securities;

3. any immediate family member of any of the foregoing persons, which means any child, stepchild, parent, stepparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law of the director, executive officer, nominee or more than 5% beneficial owner, and any person (other than a tenant or employee) sharing the household of such director, executive officer, nominee or more than 5% beneficial owner; and

4. any firm, corporation or other entity in which any of the foregoing persons is employed or is a partner or principal or in a similar position or in which such person has a 10% or greater beneficial ownership interest.

Standing Pre-Approval for Certain Related Party Transactions

The Committee has reviewed the types of Related Party Transactions described below and determined that each of the following Related Party Transactions will be deemed to be pre-approved by the Committee, even if the aggregate amount involved will exceed $120,000.

1. Employment of executive officers. Any employment by the Company of an executive officer of the Company so long as:

(A) the related compensation is required to be reported in the Company's proxy statement under Item 402 of Regulation S-K as promulgated by the Securities and Exchange Commission ("*SEC*"), which is generally applicable to "named executive officers"; or

(B) the executive officer is not an immediate family member of another executive officer or director of the Company, the related compensation would be reported in the Company's proxy statement under Item 402 of Regulation S-K if the executive officer was a "named executive officer," and the Company's Compensation Committee approved (or recommended that the Board approve) such compensation.

2. Director compensation. Any compensation paid to a director if the compensation is required to be reported in the Company's proxy statement under Item 402 of Regulation S-K.

3. Certain transactions with other companies. Any transaction with another company at which a Related Person's only relationship is as an employee (other than an executive officer), director or beneficial owner of less than 10% of that company's voting interest, if the aggregate amount involved does not exceed the greater of $200,000 and 5% of that company's total annual revenues.

4. Certain Company charitable contributions. Any charitable contribution, grant or endowment by the Company to a charitable organization, foundation or university at which a Related Person's only relationship is as an employee (other than an executive officer) or a director, if the aggregate amount involved does not exceed the greater of $200,000 and 5% of the charitable organization's total annual receipts.

5. Transactions where all shareholders receive proportional benefits. Any transaction where the Related Person's interest arises solely from the ownership of the Company's common stock and all holders of the Company's common stock received the same benefit on a pro rata basis (e.g. dividends).

6. Transactions involving competitive bids. Any transaction involving a Related Person where the rates or charges involved are determined by competitive bids.

7. Certain banking-related services. Any transaction with a Related Person involving services as a bank depositary of funds, transfer agent, registrar, trustee under a trust indenture, or similar services.

Exhibit 21.0

SUBSIDIARIES OF OPKO HEALTH, INC.

NAME	JURISDICTION OF INCORPORATION
OPKO Pharmaceuticals, LLC	Delaware
OPKO Diagnostics, LLC	Delaware
ModeX Therapeutics, Inc.	Delaware
OPKO Chile, S.A.	Chile
Arama Natural Products Distribuidora, Ltda	Chile
Pharmacos Exakta S.A. de C.V.	Mexico
FineTech Pharmaceutical Ltd	Israel
OPKO Health Europe, S.L.	Spain
OPKO Biologics, Ltd	Israel
OPKO Renal, LLC	Canada
Curna, Inc.	Delaware
BioReference Health, LLC	Delaware
EirGen Pharma Limited	Ireland
Transition Therapeutics, Corp. ULC	Nova Scotia

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. 333-271943) pertaining to the 2016 Equity Incentive Plan of OPKO Health, Inc.,
2. Registration Statement (Form S-8 No. 333-211209) pertaining to the 2016 Equity Incentive Plan of OPKO Health, Inc.,
3. Registration Statement (Form S-8 No. 333-144040) pertaining to the 2007 Equity Incentive Plan of OPKO Health, Inc.,
4. Registration Statement (Form S-8 No. 333-190899) pertaining to the 2005 Stock Incentive Plan and 2007 Equity Incentive Plan of PROLOR Biotech, Inc. (formerly Modigene Inc.),
5. Registration Statement (Form S-8 No. 333-190900) pertaining to the Amended and Restated 2007 Equity Incentive Plan of OPKO Health, Inc., and
6. Registration Statement (Form S-8 No. 333-206489) pertaining to the 2003 Employee Incentive Stock Option Plan of Bio-Reference Laboratories, Inc.

Of our reports dated March 3, 2025, with respect to the consolidated financial statements and the financial statement schedule of OPKO Health, Inc. and subsidiaries and the effectiveness of internal control over financial reporting of OPKO Health, Inc. and subsidiaries included in this Annual Report (Form 10-K) of OPKO Health, Inc. and subsidiaries for the year ended December 31, 2024.

Miami, Florida
March 3, 2025

Exhibit 31.1

CERTIFICATIONS

I, Phillip Frost, certify that:

(1) I have reviewed this Annual Report on Form 10-K of OPKO Health, Inc.;

(2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

(3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

(4) The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

(5) The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/Phillip Frost, M.D.
Phillip Frost, M.D.
Chief Executive Officer

Date: March 3, 2025

CERTIFICATIONS

I, Adam Logal, certify that:

(1) I have reviewed this Annual Report on Form 10-K of OPKO Health, Inc.;

(2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

(3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

(4) The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

(5) The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 3, 2025

/s/ Adam Logal

Adam Logal
Senior Vice President, Chief Financial Officer, Chief Accounting Officer and Treasurer

Exhibit 32.1

Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant section 906 of the Sarbanes-Oxley Act of 2002, I, Phillip Frost, Chief Executive Officer of OPKO Health, Inc. (the "Company"), hereby certify that:

The Annual Report on Form 10-K for the year ended December 31, 2024 (the "Form 10-K") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 3, 2025

/s/ Phillip Frost, M.D.
Phillip Frost, M.D.
Chief Executive Officer

Exhibit 32.2

Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 200

(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant section 906 of the Sarbanes-Oxley Act of 2002, I, Adam Logal, Chief Financial Officer of OPKO Health, Inc. (the "Company"), hereby certify that:

The Annual Report on Form 10-K for the year ended December 31, 2024 (the "Form 10-K") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 3, 2025

/s/ Adam Logal
Adam Logal
Senior Vice President, Chief Financial Officer
Chief Accounting Officer and Treasurer