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

FORM 10-K

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

For the fiscal year ended December 31, 2019
or

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.
For the transition period from to

Commission file number 001-37752

CHROMADEX CORPORATION

(Exact name of Registrant as specified in its Charter)

Delaware	26-2940963
(State or other jurisdiction of incorporation)	(I.R.S. Employer Identification No.)
10900 Wilshire Blvd. Suite 600, Los Angeles, California	90024
(Address of Principal Executive Offices)	(Zip Code)

Registrant's telephone number, including area code (310) 388-6706

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, $0.001 par value per share	CDXC	The Nasdaq Capital 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 [X]

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 [X]

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 [X] No [ ]

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

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

Large accelerated filer [ ] Accelerated filer [X] Non-accelerated filer [ ]
Smaller reporting company [X] 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 revis financing accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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

As of June 30, 2019, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately $190.4 million, based on the closing price of the registrant's common stock on the NASDAQ Capital Market on June 30, 2019.

Number of shares of common stock of the registrant outstanding as of March 3, 2020: 59,787,897.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's proxy statement (the "Proxy Statement") to be filed with the Securities and Exchange Commission ("SEC" or the "Commission") pursuant to Regulation 14A in connection with the registrant's 2020 Annual Meeting of Stockholders, which will be filed subsequent to the date hereof, are incorporated by reference into Part III of this Form 10-K. Such Proxy Statement will be filed with the SEC not later than 120 days following the end of the

registrant’s fiscal year ended December 31, 2019.

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PART I

CAUTIONARY NOTICE REGARDING FORWARD LOOKING STATEMENTS

This Annual Report on Form 10-K (the “Form 10-K”) contains “forward-looking statements” within the meaning of 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, which are subject to the safe harbor created by those sections.

We may, in some cases, use words such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “will,” “would” or the negative of these terms, and similar expressions that convey uncertainty of future events or outcomes to identify these forward-looking statements. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements and are based upon our current expectations, beliefs, estimates and projections, and various assumptions, many of which, by their nature, are inherently uncertain and beyond our control. Such statements, include, but are not limited to, statements contained in this Form 10-K relating to our business, business strategy, products and services we may offer in the future, the outcome and impact of litigation, the timing and results of future regulatory filings, the timing and results of future clinical trials, our ability to collect from major customers, sales and marketing strategy and capital outlook. Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Our actual results may differ materially from those contemplated by the forward-looking statements. They are neither statement of historical fact nor guarantees of assurance of future performance. We caution you therefore against relying on any of these forward-looking statements. Important factors that could cause actual results to differ materially from those in the forward looking statements include, but are not limited to, a decline in general economic conditions nationally and internationally; decreased demand for our products and services; market acceptance of our products; the ability to protect our intellectual property rights; impact of any litigation or infringement actions brought against us; competition from other providers and products; risks in product development; inability to raise capital to fund continuing operations; changes in government regulation; the ability to complete customer transactions and capital raising transactions, and other factors (including the risks contained in Item 1A of this Form 10-K under the heading “Risk Factors”) relating to our industry, our operations and results of operations and any businesses that may be acquired by us. Should one or more of these risks or uncertainties materialize, or should the underlying assumptions prove incorrect, actual results may differ significantly from those anticipated, believed, estimated, expected, intended or planned.

Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Given these uncertainties, you should not place undue reliance on these forward-looking statements. We cannot guarantee future results, levels of activity, performance or achievements. Except as required by applicable law, we undertake no obligation to and do not intend to update any of the forward-looking statements to conform these statements to actual results.

Item 1. Business

Unless otherwise indicated or the context otherwise requires, references to the “Company”, “ChromaDex”, “we”, “us” and “our” refer to ChromaDex Corporation and its consolidated subsidiaries.

Company Overview

ChromaDex is a science-based integrated nutraceutical company devoted to improving the way people age. ChromaDex scientists partner with leading universities and research institutions worldwide to discover, develop and create solutions to deliver the full potential of nicotinamide adenine dinucleotide ("NAD") and its impact on human health.

NAD is an essential coenzyme and a key regulator of cellular metabolism. Best known for its role in cellular energy production, NAD is now thought to play an important role in healthy aging. Many cellular functions related to health and healthy aging are sensitive to levels of locally available NAD and this represents an active area of research in the field of NAD.

NAD levels are not constant, and in humans, NAD levels have been shown to decline by more than 50% from young adulthood to middle age. NAD continues to decline as humans grow older. There are other causes of reduced NAD levels such as over-nutrition, alcohol consumption and a number of disease states. NAD may also be increased, including through calorie restriction and exercise. Healthy aging, mitochondria and NAD continue to be areas of focus in the research community. As of 2019, there were over 250 published human clinical studies on NAD. The areas of study include Alzheimer’s disease, Parkinson’s disease, neuropathy and heart failure.

In 2013, ChromaDex commercialized NIAGEN® nicotinamide riboside ("NR"), a novel form of vitamin B3. Data from numerous animal studies, and confirmed in human clinical trials, show that NR is a highly efficient NAD precursor that significantly raises NAD levels. NIAGEN® is safe for human consumption. NIAGEN® has twice been successfully reviewed under FDA's new dietary ingredient (“NDI”) notification program, has been successfully notified to the FDA as generally recognized as safe (“GRAS”), and has been approved by Health Canada, the European Commission and the Therapeutic Goods Administration of Australia. Animal studies of NIAGEN® have demonstrated a variety of outcomes ranging from increased NAD levels, increased cellular metabolism and energy production to improvements in insulin sensitivity. NIAGEN® is the trade name for our proprietary ingredient NR, and is protected by patents to which we are the exclusive licensee.

ChromaDex is the world leader in the emerging NAD space. ChromaDex has approximately 190 partnerships with leading universities and research institutions around the world including the National Institutes of Health, Cornell, Dartmouth, Harvard, Massachusetts Institute of Technology, University of Cambridge and the Mayo Clinic. Other relationships are currently being developed.

Our scientific advisory board is led by Chairman Dr. Roger Kornberg, Nobel Laureate Stanford Professor, Dr. Charles Brenner, one of the world’s recognized experts in NAD and inventor of nicotinamide riboside, Dr. Rudi Tanzi, the co-chair of the department of neurology at Harvard Medical School and one of the world’s leading experts in food and nutrition, Sir John Walker, Nobel Laureate and Emeritus Director, MRC Mitochondrial Biology Unit in the University of Cambridge, England, Dr. Bruce German, Chairman of food, nutrition and health at the University of California, Davis, Dr. Brunie Felding, Associate Professor, Department of Molecular Medicine at Scripps Research Institute, California Campus and Dr. Robert Beudeker, Vice President of Innovation, who leads the innovation program for human nutrition and health at DSM.

STRATEGIC SHIFT TO GLOBAL CONSUMER PRODUCT COMPANY

The acquisition of Healthspan Research LLC, a company that sold our TRU NIAGEN® branded product direct to consumers, marked our strategic shift from an ingredient and testing company to a global, science-based integrated nutraceutical company. ChromaDex made the strategic decision to commercialize TRU NIAGEN® as a consumer brand for the product containing NIAGEN® ingredient, launching in 2017.

In connection with our strategic decision to grow our global consumer brand, we have reduced the number of NIAGEN® resellers to just a few. As expected, our ingredients segment net sales decreased 28% in 2019, from $8.6 million in 2018 to $6.2 million. However, our net sales of TRU NIAGEN® increased by $17.6 million, from $18.5 million in 2018 to $36.1 million in 2019, to more than offset the decrease in net sales of our ingredients segment.

We began the international expansion of our TRU NIAGEN® brand with the launch in Hong Kong and Macau with our strategic partner, A.S. Watson Group, in 2017, followed by the launch in Singapore in 2018. In 2018, we also launched TRU NIAGEN® in New Zealand with retail partner Matakana Superfoods and in Canada by making it available at www.truniagen.ca and to healthcare practitioners at Fullscript Canada after receiving regulatory approval for sale from Health Canada. We are currently selling cross border in China on Tmall, and on Amazon in the United Kingdom, Canada and Japan. In 2019, we received a positive opinion from the European Food Safety Authority on NR as a novel food ingredient for use in food supplement and approval from the Australian Therapeutic Goods Association for use in listed complementary medicines. We will continue to focus on obtaining additional regulatory approvals required to expand our marketing and distribution of our TRU NIAGEN® brand in new strategic international markets.

INGREDIENTS AND ANALYTICAL REFERENCE STANDARDS AND SERVICES BUSINESS SEGMENTS

Through our ingredients business segment, we will continue to sell NIAGEN® in ingredient form to our strategic partners, including Nestec Ltd. (“Nestlé”), a global leader pioneering quality science-based nutritional health solutions. In 2018, we entered into a supply agreement with Nestlé, pursuant to which Nestlé will be our exclusive customer for NIAGEN® for human use in the (i) medical nutritional and (ii) functional food and beverage categories in certain territories. As consideration for the rights granted to Nestlé, we received an upfront fee of $4 million. Following the launch of the products in certain territories, Nestlé will additionally pay us a one-time fee for a potential total aggregate payment of $6 million.

We are a leading provider of research and quality-control products and services to the natural products industry. Through our analytical reference standards and services segment, customers worldwide in the dietary supplement, food and beverage, cosmetic and pharmaceutical industries use our products, which are small quantities of highly-characterized, research-grade, plant-based materials, to ensure the quality of their raw materials and finished products. We have conducted this analytical reference standards and services business since 1999.

For the fiscal years ended December 31, 2019 and December 31, 2018, our revenues were approximately $46.3 million and $31.6 million, respectively. The following table summarizes the Company’s total sales for each of the business segments in the last two years. Please refer to Item 8 Financial Statements and Supplementary Data of this Annual Report on Form 10-K for additional financial information for each of the business segments.

Fiscal Years	Consumer Products Segment	Ingredients Segment	Analytical Reference Standards and Services Segment	Total
2019	$36.1 million	$6.2 million	$4.0 million	$46.3 million
2018	$18.5 million	$8.6 million	$4.5 million	$31.6 million

Company Background

On May 21, 2008, Cody Resources, Inc., a Nevada corporation and a public company, ("Cody") entered into an Agreement and Plan of Merger (the "Merger Agreement"), by and among Cody, CDI Acquisition, Inc., a California corporation and wholly-owned subsidiary of Cody ("Acquisition Sub"), and ChromaDex, Inc. (the "Merger"). Subsequent to the signing of the Merger Agreement, Cody merged with and into a Delaware corporation. On June 20, 2008, Cody amended its articles of incorporation to change its name to ChromaDex Corporation. ChromaDex Corporation was traded on the Over the Counter market under the symbol "CDXC." On April 25, 2016, ChromaDex Corporation became listed on the NASDAQ Capital Market under the symbol "CDXC."

ChromaDex, Inc., a wholly owned subsidiary of ChromaDex Corporation, was originally formed as a California corporation on February 19, 2000.

On March 12, 2017, ChromaDex Corporation acquired Healthspan Research LLC, a consumer product company offering TRU NIAGEN® branded products. This marked the strategic shift to become a global, science-based integrated nutraceutical company. On September 5, 2017, the Company completed the sale of its operating assets that were used with the Company's quality verification program testing and analytical chemistry business for food and food related products to Covance Laboratories Inc.

Business Market

According to the data from Global Wellness Institute, the global wellness industry market was approximately $4.2 trillion in 2017. Personal care, beauty and anti-aging market was approximately $1.1 trillion, healthy eating, nutrition and weight loss was approximately $702 billion and traditional and complementary medicine market was approximately $360 billion.

According to the data from Grand View Research, the global dietary supplements market size was estimated at $123 billion in 2019, and is expected to grow at a CAGR of 8.2% to about $232 billion by 2027.

Business Model

CONSUMER PRODUCTS SEGMENT

Our business model is to sell TRU NIAGEN® to consumers worldwide. As a world leader in the emerging NAD space and the science of aging, we will continue to seek to discover and enhance patented technology and evolve our TRU NIAGEN® products to improve health by safely raising NAD levels. The TRU NIAGEN® brand is built on scientific evidence, trust and the direct impact to our consumers of aging better.

We intend to expand to the worldwide NAD-related healthy aging market by entering into new international markets. We will continue to focus on obtaining additional regulatory approvals required to expand our marketing and distribution of our TRU NIAGEN® products in new international markets. We will utilize our proprietary ecommerce platforms, and the ecommerce and brick and mortar platforms of strategic regional and local partners. Our United States ("U.S.") based business will continue to support our global operations, including:

- Corporate development and strategy
- Research and development activities
- Science
- Global premium brand management and brand guidelines
- Multi-platform global marketing campaigns and know-how
- Build and evolve propriety ecommerce platform and data analytics
- Global manufacturing and supply chain operations

We expect to continue to supply our international operations with finished products manufactured in the U.S, and to continue to provide all our marketing materials and know-how to our international strategic partners.

INGREDIENTS SEGMENT

We will continue to sell NIAGEN® in ingredient form to our strategic partners. In addition, we will also continue to identify, acquire and commercialize other innovative new proprietary ingredients and technologies. We have an experienced team that is capable of advancing products through development into commercialization with the required regulatory approval, safety, toxicology, clinical trials, supply chain management, manufacturing, and ultimately either directly selling the products or licensing to third parties.

ANALYTICAL REFERENCE STANDARDS AND SERVICES SEGMENT

We have taken advantage of both supply chain needs and regulatory requirements to build our analytical reference standards and services segment. We believe that we create value throughout the supply chain of the dietary supplements, functional foods and personal care markets. We will capitalize on additional opportunities in product development and commercialization of various kinds of intellectual property that we have largely discovered and acquired through the sales process associated with this segment.

Overview of our Products and Services

Current products and services provided are as follows:

CONSUMER PRODUCTS

- *TRU NIAGEN® branded dietary supplements*. We currently offer our NIAGEN® nicotinamide riboside through our TRU NIAGEN® finished bottles. We will continue to build our TRU NIAGEN® as a global brand and offer TRU NIAGEN® to consumers worldwide. We are conducting additional clinical trials to further validate the health benefits associated with NIAGEN® and TRU NIAGEN®.

INGREDIENTS

- *Nicotinamide riboside NIAGEN®*. We will continue to develop and sell NIAGEN® in ingredient form to strategic partners.
- *Spirulina Extract Immulina™*. IMMULINA™ is a spirulina extract and the predominant active compounds are Braun-type lipoproteins which are useful for improving human immune function. These lipoproteins are present at much greater levels than those found within commonly used immune enhancing botanicals such as Echinacea and ginseng.

ANALYTICAL REFERENCE STANDARDS AND SERVICES

- *Supply of reference standards and fine chemicals.* We supply a wide range of products necessary to conduct quality control of raw materials and consumer products. Reference standards and fine chemicals are used for research and quality control in the dietary supplements, cosmetics, food and beverages, and pharmaceutical industries.

Sales and Marketing Strategy

For our consumer products segment, we employ a variety of strategies to drive sales and consumer awareness of TRU NIAGEN®, including social media and internet advertising, managing websites, influencers, paid spokespersons and talent, events and tradeshows, e-mail, paid search, distribution of research publications and press releases. We also have a customer care department that handles day-to-day communications with our end customers addressing any needs or concerns related to our TRU NIAGEN® product.

For our ingredients segment and analytical reference standards and services segment, our strategy is based on a direct, technically-oriented model. We recruit and hire sales and marketing staff with appropriate commercial and scientific backgrounds.

USA:

For our consumer products segment, we are distributing our TRU NIAGEN® products direct to consumers through our propriety ecommerce platform TRUNIAGEN.com, Amazon and other established internet marketplaces. We also have specialty retailers and direct healthcare practitioners who are authorized resellers of TRU NIAGEN® in the U.S.

For our ingredients segment and analytical reference standards and services segment, we intend to continue to use a direct marketing approach in the U.S. to promote our products and services.

International:

For our consumer products segment, we utilize strategic partners on a regional or local country basis to expand our distribution of TRU NIAGEN® products. Our strategic partnerships include brick and mortar and/or ecommerce channels. We also are evaluating strategic joint ventures to rapidly expand our distribution in Asia. We began our international expansion of TRU NIAGEN® products with the successful launch in Hong Kong and Macau with our strategic partner, A.S. Watson Group in 2017, followed by the launch in Singapore in 2018. In 2018, we also launched TRU NIAGEN® in New Zealand with retail partner Matakana Superfoods and in Canada by making it available at www.truniagen.ca and to healthcare practitioners at Fullscript Canada after receiving regulatory approval for sale from Health Canada. We are currently selling cross border in China on Tmall, and on Amazon in the United Kingdom, Canada and Japan. In 2019, we received a positive opinion from the European Food Safety Authority on NR as a novel food ingredient for use in food supplement and approval from the Australian Therapeutic Goods Association for use in listed complementary medicines. We will continue to focus on obtaining additional regulatory approvals required to expand our marketing and distribution of our TRU NIAGEN® brand in new strategic international markets.

For our ingredients segment, most of our customers are based currently in the U.S.

For our analytical reference standards and services segment outside of the U.S., we use international distributors to market and sell to several foreign countries or markets. The use of distributors in some international markets has proven to be more effective than direct sales.

Government Regulation

Some of our operations are subject to regulation by various United States federal agencies and similar state and international agencies, including the Food and Drug Administration (“FDA”), the Federal Trade Commission (“FTC”), the Department of Commerce, the Department of Transportation, the Department of Agriculture and other state and international agencies. These regulators govern a wide variety of production activities, from design and development to labeling, manufacturing, handling, selling and distributing of products. From time to time, federal, state and international legislation is enacted that may have the effect of materially increasing the cost of doing business or limiting or expanding our permissible activities. We cannot predict whether or when potential legislation or regulations will be enacted, and, if enacted, the effect of such legislation, regulation, implementation, or any implemented regulations or supervisory policies would have on our financial condition or results of operations. In addition, the outcome of any litigation, investigations or enforcement actions initiated by state or federal authorities could result in changes to our operations being necessary and in increased compliance costs.

U.S. FDA Regulation

In the United States dietary supplements and food are subject to FDA regulations. For example, the FDA's final rule on Good Manufacturing Practices ("GMPs") for dietary supplements published in June 2007 requires companies to evaluate products for identity, strength, purity and composition. These regulations, in some cases, particularly for new ingredients, require a notification that must be submitted to the FDA along with evidence of safety. In addition, depending on the type of product, whether a dietary supplement, cosmetic, food, or pharmaceutical, the FDA, under the Food, Drug and Cosmetic Act (the "FDCA"), can regulate:

- product testing;
- ingredient testing;
- documentation process, batch records, specifications;
- product labeling;
- product manufacturing and storage;
- NDI status;
- health claims, advertising and promotion; and
- product sales and distribution.

The FDCA has been amended several times with respect to dietary supplements, most notably by the Dietary Supplement Health and Education Act of 1994 ("DSHEA"). DSHEA established a new framework for governing the composition and labeling of dietary supplements. Generally, under DSHEA, dietary ingredients that were marketed in the United States before October 15, 1994, may be used in dietary supplements without notifying the FDA. However, an NDI (a dietary ingredient that was not marketed in the United States before October 15, 1994) is subject to NDI notification that must be submitted to the FDA unless the ingredient has previously been "present in the food supply as an article used for food" without being "chemically altered." An NDI notification must provide the FDA with evidence of a "history of use or other evidence of safety" establishing that the use of the dietary ingredient "will reasonably be expected to be safe." An NDI notification must be submitted to the FDA at least 75 days before the initial marketing of the NDI. There can be no assurance that the FDA will accept the evidence of safety for any NDIs that we may want to commercialize, and the FDA's refusal to accept such evidence could prevent the marketing of such dietary ingredients. The FDA is in the process of developing guidance for the industry that will aim to clarify the FDA's interpretation of the NDI notification requirements, and this guidance may raise new and significant regulatory barriers for NDIs.

For any new ingredient developed by us to be used in conventional food or beverage products in the United States, the product either must be approved by the FDA as a food additive pursuant to a food additive petition ("FAP") or be generally recognized as safe ("GRAS"). The FDA does not have to approve a company's determination that an ingredient is GRAS. However, a company can notify the FDA of its determination. There can be no assurance that the FDA will approve any FAP for any ingredient that we may want to commercialize, or agree with our determination that an ingredient is GRAS, either of which could prevent the marketing of such ingredient.

U.S. Advertising Regulations

In addition to FDA regulations, the FTC regulates the advertising of dietary supplements, foods, cosmetics, and over-the-counter ("OTC"), drugs. In recent years, the FTC has instituted numerous enforcement actions against dietary supplement companies for failure to adequately substantiate claims made in advertising or for the use of false or misleading advertising claims. These enforcement actions have often resulted in consent decrees and the payment of civil penalties, restitution, or both, by the companies involved. We may be subject to regulation under various state and local laws that include provisions governing, among other things, the formulation, manufacturing, packaging, labeling, advertising and distribution of dietary supplements, foods, cosmetics and OTC drugs.

In addition, The National Advertising Division of the Council of Better Business Bureaus reviews national advertising for truthfulness and accuracy. The National Advertising Division of the Council of Better Business Bureaus uses a form of alternative dispute resolution, working closely with in-house counsel, marketing executives, research and development departments and outside consultants to decide whether claims have been substantiated.

International Regulations

Our international sales for the consumer products segment and ingredients segment are subject to foreign government regulations, which vary substantially from country to country. The time required to obtain approval by a foreign country may be longer or shorter than that required for FDA approval, and the requirements may differ. We may be unable to obtain on a timely basis, if at all, any foreign government approvals necessary for the marketing of our products abroad.

Regulation in Europe is exercised primarily through the European Union, which regulates the combined market of each of its member states. Other countries, such as Switzerland, have voluntarily adopted laws and regulations that mirror those of the European Union with respect to dietary ingredients.

Major Customers

Major customers who accounted for more than 10% of the Company's total sales were as follows:

	Years Ended	
Major Customers	2019	2018
A.S. Watson Group - Related Party	15.8%	*
Life Extension	*	10.0%

* Represents less than 10%.

Generally, we do not depend upon a single customer, or a few customers, and the loss of any one or more would not have a material adverse effect on the Company. However, due to the volume of consumer products and ingredients we are selling in relation to the overall Company's sales, we do expect that at times one or more of our customers may account for more than 10% of the Company's sales.

Competitive Business Conditions

For our consumer products segment, we are in direct competition with Elysium Health who offers a similar product to our TRU NIAGEN®. There are also a few resellers of NIAGEN® as consumer products that are our customers. We believe these resellers are focused on specific channels that we believe are complementary to our business.

For our ingredients segment, we face little direct competition as the ingredients we offer are backed by intellectual property exclusively licensed to us. We, however, face strong indirect competition from other ingredient suppliers who may supply alternative ingredients that may have similar characteristics to ingredients we offer. Below is a list of some of the competitors for our ingredients segment.

Ingredients Business Segment Competitors

- Royal DSM (the Netherlands)
- Glanbia plc (Ireland)
- BASF (Germany)
- Lonza Group Ltd (Switzerland)
- Sabinsa Corporation (India/USA)

For our consumer products segment, we employ a variety of strategies to drive sales and consumer awareness of TRU NIAGEN®, including social media and internet advertising, managing websites, influencers, paid spokespersons and talent, events and tradeshows, e-mail, paid search, distribution of research publications and press releases. We also have a customer care department that handles day-to-day communications with our end customers addressing any needs or concerns related to our TRU NIAGEN® product.

Analytical Reference Standards and Services Segment Competitors

- Sigma-Aldrich (USA)
- Phytolab (Germany)
- US Pharmacopoeia (USA)
- Extrasynthese (France)

Patents, Trademarks, Licenses, Franchises, Concessions, Royalty Agreements or Labor Contracts, Including Duration

We currently protect our intellectual property through patents, trademarks, designs and copyrights on our products and services. Our business strategy is to use the intellectual property harnessed from our analytical reference standards and services segment as the basis for providing new proprietary ingredients to our customers. Our strategy is to develop these proprietary ingredients on our own as well as to license our intellectual property to companies who will commercialize it. We anticipate that the net result will be a long-term flow of intellectual property milestone and royalty payments to us.

The following table sets forth our existing patents and those to which we have licensed rights:

Patent Number	Title	Filing Date	Issued Date	Expires	Licensor
7,205,284	Potent immunostimulants from microalgae	7/10/2001	4/17/2007	3/9/2022	Licensed from University of Mississippi
7,776,326	Methods and compositions for treating neuropathies	6/3/2005	8/17/2010	6/3/2025	Licensed from Washington University
7,846,452	Potent immunostimulatory extracts from microalgae	7/28/2005	10/7/2010	7/28/2025	Licensed from University of Mississippi
8,106,184	Nicotinyl Riboside Compositions and Methods of Use	11/17/2006	1/31/2012	11/17/2026	Licensed from Cornell University
8,114,626	Yeast strain and method for using the same to produce Nicotinamide Riboside	3/26/2009	2/14/2012	3/26/2029	Licensed from Dartmouth College
8,133,917	Pterostilbene as an agonist for the peroxisome proliferator-activated receptor alpha isoform	10/25/2010	3/13/2012	10/25/2030	Licensed from the University of Mississippi and U.S. Department of Agriculture
8,197,807	Nicotinamide Riboside Kinase compositions and Methods for using the same	11/20/2007	6/12/2012	11/20/2027	Licensed from Dartmouth College
8,252,845	Pterostilbene as an agonist for the peroxisome proliferator-activated receptor alpha isoform	2/1/2012	8/28/2012	2/1/2032	Licensed from the University of Mississippi and U.S. Department of Agriculture
8,318,807	Pterostilbene Caffeine Co-Crystal Forms	7/30/2010	11/27/2012	7/30/2030	Licensed from Laurus Labs Private Limited
8,383,086	Nicotinamide Riboside Kinase compositions and Methods for using the same	4/12/2012	2/26/2013	4/12/2032	Licensed from Dartmouth College
8,399,712	Pterostilbene cocrystals	7/30/2010	3/19/2013	7/30/2020	Licensed from Laurus Labs Private Limited

8,524,782	Key intermediate for the preparation of Stilbenes, solid forms of Pterostilbene, and methods for making the same	6/1/2009	9/3/2013	6/1/2029	Licensed from Laurus Labs Private Limited
8,809,400	Method to Ameliorate Oxidative Stress and Improve Working Memory Via Pterostilbene Administration	6/10/2008	8/19/2014	6/10/2028	Licensed from the University of Mississippi and U.S. Department of Agriculture
8,841,350	Method for treating non-melanoma skin cancer by inducing UDP-Glucuronosyltransferase activity using pterostilbene	5/8/2012	9/22/2014	5/8/2032	Co-owned by ChromaDex and University of California
8,889,126	Methods and compositions for treating neuropathies	5/28/2010	11/18/2014	5/28/2030	Licensed from Washington University
9,000,147	Nicotyl riboside compositions and methods of use	1/17/2012	4/7/2015	1/17/2032	Licensed from Cornell University
9,028,887	Method improve spatial memory via pterostilbene administration	5/22/2014	5/12/2015	5/22/2034	Licensed from the University of Mississippi and U.S. Department of Agriculture
9,295,688	Methods and compositions for treating neuropathies	10/10/2014	3/29/2016	10/10/2034	Licensed from Washington University
9,321,797	Nicotyl riboside compositions and methods of use	11/17/2014	4/26/2016	11/17/2034	Licensed from Cornell University
9,439,875	Anxiolytic effect of pterostilbene	5/11/2011	9/13/2016	5/11/2031	Licensed from the University of Mississippi and U.S. Department of Agriculture
9,975,915	Nicotinamide riboside kinase compositions and methods for using the same	4/12/2012	2/26/2013	4/12/2032	Licensed from Dartmouth College
10,000,520	B-vitamin and amino acid conjugates ofnicotinoyl ribosides and reduced nicotinoyl ribosides, derivatives thereof, and methods of preparation thereof	3/16/2017	6/19/2018	3/16/2037	Co-owned by ChromaDex and The Queen's University of Belfast

Manufacturing

We currently utilize third-party manufacturers to produce and supply dietary supplement, ingredients, products, and services. Following the receipt of products or product components from third-party manufacturers, we inspect and ensure conformance of each product and product component to our specifications. We will also consider manufacturing certain products or product components internally, if our capacity permits, when demand or quality requirements make it appropriate to do so.

We intend to work with manufacturing companies that can meet the standards imposed by the FDA, the International Organization for Standardization and the quality standards that we will require for our own internal policies and procedures. We expect to monitor and manage supplier performance through a corrective action program developed by us. We believe these manufacturing relationships can minimize our capital investment, help control costs, and allow us to compete with larger volume manufacturers of dietary supplements, phytochemicals and ingredients.

Sources and Availability of Raw Materials

For all three business segments, and subject to the risks related to our Company and our Business recited below, we believe that we have identified reliable sources and suppliers of ingredients, chemicals, phytochemicals and reference materials that will provide products in compliance with our guidelines.

Research and Development

We have completed the first human clinical trial on our proprietary ingredient NIAGEN® and the results demonstrated that a single dose of NR resulted in statistically significant increases in the co-enzyme NAD+ in healthy human volunteers. In addition, no adverse events were observed. In 2015, NIAGEN® was recognized by the FDA as a "New Dietary Ingredient." NIAGEN® was also "Generally Recognized as Safe" by an independent panel of expert toxicologists and in August 2016, the FDA issued a GRAS No Objection Letter.

In 2018, we completed a second human clinical trial on NR which evaluated the effect of repeated doses of NIAGEN® on NAD+ metabolite concentrations in blood, urine and muscle in healthy adults. This study evaluated the impacts of three dose levels of NIAGEN® compared to a placebo. One quarter of subjects received the low dose of NIAGEN® (100 mg), one quarter received the moderate dose of NIAGEN® (300 mg), one quarter received the higher dose of NIAGEN® (1,000 mg) and one quarter received the placebo. The results showed that NAD levels rose in response to the dose of NIAGEN® and the elevated blood NAD levels were sustained throughout the eight-week treatment period.

Through our research and development laboratory in Longmont, Colorado, we intend to manufacture at a process scale for products that we are planning to take to market as well as explore cost saving processes for existing products.

Research and development costs for the fiscal years ended December 31, 2019, and December 31, 2018, were approximately $4.4 million and $5.5 million, respectively.

Environmental Compliance

We will incur significant expense in complying with GMPs and safe handling and disposal of materials used in our research and manufacturing activities. We do not anticipate incurring additional material expense to comply with federal, state and local environmental laws and regulations.

Working Capital

The Company's working capital at the end of years 2019 and 2018 was approximately $4.1 million and $3.1 million, respectively. The Company measures working capital by adding trade receivables and inventories, and subtracting accounts payable. Most of the working capital is consumed by our consumer products segment and ingredients segment as the operations require a large amount of inventory to be on hand. As the consumer products segment and ingredients segment grow, more working capital will likely be needed to support the operations.

Backlog Orders

For our consumer products segment where we ship products internationally to distributors, we may have a backlog from time to time as the production of TRU NIAGEN® finished bottles require up to three months lead time by our third-party contract manufacturers. As of December 31, 2019 we had approximately $1.3 million backlog orders from the distributors that have not been shipped. For products that are directly shipped to consumers, we have minimal backlog orders as we carry inventory on hand to ship upon the receipt of order.

For our ingredients segment, we also have minimal backlog orders as we carry inventory on hand for most of the products we offer and we ship upon the receipt of customer's order.

For our analytical reference standards and services segment, we normally have a small backlog of orders for reference standards. These orders amount to approximately $25,000 or less. Because we list over 1,500 phytochemicals and 300 botanical reference materials in our catalog, we may not always have the items in stock at the time of customers' orders. These backlog orders are normally fulfilled within 2 to 3 months.

Facilities

For information on our facilities, see "Properties" in Item 2 of this Form 10-K.

Employees

As of December 31, 2019, ChromaDex (including Healthspan Research LLC and ChromaDex Analytics, Inc.) had approximately 110 employees, all of whom were full-time. We consider our relationships with our employees to be satisfactory. None of our employees is covered by a collective bargaining agreement.

Financial Information about Geographic Areas

Please refer to Item 8 Financial Statements and Supplementary Data of this Annual Report on Form 10-K for financial information about geographic areas.

Available Information

Our Internet website address is *www.chromadex.com*. Information found on, or accessible through, our website is not a part of, and is not incorporated into, this Annual Report on Form 10-K. We make available free of charge on our website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practical after we file such material with, or furnish it to, the Securities and Exchange Commission. This information is also available in print to any stockholder who requests it, with any such requests addressed to ChromaDex Corporation, 10900 Wilshire Blvd. Ste 600, Los Angeles, CA 90024. Certain of these documents may also be obtained by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, and other information regarding issuers that file electronically with the SEC at *www.sec.gov*. We also make available free of charge on our website our Code of Business Conduct and Ethics, and the Charters of our Audit Committee, Nominating and Corporate Governance Committee, and Compensation Committee of our Board of Directors.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. Current investors and potential investors should consider carefully the risks and uncertainties described below together with all other information contained in this Form 10-K before making investment decisions with respect to our common stock. If any of the following risks occurs, our business, financial condition, results of operations and our future growth prospects would be materially and adversely affected. Under these circumstances, the trading price and value of our common stock could decline, resulting in a loss of all or part of your investment. The risks and uncertainties described in this Form 10-K are not the only ones facing our Company. Additional risks and uncertainties of which we are not presently aware, or that we currently consider immaterial, may also affect our business operations.

Risks Related to our Company and our Business

We have a history of operating losses, may need additional financing to meet our future long-term capital requirements and may be unable to raise sufficient capital on favorable terms or at all.

We have a history of losses and may continue to incur operating and net losses for the foreseeable future. We incurred net losses of approximately $32.1 million and $33.3 million for the years ended December 31, 2019 and December 31, 2018, respectively. As of December 31, 2019, our accumulated deficit was approximately $121.9 million. We have not achieved profitability on an annual basis. We may not be able to reach a level of revenue to continue to achieve and sustain profitability. If our revenues grow slower than anticipated, or if operating expenses exceed expectations, then we may not be able to achieve and sustain profitability in the near future or at all, which may depress our stock price.

As of December 31, 2019, our cash and cash equivalents totaled approximately $18.8 million. While we anticipate that our current cash, cash equivalents and cash to be generated from operations will be sufficient to meet our projected operating plans through at least the next twelve months, we may require additional funds, either through additional equity or debt financings or collaborative agreements or from other sources. We have no commitments to obtain such additional financing, and we may not be able to obtain any such additional financing on terms favorable to us, or at all. If adequate financing is not available, the Company will further delay, postpone or terminate product and service expansion and curtail certain selling, general and administrative operations. The inability to raise additional financing may have a material adverse effect on the future performance of the Company.

Our capital requirements will depend on many factors.

Our capital requirements will depend on many factors, including:

- the revenues generated by sales of our products;
- the costs associated with expanding our sales and marketing efforts, including efforts to hire independent agents and sales representatives and obtain required regulatory approvals and clearances;
- the expenses we incur in developing and commercializing our products, including the cost of obtaining and maintaining regulatory approvals; and
- unanticipated general and administrative expenses, including expenses involved with our ongoing litigation with Elysium.

Because of these factors, we may seek to raise additional capital within the next twelve months both to meet our projected operating plans after the next twelve months and to fund our longer term strategic objectives. Additional capital may come from public and private equity or debt offerings, borrowings under lines of credit or other sources. These additional funds may not be available on favorable terms, or at all. There can be no assurance we will be successful in raising these additional funds. Furthermore, if we issue equity or debt securities to raise additional funds, our existing stockholders may experience dilution and the new equity or debt securities we issue may have rights, preferences and privileges senior to those of our existing stockholders. In addition, if we raise additional funds through collaboration, licensing or other similar arrangements, it may be necessary to relinquish valuable rights to our products or proprietary technologies, or grant licenses on terms that are not favorable to us. If we cannot raise funds on acceptable terms, we may not be able to develop or enhance our products, obtain the required regulatory clearances or approvals, execute our business plan, take advantage of future opportunities, or respond to competitive pressures or unanticipated customer requirements. Any of these events could adversely affect our ability to achieve our development and commercialization goals, which could have a material and adverse effect on our business, results of operations and financial condition.

We are currently engaged in substantial and complex litigation with Elysium Health, Inc. and Elysium Health LLC ("Elysium"), the outcome of which could materially harm our business and financial results.

We are currently engaged in litigation with Elysium, a customer that represented 19% of our net sales for the year ended December 31, 2016. Elysium has made no purchases from us since August 9, 2016. The litigation includes multiple complaints and counterclaims by us and Elysium in venues in California and New York, as well as a patent infringement complaint filed by the Company and Trustees of Dartmouth College. For further details on this litigation, please refer to Part I, Item 3 of this Annual Report on Form 10-K.

The litigation is substantial and complex, and it has caused and could continue to cause us to incur significant costs, as well as distract our management over an extended period. The litigation may substantially disrupt our business and we cannot assure you that we will be able to resolve the litigation on terms favorable to us. If we are unsuccessful in resolving the litigation on favorable terms to us, we may be forced to pay compensatory and punitive damages and restitution for any royalty payments that we received from Elysium, which payments could materially harm our business, or be subject to other remedies, including injunctive relief. In addition, Elysium has not paid us approximately $2.7 million for previous purchase orders. We may not collect the full amount owed to us by Elysium, and as a result, we wrote off the full amount as uncollectible expense. We cannot predict the outcome of our litigation with Elysium, which could have any of the results described above or other results that could materially adversely affect our business.

Interruptions in our relationships or declines in our business with major customers could materially harm our business and financial results.

One of our customers accounted for approximately 16% of our sales during the year ended December 31, 2019. Any interruption in our relationship or decline in our business with this customer or other customers upon whom we become highly dependent could cause harm to our business. Factors that could influence our relationship with our customers upon whom we may become highly dependent include:

- our ability to maintain our products at prices that are competitive with those of our competitors;
- our ability to maintain quality levels for our products sufficient to meet the expectations of our customers;
- our ability to produce, ship and deliver a sufficient quantity of our products in a timely manner to meet the needs of our customers;
- our ability to continue to develop and launch new products that our customers feel meet their needs and requirements, with respect to cost, timeliness, features, performance and other factors;
- our ability to provide timely, responsive and accurate customer support to our customers; and
- the ability of our customers to effectively deliver, market and increase sales of their own products based on ours.

Our financial condition and results of operations for fiscal 2020 may be adversely affected by the recent COVID-19 outbreak.

Our financial condition and results of operations for fiscal year 2020 may be adversely affected by the recent COVID-19 (also known as coronavirus) outbreak. The ongoing coronavirus outbreak emanating from China at the beginning of 2020 has resulted in increased travel restrictions and extended shutdowns of certain businesses in the region. A significant portion of our sales are to customers in Asia and we also have suppliers in Asia. In 2019, approximately 16% of our revenue was attributed to sales in the Asia region. Consequently, we are susceptible to factors adversely affecting this region. The effects could include restrictions on our ability to travel to support our customers or suppliers located in Asia, disruptions in our ability to distribute our products in the Asia region, and/or temporary closures of the facilities of our customers or suppliers. Disruption to the operations of our customers or suppliers would likely impact our sales and operating results. The extent to which the coronavirus impacts our results will depend on future developments, which are highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of the coronavirus and the actions to contain the coronavirus or treat its impact, among others.

Our future success largely depends on sales of our TRU NIAGEN® product.

In connection with our strategic shift from an ingredient and testing company to a consumer focused company, we expect to generate a significant percentage of our future revenue from sales of our TRU NIAGEN® product. As a result, the market acceptance of TRU NIAGEN® is critical to our continued success, and if we are unable to expand market acceptance of TRU NIAGEN®, our business, results of operations, financial condition, liquidity and growth prospects would be materially adversely affected.

Decline in the state of the global economy and financial market conditions could adversely affect our ability to conduct business and our results of operations.

Global economic and financial market conditions, including disruptions in the credit markets and the impact of the global economic deterioration may materially impact our customers and other parties with whom we do business. These conditions could negatively affect our future sales of our ingredient lines as many consumers consider the purchase of nutritional products discretionary. Decline in general economic and financial market conditions could materially adversely affect our financial condition and results of operations. Specifically, the impact of these volatile and negative conditions may include decreased demand for our products and services, a decrease in our ability to accurately forecast future product trends and demand, and a negative impact on our ability to timely collect receivables from our customers. The foregoing economic conditions may lead to increased levels of bankruptcies, restructurings and liquidations for our customers, scaling back of research and development expenditures, delays in planned projects and shifts in business strategies for many of our customers. Such events could, in turn, adversely affect our business through loss of sales.

We may need to increase the size of our organization, and we can provide no assurance that we will successfully expand operations or manage growth effectively.

Our significant increase in the scope and the scale of our product launches, including the hiring of additional personnel, has resulted in significantly higher operating expenses. As a result, we anticipate that our operating expenses will continue to increase. Expansion of our operations may also cause a significant demand on our management, finances and other resources. Our ability to manage the anticipated future growth, should it occur, will depend upon a significant expansion of our accounting and other internal management systems and the implementation and subsequent improvement of a variety of systems, procedures and controls. There can be no assurance that significant problems in these areas will not occur. Any failure to expand these areas and implement and improve such systems, procedures and controls in an efficient manner at a pace consistent with our business could have a material adverse effect on our business, financial condition and results of operations. There can be no assurance that our attempts to expand our marketing, sales, manufacturing and customer support efforts will be successful or will result in additional sales or profitability in any future period. As a result of the expansion of our operations and the anticipated increase in our operating expenses, as well as the difficulty in forecasting revenue levels, we expect to continue to experience significant fluctuations in our results of operations.

Changes in our business strategy, including entering the consumer product market, or restructuring of our businesses may increase our costs or otherwise affect the profitability of our businesses.

As changes in our business environment occur we may adjust our business strategies to meet these changes or we may otherwise decide to restructure our operations or businesses or assets. In addition, external events including changing technology, changing consumer patterns and changes in macroeconomic conditions may impair the value of our assets. When these changes or events occur, we may incur costs to change our business strategy and may need to write down the value of assets. In any of these events, our costs may increase, we may have significant charges associated with the write-down of assets or returns on new investments may be lower than prior to the change in strategy or restructuring. For example, if we are not successful in developing our consumer product business, our sales may decrease and our costs may increase.

The success of our consumer product and ingredient business is linked to the size and growth rate of the vitamin, mineral and dietary supplement market and an adverse change in the size or growth rate of that market could have a material adverse effect on us.

An adverse change in the size or growth rate of the vitamin, mineral and dietary supplement market could have a material adverse effect on our business. Underlying market conditions are subject to change based on economic conditions, consumer preferences and other factors that are beyond our control, including media attention and scientific research, which may be positive or negative.

The future growth and profitability of our consumer product business will depend in large part upon the effectiveness and efficiency of our marketing efforts and our ability to select effective markets and media in which to market and advertise.

Our consumer products business success depends on our ability to attract and retain customers, which significantly depends on our marketing practices. Our future growth and profitability will depend in large part upon the effectiveness and efficiency of our marketing efforts, including our ability to:

- create greater awareness of our brand;
- identify the most effective and efficient levels of spending in each market, media and specific media vehicle;
- determine the appropriate creative messages and media mix for advertising, marketing and promotional expenditures;
- effectively manage marketing costs (including creative and media) to maintain acceptable customer acquisition costs;
- acquire cost-effective television advertising;
- select the most effective markets, media and specific media vehicles in which to market and advertise; and
- convert consumer inquiries into actual orders.

Unfavorable publicity or consumer perception of our products and any similar products distributed by other companies could have a material adverse effect on our business.

We believe the nutritional supplement market is highly dependent upon consumer perception regarding the safety, efficacy and quality of nutritional supplements generally, as well as of products distributed specifically by us. Consumer perception of our products can be significantly influenced by scientific research or findings, regulatory investigations, litigation, national media attention and other publicity regarding the consumption of nutritional supplements. We cannot assure you that future scientific research, findings, regulatory proceedings, litigation, media attention or other favorable research findings or publicity will be favorable to the nutritional supplement market or any product, or consistent with earlier publicity. Future research reports, findings, regulatory proceedings, litigation, media attention or other publicity that are perceived as less favorable than, or that question, such earlier research reports, findings or publicity could have a material adverse effect on the demand for our products and consequently on our business, results of operations, financial condition and cash flows.

Our dependence upon consumer perceptions means that adverse scientific research reports, findings, regulatory proceedings, litigation, media attention or other publicity, if accurate or with merit, could have a material adverse effect on the demand for our products, the availability and pricing of our ingredients, and our business, results of operations, financial condition and cash flows. Further, adverse public reports or other media attention regarding the safety, efficacy and quality of nutritional supplements in general, or our products specifically, or associating the consumption of nutritional supplements with illness, could have such a material adverse effect. Any such adverse public reports or other media attention could arise even if the adverse effects associated with such products resulted from consumers' failure to consume such products appropriately or as directed and the content of such public reports and other media attention may be beyond our control.

We may incur material product liability claims, which could increase our costs and adversely affect our reputation, revenues and operating income.

As a consumer product and ingredient supplier we market and manufacture products designed for human and animal consumption, we are subject to product liability claims if the use of our products is alleged to have resulted in injury. Our products consist of vitamins, minerals, herbs and other ingredients that are classified as food ingredients, dietary supplements, or natural health products, and, in most cases, are not necessarily subject to pre-market regulatory approval in the United States. Some of our products contain innovative ingredients that do not have long histories of human consumption. Previously unknown adverse reactions resulting from human consumption of these ingredients could occur. In addition, the products we sell are produced by third-party manufacturers. As a marketer of products manufactured by third parties, we also may be liable for various product liability claims for products we do not manufacture. We may, in the future, be subject to various product liability claims, including, among others, that our products include inadequate instructions for use or inadequate warnings concerning possible side effects and interactions with other substances. A product liability claim against us could result in increased costs and could adversely affect our reputation with our customers, which, in turn, could have a materially adverse effect on our business, results of operations, financial condition and cash flows.

We acquire ingredients for our products from foreign suppliers, and may be negatively affected by the risks associated with international trade and importation issues.

We acquire ingredients for a number of our products from suppliers outside of the United States. Accordingly, the acquisition of these ingredients is subject to the risks generally associated with importing raw materials, including, among other factors, delays in shipments, changes in economic and political conditions, quality assurance, health epidemics affecting the region of such suppliers (including the coronavirus), nonconformity to specifications or laws and regulations, tariffs, trade disputes and foreign currency fluctuations. While we have a supplier certification program and audit and inspect our suppliers' facilities as necessary both in the United States and internationally, we cannot assure you that raw materials received from suppliers outside of the United States will conform to all specifications, laws and regulations. There have in the past been quality and safety issues in our industry with certain items imported from overseas. We may incur additional expenses and experience shipment delays due to preventative measures adopted by the U.S. governments, our suppliers and our company.

The insurance industry has become more selective in offering some types of coverage and we may not be able to obtain insurance coverage in the future.

The insurance industry has become more selective in offering some types of insurance, such as product liability, product recall, property and directors' and officers' liability insurance. Our current insurance program is consistent with both our past level of coverage and our risk management policies. However, we cannot assure you that we will be able to obtain comparable insurance coverage on favorable terms, or at all, in the future. Certain of our customers as well as prospective customers require that we maintain minimum levels of coverage for our products. Lack of coverage or coverage below these minimum required levels could cause these customers to materially change business terms or to cease doing business with us entirely.

If we experience product recalls, we may incur significant and unexpected costs, and our business reputation could be adversely affected.

We may be exposed to product recalls and adverse public relations if our products are alleged to be mislabeled or to cause injury or illness, or if we are alleged to have violated governmental regulations. A product recall could result in substantial and unexpected expenditures, which would reduce operating profit and cash flow. In addition, a product recall may require significant management attention. Product recalls may hurt the value of our brands and lead to decreased demand for our products. Product recalls also may lead to increased scrutiny by federal, state or international regulatory agencies of our operations and increased litigation and could have a material adverse effect on our business, results of operations, financial condition and cash flows.

We depend on key personnel, the loss of any of which could negatively affect our business.

We depend greatly on Frank L. Jaksch Jr., Robert N. Fried, Kevin M. Farr, and Mark J. Friedman, who are our Executive Chairman of the Board, Chief Executive Officer, Chief Financial Officer and General Counsel, respectively. We also depend greatly on other key employees, including key scientific and marketing personnel. In general, only highly qualified and trained scientists have the necessary skills to develop our products and provide our services. Only marketing personnel with specific experience and knowledge in health care are able to effectively market our products. In addition, some of our manufacturing, quality control, safety and compliance, information technology, sales and e-commerce related positions are highly technical as well. We face intense competition for these professionals from our competitors, customers, marketing partners and other companies throughout the industries in which we compete. Our success will depend, in part, upon our ability to attract and retain additional skilled personnel, which will require substantial additional funds. There can be no assurance that we will be able to find and attract additional qualified employees or retain any such personnel. Our inability to hire qualified personnel, the loss of services of our key personnel, or the loss of services of executive officers or key employees that may be hired in the future may have a material and adverse effect on our business.

Our operating results may fluctuate significantly as a result of a variety of factors, many of which are outside of our control.

We are subject to the following factors, among others, that may negatively affect our operating results:

- the announcement or introduction of new products by our competitors;
- our ability to upgrade and develop our systems and infrastructure to accommodate growth;
- the decision by significant customers to reduce purchases;
- disputes and litigation with competitors;
- our ability to attract and retain key personnel in a timely and cost-effective manner;
- technical difficulties;
- the amount and timing of operating costs and capital expenditures relating to the expansion of our business, operations and infrastructure;
- regulation by federal, state or local governments; and
- general economic conditions as well as economic conditions specific to the healthcare industry.

As a result of our limited operating history and the nature of the markets in which we compete, it is extremely difficult for us to make accurate forecasts. We have based our current and future expense levels largely on our investment plans and estimates of future events although certain of our expense levels are, to a large extent, fixed. Assuming our products reach the market, we may be unable to adjust spending in a timely manner to compensate for any unexpected revenue shortfall. Accordingly, any significant shortfall in revenues relative to our planned expenditures would have an immediate adverse effect on our business, results of operations and financial condition. Further, as a strategic response to changes in the competitive environment, we may from time to time make certain pricing, service or marketing decisions that could have a material and adverse effect on our business, results of operations and financial condition. Due to the foregoing factors, our revenues and operating results are and will remain difficult to forecast.

We face significant competition, including changes in pricing.

The markets for our products and services are both competitive and price sensitive. Many of our competitors have significant financial, operations, sales and marketing resources and experience in research and development. Competitors could develop new technologies that compete with our products and services or even render our products obsolete. If a competitor develops superior technology or cost-effective alternatives to our products and services, our business could be seriously harmed.

The markets for some of our products are also subject to specific competitive risks because these markets are highly price competitive. Our competitors have competed in the past by lowering prices on certain products. If they do so again, we may be forced to respond by lowering our prices. This would reduce sales revenues and increase losses. Failure to anticipate and respond to price competition may also impact sales and aggravate losses.

We believe that customers in our markets display a significant amount of loyalty to their supplier of a particular product. To the extent we are not the first to develop, offer and/or supply new products, customers may buy from our competitors or make materials themselves, causing our competitive position to suffer.

Many of our competitors are larger and have greater financial and other resources than we do.

Our products compete and will compete with other similar products produced by our competitors. These competitive products could be marketed by well-established, successful companies that possess greater financial, marketing, distributional, personnel and other resources than we possess. Using these resources, these companies can implement extensive advertising and promotional campaigns, both generally and in response to specific marketing efforts by competitors, and enter into new markets more rapidly to introduce new products. In certain instances, competitors with greater financial resources also may be able to enter a market in direct competition with us, offering attractive marketing tools to encourage the sale of products that compete with our products or present cost features that consumers may find attractive.

We may never develop any additional products to commercialize.

We have invested a substantial amount of our time and resources in developing various new products. Commercialization of these products will require additional development, clinical evaluation, regulatory approval, significant marketing efforts and substantial additional investment before they can provide us with any revenue. Despite our efforts, these products may not become commercially successful products for a number of reasons, including but not limited to:

- we may not be able to obtain regulatory approvals for our products, or the approved indication may be narrower than we seek;
- our products may not prove to be safe and effective in clinical trials;
- we may experience delays in our development program;
- any products that are approved may not be accepted in the marketplace;
- we may not have adequate financial or other resources to complete the development or to commence the commercialization of our products or will not have adequate financial or other resources to achieve significant commercialization of our products;
- we may not be able to manufacture any of our products in commercial quantities or at an acceptable cost;
- rapid technological change may make our products obsolete;
- we may be unable to effectively protect our intellectual property rights or we may become subject to claims that our activities have infringed the intellectual property rights of others; and
- we may be unable to obtain or defend patent rights for our products.

In addition, we may never achieve technical feasibility under the supply agreement with Nestec Ltd., and therefore Nestec Ltd. may never commercialize a product using NIAGEN®.

We may not be able to partner with others for technological capabilities and new products and services.

Our ability to remain competitive may depend, in part, on our ability to continue to seek partners that can offer technological improvements and improve existing products and services that are offered to our customers. We are committed to attempting to keep pace with technological change, to stay abreast of technology changes and to look for partners that will develop new products and services for our customer base. We cannot assure prospective investors that we will be successful in finding partners or be able to continue to incorporate new developments in technology, to improve existing products and services, or to develop successful new products and services, nor can we be certain that newly developed products and services will perform satisfactorily or be widely accepted in the marketplace or that the costs involved in these efforts will not be substantial.

If we fail to maintain adequate quality standards for our products and services, our business may be adversely affected and our reputation harmed.

Dietary supplement, nutraceutical, food and beverage, functional food, analytical laboratories, pharmaceutical and cosmetic customers are often subject to rigorous quality standards to obtain and maintain regulatory approval of their products and the manufacturing processes that generate them. A failure to maintain, or, in some instances, upgrade our quality standards to meet our customers' needs, could cause damage to our reputation and potentially substantial sales losses.

Our ability to protect our intellectual property and proprietary technology through patents and other means is uncertain and may be inadequate, which would have a material and adverse effect on us.

Our success depends significantly on our ability to protect our proprietary rights to the technologies used in our products. We rely on patent protection, as well as a combination of copyright, trade secret and trademark laws and nondisclosure, confidentiality and other contractual restrictions to protect our proprietary technology, including our licensed technology. However, these legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep any competitive advantage. For example, our pending United States and foreign patent applications may not issue as patents in a form that will be advantageous to us or may issue and be subsequently successfully challenged by others and invalidated. In addition, our pending patent applications include claims to material aspects of our products and procedures that are not currently protected by issued patents. Both the patent application process and the process of managing patent disputes can be time consuming and expensive. Competitors may be able to design around our patents or develop products which provide outcomes which are comparable or even superior to ours. Steps that we have taken to protect our intellectual property and proprietary technology, including entering into confidentiality agreements and intellectual property assignment agreements with some of our officers, employees, consultants and advisors, may not provide us with meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements. Furthermore, the laws of foreign countries may not protect our intellectual property rights to the same extent as do the laws of the United States.

In the event a competitor infringes our licensed or pending patent or other intellectual property rights, enforcing those rights may be costly, uncertain, difficult and time consuming. Even if successful, litigation to enforce our intellectual property rights or to defend our patents against challenge could be expensive and time consuming and could divert our management's attention. We may not have sufficient resources to enforce our intellectual property rights or to defend our patents rights against a challenge. The failure to obtain patents and/or protect our intellectual property rights could have a material and adverse effect on our business, results of operations and financial condition.

Our patents and licenses may be subject to challenge on validity grounds, and our patent applications may be rejected.

We rely on our patents, patent applications, licenses and other intellectual property rights to give us a competitive advantage. Whether a patent is valid, or whether a patent application should be granted, is a complex matter of science and law, and therefore we cannot be certain that, if challenged, our patents, patent applications and/or other intellectual property rights would be upheld. If one or more of those patents, patent applications, licenses and other intellectual property rights are invalidated, rejected or found unenforceable, that could reduce or eliminate any competitive advantage we might otherwise have had.

We may become subject to claims of infringement or misappropriation of the intellectual property rights of others, which could prohibit us from developing our products, require us to obtain licenses from third parties or to develop non-infringing alternatives and subject us to substantial monetary damages.

Third parties could, in the future, assert infringement or misappropriation claims against us with respect to products we develop. Whether a product infringes a patent or misappropriates other intellectual property involves complex legal and factual issues, the determination of which is often uncertain. Therefore, we cannot be certain that we have not infringed the intellectual property rights of others. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for use related to the use or manufacture of our products, and our potential competitors may assert that some aspect of our product infringes their patents. Because patent applications may take years to issue, there also may be applications now pending of which we are unaware that may later result in issued patents upon which our products could infringe. There also may be existing patents or pending patent applications of which we are unaware upon which our products may inadvertently infringe.

Any infringement or misappropriation claim could cause us to incur significant costs, place significant strain on our financial resources, divert management's attention from our business and harm our reputation. If the relevant patents in such claim were upheld as valid and enforceable and we were found to infringe them, we could be prohibited from manufacturing or selling any product that is found to infringe unless we could obtain licenses to use the technology covered by the patent or are able to design around the patent. We may be unable to obtain such a license on terms acceptable to us, if at all, and we may not be able to redesign our products to avoid infringement, which could materially impact our revenue. A court could also order us to pay compensatory damages for such infringement, plus prejudgment interest and could, in addition, treble the compensatory damages and award attorney fees. These damages could be substantial and could harm our reputation, business, financial condition and operating results. A court also could enter orders that temporarily, preliminarily or permanently enjoin us and our customers from making, using, or selling products, and could enter an order mandating that we undertake certain remedial activities. Depending on the nature of the relief ordered by the court, we could become liable for additional damages to third parties.

The prosecution and enforcement of patents licensed to us by third parties are not within our control. Without these technologies, our products may not be successful and our business would be harmed if the patents were infringed on or misappropriated without action by such third parties.

We have obtained licenses from third parties for patents and patent application rights related to the products we are developing, allowing us to use intellectual property rights owned by or licensed to these third parties. We do not control the maintenance, prosecution, enforcement or strategy for many of these patents or patent application rights and as such are dependent in part on the owners of the intellectual property rights to maintain their viability. If any third party licensor is unable to successfully maintain, prosecute or enforce the licensed patents and/or patent application rights related to our products, we may become subject to infringement or misappropriate claims or lose our competitive advantage. Without access to these technologies or suitable design-around or alternative technology options, our ability to conduct our business could be impaired significantly.

We may be subject to damages resulting from claims that we, our employees, or our independent contractors have wrongfully used or disclosed alleged trade secrets of others.

Some of our employees were previously employed at other dietary supplement, nutraceutical, food and beverage, functional food, analytical laboratories, pharmaceutical and cosmetic companies. We may also hire additional employees who are currently employed at other such companies, including our competitors. Additionally, consultants or other independent agents with which we may contract may be or have been in a contractual arrangement with one or more of our competitors. We may be subject to claims that these employees or independent contractors have used or disclosed such other party's trade secrets or other proprietary information. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to our management. If we fail to defend such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A loss of key personnel or their work product could hamper or prevent our ability to market existing or new products, which could severely harm our business.

Litigation may harm our business.

Substantial, complex or extended litigation could cause us to incur significant costs and distract our management. For example, lawsuits by employees, stockholders, collaborators, distributors, customers, competitors or others could be very costly and substantially disrupt our business. Disputes from time to time with such companies, organizations or individuals are not uncommon, and we cannot assure you that we will always be able to resolve such disputes or on terms favorable to us. As further described in Part I, Item 3 of this Annual Report on Form 10-K, we are currently involved in substantial and complex litigation with Elysium. Unexpected results could cause us to have financial exposure in these matters in excess of recorded reserves and insurance coverage, requiring us to provide additional reserves to address these liabilities, therefore impacting profits.

Our sales and results of operations for our analytical reference standards and services segment depend on our customers' research and development efforts and their ability to obtain funding for these efforts.

Our analytical reference standards and services segment customers include researchers at pharmaceutical and biotechnology companies, chemical and related companies, academic institutions, government laboratories and private foundations. Fluctuations in the research and development budgets of these researchers and their organizations could have a significant effect on the demand for our products. Our customers determine their research and development budgets based on several factors, including the need to develop new products, the availability of governmental and other funding, competition and the general availability of resources. As we continue to expand our international operations, we expect research and development spending levels in markets outside of the United States will become increasingly important to us.

Research and development budgets fluctuate due to changes in available resources, spending priorities, general economic conditions, institutional and governmental budgetary limitations and mergers of pharmaceutical and biotechnology companies. Our business could be harmed by any significant decrease in life science and high technology research and development expenditures by our customers. In particular, a small portion of our sales has been to researchers whose funding is dependent on grants from government agencies such as the United States National Institute of Health, the National Science Foundation, the National Cancer Institute and similar agencies or organizations. Government funding of research and development is subject to the political process, which is often unpredictable. Other departments, such as Homeland Security or Defense, or general efforts to reduce the United States federal budget deficit could be viewed by the government as a higher priority. Any shift away from funding of life science and high technology research and development or delays surrounding the approval of governmental budget proposals may cause our customers to delay or forego purchases of our products and services, which could seriously damage our business.

Some of our customers receive funds from approved grants at a particular time of year, many times set by government budget cycles. In the past, such grants have been frozen for extended periods or have otherwise become unavailable to various institutions without notice. The timing of the receipt of grant funds may affect the timing of purchase decisions by our customers and, as a result, cause fluctuations in our sales and operating results.

Demand for our products and services are subject to the commercial success of our customers' products, which may vary for reasons outside our control.

Even if we are successful in securing utilization of our products in a customer's manufacturing process, sales of many of our products and services remain dependent on the timing and volume of the customer's production, over which we have no control. The demand for our products depends on regulatory approvals and frequently depends on the commercial success of the customer's supported product. Regulatory processes are complex, lengthy, expensive, and can often take years to complete.

We may bear financial risk if we under-price our contracts or overrun cost estimates.

In cases where our contracts are structured as fixed price or fee-for-service with a cap, we bear the financial risk if we initially under-price our contracts or otherwise overrun our cost estimates. Such underpricing or significant cost overruns could have a material adverse effect on our business, results of operations, financial condition and cash flows.

We rely on single or a limited number of third-party suppliers for the raw materials required to produce our products.

Our dependence on a limited number of third-party suppliers or on a single supplier, and the challenges we may face in obtaining adequate supplies of raw materials, involve several risks, including limited control over pricing, availability, health epidemics affecting the region of such suppliers (including the coronavirus), quality and delivery schedules. We cannot be certain that our current suppliers will continue to provide us with the quantities of these raw materials that we require or satisfy our anticipated specifications and quality requirements. Any supply interruption in limited or sole sourced raw materials could materially harm our ability to manufacture our products until a new source of supply, if any, could be identified and qualified. Although we believe there are other suppliers of these raw materials, we may be unable to find a sufficient alternative supply channel in a reasonable time or on commercially reasonable terms. Any performance failure on the part of our suppliers could delay the development and commercialization of our products, or interrupt production of then existing products that are already marketed, which would have a material adverse effect on our business.

We may not be successful in acquiring complementary businesses or products on favorable terms.

As part of our business strategy, we intend to consider acquisitions of similar or complementary businesses or products. No assurance can be given that we will be successful in identifying attractive acquisition candidates or completing acquisitions on favorable terms. In addition, any future acquisitions will be accompanied by the risks commonly associated with acquisitions. These risks include potential exposure to unknown liabilities of acquired companies or to acquisition costs and expenses, the difficulty and expense of integrating the operations and personnel of the acquired companies, the potential disruption to the business of the combined company and potential diversion of our management's time and attention, the impairment of relationships with and the possible loss of key employees and clients as a result of the changes in management, the incurrence of amortization expenses and write-downs and dilution to the shareholders of the combined company if the acquisition is made for stock of the combined company. In addition, successful completion of an acquisition may depend on consents from third parties, including regulatory authorities and private parties, which consents are beyond our control. There can be no assurance that products, technologies or businesses of acquired companies will be effectively assimilated into the business or product offerings of the combined company or will have a positive effect on the combined company's revenues or earnings. Further, the combined company may incur significant expense to complete acquisitions and to support the acquired products and businesses. Any such acquisitions may be funded with cash, debt or equity, which could have the effect of diluting or otherwise adversely affecting the holdings or the rights of our existing stockholders.

If we experience a significant disruption in our information technology systems or if we fail to implement new systems and software successfully, our business could be adversely affected.

We depend on information systems throughout our company to control our manufacturing processes, process orders, manage inventory, process and bill shipments and collect cash from our customers, respond to customer inquiries, contribute to our overall internal control processes, maintain records of our property, plant and equipment, and record and pay amounts due vendors and other creditors. If we were to experience a prolonged disruption in our information systems that involve interactions with customers and suppliers, it could result in the loss of sales and customers and/or increased costs, which could adversely affect our overall business operation.

If we are unable to maintain sales, marketing and distribution capabilities or maintain arrangements with third parties to sell, market and distribute our products, our business may be harmed.

To achieve commercial success for our products, we must sell our product lines and/or technologies at favorable prices. In addition to being expensive, maintaining such a sales force is time-consuming. Qualified direct sales personnel with experience in the natural products industry are in high demand, and there can be no assurance that we will be able to hire or retain an effective direct sales team. Similarly, qualified independent sales representatives both within and outside the United States are in high demand, and we may not be able to build an effective network for the distribution of our product through such representatives. There can be no assurance that we will be able to enter into contracts with representatives on terms acceptable to us. Furthermore, there can be no assurance that we will be able to build an alternate distribution framework should we attempt to do so.

We may also need to contract with third parties in order to market our products. To the extent that we enter into arrangements with third parties to perform marketing and distribution services, our product revenue could be lower and our costs higher than if we directly marketed our products. Furthermore, to the extent that we enter into co-promotion or other marketing and sales arrangements with other companies, any revenue received will depend on the skills and efforts of others, and we do not know whether these efforts will be successful. If we are unable to establish and maintain adequate sales, marketing and distribution capabilities, independently or with others, we will not be able to generate product revenue, and may not become profitable.

Our business could be negatively impacted by cyber security threats.

In the ordinary course of our business, we use our data centers and our networks to store and access our proprietary business information. We face various cyber security threats, including cyber security attacks to our information technology infrastructure and attempts by others to gain access to our proprietary or sensitive information. Information security risks have significantly increased in recent years in part due to the proliferation of new technologies and the increased sophistication and activities of organized crime, hackers, data and related privacy breaches, terrorists and other external parties, including foreign private parties and state actors. The procedures and controls we use to monitor these threats and mitigate our exposure may not be sufficient to prevent cyber security incidents. The result of these incidents could include disrupted operations, lost opportunities, misstated financial data, liability for stolen assets or information, theft of our intellectual property, loss of data and other personally identifiable information, increased costs arising from the implementation of additional security protective measures, litigation and reputational damage. Any remedial costs or other liabilities related to cyber security incidents may not be fully insured or indemnified by other means.

Compliance with global privacy and data security requirements could result in additional costs and liabilities to us or inhibit our ability to collect and, if applicable, process data globally, and the failure to comply with such requirements could have a material adverse effect on our business, financial condition or results of operations.

The regulatory framework for the collection, use, safeguarding, sharing, transfer and other processing of information worldwide is rapidly evolving and is likely to remain uncertain for the foreseeable future. For example, the European Union's General Data Protection Regulation ("GDPR") imposes strict obligations on the processing of personal data, including, without limitation, personal health data, and the free movement of such data. The GDPR applies to any company established in the European Union as well as any company outside the European Union that processes personal data in connection with the offering of goods or services to individuals in the European Union or the monitoring of their behavior. The GDPR provides data protection obligations for processors and controllers of personal data, including, for example, obligations relating to: processing health and other sensitive data; obtaining consent of individuals; providing notice to individuals regarding data processing activities; respondingto data subject requests; taking certain measures when engaging third-party processors; notifying data subjects and regulators of data breaches; implementing safeguards to protect the security and confidentiality of personal data; and transferring personal data to countries outside the European Union, including the U.S. The GDPR imposes fines for breaches of data protection requirements and provides other remedies for parties who suffer harm as a result of a data breach. The GDPR and other changes in laws or regulations associated with the enhanced protection of certain types of sensitive data, such as healthcare data or other personal information from our clinical trials, could require us to change our business practices or lead to government enforcement actions, private litigation or significant penalties against us and could have a material adverse effect on our business, financial condition or results of operations.

Additionally, California recently enacted legislation that has been dubbed the first "GDPR-like" law in the U.S. Known as the California Consumer Privacy Act (the "CCPA"), it creates new individual privacy rights for consumers (as that word is broadly defined in the law) and places increased privacy and security obligations on entities handling personal data of consumers. The CCPA, which went into effect on January 1, 2020, requires covered companies to provide new disclosures to California consumers, and provides such consumers new ways to opt-out of certain sales of personal information. The CCPA provides for penalties for violations, as well as other remedies for parties who suffer harm as a result of a data breach, which may increase data breach litigation. The CCPA may increase our compliance costs and potential liability.

We are subject to financial and operating covenants in our business financing agreement with Western Alliance Bank (the "Credit Agreement") and any failure to comply with such covenants, or obtain waivers in the event of non-compliance, could limit our borrowing availability under the Credit Agreement, resulting in our being unable to borrow under the Credit Agreement and materially adversely impact our liquidity. In addition, our operations may not provide sufficient cash to meet the repayment obligations of debt incurred under the Credit Agreement.

The Credit Agreement contains affirmative and restrictive covenants, including covenants regarding delivery of financial statements, maintenance of inventory, payment of taxes, maintenance of insurance, dispositions of property, business combinations or acquisitions and incurrence of additional indebtedness, among other customary covenants, in each case subject to limited exceptions.

There can be no assurance that we will be able to comply with the financial and other covenants in the Credit Agreement. Our failure to comply with these covenants could cause us to be unable to borrow under the Credit Agreement and may constitute an event of default which, if not cured or waived, could result in the acceleration of the maturity of any indebtedness then outstanding under the Credit Agreement, which would require us to pay all amounts then outstanding. If we are unable to repay those amounts, Western Alliance Bank could proceed against the collateral granted to them to secure that debt, which would seriously harm our business. Such an event could materially adversely affect our financial condition and liquidity. Additionally, such events of non-compliance could impact the terms of any additional borrowings and/or any credit renewal terms. Any failure to comply with such covenants may be a disclosable event and may be perceived negatively. Such perception could adversely affect the market price for our common stock and our ability to obtain financing in the future.

Risks Related to Regulatory Approval of Our Products and Other Government Regulations

We are subject to regulation by various federal, state and foreign agencies that require us to comply with a wide variety of regulations, including those regarding the manufacture of products, advertising and product label claims, the distribution of our products and environmental matters. Failure to comply with these regulations could subject us to fines, penalties and additional costs.

Some of our operations are subject to regulation by various United States federal agencies and similar state and international agencies, including the Department of Commerce, the FDA, the FTC, the Department of Transportation and the Department of Agriculture. These regulations govern a wide variety of product activities, from design and development to labeling, manufacturing, handling, sales and distribution of products. If we fail to comply with any of these regulations, we may be subject to fines or penalties, have to recall products and/or cease their manufacture and distribution, which would increase our costs and reduce our sales.

We are also subject to various federal, state, local and international laws and regulations that govern the handling, transportation, manufacture, use and sale of substances that are or could be classified as toxic or hazardous substances. Some risk of environmental damage is inherent in our operations and the products we manufacture, sell, or distribute. Any failure by us to comply with the applicable government regulations could also result in product recalls or impositions of fines and restrictions on our ability to carry on with or expand in a portion or possibly all of our operations. If we fail to comply with any or all of these regulations, we may be subject to fines or penalties, have to recall products and/or cease their manufacture and distribution, which would increase our costs and reduce our sales.

Government regulations of our customer's business are extensive and are constantly changing. Changes in these regulations can significantly affect customer demand for our products and services.

The process by which our customers' industries are regulated is controlled by government agencies and depending on the market segment can be very expensive, time consuming, and uncertain. Changes in regulations or the enforcement practices of current regulations could have a negative impact on our customers and, in turn, our business. At this time, it is unknown how the FDA will interpret and to what extent it will enforce GMPs, regulations that will likely affect many of our customers. These uncertainties may have a material impact on our results of operations, as lack of enforcement or an interpretation of the regulations that lessens the burden of compliance for the dietary supplement marketplace may cause a reduced demand for our products and services.

Changes in government regulation or in practices relating to the pharmaceutical, dietary supplement, food and cosmetic industry could decrease the need for the services we provide.

Governmental agencies throughout the world, including in the United States, strictly regulate the pharmaceutical, dietary supplement, food and cosmetic industries. Our business involves helping pharmaceutical and biotechnology companies navigate the regulatory drug approval process. Changes in regulation, such as a relaxation in regulatory requirements or the introduction of simplified drug approval procedures, or an increase in regulatory requirements that we have difficulty satisfying or that make our services less competitive, could eliminate or substantially reduce the demand for our services. Also, if the government makes efforts to contain drug costs and pharmaceutical and biotechnology company profits from new drugs, our customers may spend less, or reduce their spending on research and development. If health insurers were to change their practices with respect to reimbursements for pharmaceutical products, our customers may spend less, or reduce their spending on research and development.

If we should in the future become required to obtain regulatory approval to market and sell our goods we will not be able to generate any revenues until such approval is received.

The pharmaceutical industry is subject to stringent regulation by a wide range of authorities. While we believe that, given our present business, we are not currently required to obtain regulatory approval to market our goods because, among other things, we do not (i) produce or market any clinical devices or other products, or (ii) sell any medical products or services to the customer, we cannot predict whether regulatory clearance will be required in the future and, if so, whether such clearance will at such time be obtained for any products that we are developing or may attempt to develop. Should such regulatory approval in the future be required, our goods may be suspended or may not be able to be marketed and sold in the United States until we have completed the regulatory clearance process as and if implemented by the FDA. Satisfaction of regulatory requirements typically takes many years, is dependent upon the type, complexity and novelty of the product or service and would require the expenditure of substantial resources.

If regulatory clearance of a good that we propose to propose to market and sell is granted, this clearance may be limited to those particular states and conditions for which the good is demonstrated to be safe and effective, which would limit our ability to generate revenue. We cannot ensure that any good that we develop will meet all of the applicable regulatory requirements needed to receive marketing clearance. Failure to obtain regulatory approval will prevent commercialization of our goods where such clearance is necessary. There can be no assurance that we will obtain regulatory approval of our proposed goods that may require it.

Risks Related to the Securities Markets and Ownership of our Equity Securities

The market price of our common stock may be volatile and adversely affected by several factors.

The market price of our common stock could fluctuate significantly in response to various factors and events, including, but not limited to:

- our ability to integrate operations, technology, products and services;
- our ability to execute our business plan;
- our operating results are below expectations;
- our issuance of additional securities, including debt or equity or a combination thereof,;
- announcements of technological innovations or new products by us or our competitors;
- acceptance of and demand for our products by consumers;
- media coverage regarding our industry or us;
- litigation;
- disputes with or our inability to collect from significant customers;
- loss of any strategic relationship;
- industry developments, including, without limitation, changes in healthcare policies or practices;
- economic and other external factors;
- reductions in purchases from our large customers;
- period-to-period fluctuations in our financial results; and
- whether an active trading market in our common stock develops and is maintained.

In addition, the securities markets have from time to time experienced significant price and volume fluctuations that are unrelated to the operating performance of particular companies. These market fluctuations may also materially and adversely affect the market price of our common stock.

Our shares of common stock may be thinly traded, so you may be unable to sell at or near ask prices or at all.

We cannot predict the extent to which an active public market for our common stock will develop or be sustained. This situation may be attributable to a number of factors, including the fact that we are a small company that is relatively unknown to stock analysts, stock brokers, institutional investors and others in the investment community who generate or influence sales volume, and that even if we came to the attention of such persons, they tend to be risk averse and would be reluctant to follow an unproven company such as ours or purchase or recommend the purchase of our shares until such time as we have become more seasoned and viable. As a consequence, there may be periods of several days or weeks when trading activity in our shares is minimal or non-existent, as compared to a seasoned issuer which has a large and steady volume of trading activity that will generally support continuous sales without an adverse effect on share price. We cannot assure you that a broader or more active public trading market for our common stock will develop or be sustained, or that current trading levels will be sustained or not diminish.

We have not paid cash dividends in the past and do not expect to pay cash dividends in the foreseeable future. Any return on investment may be limited to the value of our common stock.

We have never paid cash dividends on our capital stock and do not anticipate paying cash dividends on our capital stock in the foreseeable future. The payment of dividends on our capital stock will depend on our earnings, financial condition and other business and economic factors affecting us at such time as the board of directors may consider relevant. If we do not pay dividends, our common stock may be less valuable because a return on your investment will only occur if the common stock price appreciates.

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

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time, which could adversely affect our business operations and financial performance. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us. For example, legislation enacted in 2017 informally titled the Tax Cuts and Jobs Act enacted many significant changes to the U.S. tax laws. Future guidance from the Internal Revenue Service and other tax authorities with respect to the Tax Cuts and Jobs Act may affect us, and certain aspects of the Tax Cuts and Jobs Act could be repealed or modified in future legislation. In addition, it is uncertain if and to what extent various states will conform to the Tax Cuts and Jobs Act or any newly enacted federal tax legislation. Changes in corporate tax rates, the realization of net deferred tax assets relating to our operations, the taxation of foreign earnings, and the deductibility of expenses under the Tax Cuts and Jobs Act or future reform legislation could have a material impact on the value of our deferred tax assets, could result in significant one-time charges, and could increase our future U.S. tax expense.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

Our federal net operating losses ("NOL"s) generated in taxable years ending prior to 2018 could expire unused. Under the Tax Cuts and Jobs Act, federal NOLs incurred in taxable years ending after December 31, 2017, may be carried forward indefinitely, but the deductibility of federal NOLs generated in tax years beginning after December 31, 2017, is limited. It is uncertain if and to what extent various states will conform to the Tax Cuts and Jobs Act. In addition, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, and corresponding provisions of state law, if a corporation undergoes an "ownership change," which is generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period, the corporation's ability to use its pre-change NOL carryforwards, or NOLs, and other pre-change tax attributes (such as research tax credits) to offset its post-change income or taxes may be limited. We may experience ownership changes in the future as a result of subsequent shifts in our stock ownership some of which may be outside of our control. As a result, if we earn net taxable income, our ability to use our pre-ownership change NOL carryforwards to offset U.S. federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to us. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed.

Stockholders may experience significant dilution if future equity offerings are used to fund operations or acquire complementary businesses.

If future operations or acquisitions are financed through the issuance of additional equity securities, stockholders could experience significant dilution. Securities issued in connection with future financing activities or potential acquisitions may have rights and preferences senior to the rights and preferences of our common stock. In addition, the issuance of shares of our common stock upon the exercise of outstanding options or warrants may result in dilution to our stockholders.

We may become involved in securities class action litigation that could divert management's attention and harm our business.

The stock market in general, and the stocks of early stage companies in particular, have experienced extreme price and volume fluctuations. These fluctuations have often been unrelated or disproportionate to the operating performance of the companies involved. If these fluctuations occur in the future, the market price of our shares could fall regardless of our operating performance. In the past, following periods of volatility in the market price of a particular company's securities, securities class action litigation has often been brought against that company. If the market price or volume of our shares suffers extreme fluctuations, then we may become involved in this type of litigation, which would be expensive and divert management's attention and resources from managing our business.

As a public company, we may also from time to time make forward-looking statements about future operating results and provide some financial guidance to the public markets. Projections may not be made in a timely manner or we might fail to reach expected performance levels and could materially affect the price of our shares. Any failure to meet published forward-looking statements that adversely affect the stock price could result in losses to investors, stockholder lawsuits or other litigation, sanctions or restrictions issued by the Securities and Exchange Commission.

We have a significant number of outstanding options. Future sales of these shares could adversely affect the market price of our common stock.

As of December 31, 2019, we had outstanding options for an aggregate of approximately 10.6 million shares of common stock at a weighted average exercise price of $3.89 per share. The holders may sell many of these shares in the public markets from time to time, without limitations on the timing, amount or method of sale. As and when our stock price rises, if at all, more outstanding options will be in-the-money and the holders may exercise their options and sell a large number of shares. This could cause the market price of our common stock to decline.

Our amended and restated bylaws, as amended (our "Bylaws") provide that the Court of Chancery of the State of Delaware is the exclusive forum for certain disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our Bylaws provide that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers to our company or our stockholders, (iii) any action asserting a claim against our company arising pursuant to any provision of the Delaware General Corporation Law or our amended and restated certificate of incorporation or Bylaws, or (iv) any action asserting a claim against our company governed by the internal affairs doctrine. This choice of forum provision does not apply to suits brought to enforce a duty or liability created by the Securities Act of 1933, as amended, or the Exchange Act, or any other claim for which the federal courts have exclusive jurisdiction.

This choice of forum provision may limit a stockholder's ability to bring certain claims in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, other employees or stockholders, which may discourage lawsuits with respect to such claims, although our stockholders will not be deemed to have waived our compliance with federal securities laws and the rules and regulations thereunder. If a court were to find this choice of forum provision to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

As of December 31, 2019, we lease (i) approximately 10,000 square feet of office space in Los Angeles, California with two years remaining on the lease, (ii) approximately 15,000 square feet of office space in Irvine, California with five months remaining on the lease, and (iii) approximately 10,000 square feet of space for research and development laboratory in Longmont, Colorado with four years remaining on the lease. The below table illustrates the use of each property by our business segments.

Business Segment	Property Used
Consumer Products	All properties
Ingredients	All properties
Analytical Reference Standards and Services	Irvine, CA and Longmont, CO

We do not own any real estate. For the year ended December 31, 2019, our total annual rental expense was approximately $979,000**.**

Item 3. Legal Proceedings

(A) California Action

On December 29, 2016, ChromaDex, Inc. filed a complaint in the United States District Court for the Central District of California, naming Elysium Health, Inc. (together with Elysium Health, LLC, "Elysium") as defendant (the "Complaint"). On January 25, 2017, Elysium filed an answer and counterclaims in response to the Complaint (together with the Complaint, the "California Action"). Over the course of the California Action, the parties have each filed amended pleadings several times and have each engaged in several rounds of motions to dismiss and one round of motion for judgment on the pleadings with respect to various claims. Most recently, on November 27, 2018, ChromaDex, Inc. filed a fifth amended complaint that added an individual, Mark Morris, as a defendant. Elysium and Morris ("the Defendants") moved to dismiss on December 21, 2018. The court denied Defendants' motion on February 4, 2019. Defendants filed their answer to ChromaDex, Inc.'s fifth amended complaint on February 19, 2019. ChromaDex, Inc. filed an answer to Elysium's restated counterclaims on March 5, 2019. Discovery closed on August 9, 2019.

On August 16, 2019, the parties filed motions for partial summary judgment as to certain claims and counterclaims. The parties filed opposition briefs on August 28, 2019, and reply briefs on September 4, 2019. On October 9, 2019, among other things, the court vacated the previously scheduled trial date, ordered supplemental briefing with respect to certain issues related to summary judgment. Elysium filed its opening supplemental brief on October 30, 2019, ChromaDex filed its opening supplemental brief on November 18, 2019, and Elysium filed a reply brief on November 27, 2019, and the court heard argument on January 13, 2020. On January 16, 2020, the court granted both parties' motions for summary judgment in part and denied both in part. On ChromaDex's motion, the court granted summary judgment in favor of ChromaDex on Elysium's counterclaims for (i) breach of contract related to manufacturing NIAGEN® according to the defined standard, selling NIAGEN and ingredients that are substantially similar to pterostilbene to other customers, distributing the NIAGEN® product specifications, and failing to provide information concerning the quality and identity of NIAGEN®, and (ii) breach of the implied covenant of good faith and fair dealing. The court denied summary judgment on Elysium's counterclaims for (i) fraudulent inducement of the Trademark License and Royalty Agreement, dated February 3, 2014, by and between ChromaDex, Inc. and Elysium (the "License Agreement"), (ii) patent misuse, and (iii) unjust enrichment. On Elysium's motion, the court granted summary judgment in favor of Elysium on ChromaDex's claim for damages related to $110,000 in avoided costs arising from documents that Elysium used in violation of the Supply Agreement, dated February 3, 2014, by and between ChromaDex, Inc. and Elysium, as amended (the "NIAGEN® Supply Agreement"). The court denied summary judgment on Elysium's counterclaim for breach of contract related to certain refunds or credits to Elysium. The court also denied summary judgment on ChromaDex's breach of contract claim against Morris and claims for disgorgement of $8.3 million in Elysium's resale profits, $600,000 for a price discount received by Elysium, and $684,781 in Morris's compensation.

Following the court's January 16, 2020 order, the claims that ChromaDex, Inc. presently asserts in the California Action, among other allegations, are that (i) Elysium breached the Supply Agreement, dated June 26, 2014, by and between ChromaDex, Inc. and Elysium (the "pTeroPure® Supply Agreement"), by failing to make payments to ChromaDex, Inc. for purchases of pTeroPure® and by improper disclosure of confidential ChromaDex, Inc. information pursuant to the pTeroPure® Supply Agreement, (ii) Elysium breached the NIAGEN® Supply Agreement, by failing to make payments to ChromaDex, Inc. for purchases of NIAGEN®, (iii) Defendants willfully and maliciously misappropriated ChromaDex, Inc. trade secrets concerning its ingredient sales business under both the California Uniform Trade Secrets Act and the Federal Defend Trade Secrets Act, (iv) Morris breached two confidentiality agreements he signed by improperly stealing confidential ChromaDex, Inc. documents and information, (v) Morris breached his fiduciary duty to ChromaDex, Inc. by lying to and competing with ChromaDex, Inc. while still employed there, and (vi) Elysium aided and abetted Morris's breach of fiduciary duty. ChromaDex, Inc. is seeking damages and interest for Elysium's alleged breaches of the NIAGEN® Supply Agreement and pTeroPure® Supply Agreement and Morris's alleged breaches of his confidentiality agreements, compensatory damages and interest, punitive damages, injunctive relief, and attorney's fees for Defendants' alleged willful and malicious misappropriation of ChromaDex, Inc.'s trade secrets, and compensatory damages and interest, disgorgement of all benefits received, and punitive damages for Morris's alleged breach of his fiduciary duty and Elysium's aiding and abetting of that alleged breach.

The claims that Elysium presently alleges in the California Action are that (i) ChromaDex, Inc. breached the NIAGEN® Supply Agreement by not issuing certain refunds or credits to Elysium, (ii) ChromaDex, Inc. fraudulently induced Elysium into entering into the License Agreement, (iv) ChromaDex, Inc.'s conduct constitutes misuse of its patent rights, and (v) ChromaDex, Inc. was unjustly enriched by the royalties Elysium paid pursuant to the License Agreement. Elysium is seeking damages for ChromaDex, Inc.'s alleged breaches of the NIAGEN® Supply Agreement, and compensatory damages, punitive damages, and/or rescission of the License Agreement and restitution of any royalty payments conveyed by Elysium pursuant to the License Agreement, and a declaratory judgment that ChromaDex, Inc. has engaged in patent misuse.

On January 17, 2020, Elysium moved to substitute its counsel. The same day, the court ordered hearing on that motion for January 21, 2020, and granted Elysium's motion at the hearing. On January 23, 2020, the court issued a scheduling order that, among other things, set trial on the remaining claims to begin on May 12, 2020.

(B) Patent Office Proceedings

On July 17, 2017, Elysium filed petitions with the U.S. Patent and Trademark Office for *inter partes* review of U.S. Patents 8,197,807 (the "'807 Patent") and 8,383,086 (the "'086 Patent"), patents to which ChromaDex, Inc. is the exclusive licensee. The Patent Trial and Appeal Board ("PTAB") denied institution of the *inter partes* review for the '807 Patent on January 18, 2018. On January 29, 2018, the PTAB granted institution of the *inter partes* review as to claims 1 and 3-5 and denied institution as to claim 2 of the '086 Patent. Based upon a recent U.S. Supreme Court decision, and solely on a procedural basis, the PTAB was required to include claim 2 in the trial of the *inter partes* review. The matter was heard on October 2, 2018. The PTAB issued its written decision on January 16, 2019, upholding claim 2 of the '086 Patent which relates to the use of isolated NR in a pharmaceutical composition as valid. Elysium is now prevented from raising invalidity arguments against the '086 Patent in the ongoing patent litigation in Delaware that it brought or could have brought before the PTAB in its *inter partes* review. Elysium appealed the PTAB's decision with respect to claim 2 on March 6, 2019. A cross-appeal with respect to claims 1 and 3–5 was filed on March 20, 2019. Elysium filed its opening brief on June 17, 2019. Dartmouth moved to voluntarily dismiss its cross-appeal on August 14, 2019. The motion was granted on August 18, 2019. Dartmouth's response brief was filed on August 28, 2019. Elysium's reply brief was filed on October 9, 2019. Oral argument on Elysium's appeal was heard on March 5, 2020. On March 6, 2020, the United States Court of Appeals for the Federal Circuit affirmed the PTAB's decision, rejecting Elysium's attempt to invalidate claim 2 of the '086 patent.

(C) Southern District of New York Action

On September 27, 2017, Elysium Health Inc. ("Elysium Health") filed a complaint in the United States District Court for the Southern District of New York, against ChromaDex, Inc. (the "Elysium SDNY Complaint"). Elysium Health alleges in the Elysium SDNY Complaint that ChromaDex, Inc. made false and misleading statements in a citizen petition to the Food and Drug Administration it filed on or about August 18, 2017. Among other allegations, Elysium Health avers that the citizen petition made Elysium Health's product appear dangerous, while casting ChromaDex, Inc.'s own product as safe. The Elysium SDNY Complaint asserts four claims for relief: (i) false advertising under the Lanham Act, 15 U.S.C. § 1125(a); (ii) trade libel; (iii) deceptive business practices under New York General Business Law § 349; and (iv) tortious interference with prospective economic relations. ChromaDex, Inc. denies the claims in the Elysium SDNY Complaint and intends to defend against them vigorously. On October 26, 2017, ChromaDex, Inc. moved to dismiss the Elysium SDNY Complaint on the grounds that, inter alia, its statements in the citizen petition are immune from liability under the Noerr-Pennington Doctrine, the litigation privilege, and New York's Anti-SLAPP statute, and that the Elysium SDNY Complaint failed to state a claim. Elysium Health opposed the motion on November 2, 2017. ChromaDex, Inc. filed its reply on November 9, 2017.

On October 26, 2017, ChromaDex, Inc. filed a complaint in the United States District Court for the Southern District of New York against Elysium Health (the "ChromaDex SDNY Complaint"). ChromaDex, Inc. alleges that Elysium Health made material false and misleading statements to consumers in the promotion, marketing, and sale of its health supplement product, Basis, and asserts five claims for relief: (i) false advertising under the Lanham Act, 15 U.S.C. §1125(a); (ii) unfair competition under 15 U.S.C. § 1125(a); (iii) deceptive practices under New York General Business Law § 349; (iv) deceptive practices under New York General Business Law § 350; and (v) tortious interference with prospective economic advantage. On November 16, 2017, Elysium Health moved to dismiss for failure to state a claim. ChromaDex, Inc. opposed the motion on November 30, 2017 and Elysium Health filed a reply on December 7, 2017.

On November 3, 2017, the Court consolidated the Elysium SDNY Complaint and the ChromaDex SDNY Complaint actions under the caption In re Elysium Health-ChromaDex Litigation, 17-cv-7394, and stayed discovery in the consolidated action pending a Court-ordered mediation. The mediation was unsuccessful. On September 27, 2018, the Court issued a combined ruling on both parties' motions to dismiss. For ChromaDex's motion to dismiss, the Court converted the part of the motion on the issue of whether the citizen petition is immune under the Noerr-Pennington Doctrine into a motion for summary judgment, and requested supplemental evidence from both parties, which were submitted on October 29, 2018. The Court otherwise denied the motion to dismiss. On January 3, 2019, the Court granted ChromaDex, Inc.'s motion for summary judgment under the Noerr-Pennington Doctrine and dismissed all claims in the Elysium SDNY Complaint. Elysium moved for reconsideration on January 17, 2019. The Court denied Elysium's motion for reconsideration on February 6, 2019, and issued an amended final order granting ChromaDex, Inc.'s motion for summary judgment as on February 7, 2019.

The Court granted in part and denied in part Elysium's motion to dismiss, sustaining three grounds for ChromaDex's Lanham Act claims while dismissing two others, sustaining the claim under New York General Business Law § 349, and dismissing the claims under New York General Business Law § 350 and for tortious interference. Elysium filed an answer and counterclaims on October 10, 2018, alleging claims for (i) false advertising under the Lanham Act, 15 U.S.C. §1125(a); (ii) unfair competition under 15 U.S.C. § 1125(a); and (iii) deceptive practices under New York General Business Law § 349. ChromaDex answered Elysium's counterclaims on November 2, 2018.

ChromaDex, Inc. filed an amended complaint on March 27, 2019, adding new claims against Elysium Health for false advertising and unfair competition under the Lanham Act, 15 U.S.C. § 1125(a). On April 10, 2019, Elysium Health answered the amended complaint and filed amended counterclaims, also adding new claims against ChromaDex, Inc. for false advertising and unfair competition under the Lanham Act, 15 U.S.C. § 1125(a). On July 1, 2019, Elysium Health filed further amended counterclaims, adding new claims under the Copyright Act §§ 106 & 501. On February 9, 2020, ChromaDex, Inc. filed a motion for leave to amend its complaint to add additional claims against Elysium Health for false advertising and unfair competition. On February 10, 2020, Elysium Health filed a motion for leave to amend its counterclaims to identify allegedly false and misleading statements in ChromaDex's advertising. Those motions remain pending and the parties are currently in discovery.

The Company is unable to predict the outcome of these matters and, at this time, cannot reasonably estimate the possible loss or range of loss with respect to the legal proceedings discussed herein. As of December 31, 2019, ChromaDex, Inc. did not accrue a potential loss for the California Action or the Elysium SDNY Complaint because ChromaDex, Inc. believes that the allegations are without merit and thus it is not probable that a liability has been incurred.

(D) Delaware – Patent Infringement Action

On September 17, 2018, ChromaDex, Inc. and Trustees of Dartmouth College filed a patent infringement complaint in the United States District Court for the District of Delaware against Elysium Health, Inc. The complaint alleges that Elysium's BASIS® dietary supplement violates U.S. Patents 8,197,807 (the "'807 Patent") and 8,383,086 (the "'086 Patent") that comprise compositions containing isolated nicotinamide riboside held by Dartmouth and licensed exclusively to ChromaDex, Inc. On October 23, 2018, Elysium filed an answer to the complaint. The answer asserts various affirmative defenses and denies that Plaintiffs are entitled to any relief.

On November 7, 2018, Elysium filed a motion to stay the patent infringement proceedings pending resolution of (1) the *inter partes* review of the '807 Patent and the '086 Patent before the Patent Trial and Appeal Board ("PTAB") and (2) the outcome of the litigation in the California Action. ChromaDex, Inc. filed an opposition brief on November 21, 2018 detailing the issues with Elysium's motion to stay. In particular, ChromaDex, Inc. argued that given claim 2 of the '086 Patent was only included in the PTAB's *inter partes* review for procedural reasons the PTAB was unlikely to invalidate claim 2 and therefore litigation in Delaware would continue regardless. In addition, ChromaDex, Inc. argued that the litigation in the California Action is unlikely to have a significant effect on the ongoing patent litigation. After the PTAB released its written decision upholding claim 2 of the '086 Patent, proving right ChromaDex, Inc.'s prediction, ChromaDex, Inc. informed the Delaware court of the PTAB's decision on January 17, 2019. On June 19, 2019, the Delaware court granted in part and denied in part Elysium's motion, ordering that the case was stayed pending the resolution of Elysium's patent misuse counterclaim in the California Action.

On November 1, 2019, ChromaDex, Inc. filed a motion to lift the stay due to changed circumstances in the California Action, among other reasons. Briefing on the motion was completed on November 22, 2019. On January 6, 2020, the Delaware court issued an oral order instructing the parties to submit a joint status report after the January 13, 2020 motions hearing in the California Action. The joint status report was submitted on January 30, 2020. On February 4, 2020, the Delaware court issued an order granting ChromaDex, Inc.'s motion to lift the stay and setting a scheduling conference for March 10, 2020.

Legal proceedings – Utah Lanham Act Action

On March 6, 2019, Novex Biotech LLC ("Novex") filed an action in the Third Judicial District Court County of Salt Lake, State of Utah against ChromaDex, Inc. and 10 fictional defendants. The complaint alleges that Novex markets a dietary supplement, Oxydrene Elite, that competes with ChromaDex's product, TRU NIAGEN. The complaint further alleges that ChromaDex, Inc. has violated the Lanham Act by making false or misleading claims for TRU NIAGEN. Novex is seeking an injunction and damages for the competitive harm it alleges to have suffered.

ChromaDex, Inc. timely removed the action to federal court in the District of Utah. ChromaDex answered the complaint and also filed counterclaims against Novex under the Lanham Act and California state law. ChromaDex's counterclaims allege that Novex has falsely advertised its product called Oxydrene. Novex moved to dismiss the counterclaims and ChromaDex has opposed this motion. Discovery in the case is ongoing and no hearing has been set for Novex's motion to dismiss.

The Company is unable to predict the outcome of this matter and, at this time, cannot reasonably estimate the possible loss or range of loss with respect to the legal proceedings discussed herein. As of December 31, 2019, ChromaDex, Inc. did not accrue a potential loss for the Utah Lanham Act action because ChromaDex, Inc. believes that the allegations are without merit and thus it is not probable that a liability has been incurred.

From time to time we are involved in legal proceedings arising in the ordinary course of our business. We believe that there is no other litigation pending that is likely to have, individually or in the aggregate, a material adverse effect on our financial condition or results of operations.

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

Since April 25, 2016, our common stock has been traded on The Nasdaq Capital Market ("NASDAQ") under the symbol "CDXC." On March 3, 2020, the closing sale price was $3.60.

Holders of Our Common Stock

As of March 3, 2020, we had approximately 51 registered holders of record of our common stock.

Dividend Policy

We have not declared or paid any cash dividends on our common stock during either of the two most recent fiscal years and have no current intention to pay any cash dividends. Our ability to pay cash dividends is governed by applicable provisions of Delaware law and is subject to the discretion of our Board of Directors.

Recent Sales of Unregistered Securities

Other than as previously disclosed in our past Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, the Company did not have any sales of unregistered securities for the period covered by this Annual Report on Form 10-K.

Item 6. Selected Financial Data

Not Applicable.

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

You should read the following discussion and analysis of financial condition and results of operation together with "Selected Financial Data," the consolidated financial statements and the related notes included elsewhere this Form 10-K. This discussion contains forward-looking statements that involve risks and uncertainties. When reviewing the discussion below, you should keep in mind the substantial risks and uncertainties that impact our business. In particular, we encourage you to review the risks and uncertainties described in "Risk Factors" in Part I, Item 1A in this Form 10-K. These risks and uncertainties could cause actual results to differ materially from those projected in forward-looking statements contained in this report or implied by past results and trends.

Overview

ChromaDex Corporation and its wholly owned subsidiaries, ChromaDex, Inc., Healthspan Research, LLC, ChromaDex Analytics, Inc. and ChromaDex Asia Limited (collectively, the "Company" "ChromaDex" or, in the first person as "we" "us" and "our") are a science-based integrated nutraceutical company devoted to improving the way people age. ChromaDex scientists partner with leading universities and research institutions worldwide to discover, develop and create solutions to deliver the full potential of nicotinamide adenine dinucleotide ("NAD") and its impact on human health. Our flagship ingredient, NIAGEN® nicotinamide riboside, a precursor to NAD sold directly to consumers as TRU NIAGEN®, is backed with clinical and scientific research, as well as intellectual property protection. The Company also has analytical reference standards and services segment, which focuses on natural product fine chemicals (known as "phytochemicals") and related chemistry services.

The discussion and analysis of our financial condition and results of operations are based on the ChromaDex financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires making estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenues, if any, and expenses during the reporting periods. On an ongoing basis, we evaluate such estimates and judgments, including those described in greater detail below. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

As of December 31, 2019, cash and cash equivalents totaled approximately $18.8 million. The Company anticipates that its current cash, cash equivalents and cash to be generated from operations will be sufficient to meet its projected operating plans through at least the next twelve months from the issuance date of this report. The Company may, however, seek additional capital in the next twelve months, both to meet its projected operating plans after the next twelve months and/or to fund its longer term strategic objectives.

Additional capital may come from public and/or private stock or debt offerings, borrowings under lines of credit or other sources. These additional funds may not be available on favorable terms, or at all. Further, if we issue equity or debt securities to raise additional funds, our existing stockholders may experience dilution and the new equity or debt securities we issue may have rights, preferences and privileges senior to those of our existing stockholders. In addition, if we raise additional funds through collaboration, licensing or other similar arrangements, it may be necessary to relinquish valuable rights to our products or proprietary technologies, or to grant licenses on terms that are not favorable to us. If we cannot raise funds on acceptable terms, we may not be able to develop or enhance our products, obtain the required regulatory clearances or approvals, achieve long term strategic objectives, take advantage of future opportunities, or respond to competitive pressures or unanticipated customer requirements. Any of these events could adversely affect our ability to achieve our development and commercialization goals, which could have a material and adverse effect on our business, results of operations and financial condition.

Some of our operations are subject to regulation by various state and federal agencies. Dietary supplements are subject to FDA, FTC and U.S. Department of Agriculture regulations relating to composition, labeling and advertising claims. These regulations may in some cases, particularly with respect to those applicable to new ingredients, require a notification that must be submitted to the FDA along with evidence of safety. There are similar regulations related to food additives.

Results of Operations

Our losses per basic and diluted share were $0.56 and $0.61 for the twelve-month periods ended December 31, 2019 and December 31, 2018, respectively. Over the next two years, we plan to continue to increase marketing, research and development efforts for our flagship ingredient, NIAGEN® nicotinamide riboside, and our consumer branded product TRU NIAGEN®.

(In thousands)		Twelve months ending	
		Dec. 31, 2019	Dec. 31, 2018
Sales		$ 46,291	$ 31,557
Cost of sales		20,522	15,502
Gross profit		25,769	16,055
Operating expenses	-Sales and marketing	18,216	16,537
	-Research and development	4,420	5,478
	-General and administrative	34,308	27,137
	-Other	125	75
Nonoperating	-Interest expense, net	(847)	(79)
	-Other	-	(65)
Net loss		$ (32,147)	$ (33,316)

Net Sales. Net sales consist of gross sales less discounts and returns.

(In thousands)	Twelve months ending December 31, 2019	December 31, 2018	Change
Net sales:			
Consumer Products	**$ 36,075**	$ 18,451	96%
Ingredients	**6,196**	8,565	-28%
Analytical reference standards and services	**4,020**	4,541	-11%
Total net sales	**$ 46,291**	$ 31,557	47%

- The Company's TRU NIAGEN® sales for consumer products segment increased after the Company's strategic shift towards consumer products in 2017. The Company expects the sales for the consumer products segment to continue to grow over the next twelve months.
- The decrease in sales for the ingredients segment is largely due to the Company’s focus on expanding consumer products business. The Company made a strategic decision in 2017 to transition from an ingredient company to a consumer driven nutraceutical company that has resulted in a shift in our sales away from ingredients.
- The decrease in sales for the analytical reference standards and services segment is primarily due to decreased sales of analytical reference standards.

Cost of Sales. Costs of sales include raw materials, labor, overhead, and delivery costs.

(In thousands)	Twelve months ending			
	December 31, 2019		December 31, 2018	
	Amount	% of net sales	Amount	% of net sales
Cost of sales:				
Consumer Products	**$ 14,550**	40%	$ 7,222	39%
Ingredients	**2,980**	48%	4,831	56%
Analytical reference standards and services	**2,992**	74%	3,449	76%
Total cost of sales	**$ 20,522**	44%	$ 15,502	49%

The cost of sales, as a percentage of net sales, decreased 5%.

- The cost of sales, as a percentage of net sales, for the consumer products segment increased 1%. Compared to the other segments, the consumer products segment experienced better margins due to the positive impact of TRU NIAGEN® consumer product sales.
- The cost of sales, as a percentage of net sales, for the ingredients segment decreased 8%. The ingredient segment recorded higher margins compared to the last year as we focus on fewer ingredients with higher profit margins. Also, in 2018, we had an inventory write off of approximately $442,000.
- The cost of sales, as a percentage of net sales for the analytical reference standards and services segment decreased 2%. In 2019, we focused on sale of reference standards and services with higher profit margins.

Gross Profit. Gross profit is net sales less the cost of sales and is affected by a number of factors including product mix, competitive pricing and costs of products and services.

(In thousands)	Twelve months ending December 31, 2019	December 31, 2018	Change
Gross profit:			
Consumer Products	**$ 21,525**	$ 11,229	92%
Ingredients	**3,216**	3,734	-14%
Analytical reference standards and services	**1,028**	1,092	-6%
Total gross profit	**$ 25,769**	$ 16,055	61%

- The consumer products segment posted gross profit of $21.5 million in 2019. The Company expects the sales and gross profit for consumer products segment to continue to grow over the next twelve months.
- The decreased gross profit for the ingredients segment was largely due to a decrease in sales as the Company transitions from an ingredient company to a consumer driven nutraceutical company.
- The decreased gross profit for the analytical reference standards and services segment is largely due to the decreased sales.

Operating Expenses – Sales and Marketing. Sales and Marketing Expenses consist of salaries, advertising and marketing expenses.

(In thousands)	Twelve months ending December 31, 2019	December 31, 2018	Change
Sales and marketing expenses:			
Consumer Products	**$ 17,343**	$ 15,063	15%
Ingredients	**245**	727	-66%
Analytical reference standards and services	**628**	747	-16%
Total sales and marketing expenses	**$ 18,216**	$ 16,537	10%

- For the consumer products segment, the Company has increased staffing as well as direct marketing expenses associated with social media and other customer awareness and acquisition programs. The Company plans to continue to invest in building out our own global branded consumer product business.
- For the ingredients segment, the decrease in 2019 is largely due to decreased marketing efforts as the Company shifts towards consumer products.
- For the analytical reference standards and services segment, the decrease is mainly due to decreased sales and marketing efforts.

Operating Expenses – Research and Development. Research and Development Expenses consist of clinical trials and process development expenses.

(In thousands)	Twelve months ending December 31, 2019	December 31, 2018	Change
Research and development expenses:			
Consumer Products	**$ 3,699**	$ 3,852	-4%
Ingredients	**721**	1,626	-56%
Total research and development expenses	**$ 4,420**	$ 5,478	-19%

- In 2017, we began allocating the research and development expenses related to our NIAGEN® branded ingredient to the consumer products and ingredients segment, based on revenues recorded. Overall, we decreased our research and development efforts as we evaluate and realign the priorities of our ongoing research and development efforts of our flagship ingredient, NIAGEN® nicotinamide riboside.

Operating Expenses – General and Administrative. General and Administrative Expenses consist of general company administration, IT, accounting and executive management expenses.

(In thousands)	Twelve months ending December 31, 2019	December 31, 2018	Change
General and administrative	**$ 34,308**	$ 27,137	26%

The following expenses contributed to the increase in general and administrative expenses in 2019:

- An increase in bad debt expense. Our bad debt expense increased to approximately $2.2 million in 2019 compared to an insignificant amount in 2018. This is due to recording a write off $2.2 million related to trade receivable from Elysium Health by increasing the allowance from $0.5 million to the entire trade receivable balance of $2.7 million. We placed a reserve for the entire outstanding balance as it was no longer deemed collectible.

- An increase in legal expenses. Our legal expenses increased to approximately $11.3 million in 2019 compared to approximately $9.8 million in 2018. The ongoing litigation with Elysium and our increased efforts to file and maintain patents related to the proprietary ingredient technologies were the main reasons for the increase in legal expenses.

- An increase in royalties we pay to patent holders. Our royalty expense increased to approximately $2.6 million in 2019, compared to approximately $1.6 million in 2018. The increases are due to increased sales for licensed products in 2019.

Nonoperating – Interest Expense, net. Interest expense, net consists of interest earned from bank deposit accounts less interest expenses from convertible notes, the line of credit arrangement and finance leases.

(In thousands)	Twelve months ending December 31, 2019	December 31, 2018	Change
Interest expense, net	**$ 847**	$ 79	972%

- In 2019, the Company recorded debt discounts of approximately $0.8 million in connection with the issuance of convertible promissory notes in the aggregate principal amount of $10.0 million to Winsave Resources Limited and Pioneer Step Holdings Limited. The debt discounts have been amortized as interest expense using the effective interest method.

Depreciation and Amortization. For the twelve-month period ended December 31, 2019, we recorded approximately $0.8 million in depreciation compared to approximately $0.6 million for the twelve-month period ended December 31, 2018. We depreciate our assets on a straight-line basis, based on the estimated useful lives of the respective assets. We amortize intangible assets using a straight-line method, generally over 10 years. For licensed patent rights, the useful lives are 10 years or the remaining term of the patents underlying licensing rights, whichever is shorter. The useful lives of subsequent milestone payments that are capitalized are the remaining useful life of the initial licensing payment that was capitalized. In the twelve-month period ended December 31, 2019, we recorded amortization on intangible assets of approximately $0.2 million compared to approximately $0.2 million for the twelve-month period ended December 31, 2018.

Income Taxes. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. At December 31, 2019 and December 31, 2018, the Company maintained a full valuation allowance against the entire deferred income tax balance which resulted in an effective tax rate of 0% for each of 2019 and 2018. As defined in ASC 740, *Income Taxes*, future realization of the tax benefit will depend on the existence of sufficient taxable income, including the expectation of continued future taxable income.

Net cash used in operating activities. Net cash used in operating activities for the twelve-month period ended December 31, 2019 was approximately $20.4 million as compared to approximately $20.9 million for the twelve-month period ended December 31, 2018. Along with the net loss, an increase inventories was the largest use of cash during the twelve-month period ended December 31, 2019. Net cash used in operating activities for the twelve-month period ended December 31, 2018 also largely reflects an increase in inventories along with the net loss.

We expect our operating cash flows to fluctuate significantly in future periods as a result of fluctuations in our operating results, shipment timetables, accounts receivable collections, inventory management, and the timing of our payments, among other factors.

Net cash used in investing activities. Net cash used in investing activities was approximately $0.2 million for the twelve-month period ended December 31, 2019, compared to approximately $1.8 million for the twelve-month period ended December 31, 2018. Net cash used in investing activities for the twelve-month period ended December 31, 2018, mainly consisted of purchases of leasehold improvements and equipment, offset by proceeds from disposal of assets held at escrow. Net cash used in investing activities for the twelve-month period ended December 31, 2018, mainly consisted of purchases of leasehold improvements and equipment and intangible assets, as well as a long-term related party investment.

Net cash provided by (used in) financing activities. Net cash provided by financing activities was approximately $16.9 million for the twelve-month period ended December 31, 2019, compared to approximately $90,000 used for the twelve-month period ended December 31, 2018. Net cash provided by financing activities for 2019 mainly consisted of proceeds from issuances of our common stock, sale of convertible notes and exercise of stock options, offset by principal payments on finance leases. Net cash used in financing activities for 2018 primarily consisted of repurchase of common stock and principal payments on finance leases, partially offset by proceeds from exercise of stock options.

Trade Receivables. As of December 31, 2019, we had approximately $2.2 million in trade receivables as compared to approximately $4.4 million as of December 31, 2018.

Inventories. As of December 31, 2019, we had approximately $11.5 million in inventory, compared to approximately $8.2 million as of December 31, 2018. As of December 31, 2019, our inventory consisted of approximately $9.5 million of consumer products, approximately $1.4 million of bulk ingredients and approximately $0.6 million of phytochemical reference standards. Consumer products inventory consists of TRU NIAGEN® branded finished bottles of dietary supplement products and related work-in-process inventory. Bulk ingredients are proprietary compounds sold to customers in larger quantities, typically in kilograms. These ingredients are used by our customers in the dietary supplement, food and beverage, animal health, cosmetic and pharmaceutical industries to manufacture their final products. Phytochemical reference standards are small quantities of plan-based compounds typically used to research an array of potential attributes or for quality control purposes. The Company currently lists over 1,500 phytochemicals and 300 botanical reference materials in our catalog and holds a lot of these as inventory in small quantities, mostly in grams and milligrams.

Our normal operating cycle for reference standards is currently longer than one year. Due to the large number of different items we carry, certain groups of these reference standards have a sales frequency that is slower than others and varies greatly year to year. In addition, for certain reference standards, the cost saving is advantageous when purchased in larger quantities and we have taken advantage of such opportunities when available. Such factors have resulted in an operating cycle to be more than one year on average. The Company gains competitive advantage through the broad offering of reference standards and it is critical for the Company to continue to expand its library of reference standards it offers for the growth of business. Nevertheless, the Company has made changes in its reference standards inventory purchasing practice, which the management believes will result in an improved turnover rate and shorter operating cycle without impacting our competitive advantage.

The Company regularly reviews inventories on hand and reduces the carrying value for slow-moving and obsolete inventory, inventory not meeting quality standards and inventory subject to expiration. The reduction of the carrying value for slow-moving and obsolete inventory is based on current estimates of future product demand, market conditions and related management judgment. Any significant unanticipated changes in future product demand or market conditions that vary from current expectations could have an impact on the value of inventories.

We strive to optimize our supply chain as we constantly search for better and more reliable sources and suppliers. By doing so, we believe we can lower the costs of our inventory and yield higher gross profit. In addition, we are working with our suppliers and partners to develop more efficient manufacturing methods, in an effort to lower the costs of our inventory.

Accounts Payable. As of December 31, 2019, we had $9.6 million in accounts payable compared to approximately $9.5 million as of December 31, 2018.

Liquidity and Capital Resources

For the twelve-month periods ended December 31, 2019, and December 31, 2018, the Company has incurred losses from operations of approximately $31.3 million and $33.2 million, respectively. Net cash used in operating activities for the twelve-month periods ended December 31, 2019, and December 31, 2018, was approximately $20.4 million and $20.9 million, respectively. The losses and the uses of cash are primarily due to expenses associated with the development and expansion of our operations. These operations have been financed through capital contributions, primarily through the issuance of common stock in private placements.

Our Board of Directors periodically reviews our capital requirements in light of our proposed business plan. Our future capital requirements will remain dependent upon a variety of factors, including cash flow from operations, the ability to increase sales, increasing our gross profits from current levels, reducing sales and administrative expenses as a percentage of net sales, continued development of customer relationships, and our ability to market our new products successfully. However, based on our results from operations, we may determine that we need additional financing to implement our business plan. Additional financing may come from public and private equity or debt offerings, borrowings under lines of credit or other sources. These additional funds may not be available on favorable terms, or at all. There can be no assurance we will be successful in raising these additional funds. Without adequate financing we may have to further delay or terminate product or service expansion plans. Any inability to raise additional financing would have a material adverse effect on us.

As of December 31, 2019, the cash and cash equivalents totaled approximately $18.8 million. The Company anticipates that its current cash, cash equivalents and cash to be generated from operations will be sufficient to meet its projected operating plans through at least the next twelve months from the issuance date of this report. The Company may, however, seek additional capital within the next twelve months, both to meet its projected operating plans after the next twelve months and/or to fund its longer term strategic objectives.

Dividend Policy

We have not declared or paid any cash dividends on our common stock. We presently intend to retain earnings for use in our operations and to finance our business. Any change in our dividend policy is within the discretion of our board of directors and will depend, among other things, on our earnings, debt service and capital requirements, restrictions in financing agreements, if any, business conditions, legal restrictions and other factors that our board of directors deems relevant.

Off-Balance Sheet Arrangements

During the fiscal years ended December 31, 2019 and December 31, 2018, we had no material off-balance sheet arrangements.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations and other commitments as of December 31, 2019:

(In thousands)	Total	Payments due by period 2020	2021	2022	2023	2024
Operating leases	$ 1,610	$ 690	$ 614	$ 138	$ 143	$ 25
Finance leases	290	272	18	-	-	-
Purchase obligations	11,520	11,520	-	-	-	-
Total	**$ 13,420**	**$ 12,482**	**$ 632**	**$ 138**	**$ 143**	**$ 25**

Operating leases. We lease our offices and research facilities in California and Colorado under operating lease agreements that expire at October 2021 and February 2024, respectively. We make monthly payments on these leases.

Finance leases. We lease equipment and computer software under finance lease obligations with a term of typically two to four years. We make monthly installment payments for these leases.

Purchase obligations. We enter into purchase obligations with various vendors for goods and services that we need for our operations. The purchase obligations for goods and services include inventory, advertising, research and development, and laboratory supplies.

Critical Accounting Policies

The discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosures. On an ongoing basis, we evaluate these estimates, including those related to the valuation of share-based payments. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Our significant accounting policies are described in Note 3 of the Financial Statements, set forth in Item 8 of this Form 10-K.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not applicable

Item 8. Financial Statements and Supplementary Data

The financial statements are set forth in the pages listed below.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of
ChromaDex Corporation

Opinion on the Financial Statements

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

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2019, based on the criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in 2013 and our report dated March 10, 2020, expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 3 to the consolidated financial statements, the Company has changed its method of accounting for leases in 2019 due to the adoption of the guidance in ASC Topic 842, Leases ("Topic 842").

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 audits 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.

/s/ Marcum LLP

Marcum LLP

We have served as the Company's auditor since 2013.

New York, NY
March 10, 2020

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON
INTERNAL CONTROL OVER FINANCIAL REPORTING

To the Shareholders and Board of Directors of
ChromaDex Corporation

Opinion on Internal Control over Financial Reporting

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

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets as of December 31, 2019 and December 31, 2018 and the related consolidated statements of operations, stockholders' equity, and cash flows and the related notes for each of the two years in the period ended December 31, 2019 of the Company, and our report dated March 10, 2020 expressed an unqualified opinion on those financial statements.

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

Definition and Limitations of Internal Control over Financial Reporting

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

Because of the 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 degree of compliance with the policies or procedures may deteriorate.

/s/ Marcum LLP

Marcum LLP

New York, NY
March 10, 2020

ChromaDex Corporation and Subsidiaries

Consolidated Balance Sheets
December 31, 2019 and December 31, 2018
(In thousands, except per share data)

	Dec. 31, 2019	Dec. 31, 2018
Assets		
Current Assets		
Cash, including restricted cash of $0.2 million and $0.2 million, respectively	**$ 18,812**	$ 22,616
Trade receivables, net of allowances of $2.8 million and $0.5 million, respectively;		
Receivables from Related Party: $0.8 million and $0.7 million, respectively	**2,175**	4,359
Contract assets	**-**	56
Receivable held at escrow, net of allowance of $0.1 million	**-**	677
Inventories	**11,535**	8,249
Prepaid expenses and other assets	**996**	577
Total current assets	**33,518**	36,534
Leasehold Improvements and Equipment, net	**3,765**	3,585
Intangible Assets, net	**1,311**	1,547
Right of Use Assets	**891**	-
Other Long-term Assets	**762**	566
Total assets	**$ 40,247**	$ 42,232
Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts payable	**$ 9,626**	$ 9,548
Accrued expenses	**4,415**	4,444
Current maturities of operating lease obligations	**595**	-
Current maturities of finance lease obligations	**258**	173
Contract liabilities and customer deposits	**169**	275
Total current liabilities	**15,063**	14,440
Deferred Revenue	**3,873**	-
Operating Lease Obligations, Less Current Maturities	**848**	-
Finance Lease Obligations, Less Current Maturities	**18**	137
Deferred Rent	**-**	477
Total liabilities	**19,802**	15,054
Commitments and Contingencies		
Stockholders' Equity		
Common stock, $.001 par value; authorized 150,000 shares;		
issued and outstanding December 31, 2019 59,562 shares and		
December 31, 2018 55,089 shares	**60**	55
Additional paid-in capital	**142,285**	116,876
Accumulated deficit	**(121,900)**	(89,753)
Total stockholders' equity	**20,445**	27,178
Total liabilities and stockholders' equity	**$ 40,247**	$ 42,232

See Notes to Consolidated Financial Statements.

ChromaDex Corporation and Subsidiaries

Consolidated Statements of Operations
Years Ended December 31, 2019 and December 31, 2018
(In thousands, except per share data)

	2019	2018
Sales, net	**$ 46,291**	$ 31,557
Cost of sales	**20,522**	15,502
Gross profit	**25,769**	16,055
Operating expenses:		
Sales and marketing	**18,216**	16,537
Research and development	**4,420**	5,478
General and administrative	**34,308**	27,137
Other	**125**	75
Operating expenses	**57,069**	49,227
Operating loss	**(31,300)**	(33,172)
Nonoperating expense:		
Interest expense, net	**(847)**	(79)
Other	**-**	(65)
Nonoperating expenses	**(847)**	(144)
Net loss	**(32,147)**	(33,316)
Basic and diluted loss per common share:	**$ (0.56)**	$ (0.61)
Basic and diluted weighted average common shares outstanding	**57,056**	55,006

See Notes to Consolidated Financial Statements.

ChromaDex Corporation and Subsidiaries

Consolidated Statement of Stockholders' Equity
Years Ended December 31, 2019 and December 31, 2018
(In thousands)

	Common Stock		Additional Paid-in	Accumulated	Total Stockholders'
	Shares	Amount	Capital	Deficit	Equity
Balance, December 30, 2017	54,697	$ 55	$ 110,380	$ (56,601)	$ 53,834
Adjustment to retained earnings: cumulative effect of initially applying ASC 606	-	-	-	164	164
Exercise of stock options	132	-	529	-	529
Repurchase of common stock	(75)	-	(404)	-	(404)
Vested restricted stock	2	-	-	-	-
Share-based compensation	333	-	6,371	-	6,371
Net loss	-	-	-	(33,316)	(33,316)
Balance, December 31, 2018	55,089	$ 55	$ 116,876	$ (89,753)	$ 27,178
Issuance of common stock, net of offering costs of $0.2 million	1,568	2	6,770	-	6,772
Issuance of common stock for conversion of debt and accrued interest	2,267	2	10,121		10,123
Debt discount to covertible notes	-	-	282	-	282
Exercise of stock options	427	1	1,064	-	1,065
Exercise of of warrants	44	-	-	-	-
Share-based compensation	167	-	7,172	-	7,172
Net loss	-	-	-	(32,147)	(32,147)
Balance, December 31, 2019	59,562	$ 60	$ 142,285	$ (121,900)	$ 20,445

See Notes to Consolidated Financial Statements.

ChromaDex Corporation and Subsidiaries

Consolidated Statements of Cash Flows
Years Ended December 31, 2019 and December 31, 2018
(In thousands)

	2019	2018
Cash Flows From Operating Activities		
Net loss	**$ (32,147)**	$ (33,316)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation of leasehold improvements and equipment	**762**	607
Amortization of intangibles	**246**	235
Amortization of right of use assets	**515**	-
Share-based compensation	**7,172**	6,371
Allowance for doubtful trade receivables	**2,228**	(132)
Loss from disposal of equipment	**7**	1
Amortization of convertible notes issuance costs and discount	**846**	-
Non-cash financing costs	**134**	70
Other Non-cash expense	**-**	65
Changes in operating assets and liabilities:		
Trade receivables	**(44)**	1,111
Contract assets	**56**	-
Inventories	**(3,286)**	(2,453)
Prepaid expenses and other assets	**(247)**	65
Accounts payable	**78**	5,829
Accrued expenses	**103**	668
Deferred revenue	**3,873**	-
Customer deposits and other	**(106)**	69
Payments on operating leases	**(629)**	-
Deferred rent	**-**	2
Due to officer	**-**	(100)
Net cash used in operating activities	**(20,439)**	(20,908)
Cash Flows From Investing Activities		
Proceeds from disposal of assets held at escrow	**553**	-
Purchases of leasehold improvements and equipment	**(743)**	(1,321)
Purchases of intangible assets	**(10)**	(131)
Investment in other long-term assets	**(49)**	(323)
Net cash used in investing activities	**(249)**	(1,775)
Cash Flows From Financing Activities		
Proceeds from issuance of common stock, net	**6,772**	-
Proceeds from sale of convertible notes	**10,000**	-
Payment of convertible notes issuance costs	**(565)**	-
Payment of debt issuance costs	**(113)**	(19)
Proceeds from exercise of stock options	**1,066**	529
Repurchase of common stock	**-**	(404)
Principal payments on finance leases	**(276)**	(196)
Net cash provided by (used in) financing activities	**16,884**	(90)
Net decrease in cash	**(3,804)**	(22,773)
Cash Beginning of Year, including restricted cash of $0.2 million for 2019	**22,616**	45,389
Cash Ending of Year, including restricted cash of $0.2 million for both 2019 and 2018	**$ 18,812**	$ 22,616
Supplemental Disclosures of Cash Flow Information		
Cash payments for interest on finance leases	**$ 33**	$ 41
Supplemental Schedule of Noncash Operating Activity		
Adjustment to retained earnings - cumulative effect of initially applying ASC 606	**$ -**	$ 164
Finance lease obligation incurred on licensing fees	**$ 99**	$ -
Right of use assets transferred	**$ 62**	$ -
Operating lease obligation transferred	**$ 65**	$ -

Supplemental Schedule of Noncash Investing Activity				
Finance lease obligation incurred for purchase of software	**$**	**143**	$	-
Operating lease obligation incurred for tenant improvement credit received	**$**	**64**	$	-
Supplemental Schedule of Noncash Financing Activity				
Issuance of common stock for conversion of debt and accrued interest	**$**	**10,123**	$	-

See Notes to Consolidated Financial Statements.

Note 1. Nature of Business

ChromaDex Corporation and its wholly owned subsidiaries, ChromaDex, Inc., Healthspan Research, LLC, ChromaDex Analytics, Inc. and ChromaDex Asia Limited (collectively, the "Company" or, in the first person as "we" "us" and "our") are a science-based integrated nutraceutical company devoted to improving the way people age. The Company's scientists partner with leading universities and research institutions worldwide to discover, develop and create solutions to deliver the full potential of nicotinamide adenine dinucleotide and its impact on human health. Its flagship ingredient, NIAGEN® nicotinamide riboside, sold directly to consumers as TRU NIAGEN®, is backed with clinical and scientific research, as well as intellectual property protection. The Company also has analytical reference standards and services segment, which focuses on natural product fine chemicals (known as "phytochemicals") and related chemistry services.

Note 2. Liquidity

The Company has incurred a net loss of approximately $32.1 million for the year ended December 31, 2019, and net loss of approximately $33.3 million for the year ended December 31, 2018. As of December 31, 2019, cash and cash equivalents totaled approximately $18.8 million, which includes restricted cash of approximately $0.2 million.

The Company anticipates that its current cash, cash equivalents and cash to be generated from operations will be sufficient to meet its projected operating plans through at least the next twelve months from the issuance date of this report. The Company may, however, seek additional capital within the next twelve months, both to meet its projected operating plans within the next twelve months and/or to fund its longer term strategic objectives.

Note 3. Significant Accounting Policies

Significant accounting policies are as follows:

Basis of presentation: The financial statements and accompanying notes have been prepared on a consolidated basis and reflect the consolidated financial position of the Company and its wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated from these financial statements. The Company's fiscal year ends on December 31.

Adopted Accounting Standards in Fiscal 2019:

Effective the first day of fiscal year 2019, the Company adopted Accounting Standards Update ("ASU") No. 2016-02, Leases (Topic 842). ASU 2016-02 requires that a lessee recognize the assets and liabilities that arise from operating leases. A lessee should recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term. The Company adopted ASU 2016-02 applying the modified retrospective approach. For leases with a term of 12 months or less, the Company made an accounting policy election by class of underlying asset not to recognize lease assets and lease liabilities. The Company's leased assets and corresponding liabilities exclude non-lease components.

Within the opening balances for the fiscal year beginning January 1, 2019, the Company recognized right of use assets of approximately $1.5 million and corresponding operating lease obligations liabilities of approximately $2.1 million which includes approximately $0.6 million deferred rent liability the Company previously recognized as of December 31, 2018. The Company determines if an arrangement is a lease at inception and classifies it as finance or operating. Leased assets and corresponding liabilities are recognized based on the present value of the lease payments over the lease term utilizing an estimated borrowing rate for a secured loan with a maturity corresponding to the remaining lease term. Leases primarily consist of real property and laboratory equipment.

Effective the first day of fiscal year 2019, the Company adopted ASU No. 2017-11, Earnings Per Share (Topic 260); Distinguishing Liabilities from Equity (Topic 480); Derivatives and Hedging (Topic 815): (Part I) Accounting for Certain Financial Instruments with Down Round Features, (Part II) Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception. Among others, Part I of ASU 2017-11 allows companies to exclude a down round feature when determining whether a financial instrument (or embedded conversion feature) is considered indexed to the entity's own stock. As a result, financial instruments (or embedded conversion features) with down round features may no longer be required to be accounted for as derivative liabilities. A company recognizes the value of a down round feature only when it is triggered and the strike price has been adjusted downward.

Use of accounting estimates: The preparation of financial statements requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Revenue recognition: The Company recognizes sales and the related cost of sales when the performance obligations are satisfied. The performance obligations are typically satisfied upon shipment of physical goods or as the services are performed over time. In addition to the satisfaction of the performance obligations, the following conditions are required for revenue recognition: an arrangement exists, there is a fixed price, and collectability is reasonably assured. Discounts, returns and allowances related to sales, including an estimated reserve for the returns and allowances, are recorded as reduction of revenue.

The Company accounts for shipping and handling activities performed as cost of sales under a fulfillment cost and any fee received for shipping and handling as part of the transaction price and recognize revenue when control of the good transfers. Shipping and handling fees billed to customers included in net sales for the years ending December 31, 2019 and December 31, 2018 are as follows:

(In thousands)	2019	2018
Shipping and handling fees billed	$ 360	$ 287

Taxes collected from customers and remitted to governmental authorities are excluded from revenue, which is presented on a net basis in the statement of operations.

Restricted cash: The Company classifies cash as restricted if the withdrawal or its usage is restricted for more than three months. In connection with a lease amendment entered on November 9, 2018 to lease additional office space located in Los Angeles, California through October 2021, the Company delivered a letter of credit issued by a bank to the landlord in the amount of $0.2 million. The issuing bank required a collateral for the letter of credit and the Company made a deposit covering the letter of credit amount with the issuing bank. The letter of credit expires on October 18, 2020.

Trade accounts receivable, net: Trade accounts receivable are carried at original invoice amount less an estimate made for doubtful receivables based on monthly and quarterly reviews of all outstanding amounts. Management determines the allowance for doubtful accounts by identifying troubled accounts and by using historical experience applied to an aging of accounts. The allowance amounts for the periods ended December 31, 2019 and December 31, 2018 are as follows:

(In thousands)	2019	2018
Allowances Related to		
Elysium Health	$ 2,733	$ 500
Other Allowances	31	37
	$ 2,764	$ 537

Trade accounts receivable are written off when deemed uncollectible. Recoveries of trade accounts receivable previously written off are recorded when received.

Credit risk: Financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash and cash equivalents and trade receivables. For cash and cash equivalents, the Company has them either in a form of bank deposits or highly liquid debt instruments in investment-grade pursuant to the Company's investment policy. Accounts at each institution are insured by the Federal Deposit Insurance Corporation ("FDIC") up to $250,000. As of December 31, 2019, we held a total deposit of approximately $10.8 million with one institution and $7.7 million with another institution which exceeded the FDIC limit. We, however, believe we have very little credit risk exposure for our cash and cash equivalents. Our trade receivables are derived from sales to our customers. We assess credit risk of our customers through quantitative and qualitative analysis. From this analysis, we establish credit limits and manage the risk exposure. We, however, incur credit losses due to bankruptcy or other failure of the customer to pay.

Inventories: Inventories are comprised of work in process and finished goods. They are stated at the lower of cost, determined by the first-in, first-out method, or net realizable value. The inventory on the balance sheet is recorded net of valuation allowances. Labor and overhead has been added to inventory that was manufactured or characterized by the Company.
Our normal operating cycle for reference standards is currently longer than one year. The Company regularly reviews inventories on hand and reduces the carrying value for slow-moving and obsolete inventory, inventory not meeting quality standards and inventory subject to expiration. The reduction of the carrying value for slow-moving and obsolete inventory is based on current estimates of future product demand, market conditions and related management judgment. Any significant unanticipated changes in future product demand or market conditions that vary from current expectations could have an impact on the value of inventories.

Intangible assets: Intangible assets include licensing rights and are accounted for based on the fair value of consideration given or the fair value of the net assets acquired, whichever is more reliable. Intangible assets with finite useful lives are amortized using the straight-line method over a period of 10 years, or, for licensed patent rights, the remaining term of the patents underlying licensing rights (considered to be the remaining useful life of the license), whichever is shorter. The useful lives of subsequent milestone payments that are capitalized are the remaining useful life of the initial licensing payment that was capitalized.

Leasehold improvements and equipment, net: Leasehold improvements and equipment are carried at cost and depreciated on the straight-line method over the lesser of the estimated useful life of each asset or lease term. Leasehold improvements and equipment are comprised of leasehold improvements, laboratory equipment, furniture and fixtures, and computer equipment. Depreciation on equipment under finance lease is included with depreciation on owned assets. Maintenance and repairs are charged to operating expenses as they are incurred. Improvements and betterments, which extend the lives of the assets, are capitalized.

Long-lived assets are reviewed for impairment on a periodic basis and when changes in circumstances indicate the possibility that the carrying amount may not be recoverable. Long-lived assets are grouped at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets. If the forecast of undiscounted future cash flows is less than the carrying amount of the assets, an impairment charge would be recognized to reduce the carrying value of the assets to fair value. If a possible impairment is identified, the asset group’s fair value is measured relying primarily on a discounted cash flow methodology.

Customer deposits: Customer deposits represent cash received from customers in advance of product shipment or delivery of services.

Income taxes: Deferred taxes are provided on a liability method whereby deferred tax assets are recognized for deductible temporary differences and operating loss and tax credit carryforwards and deferred liabilities are recognized for taxable temporary differences. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax bases. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Deferred tax assets and liabilities are adjusted for the effects of changes in tax laws and rates on the date of enactment.

The Company has not recorded a reserve for any tax positions for which the ultimate deductibility is highly certain but for which there is uncertainty about the timing of such deductibility. The Company files tax returns in all appropriate jurisdictions, which include a U.S. federal tax return and various state tax returns. Open tax years for these jurisdictions are 2016 to 2019, which statutes expire in 2020 to 2023, respectively. When and if applicable, potential interest and penalty costs are accrued as incurred, with expenses recognized in general and administrative expenses in the statements of operations. As of December 31, 2019, the Company has no liability for unrecognized tax benefits.

Research and development costs: Research and development costs consist of direct and indirect costs associated with the development of the Company's technologies. These costs are expensed as incurred.

Advertising: The Company expenses the production costs of advertising the first time the advertising takes place. Advertising expense for the periods ended December 31, 2019 and December 31, 2018 were approximately $6,689,000 and $8,764,000, respectively.

Share-based compensation: The Company has an Equity Incentive Plan under which the Board of Directors may grant restricted stock or stock options to employees and non-employees. Effective October 1, 2018, the Company adopted ASU 2018-07, by which the accounting for share-based payments to non-employees and employees is substantially aligned. The ASU supersedes Subtopic 505-50, Equity - Equity-Based Payments to Non-Employees. Consistent with the accounting requirement for employee share-based payment awards, non-employee share-based payment awards now within the scope of Topic 718 are measured at grant-date fair value of the equity instruments that the Company is obligated to issue when the good has been delivered or the service has been rendered and any other conditions necessary to earn the right to benefit from the instruments have been satisfied. There was no cumulative effect of the adoption of this standard.

Share-based compensation cost is recorded for all option grants and awards of non-vested stock based on the grant date fair value of the award, and is recognized over the service period required for the award. Prior to October 1, 2018, share-based compensation cost for non-employees was remeasured over the vesting term as earned.

The fair value of the Company's stock options is estimated at the date of grant using the Black-Scholes based option valuation model. The volatility assumption is based on the historical volatility of the Company's common stock. The dividend yield assumption is based on the Company's history and expectation of future dividend payouts on the common stock. The risk-free interest rate is based on the implied yield available on U.S. treasury zero-coupon issues with an equivalent remaining term. For the expected term, the Company uses SEC Staff Accounting Bulletin No. 107 simplified method for "plain vanilla" options with following characteristics: (i) the share options are granted at the market price on the grant date; (ii) exercisability is conditional on performing service through the vesting date on most options; (iii) if an employee terminates service prior to vesting, the employee would forfeit the share options; (iv) if an employee terminates service after vesting, the employee would have 30 to 90 days to exercise the share options; and (v) the share options are nontransferable and nonhedgeable.

Market conditions that affect vesting of stock options are considered in the grant-date fair value. The issues surrounding the valuation for such awards can be complex and consideration needs to be given for how the market condition should be incorporated into the valuation of the award. The Company considers using other valuation techniques, such as Monte Carlo simulations based on a lattice approach, to value awards with market conditions.

The Company recognizes compensation expense over the requisite service period using the straight-line method for option grants without performance conditions. For stock options that have both service and performance conditions, the Company recognizes compensation expense using the graded attribution method. Compensation expense for stock options with performance conditions is recognized only for those awards expected to vest. The Company recognizes forfeitures when they occur.

From time to time, the Company awards shares of its common stock to non-employees for services provided or to be provided. The fair value of the awards are measured either based on the fair market value of stock at the date of grant or the value of the services provided, based on which is more reliably measurable. Since these stock awards are fully vested and non-forfeitable, upon issuance the measurement date for the award is usually reached on the date of the award.

Fair Value Measurement: The Company follows the provisions of the accounting standard which defines fair value, establishes a framework for measuring fair value and enhances fair value measurement disclosure. Under these provisions, fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (i.e., the "exit price") in an orderly transaction between market participants at the measurement date.

The standard establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use on unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability developed based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the assumptions market participants would use in pricing the asset or liability developed based on the best information available in the circumstances. The hierarchy is described below:

Level 1: Quoted prices (unadjusted) in active markets that are accessible at the measurement date for assets or liabilities. The fair value hierarchy gives the highest priority to Level 1 inputs.

Level 2: Observable prices that are based on inputs not quoted on active markets, but corroborated by market data.

Level 3: Unobservable inputs are used when little or no market data is available. The fair value hierarchy gives the lowest priority to Level 3 inputs.

Financial instruments: The estimated fair value of financial instruments has been determined based on the Company's assessment of available market information and appropriate valuation methodologies. The fair value of the Company's financial instruments that are included in current assets and current liabilities approximates their carrying value due to their short-term nature.

The carrying amounts reported in the balance sheet for capital lease obligations are present values of the obligations, excluding the interest portion.

Recent accounting standards: In June 2016, the Financial Accounting Standards Board issued ASU 2016-13, Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. The standard's main goal is to improve financial reporting by requiring earlier recognition of credit losses on financing receivables and other financial assets in scope. The new guidance represents significant changes to accounting for credit losses: (i) full lifetime expected credit losses will be recognized upon initial recognition of an asset in scope; (ii) the current incurred loss impairment model that recognizes losses when a probable threshold is met will be replaced with the expected credit loss impairment method without recognition threshold; and (iii) the expected credit losses estimate will be based upon historical information, current conditions, and reasonable and supportable forecasts. ASU 2016-13 introduces two distinctive credit loss impairment models: (i) CECL impairment model (Subtopic 326-20) applicable to financial assets measured at amortized cost; and (ii) available-for-sale debt securities impairment model (Subtopic 326-30). ASU 2016-13 is effective for public entities for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Public entities that qualify as a smaller reporting company can elect to defer compliance effective for fiscal years beginning after December 15, 2022. We are currently evaluating the impact of our pending adoption of ASU 2016-13 on our consolidated financial statements.

Note 4. Loss Per Share Applicable to Common Stockholders

The following table sets forth the computations of loss per share amounts applicable to common stockholders for the years ended December 31, 2019 and December 31, 2018.

(In thousands, except per share data)	Years Ended 2019	2018
Net loss	**$ (32,147)**	$ (33,316)
Basic and diluted loss per common share	**$ (0.56)**	$ (0.61)
Basic and diluted weighted average common shares outstanding (1):	**57,056**	55,006
Potentially dilutive securities (2):		
Stock options	**10,551**	9,089
Warrants	**-**	204

(1) Includes approximately 0.2 million shares of restricted stock for each of the years 2019 and 2018, which are participating securities that feature voting and dividend rights.

(2) Excluded from the computation of loss per share as their impact is antidilutive.

Note 5. Inventory

The amounts of major classes of inventory for the periods ended December 31, 2019 and December 31, 2018 are as follows:

(In thousands)	2019	2018
Bulk ingredients	$ 1,364	$ 2,254
Reference standards	635	751
Consumer Products - Finished Goods	4,877	2,450
Consumer Products - Work in Process	4,659	2,794
	$ 11,535	$ 8,249

Note 6. Intangible Assets

Intangible assets consisted of the following:

(In thousands)	2019	2018	Weighted Average Total Amortization Period
Healthspan Research LLC Acquisition	$ 1,346	$ 1,346	10 years
License agreements and other	1,635	1,625	9 years
Less accumulated depreciation	(1,670)	(1,424)	
	$ 1,311	$ 1,547	

Amortization expenses on amortizable intangible assets included in the consolidated statement of operations for the years ended December 31, 2019 and December 31, 2018 were approximately $246,000 and $235,000, respectively.

Estimated aggregate amortization expense for each of the next five years is as follows:

(In thousands) Years ending December:	
2020	$ 242
2021	223
2022	186
2023	157
2024	153
Thereafter	350
	$ 1,311

Note 7. Leasehold Improvements and Equipment, Net

Leasehold improvements and equipment consisted of the following:

(In thousands)	2019	2018	Useful Life
Laboratory equipment	$ 2,859	$ 2,755	10 years
Leasehold improvements	2,320	2,127	Lesser of lease term or estimated useful life
Computer equipment	1,104	604	3 to 5 years
Furniture and fixtures	201	143	7 to 10 years
Construction in progress	71	7	
	6,555	5,636	
Less accumulated depreciation	2,790	2,051	
	$ 3,765	$ 3,585	

Depreciation expenses on leasehold improvements and equipment included in the consolidated statement of operations for the years ended December 31, 2019 and December 31, 2018 were approximately $0.8 million and $0.6 million, respectively.

Note 8. Leases

Operating Leases

As of December 31, 2019, the Company had operating lease assets in right of use assets of approximately $0.9 million and corresponding operating lease liabilities of approximately $1.4 million. For the year ended December 31, 2019, the following were expenses incurred in connection with operating leases:

(In thousands)	For the Year Ended Dec. 31, 2019
Operating leases	
Operating lease expense	$ 663
Variable lease expense	246
Operating lease expense	909
Short-term lease rent expense	70
Total expense	$ 979

	At Dec. 31, 2019
Weighted-average remaining lease term (years) – operating leases	1.9
Weighted-average discount rate – operating leases	8.0%

Minimum future lease payments under operating leases as of December 31, 2019 are as follows:

(In thousands)	
Year Ending December 31, 2020	$ 690
Year Ending December 31, 2021	614
Year Ending December 31, 2022	138
Year Ending December 31, 2023	143
Year Ending December 31, 2024	25
Total	1,610
Less present value discount	167
Operating lease liabilities	1,443
Less current portion	595
Long-term obligations under operating leases	$ 848

Finance Leases

As of December 31, 2019 and December 31, 2018, the Company had finance lease assets in equipment assets of approximately $0.7 million and $0.7 million, respectively and corresponding finance lease liabilities of approximately $0.3 million and $0.3 million, respectively. For the years ended December 31, 2019 and December 31, 2018, following were expenses incurred in connection with finance leases:

	For the Year Ended Dec. 31, 2019	For the Year Ended Dec. 31, 2018
(In thousands)		
Finance leases		
Amortization of equipment assets	$ 83	$ 87
Interest on lease liabilities	33	41
Total expenses	$ 116	$ 128

	At Dec. 31, 2019
Weighted-average remaining lease term (years) – finance leases	0.9
Weighted-average discount rate – finance leases	8.9%

Minimum future lease payments under finance leases as of December 31, 2019 are as follows:

(In thousands)	
Year Ending December 31, 2020	$ 272
Year Ending December 31, 2021	18
Total	290
Less present value discount	14
Finance lease liabilities	276
Less current portion	258
Long-term obligations under finance leases	$ 18

Note 9. Line of Credit

On November 12, 2019, the Company entered into a business financing agreement with Western Alliance Bank (the "Credit Agreement"), in order to establish a formula based revolving credit line pursuant to which the Company may borrow an aggregate principal amount of up to $7.0 million, subject to the terms and conditions of the Credit Agreement. As of December 31, 2019, the Company did not have any outstanding loan payable from this line of credit arrangement.

The interest rate as of December 31, 2019 was 6.25%. The interest rate is calculated at a floating rate per month equal to (a) the greater of (i) 4.75% per year or (ii) the Prime Rate published by The Wall Street Journal, plus (b) 1.50 percentage points, plus an additional 5.00 percentage points during any period that an event of default has occurred and is continuing. The Company's obligations under the Credit Agreement are secured by a security interest in substantially all of the Company's current and future personal property assets, including intellectual property. Any borrowings, interest or other fees or obligations that the Company owes will become due and payable on November 12, 2021.

The Credit Agreement includes quick ratio and minimum liquidity financial covenants. The Company is also subject to a number of affirmative and restrictive covenants, including covenants regarding delivery of financial statements, maintenance of inventory, payment of taxes, maintenance of insurance, dispositions of property, business combinations or acquisitions and incurrence of additional indebtedness, among other customary covenants.

Debt Issuance Costs

The Company incurred debt issuance costs of approximately $0.1 million in connection with this line of credit arrangement and had an unamortized balance of approximately $0.1 million as of December 31, 2019. For the line of credit arrangement, the Company elected a policy to keep the debt issuance costs as an asset, regardless of whether an amount is drawn. The remaining unamortized deferred asset will be amortized over the remaining life of the line of credit arrangement.

Note 10. Deferred Revenue

In December 2018, the Company entered into a supply agreement with Nestec Ltd. ("Nestlé"), pursuant to which Nestlé is the exclusive customer for NIAGEN® for human use in the (i) medical nutritional and (ii) functional food and beverage categories in certain territories. As consideration for the rights granted to Nestlé, the Company received an upfront fee of $4.0 million in January 2019. The Company determined that the $4.0 million upfront fee is treated as advance payment for future goods or services and to utilize the output method to recognize the upfront fee as revenue as the product is delivered to Nestlé. In utilizing the output method, the Company estimated total delivery volume to Nestlé over the course of the supply agreement.

Revenue recognized from deferred revenue was as follows:

(In thousands)	Year ending Dec. 31, 2019	Year ending Dec. 31, 2018	At Dec. 31, 2019	At Dec. 31, 2018
Revenue recognized from deferred revenue	$ 127	$ -		
Deferred Revenue Balance			$ 3,873	$ -

Note 11. Income Taxes

At December 31, 2019 and December 31, 2018, the Company maintained a full valuation allowance against the entire deferred income tax balance which resulted in an effective tax rates of 0% for both years 2019 and 2018. At December 31, 2019 and December 31, 2018, we recorded a valuation allowance of $30.3 million and $21.9 million, respectively. The valuation allowance increased by $8.4 million during 2019.

A reconciliation of income taxes computed at the statutory federal income tax rate to income taxes as reflected in the financial statements is summarized as follows:

	2019	2018
Federal income tax expense at statutory rate	(21.0)%	(21.0)%
State income tax, net of federal benefit	(6.4)%	(6.6)%
Permanent differences	1.1%	1.1%
Changes of state net operating losses	0.3%	(0.5)%
Change in stock options and restricted stock	(0.2)%	0.0%
Change in valuation allowance	26.2%	27.1%
Other	0.0%	(0.1)%
Effective tax rate	0.0%	0.0%

The deferred income tax assets and liabilities consisted of the following components as of December 31, 2019 and December 31, 2018:

(In thousands)	2019	2018
Deferred tax assets:		
Net operating loss carryforward	$ 24,233	$ 17,957
Stock options and restricted stock	3,988	2,654
Interest expense	278	-
Inventory reserve	353	222
Allowance for doubtful accounts	758	168
Accrued expenses	689	831
Deferred revenue	-	19
Leasehold improvements and equipment	14	4
Intangibles	66	46
Operating leases	152	168
	30,531	22,069
Less valuation allowance	(30,313)	(21,932)
	218	137
Deferred tax liabilities:		
Prepaid expenses	(218)	(137)
	(218)	(137)
	$ -	$ -

As of December 31, 2019, the Company has tax net operating loss carryforwards for federal and state income tax purposes of approximately $91.4 million and $79.4 million, respectively which begin to expire in the year ending December 31, 2023 and 2022, respectively. The federal net operating loss carryforward of $51.4 million from 2019 and 2018 can be carried forward indefinitely but is limited to 80% of taxable income.

Under the Internal Revenue Code of 1986, as amended (the “Code”), certain ownership changes may subject the Company to annual limitations on the utilization of its net operating loss carryforwards. The Company has determined that the stock issued in the year of 2019 did not create a change in control under the Section 382 of the Code. The Company will continue to analyze the potential impact of any additional transactions undertaken upon the utilization of the net operating losses on a go forward basis.

The Tax Cuts and Jobs Act created new Section 951A, which set forth a new set of tax rules affecting U.S. shareholders of controlled foreign corporations (“CFCs”). Section 951A defined a new category of income, global intangible low-taxed income (“GILTI”), which must be included on the U.S. shareholder’s tax return as it is earned, regardless of when it is distributed (similar to subpart F income). This provision is effective for CFC tax years beginning after December 31, 2017. The Company has prepared the GILTI calculation for 2019 an there is no U.S. tax on GILTI for 2019 due to a loss.

The Company is currently not under examination by the Internal Revenue Service or any other jurisdictions for any tax years for income taxes. The Company has not identified any material uncertain tax positions requiring a reserve as of December 31, 2019 and December 31, 2018.

Note 12. Related Party Transactions

Sale of consumer products

	Net sales Year ended Dec. 31, 2019	Net sales Year ended Dec. 31, 2018	Trade receivable at Dec. 31, 2019	Trade receivable at Dec. 31, 2018
A.S. Watson Group	$7.3 million	$2.9 million	$0.8 million	$0.7 million
Horizon Ventures	-	$0.4 million	-	-
Total	$7.3 million	$3.3 million	$0.8 million	$0.7 million

*A.S. Watson Group and Horizon Ventures are related parties through common ownership of an enterprise that beneficially owns more than 10% of the common stock of the Company.

Note 13. Contract Assets and Contract Liabilities

Our contract assets consist of unbilled amounts typically resulting from sales under contracts when the cost-to-cost method of revenue recognition is utilized and revenue recognized exceeds the amount billed to the customer. Our contract liabilities consist of advance payments and billings in excess of costs incurred and deferred revenue.

Net contract assets (liabilities) consisted of the following:

(In thousands)	Dec. 31, 2018	Reductions (1)	Additions (2)	Transferred (3)	Dec. 31, 2019
Contract Assets	$ 56	$ (301)	$ 331	$ (86)	$ -
Contract Liabilities - Open Projects (4)	101	(218)	272	(155)	-
Contract Liabilities - Other Customer Deposits (5)	174	(131)	126	-	169
Net Contract Assets (Liabilities)	$ (219)	$ 48	$ (67)	$ 69	$ (169)

(1) For contract assets, the amount represents amount billed to the customer. For contract liabilities, the amount represents reductions for revenue recognized.

(2) For contract assets, the amount represents revenue recognized during the period using the cost-to-cost method. For contract liabilities, the amount represents advance payments received during the period.

(3) Effective November 1, 2019, the Company completed a spinoff of a regulatory consulting business unit, Spherix Consulting Group, Inc. ("Spherix"). The Company assigned to Spherix all existing consulting contracts and transferred related contract assets and liabilities.

(4) Contract liablities from ongoing consulting projects.

(5) Other customer deposts include payments received for orders not fulfilled and other advance payments.

For the years ended December 31, 2019 and December 31, 2018, we recognized revenues of approximately $143,000 and $95,000 related to our adjusted contract liabilities at the beginning of the fiscal year 2019 and 2018, respectively.

Note 14. Share-Based Compensation

Stock Option Plans

At the discretion of the Company's board of directors (the "Board of Directors") or compensation committee of the Board of Directors (the "Compensation Committee"), the Company may grant options to purchase the Company's common stock to certain individuals from time to time. Management and the Board or Compensation Committee determine the terms of awards which include the exercise price, vesting conditions and expiration dates at the time of grant. Expiration dates for stock options are not to exceed 10 years from their date of issuance.

On June 20, 2017, the stockholders of the Company approved the ChromaDex Corporation 2017 Equity Incentive Plan (the "2017 Plan"). The Company's Board of Directors amended the 2017 Plan in January 2018 and the stockholders of the Company approved an amendment to the 2017 plan on June 22, 2018. The 2017 Plan is the successor to the ChromaDex Corporation Second Amended and Restated 2007 Equity Incentive Plan (the "2007 Plan"). As of December 31, 2019, under the 2017 Plan, the Company is authorized to issue stock options that total no more than the sum of (i) 9,000,000 new shares, (ii) approximately 384,000 unallocated shares remaining available for the grant of new awards under the 2007 Plan, (iii) any returning shares from the 2007 Plan or the 2017 Plan, such as forfeited, cancelled, or expired shares and (iv) 500,000 shares pursuant to an inducement award. The remaining number of shares available for issuance under the 2017 Plan totaled approximately 2.9 million shares at December 31, 2019.

General Vesting Conditions

The stock option awards generally vest ratably over a three to four-year period following grant date after a passage of time. However, some stock option awards are market or performance based and vest based on certain triggering events established by the Compensation Committee, subject to approval by the Board of Directors.

The fair value of the Company's stock options that are not market or performance based was estimated at the date of grant using the Black-Scholes based option valuation model. The table below outlines the weighted average assumptions for options granted during the years ended December 31, 2019 and December 31, 2018.

Year Ended December	2019	2018
Expected term	6 years	6 years
Volatility	67%	69%
Dividend Yield	0%	0%
Risk-free rate	2%	3%

1) Service Period Based Stock Options

The majority of options granted by the Company are comprised of service based options. These options vest ratably over a defined period following grant date after a passage of a service period.

The following table summarizes service period based stock options activity (in thousands except per share data and remaining contractual term):

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Weighted Average Fair Value	Aggregate Intrinsic Value
Outstanding at December 30, 2017	5,467	$ 3.49	6.41		$ 13,101
Options Granted	3,071	4.29	10.00	$ 2.74	
Options Exercised	(131)	4.02			$ 109
Options Expired	(245)	4.50			
Options Forfeited	(139)	4.21			
Outstanding at December 31, 2018	8,023	$ 3.75	7.11		$ 2,207
Options Granted	2,603	4.03	10.00	$ 2.46	
Options Exercised	(402)	2.54			$ 389
Options Expired	(3)	4.50			
Options Forfeited	(712)	3.89			
Outstanding at December 31, 2019	9,509	$ 3.86	6.90		$ 6,315*
Exercisable at December 31, 2019	5,822	$ 3.75	5.60		$ 4,725*

*The aggregate intrinsic values in the table above are based on the Company's closing stock price of $4.31 on the last day of business for the year ended December 31, 2019.

2) Performance Based Stock Options

The Company also grants stock option awards that are performance based and vest based on the achievement of certain criteria established from time to time by the Compensation Committee. If these performance criteria are not met, the compensation expenses are not recognized and the expenses that have been recognized will be reversed.

The following table summarizes performance based stock options activity (in thousands except per share data and remaining contractual term):

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Weighted Average Fair Value	Aggregate Intrinsic Value
Outstanding at December 30, 2017	67	$ 1.89	5.08		
Options Granted	-	-			
Options Exercised	-	-			
Options Forfeited	-	-			
Outstanding at December 31, 2018	67	$ 1.89	4.08		
Options Granted	-	-			
Options Exercised	(25)	1.89			$ 69
Options Forfeited	-	-			
Outstanding at December 31, 2019	42	$ 1.89	3.08		$ 101
Exercisable at December 31, 2019	42	$ 1.89	3.08		$ 101

The aggregate intrinsic value in the table above are, based on the Company's closing stock price of $4.31 on the last day of business for the period ended December 31, 2019.

3) Market Based Stock Options

The Company also grants stock option awards that are market based which have vesting conditions associated with a service condition as well as performance of the Company's stock price. The following table summarizes market based stock options activity (in thousands except per share data and remaining contractual term):

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Fair Value	Aggregate Intrinsic Value
Outstanding at December 30, 2017	1,000	$ 4.24	9.76		
Options Granted	-	-			
Options Exercised	-	-			
Options Forfeited	-	-			
Outstanding at December 31, 2018	1,000	$ 4.24	8.76		
Options Granted	-	-			
Options Exercised	-	-			
Options Forfeited	-	-			
Outstanding at December 31, 2019	1,000	$ 4.24	7.76		$ 70
Exercisable at December 31, 2019	722	$ 4.24	7.76		$ 51

The aggregate intrinsic value in the table above are, based on the Company's closing stock price of $4.31 on the last day of business for the period ended December 31, 2019.

Total Remaining Unamortized Compensation for Stock Options

As of December 31, 2019, there was approximately $8.2 million of total unrecognized compensation expense related to non-vested share-based compensation arrangements granted under the plans for stock options. That cost is expected to be recognized over a weighted average period of 1.7 years.

Restricted Stock Awards

Restricted stock awards granted by the Company to employees have vesting conditions that are unique to each award.

The following table summarizes activity of restricted stock awards granted (in thousands except per share fair value):

	Shares	Weighted Average Fair Value
Unvested shares at December 30, 2017	185	$ 3.28
Granted	-	-
Vested	(2)	5.28
Forfeited	-	-
Unvested shares at December 31, 2018	183	$ 3.25
Granted	-	-
Vested	-	-
Forfeited	-	-
Unvested shares at December 31, 2019	183	$ 3.25
Expected to Vest as of December 31, 2019	183	$ 3.25

Performance Stock Awards

During the fiscal year 2019 and 2018, the Compensation Committee approved grants of 166,666 shares and 333,334 shares, respectively, of fully-vested restricted stock to Robert Fried, the Company's Chief Executive Officer. The shares were granted pursuant to his employment agreement, which provided for the stock grants upon the achievement of certain performance goals. The expense recognized for the fiscal year 2019 and 2018 for the awarded shares were approximately $0.7 million and $1.3 million, respectively.

Share-based Compensation

Share-based compensation expenses for the years ended December 31, 2019 and December 31, 2018 were as follows:

	Year ending	
(In thousands)	**Dec. 31, 2019**	Dec. 31, 2018
Share-based compensation expense		
Cost of sales	**$ 107**	$ 85
Sales and marketing	**731**	346
Research and development	**529**	353
General and administrative	**5,805**	5,587
Total	**$ 7,172**	$ 6,371

Note 15. Stock Issuance and Conversion of Convertible Notes

Stock Issuance

On August 13, 2019, the Company entered into a Securities Purchase Agreement with certain purchasers, pursuant to which the Company agreed to sell and issue an aggregate of $7.0 million of the Company's common stock at a purchase price of $4.465 per share (the "Financing"). On August 15, 2019, the Company closed the Financing and issued approximately 1.6 million shares of its Common Stock. The Company received proceeds of $6.8 million, net of offering costs.

Conversion of Convertible Notes

On May 17, 2019, the Company closed a financing transaction and issued convertible promissory notes (the "Notes") in the aggregate principal amount of $10.0 million to Winsave Resources Limited and Pioneer Step Holdings Limited. The maturity date of the Notes was originally July 1, 2019 and was subsequently extended to August 15, 2019. The Notes accrued interest at a rate of 5.0% per annum for a total of approximately $123,000 through the maturity date. On the maturity date, the Notes automatically converted into approximately 2.3 million shares of the Company's common stock at a price of $4.465 per share.

Summary of Convertible Notes

Description	Modified Conversion Price *	Original Conversion Price	Extended Maturity Date	Original Maturity Date	Amount (In thousands)
Principal	$ 4.465	$ 4.590	August 15, 2019	July 1, 2019	$ 10,000
Interest at a rate of 5.0% per annum					123
Total Amount Converted for 2.3 million shares					$ 10,123
Debt Discount - Issuance costs					565
Debt Discount - Down round feature					282
Total Debt Discount recognized as Interest Expense					$ 847

* The conversion price has a down round feature. The original conversion price of $4.59 was lowered to $4.465 due to the Financing.

Debt Issuance Costs

In connection with the issuance of the Notes, the Company incurred issuance costs of approximately $565,000. The issuance costs were recorded as a debt discount and were amortized as interest expense using the effective interest method over the original term of 45 days.

Down Round Feature

The Notes had adjustments which meet the definition of a down round feature per ASU 2017-11. Pursuant to the terms of the Notes, the conversion price per share was adjusted downward from $4.59 to $4.465 as the Company closed the Financing on the Maturity Date. As allowed under ASU 2017-11, the Company excluded such down round feature when determining whether the instrument is indexed to the entity's own stock and did not bifurcate the down round feature from the loan host.

In accordance with ASU 2017-11, the Company recognized the value of the triggered down round as a beneficial conversion discount to earnings. The Note purchasers obtained approximately additional 62,000 shares of the Company's common stock due to the down round feature with an incremental intrinsic value of approximately $282,000. This amount was initially recognized as debt discount and was amortized as interest expense.

Along with the issuance cost of the Notes, the Company recorded a total of approximately $0.8 million as interest expense in amortization of debt discounts during the year ended December 31, 2019.

Debt Modification

On June 30, 2019, the Company and the Purchasers entered into an Omnibus Amendment to the Purchase Agreement and the Notes to (i) remove the restriction on the Company issuing common stock during the a certain restricted period and (ii) amend the Notes to extend the maturity date by 45 days from July 1, 2019 to August 15, 2019. The amendment to extend the maturity date for another 45 days to August 15, 2019 was recognized as a modification of the Notes.

Note 16. Warrants

The following table summarizes activity of warrants at December 31, 2019 and December 31, 2018 and changes during the years then ended (in thousands except per share data and remaining contractual term):

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term
Outstanding and exercisable at December 30, 2017	470	$ 4.15	2.17
Warrants Issued	-	-	
Warrants Exercised	-	-	
Warrants Expired	(266)	4.50	
Outstanding and exercisable at December 31, 2018	204	3.69	0.57
Warrants Issued	-	-	
Warrants Exercised	(140)	3.19	
Warrants Expired	(64)	4.80	
Outstanding and exercisable at December 31, 2019	-	$ -	-

Note 17. Commitments and Contingencies

Purchase obligations

The Company enters into purchase obligations with various vendors for goods and services that we need for our operations. The purchase obligations for goods and services include inventory, research and development, and laboratory supplies. Minimum future payments under purchase obligations as of December 31, 2019 are as follows:

(In thousands) Fiscal year ending:	
2020	$ 11,520
	$ 11,520

Royalty

The Company has nine licensing agreements with leading research universities and other patent holders, pursuant to which the Company acquired patents related to certain products the Company offers to its customers. These agreements afford for royalty payments based on contractual minimums and expire at various dates from December 31, 2019 through an estimated year of 2037. Yearly minimum royalty payments including license maintenance fees range from $10,000 per year to $100,000 per year, however, these minimum payments escalate each year with a maximum of $150,000 per year. In addition, the Company is required to pay a range of 2% to 5% of sales related to the licensed products under these agreements. Total royalty expenses including license maintenance fees for the years ended December 31, 2019 and December 31, 2018 were approximately $2.7 million and $1.7 million, respectively under these agreements. Minimum royalties including license maintenance fees for the next five years are as follows:

(In thousands) Fiscal years ending:	
2020	$ 342
2021	360
2022	361
2023	363
2024	364
	$ 1,790

Operating lease guarantee

Effective November 1, 2019, the Company completed a spinoff of a regulatory consulting business unit, Spherix Consulting Group, Inc. ("Spherix"). As part of the spinoff transaction, the Company's existing lease in Maryland was assigned from the Company to Spherix, whom assumed all rights, title, obligations, and interests in the lease. The Company remained a guarantor on the lease. The term on the lease expires in April 2021. Future minimum lease payments are approximately $46,000 in 2020 and $16,000 in 2021. If Spherix becomes insolvent, the Company may be obligated to pay these amounts. Based on the financial health of Spherix as of the transaction date, the Company does not believe it is probable it will have to make any performance on this guarantee.

Legal proceedings - Elysium Health, LLC

(A) California Action

On December 29, 2016, ChromaDex, Inc. filed a complaint in the United States District Court for the Central District of California, naming Elysium Health, Inc. (together with Elysium Health, LLC, "Elysium") as defendant (the "Complaint"). On January 25, 2017, Elysium filed an answer and counterclaims in response to the Complaint (together with the Complaint, the "California Action"). Over the course of the California Action, the parties have each filed amended pleadings several times and have each engaged in several rounds of motions to dismiss and one round of motion for judgment on the pleadings with respect to various claims. Most recently, on November 27, 2018, ChromaDex, Inc. filed a fifth amended complaint that added an individual, Mark Morris, as a defendant. Elysium and Morris ("the Defendants") moved to dismiss on December 21, 2018. The court denied Defendants' motion on February 4, 2019. Defendants filed their answer to ChromaDex, Inc.'s fifth amended complaint on February 19, 2019. ChromaDex, Inc. filed an answer to Elysium's restated counterclaims on March 5, 2019. Discovery closed on August 9, 2019.

On August 16, 2019, the parties filed motions for partial summary judgment as to certain claims and counterclaims. The parties filed opposition briefs on August 28, 2019, and reply briefs on September 4, 2019. On October 9, 2019, among other things, the court vacated the previously scheduled trial date, ordered supplemental briefing with respect to certain issues related to summary judgment. Elysium filed its opening supplemental brief on October 30, 2019, ChromaDex filed its opening supplemental brief on November 18, 2019, and Elysium filed a reply brief on November 27, 2019, and the court heard argument on January 13, 2020. On January 16, 2020, the court granted both parties' motions for summary judgment in part and denied both in part. On ChromaDex's motion, the court granted summary judgment in favor of ChromaDex on Elysium's counterclaims for (i) breach of contract related to manufacturing NIAGEN® according to the defined standard, selling NIAGEN and ingredients that are substantially similar to pterostilbene to other customers, distributing the NIAGEN® product specifications, and failing to provide information concerning the quality and identity of NIAGEN®, and (ii) breach of the implied covenant of good faith and fair dealing. The court denied summary judgment on Elysium's counterclaims for (i) fraudulent inducement of the Trademark License and Royalty Agreement, dated February 3, 2014, by and between ChromaDex, Inc. and Elysium (the "License Agreement"), (ii) patent misuse, and (iii) unjust enrichment. On Elysium's motion, the court granted summary judgment in favor of Elysium on ChromaDex's claim for damages related to $110,000 in avoided costs arising from documents that Elysium used in violation of the Supply Agreement, dated February 3, 2014, by and between ChromaDex, Inc. and Elysium, as amended (the "NIAGEN® Supply Agreement"). The court denied summary judgment on Elysium's counterclaim for breach of contract related to certain refunds or credits to Elysium. The court also denied summary judgment on ChromaDex's breach of contract claim against Morris and claims for disgorgement of $8.3 million in Elysium's resale profits, $600,000 for a price discount received by Elysium, and $684,781 in Morris's compensation.

Following the court's January 16, 2020 order, the claims that ChromaDex, Inc. presently asserts in the California Action, among other allegations, are that (i) Elysium breached the Supply Agreement, dated June 26, 2014, by and between ChromaDex, Inc. and Elysium (the "pTeroPure® Supply Agreement"), by failing to make payments to ChromaDex, Inc. for purchases of pTeroPure® and by improper disclosure of confidential ChromaDex, Inc. information pursuant to the pTeroPure® Supply Agreement, (ii) Elysium breached the NIAGEN® Supply Agreement, by failing to make payments to ChromaDex, Inc. for purchases of NIAGEN®, (iii) Defendants willfully and maliciously misappropriated ChromaDex, Inc. trade secrets concerning its ingredient sales business under both the California Uniform Trade Secrets Act and the Federal Defend Trade Secrets Act, (iv) Morris breached two confidentiality agreements he signed by improperly stealing confidential ChromaDex, Inc. documents and information, (v) Morris breached his fiduciary duty to ChromaDex, Inc. by lying to and competing with ChromaDex, Inc. while still employed there, and (vi) Elysium aided and abetted Morris's breach of fiduciary duty. ChromaDex, Inc. is seeking damages and interest for Elysium's alleged breaches of the NIAGEN® Supply Agreement and pTeroPure® Supply Agreement and Morris's alleged breaches of his confidentiality agreements, compensatory damages and interest, punitive damages, injunctive relief, and attorney's fees for Defendants' alleged willful and malicious misappropriation of ChromaDex, Inc.'s trade secrets, and compensatory damages and interest, disgorgement of all benefits received, and punitive damages for Morris's alleged breach of his fiduciary duty and Elysium's aiding and abetting of that alleged breach.

The claims that Elysium presently alleges in the California Action are that (i) ChromaDex, Inc. breached the NIAGEN® Supply Agreement by not issuing certain refunds or credits to Elysium, (ii) ChromaDex, Inc. fraudulently induced Elysium into entering into the License Agreement, (iv) ChromaDex, Inc.'s conduct constitutes misuse of its patent rights, and (v) ChromaDex, Inc. was unjustly enriched by the royalties Elysium paid pursuant to the License Agreement. Elysium is seeking damages for ChromaDex, Inc.'s alleged breaches of the NIAGEN® Supply Agreement, and compensatory damages, punitive damages, and/or rescission of the License Agreement and restitution of any royalty payments conveyed by Elysium pursuant to the License Agreement, and a declaratory judgment that ChromaDex, Inc. has engaged in patent misuse.

On January 17, 2020, Elysium moved to substitute its counsel. The same day, the court ordered hearing on that motion for January 21, 2020, and granted Elysium's motion at the hearing. On January 23, 2020, the court issued a scheduling order that, among other things, set trial on the remaining claims to begin on May 12, 2020.

(B) Patent Office Proceedings

On July 17, 2017, Elysium filed petitions with the U.S. Patent and Trademark Office for *inter partes* review of U.S. Patents 8,197,807 (the "'807 Patent") and 8,383,086 (the "'086 Patent"), patents to which ChromaDex, Inc. is the exclusive licensee. The Patent Trial and Appeal Board ("PTAB") denied institution of the *inter partes* review for the '807 Patent on January 18, 2018. On January 29, 2018, the PTAB granted institution of the *inter partes* review as to claims 1 and 3-5 and denied institution as to claim 2 of the '086 Patent. Based upon a recent U.S. Supreme Court decision, and solely on a procedural basis, the PTAB was required to include claim 2 in the trial of the *inter partes* review. The matter was heard on October 2, 2018. The PTAB issued its written decision on January 16, 2019, upholding claim 2 of the '086 Patent which relates to the use of isolated NR in a pharmaceutical composition as valid. Elysium is now prevented from raising invalidity arguments against the '086 Patent in the ongoing patent litigation in Delaware that it brought or could have brought before the PTAB in its *inter partes* review. Elysium appealed the PTAB's decision with respect to claim 2 on March 6, 2019. A cross-appeal with respect to claims 1 and 3–5 was filed on March 20, 2019. Elysium filed its opening brief on June 17, 2019. Dartmouth moved to voluntarily dismiss its cross-appeal on August 14, 2019. The motion was granted on August 18, 2019. Dartmouth's response brief was filed on August 28, 2019. Elysium's reply brief was filed on October 9, 2019. Oral argument on Elysium's appeal was heard on March 5, 2020. On March 6, 2020, the United States Court of Appeals for the Federal Circuit affirmed the PTAB's decision, rejecting Elysium's attempt to invalidate claim 2 of the '086 patent.

(C) Southern District of New York Action

On September 27, 2017, Elysium Health Inc. ("Elysium Health") filed a complaint in the United States District Court for the Southern District of New York, against ChromaDex, Inc. (the "Elysium SDNY Complaint"). Elysium Health alleges in the Elysium SDNY Complaint that ChromaDex, Inc. made false and misleading statements in a citizen petition to the Food and Drug Administration it filed on or about August 18, 2017. Among other allegations, Elysium Health avers that the citizen petition made Elysium Health's product appear dangerous, while casting ChromaDex, Inc.'s own product as safe. The Elysium SDNY Complaint asserts four claims for relief: (i) false advertising under the Lanham Act, 15 U.S.C. § 1125(a); (ii) trade libel; (iii) deceptive business practices under New York General Business Law § 349; and (iv) tortious interference with prospective economic relations. ChromaDex, Inc. denies the claims in the Elysium SDNY Complaint and intends to defend against them vigorously. On October 26, 2017, ChromaDex, Inc. moved to dismiss the Elysium SDNY Complaint on the grounds that, inter alia, its statements in the citizen petition are immune from liability under the Noerr-Pennington Doctrine, the litigation privilege, and New York's Anti-SLAPP statute, and that the Elysium SDNY Complaint failed to state a claim. Elysium Health opposed the motion on November 2, 2017. ChromaDex, Inc. filed its reply on November 9, 2017.

On October 26, 2017, ChromaDex, Inc. filed a complaint in the United States District Court for the Southern District of New York against Elysium Health (the "ChromaDex SDNY Complaint"). ChromaDex, Inc. alleges that Elysium Health made material false and misleading statements to consumers in the promotion, marketing, and sale of its health supplement product, Basis, and asserts five claims for relief: (i) false advertising under the Lanham Act, 15 U.S.C. §1125(a); (ii) unfair competition under 15 U.S.C. § 1125(a); (iii) deceptive practices under New York General Business Law § 349; (iv) deceptive practices under New York General Business Law § 350; and (v) tortious interference with prospective economic advantage. On November 16, 2017, Elysium Health moved to dismiss for failure to state a claim. ChromaDex, Inc. opposed the motion on November 30, 2017 and Elysium Health filed a reply on December 7, 2017.

On November 3, 2017, the Court consolidated the Elysium SDNY Complaint and the ChromaDex SDNY Complaint actions under the caption In re Elysium Health-ChromaDex Litigation, 17-cv-7394, and stayed discovery in the consolidated action pending a Court-ordered mediation. The mediation was unsuccessful. On September 27, 2018, the Court issued a combined ruling on both parties' motions to dismiss. For ChromaDex's motion to dismiss, the Court converted the part of the motion on the issue of whether the citizen petition is immune under the Noerr-Pennington Doctrine into a motion for summary judgment, and requested supplemental evidence from both parties, which were submitted on October 29, 2018. The Court otherwise denied the motion to dismiss. On January 3, 2019, the Court granted ChromaDex, Inc.'s motion for summary judgment under the Noerr-Pennington Doctrine and dismissed all claims in the Elysium SDNY Complaint. Elysium moved for reconsideration on January 17, 2019. The Court denied Elysium's motion for reconsideration on February 6, 2019, and issued an amended final order granting ChromaDex, Inc.'s motion for summary judgment as on February 7, 2019.

The Court granted in part and denied in part Elysium's motion to dismiss, sustaining three grounds for ChromaDex's Lanham Act claims while dismissing two others, sustaining the claim under New York General Business Law § 349, and dismissing the claims under New York General Business Law § 350 and for tortious interference. Elysium filed an answer and counterclaims on October 10, 2018, alleging claims for (i) false advertising under the Lanham Act, 15 U.S.C. §1125(a); (ii) unfair competition under 15 U.S.C. § 1125(a); and (iii) deceptive practices under New York General Business Law § 349. ChromaDex answered Elysium's counterclaims on November 2, 2018.

ChromaDex, Inc. filed an amended complaint on March 27, 2019, adding new claims against Elysium Health for false advertising and unfair competition under the Lanham Act, 15 U.S.C. § 1125(a). On April 10, 2019, Elysium Health answered the amended complaint and filed amended counterclaims, also adding new claims against ChromaDex, Inc. for false advertising and unfair competition under the Lanham Act, 15 U.S.C. § 1125(a). On July 1, 2019, Elysium Health filed further amended counterclaims, adding new claims under the Copyright Act §§ 106 & 501. On February 9, 2020, ChromaDex, Inc. filed a motion for leave to amend its complaint to add additional claims against Elysium Health for false advertising and unfair competition. On February 10, 2020, Elysium Health filed a motion for leave to amend its counterclaims to identify allegedly false and misleading statements in ChromaDex's advertising. Those motions remain pending and the parties are currently in discovery.

The Company is unable to predict the outcome of these matters and, at this time, cannot reasonably estimate the possible loss or range of loss with respect to the legal proceedings discussed herein. As of December 31, 2019, ChromaDex, Inc. did not accrue a potential loss for the California Action or the Elysium SDNY Complaint because ChromaDex, Inc. believes that the allegations are without merit and thus it is not probable that a liability has been incurred.

(D) Delaware – Patent Infringement Action

On September 17, 2018, ChromaDex, Inc. and Trustees of Dartmouth College filed a patent infringement complaint in the United States District Court for the District of Delaware against Elysium Health, Inc. The complaint alleges that Elysium's BASIS® dietary supplement violates U.S. Patents 8,197,807 (the "'807 Patent") and 8,383,086 (the "'086 Patent") that comprise compositions containing isolated nicotinamide riboside held by Dartmouth and licensed exclusively to ChromaDex, Inc. On October 23, 2018, Elysium filed an answer to the complaint. The answer asserts various affirmative defenses and denies that Plaintiffs are entitled to any relief.

On November 7, 2018, Elysium filed a motion to stay the patent infringement proceedings pending resolution of (1) the *inter partes* review of the ’807 Patent and the ’086 Patent before the Patent Trial and Appeal Board (“PTAB”) and (2) the outcome of the litigation in the California Action. ChromaDex, Inc. filed an opposition brief on November 21, 2018 detailing the issues with Elysium’s motion to stay. In particular, ChromaDex, Inc. argued that given claim 2 of the ’086 Patent was only included in the PTAB’s *inter partes* review for procedural reasons the PTAB was unlikely to invalidate claim 2 and therefore litigation in Delaware would continue regardless. In addition, ChromaDex, Inc. argued that the litigation in the California Action is unlikely to have a significant effect on the ongoing patent litigation. After the PTAB released its written decision upholding claim 2 of the ’086 Patent, proving right ChromaDex, Inc.’s prediction, ChromaDex, Inc. informed the Delaware court of the PTAB’s decision on January 17, 2019. On June 19, 2019, the Delaware court granted in part and denied in part Elysium’s motion, ordering that the case was stayed pending the resolution of Elysium’s patent misuse counterclaim in the California Action.

On November 1, 2019, ChromaDex, Inc. filed a motion to lift the stay due to changed circumstances in the California Action, among other reasons. Briefing on the motion was completed on November 22, 2019. On January 6, 2020, the Delaware court issued an oral order instructing the parties to submit a joint status report after the January 13, 2020 motions hearing in the California Action. The joint status report was submitted on January 30, 2020. On February 4, 2020, the Delaware court issued an order granting ChromaDex, Inc.’s motion to lift the stay and setting a scheduling conference for March 10, 2020.

Legal proceedings – Utah Lanham Act Action

On March 6, 2019, Novex Biotech LLC (“Novex”) filed an action in the Third Judicial District Court County of Salt Lake, State of Utah against ChromaDex, Inc. and 10 fictional defendants. The complaint alleges that Novex markets a dietary supplement, Oxydrene Elite, that competes with ChromaDex’s product, TRU NIAGEN. The complaint further alleges that ChromaDex, Inc. has violated the Lanham Act by making false or misleading claims for TRU NIAGEN. Novex is seeking an injunction and damages for the competitive harm it alleges to have suffered.

ChromaDex, Inc. timely removed the action to federal court in the District of Utah. ChromaDex answered the complaint and also filed counterclaims against Novex under the Lanham Act and California state law. ChromaDex’s counterclaims allege that Novex has falsely advertised its product called Oxydrene. Novex moved to dismiss the counterclaims and ChromaDex has opposed this motion. Discovery in the case is ongoing and no hearing has been set for Novex’s motion to dismiss.

The Company is unable to predict the outcome of this matter and, at this time, cannot reasonably estimate the possible loss or range of loss with respect to the legal proceedings discussed herein. As of December 31, 2019, ChromaDex, Inc. did not accrue a potential loss for the Utah Lanham Act action because ChromaDex, Inc. believes that the allegations are without merit and thus it is not probable that a liability has been incurred.

From time to time we are involved in legal proceedings arising in the ordinary course of our business. We believe that there is no other litigation pending that is likely to have, individually or in the aggregate, a material adverse effect on our financial condition or results of operations.

Note 18. Business Segmentation and Geographical Distribution

The Company has the following three reportable segments for the years ended December 31, 2019 and December 31, 2018:

- Consumer products segment: provides finished dietary supplement products that contain the Company's proprietary ingredients directly to consumers as well as to distributors.
- Ingredients segment: develops and commercializes proprietary-based ingredient technologies and supplies these ingredients as raw materials to the manufacturers of consumer products in various industries including the nutritional supplement, food, beverage and animal health industries.
- Analytical reference standards and services segment: includes (i) supply of phytochemical reference standards, (ii) scientific and regulatory consulting and (iii) other research and development services.

Effective November 1, 2019, the Company completed a spinoff of Spherix, a regulatory consulting business unit. The net sales generated by Spherix for the years ended December 31, 2019 and December 31, 2018 were approximately $694,000 and $597,000, respectively.

The “Corporate and other” classification includes corporate items not allocated by the Company to each reportable segment. Further, there are no intersegment sales that require elimination. The Company evaluates performance and allocates resources based on reviewing gross margin by reportable segment. The discontinued operations are not included in following statement of operations for business segments.

Year ended December 31, 2019 (In thousands)	Consumer Products segment	Ingredients segment	Analytical Reference Standards and Services segment	Corporate and other	Total
Net sales	$ 36,075	$ 6,196	$ 4,020	$ -	$ 46,291
Cost of sales	14,550	2,980	2,992	-	20,522
Gross profit	21,525	3,216	1,028	-	25,769
Operating expenses:					
Sales and marketing	17,343	245	628	-	18,216
Research and development	3,699	721	-	-	4,420
General and administrative	-	-	-	34,308	34,308
Other	-	-	-	125	125
Operating expenses	21,042	966	628	34,433	57,069
Operating income (loss)	$ 483	$ 2,250	$ 400	$ (34,433)	$ (31,300)

Year ended December 31, 2018 (In thousands)	Consumer Products segment	Ingredients segment	Analytical Reference Standards and Services segment	Corporate and other	Total
Net sales	$ 18,451	$ 8,565	$ 4,541	$ -	$ 31,557
Cost of sales	7,222	4,831	3,449	-	15,502
Gross profit	11,229	3,734	1,092	-	16,055
Operating expenses:					
Sales and marketing	15,063	727	747	-	16,537
Research and development	3,852	1,626	-	-	5,478
General and administrative	-	-	-	27,137	27,137
Other	-	-	-	75	75
Operating expenses	18,915	2,353	747	27,212	49,227
Operating income (loss)	$ (7,686)	$ 1,381	$ 345	$ (27,212)	$ (33,172)

At December 31, 2019 (In thousands)	Consumer Products segment	Ingredients segment	Analytical Reference Standards and Services segment	Corporate and other	Total
Total assets	$ 12,137	$ 2,135	$ 918	$ 25,057	$ 40,247

At December 31, 2018 (In thousands)	Consumer Products segment	Ingredients segment	Analytical Reference Standards and Services segment	Corporate and other	Total
Total assets	$ 7,407	$ 5,412	$ 1,213	$ 28,200	$ 42,232

Disaggregation of revenue

We disaggregate our revenue from contracts with customers by type of goods or services for each of our segments, as we believe it best depicts how the nature, amount, timing and uncertainty of our revenue and cash flows are affected by economic factors. See details in the tables below.

Year Ended December 31, 2019 (In thousands)	Consumer Products Segment	Ingredients Segment	Analytical Reference Standards and Services Segment	Total
TRU NIAGEN®, Consumer Product	$ 36,075	$ -	$ -	$ 36,075
NIAGEN® Ingredient	-	4,879	-	4,879
Subtotal NIAGEN Related	$ 36,075	$ 4,879	$ -	$ 40,954
Other Ingredients	-	1,317	-	1,317
Reference Standards	-	-	3,064	3,064
Consulting and Other	-	-	956	956
Subtotal Other Goods and Services	$ -	$ 1,317	$ 4,020	$ 5,337
Total Net Sales	$ 36,075	$ 6,196	$ 4,020	$ 46,291

Year Ended December 31, 2018 (In thousands)	Consumer Products Segment	Ingredients Segment	Analytical Reference Standards and Services Segment	Total
TRU NIAGEN®, Consumer Product	$ 18,451	$ -	$ -	$ 18,451
NIAGEN® Ingredient	-	5,169	-	5,169
Subtotal NIAGEN Related	$ 18,451	$ 5,169	$ -	$ 23,620
Other Ingredients	-	3,396	-	3,396
Reference Standards	-	-	3,455	3,455
Consulting and Other	-	-	1,086	1,086
Subtotal Other Goods and Services	$ -	$ 3,396	$ 4,541	$ 7,937
Total Net Sales	$ 18,451	$ 8,565	$ 4,541	$ 31,557

Revenues from international sources

Revenues from International Sources	Year ended Dec. 31, 2019	Year ended Dec. 31, 2018
Consumer Products Segment	$10.8 million	$4.2 million
Ingredients Segment	$0.6 million	$0.6 million
Analytical Reference Standards and Services Segment	$1.8 million	$1.7 million
Total	$13.2 million	$6.5 million

*International sources include Europe, North America, South America, Asia and Oceania.

Long-lived assets

The Company's long-lived assets are located within the United States.

Disclosure of major customers

Major customers who accounted for more than 10% of the Company's total sales were as follows:

	Years Ended	
Major Customers	2019	2018
A.S. Watson Group - Related Party	15.8%	*
Life Extension	*	10.0%

* Represents less than 10%.

Major customers who accounted for more than 10% of the Company's total trade receivables were as follows:

	Percentage of the Company's Total Trade Receivables	
Major Customers	At December 31, 2019	At December 31, 2018
A.S. Watson Group - Related Party	39.0%	15.9%
Life Extension	27.4%	*
Elysium Health (1)	*	51.2%

* Represents less than 10%.

(1) There is ongoing litigation with Elysium Health.

Disclosure of major vendors

Major vendors who accounted for more than 10% of the Company's total accounts payable were as follows:

Major Vendors	Percentage of the Company's Total Accounts Payable	
	At December 31, 2019	At December 31, 2018
Vendor A	43.1%	36.8%
Vendor E	*	13.2%

* Represents less than 10%.

Note 19. Subsequent Events

Subsequent to the year ended December 31, 2019, the Company entered into a separation agreement with Lisa Bratkovich, the Company’s former Chief Marketing Officer. Pursuant to the terms of the agreement, Ms. Bratkovich will receive (a) continuation of her base salary for 12 months for a total of approximately $350,000, (b) accelerated vesting of approximately 94,000 stock options that would have otherwise become vested by the one-year anniversary of the termination date and a period of three years after the termination date to exercise any vested stock options and (c) payment of COBRA group health insurance premiums for up to 12 months.

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

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer carried out an evaluation of the effectiveness of our disclosure controls and procedures as of December 31, 2019. Pursuant to Rule13a−15(e) promulgated by the Commission pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act") "disclosure controls and procedures" means controls and other procedures that are designed to insure that information required to be disclosed by us in the reports that we file with the Commission is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms. "Disclosure controls and procedures" include, without limitation, controls and procedures designed to insure that information that we are required to disclose in the reports we file with the Commission is accumulated and communicated to our principal executive officer and principal financial officer as appropriate to allow timely decisions regarding required disclosure. Based on their evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2019.

Inherent Limitations on Disclosure Controls and Procedures

The effectiveness of our disclosure controls and procedures is subject to various inherent limitations, including cost limitations, judgments used in decision making, assumptions about the likelihood of future events, the soundness of our systems, the possibility of human error, and the risk of fraud. Moreover, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions and the risk that the degree of compliance with policies or procedures may deteriorate over time. Because of these limitations, there can be no assurance that any system of disclosure controls and procedures, no matter how well conceived, will be successful in preventing all errors or fraud or in making all material information known in a timely manner to the appropriate levels of management.

Changes in Internal Control over Financial Reporting

There were no change in internal controls over financial reporting (as defined in Rule 13a−15(f) promulgated under the Exchange Act) that occurred during our fourth fiscal quarter that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Management Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) and 15d-(f) under the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with U.S. generally accepted accounting principles. Our internal control over financial reporting include those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of our consolidated financial statements in accordance with U.S. generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and

(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the consolidated financial statements.

Our management, including the undersigned principal executive officer and principal financial officer, assessed the effectiveness of our internal control over financial reporting as of December 31, 2019. In conducting its assessment, our management used the criteria issued by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control—Integrated Framework in 2013*. Based on this assessment, our management concluded that, as of December 31, 2019, our internal control over financial reporting was effective based on those criteria.

Inherent Limitations on Internal Control

Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations, including the possibility of human error and circumvention by collusion or overriding of control. Accordingly, even an effective internal control system may not prevent or detect material misstatements on a timely basis. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that the controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate. Accordingly, our internal control over financial reporting is designed to provide reasonable assurance of achieving their objectives.

Attestation Report of the Registered Public Accounting Firm

The effectiveness of our internal control over financial reporting has been audited by Marcum LLP, an independent registered public accounting firm, as stated in their attestation report in Item 8 of this Annual Report on Form 10-K, which expresses an unqualified opinion on the effectiveness of our internal control over financial reporting as of December 31, 2019.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information required by this item will be contained in the Proxy Statement and is incorporated herein by reference.

We have adopted a written Code of Business Conduct and Ethics (the "Ethics Code") that applies to all officers, directors and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. The Ethics Code is available on our website at www.chromadex.com. If we make any substantive amendments to the Ethics Code or grant any waiver from a provision of the Ethics Code to any executive officer or director, we will promptly disclose the nature of the amendment or waiver on our website or in a Current Report on Form 8-K.

Item 11. Executive Compensation

Information required by this item will be contained in the Proxy Statement and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information required by this item will be contained in the Proxy Statement and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information required by this item will be contained in the Proxy Statement and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

Information required by this item will be contained in the Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) Financial Statements

Reference is made to Item 8 of this Annual Report on Form 10-K.

(a)(2) Financial Statement Schedules

All schedules have been omitted because they are not required or because the required information is given in the Financial Statements or Notes thereto set forth under Part II, Item 8 of this Annual Report on Form 10-K.

(a)(3) List of Exhibits

INDEX TO EXHIBITS

Exhibit No.	Description
2.1	Agreement and Plan of Merger, dated as of May 21, 2008, among Cody, CDI Acquisition, Inc. and ChromaDex, Inc. as amended on June 10, 2008 (incorporated by reference to, and filed as Exhibit 2.1 to the Registrant's Current Report on Form 8-K (File No. 333-140056) filed with the Commission on June 24, 2008) (1)
2.2	Asset Purchase Agreement, dated as of August 21, 2017, by and among Covance Laboratories Inc., ChromaDex, Inc., ChromaDex Analytics, Inc., and ChromaDex Corporation (incorporated by reference to, and filed as Exhibit 2.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on November 9, 2017)*(2)
2.3	Amendment to Asset Purchase Agreement, dated as of September 5, 2017, by and among Covance Laboratories Inc., ChromaDex, Inc., ChromaDex Analytics, Inc., and ChromaDex Corporation (incorporated by reference to, and filed as Exhibit 2.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on November 9, 2017)
3.1	Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to, and filed as Exhibit 3.1 to the Registrant's Annual Report on Form 10-K (File No. 001-37752) filed with the Commission on March 15, 2018)
3.2	Certificate of Amendment to the Certificate of Incorporation of the Registrant (incorporated by reference to, and filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 000-53290) filed with the Commission on April 12, 2016)
3.3	Bylaws of the Registrant (incorporated by reference to, and filed as Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 333-140056) filed with the Commission on June 24, 2008)
3.4	Amendment to Bylaws of the Registrant (incorporated by reference to, and filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-37752) filed with the Commission on July 19, 2016)
4.1	Form of Stock Certificate representing shares of the Registrant's Common Stock (incorporated by reference to, and filed as Exhibit 4.1 of the Registrant's Annual Report on Form 10-K (File No. 000-53290) filed with the Commission on April 3, 2009)
4.2	Investor's Rights Agreement, effective as of December 31, 2005, by and between The University of Mississippi Research Foundation and ChromaDex (incorporated by reference to, and filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K (File No. 333-140056) filed with the Commission on June 24, 2008)
4.3	Tag-Along Agreement effective as of December 31, 2005, by and among the Registrant, Frank Louis Jaksch, Snr. & Maria Jaksch, Trustees of the Jaksch Family Trust, Margery Germain, Lauren Germain, Emily Germain, Lucie Germain, Frank Louis Jaksch, Jr., and the University of Mississippi Research Foundation (incorporated by reference to, and filed as Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 333-140056) filed with the Commission on June 24, 2008)
4.4	Form of Stock Certificate representing shares of the Registrant's Common Stock effective as of January 1, 2016 (incorporated by reference to, and filed as Exhibit 4.4 to the Registrant's Annual Report on Form 10-K (File No. 001-37752) filed with the Commission on March 17, 2016)
4.5	Form of Stock Certificate representing shares of the Registrant's Common Stock effective as of December 10, 2018 (incorporated by reference to, and filed as Exhibit 4.5 to the Registrant's Annual Report on Form 10-K (File No. 001-37752) filed with the Commission on March 7, 2019)
4.6	Description of Common Stock of the Registrant❖

10.1	Second Amended and Restated 2007 Equity Incentive Plan effective March 13, 2007, as amended May 20, 2010 (incorporated by reference to, and filed as Appendix B to the Registrant's Current Definitive Proxy Statement on Schedule 14A (File No. 000-53290) filed with the Commission on May 4, 2010)(1)+
10.2	Form of Stock Option Agreement under the ChromaDex, Inc. Second Amended and Restated 2007 Equity Incentive Plan (incorporated by reference to, and filed as Exhibit 10.3 to the Registrant's Current Report on Form 8-K (File No. 333-140056) filed with the Commission on June 24, 2008)(1)+
10.3	Form of Restricted Stock Purchase Agreement under the ChromaDex, Inc. 2007 Equity Incentive Plan (incorporated by reference to, and filed as Exhibit 10.4 to the Registrant's Current Report on Form 8-K (File No. 333-140056) filed with the Commission on June 24, 2008)(1)+
10.4	Amended and Restated Employment Agreement dated April 19, 2010, by and between Frank L. Jaksch, Jr. and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the Commission on April 22, 2010)(1)+
10.5	Amendment, dated June 22, 2018, to the Amended and Restated Employment Agreement, by and between Frank L. Jaksch Jr. and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K (File No. 001-37752) filed with the Commission on June 28, 2018)+
10.6	License Agreement, dated March 25, 2010 between the University of Mississippi and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 000-53290) filed with the Commission on May 18, 2010)*
10.7	First Amendment to License Agreement, made as of June 3, 2011 between the University of Mississippi and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 000-53290) filed with the Commission on August 11, 2011)*
10.8	Restated and Amended License Agreement, effective as of June 3, 2015 between the University of Mississippi and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 000-53290) filed with the Commission on August 13, 2015)*
10.9	License Agreement, dated July 5, 2011 between ChromaDex, Inc. and Cornell University (incorporated by reference to, and filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 000-53290) filed with the Commission on November 10, 2011)*
10.10	Exclusive License Agreement, dated September 8, 2011 between the Regents of the University of California and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 000-53290) filed with the Commission on November 10, 2011)*
10.11	First Amendment to the License Agreement, effective as of September 5, 2014 between the Regents of the University of California and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 000-53290) filed with the Commission on November 6, 2014)*
10.12	Second Amendment to the License Agreement, effective as of December 31, 2015, between the Regents of the University of California and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on November 10, 2016)*
10.13	Exclusive License Agreement, dated July 13, 2012 between Dartmouth College and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on November 10, 2016)
10.14	Exclusive License Agreement, dated March 7, 2013 between Washington University and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on November 10, 2016)
10.15	Amendment #1 to Exclusive License Agreement, effective as of December 15, 2015, between Washington University and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on November 10, 2016)
10.16	License Agreement, made as of August 1, 2013, between Green Molecular S.L., Inc. and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on November 10, 2016)
10.17	Exclusive License Agreement, effective as of May 16, 2014 between Dartmouth College and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 000-53290) filed with the Commission on August 12, 2014)*
10.18	First Amendment to Exclusive License Agreement, effective as of June 13, 2016, between Dartmouth College and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.10 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on November 10, 2016)*

10.19	License Agreement, effective as of October 15, 2014 between University of Mississippi and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.40 to the Registrant's Annual report on Form 10-K (File No. 000-53290) filed with the Commission on March 19, 2015)*
10.20	First Amendment to Exclusive License Agreement, effective as of July 6, 2015, between University of Mississippi and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.7 to the Registrant's Quarterly report on Form 10-Q (File No. 001-37752) filed with the Commission on November 10, 2016)
10.21	Lease Agreement, made as of April 14, 2016, by and between Longmont Diagonal Investments LLC and ChromaDex Analytics, Inc. (incorporated by reference to and filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 000-53290) filed with the Commission on April 20, 2016)
10.22	Supply Agreement, effective as of February 3, 2014, between Elysium Health, Inc. and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on May 12, 2016)*
10.23	Supply Agreement, effective as of June 26, 2014, between Elysium Health, Inc. and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on May 12, 2016)*
10.24	Amendment to Supply Agreement, effective as of February 19, 2016, between Elysium Health, Inc. and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on May 12, 2016)*
10.25	Form of Indemnity Agreement, between the Registrant and each of its existing directors and executive officers. (incorporated by reference to, and filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-37752) filed with the Commission on December 16, 2016)+
10.26	Amended and Restated Non-Employee Director Compensation Policy (incorporated by reference to, and filed as Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on August 9, 2018)+
10.27	Membership Interest Purchase Agreement effective as of March 12, 2017, by and among Robert Fried, Charles Brenner, Jeffrey Allen and the Registrant (incorporated by reference to, and filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on May 11, 2017)
10.28	Form of Restricted Stock Award Agreement for Robert Fried (incorporated by reference to, and filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37752) filed with the Commission on May 11, 2017)+
10.29	Amended and Restated Executive Employment Agreement, dated June 22, 2018, by and between Robert Fried and the Registrant (incorporated by reference to, and filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-37752) filed with the Commission on June 28, 2018)+
10.30	ChromaDex Corporation 2017 Equity Incentive Plan, as amended, and Form of Option Grant Notice, Form of Option Agreement, Form of Restricted Stock Award Grant Notice, Form of Restricted Stock Award Agreement, Form of Restricted Stock Unit Award Grant Notice and Form of Restricted Stock Unit Award Agreement thereunder (incorporated by reference to, and filed as Exhibit 99.1 to the Registrant's Current Report on Form 8-K (File No. 001-37752) filed with the Commission on June 28, 2018)+
10.31	Lease, dated July 6, 2017, by and between 10900 WILSHIRE L.L.C and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.50 to the Registrant's Annual Report on Form 10-K (File No. 001-37752) filed with the Commission on March 7, 2019)
10.32	First Amendment to Lease, dated February 7, 2018, by and between 10900 WILSHIRE L.L.C and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.51 to the Registrant's Annual Report on Form 10-K (File No. 001-37752) filed with the Commission on March 7, 2019)
10.33	Second Amendment to Lease, dated June 30, 2018, by and between 10900 WILSHIRE L.L.C and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.52 to the Registrant's Annual Report on Form 10-K (File No. 001-37752) filed with the Commission on March 7, 2019)
10.34	Third Amendment to Lease, dated November 9, 2018, by and between 10900 WILSHIRE L.L.C and ChromaDex, Inc. (incorporated by reference to, and filed as Exhibit 10.53 to the Registrant's Annual Report on Form 10-K (File No. 001-37752) filed with the Commission on March 7, 2019)
10.35	Executive Employment Agreement, dated October 5, 2017, by and between Kevin M. Farr and the Registrant (incorporated by reference to and filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-37752) filed with the Commission on October 10, 2017)+
10.36	Executive Employment Agreement, dated as of January 22, 2018, by and between Mark Friedman and the Registrant (incorporated by reference to and filed as Exhibit 10.72 to the Registrant's Annual Report on Form 10-K (File No. 001-37752) filed with the Commission on March 15, 2018)+

10.37	Executive Employment Agreement, dated as of June 1, 2018, by and between Lisa Bratkovich and the Registrant (incorporated by reference to, and filed as Exhibit 10.58 to the Registrant's Annual Report on Form 10-K (File No. 001-37752) filed with the Commission on March 7, 2019)+
10.38	Employment Offer Letter, dated as of October 31, 2018, by ChromaDex, Inc. and accepted by Matthew Roberts (incorporated by reference to, and filed as Exhibit 10.61 to the Registrant's Annual Report on Form 10-K (File No. 001-37752) filed with the Commission on March 7, 2019)+
10.39	Supply Agreement, dated December 19, 2018, by and between ChromaDex, Inc. and Nestec Ltd. (incorporated by reference to, and filed as Exhibit 10.62 to the Registrant's Annual Report on Form 10-K (File No. 001-37752) filed with the Commission on March 7, 2019)*
10.40	Note Purchase Agreement, dated May 9, 2019, by and among ChromaDex Corporation and Winsave Resource Limited and Pioneer Step Holdings Limited (incorporated by reference to, and filed as Exhibit 99.1 to the Registrant's Current Report on Form 8-K (File No. 001-37752) filed with the Commission on May 10, 2019)
10.41	Registration Rights Agreement, dated May 9, 2019, by and among ChromaDex Corporation and Winsave Resource Limited and Pioneer Step Holdings Limited (incorporated by reference to, and filed as Exhibit 99.2 to the Registrant's Current Report on Form 8-K (File No. 001-37752) filed with the Commission on May 10, 2019)
10.42	Omnibus Amendment to Note Purchase Agreement and Convertible Promissory Notes, dated June 30, 2019, by and among ChromaDex Corporation and Winsave Resource Limited and Pioneer Step Holdings Limited (incorporated by reference to, and filed as Exhibit 99.1 to the Registrant's Current Report on Form 8-K (File No. 001-37752) filed with the Commission on July 1, 2019)
10.43	Securities Purchase Agreement, dated August 13, 2019, by and among ChromaDex Corporation and the purchasers therein (incorporated by reference to, and filed as Exhibit 99.1 to the Registrant's Current Report on Form 8-K (File No. 001-37752) filed with the Commission on August 14, 2019)
10.44	Registration Rights Agreement, dated August 15, 2019, by and among ChromaDex Corporation and the purchasers therein (incorporated by reference to, and filed as Exhibit 99.1 to the Registrant's Current Report on Form 8-K (File No. 001-37752) filed with the Commission on August 15, 2019)
10.45	Business Financing Agreement, dated November 12, 2019, by and between ChromaDex Corporation and Western Alliance Bank❖
21.1	Subsidiaries of ChromaDex Corporation❖
23.1	Consent of Marcum, LLP, Independent Registered Public Accounting Firm❖
31.1	Certification of the Chief Executive Officer pursuant to §240.13a-14 or §240.15d-14 of the Securities Exchange Act of 1934, as amended❖
31.2	Certification of the Chief Financial Officer pursuant to §240.13a-14 or §240.15d-14 of the Securities Exchange Act of 1934, as amended❖
32.1	Certification pursuant to 18 U.S.C. Section 1350 (as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002)❖
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

❖ Filed herewith.

(1) Plan and related Forms were assumed by ChromaDex Corporation pursuant to Agreement and Plan of Merger, dated as of May 21, 2008, among ChromaDex Corporation (formerly Cody Resources, Inc.), CDI Acquisition, Inc. and ChromaDex, Inc.

(2) Schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K. ChromaDex Corporation undertakes to furnishsupplemental copies of any of the omitted schedules upon request by the Securities and Exchange Commission; provided,however, that ChromaDex Corporation may request confidential treatment pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended, for any schedule so furnished.

\+ Indicates management contract or compensatory plan or arrangement.

* This Exhibit has been granted confidential treatment and has been filed separately with the Commission. The confidential portions of this Exhibit have been omitted and are marked by an asterisk.

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, on the 10th day of March 2020.

CHROMADEX CORPORATION
By: /s/ ROBERT FRIED
Robert Fried
Chief Executive Officer

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Robert Fried and Kevin Farr, and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or either of them, or their or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ ROBERT FRIED Robert Fried	Chief Executive Officer and Director (Principal Executive Officer)	March 10, 2020
/s/ KEVIN FARR Kevin Farr	Chief Financial Officer (Principal Financial and Accounting Officer)	March 10, 2020
/s/ FRANK L. JAKSCH JR. Frank L. Jaksch Jr.	Executive Chairman of the Board and Director	March 10, 2020
/s/ STEPHEN BLOCK Stephen Block	Director	March 10, 2020
/s/ JEFF BAXTER Jeff Baxter	Director	March 10, 2020
/s/ KURT GUSTAFSON Kurt Gustafson	Director	March 10, 2020
/s/ STEVEN RUBIN Steven Rubin	Director	March 10, 2020
/s/ TONY LAU Tony Lau	Director	March 10, 2020
/s/ WENDY YU Wendy Yu	Director	March 10, 2020

Exhibit 4.6

DESCRIPTION OF COMMON STOCK

The following description summarizes the terms of our common stock. Because it is only a summary, it does not contain all the information that may be important to you. For a complete description of the matters set forth in this "Description of Common Stock," you should refer to our amended and restated certificate of incorporation, as amended, and bylaws, as amended, which are included as exhibits to our Annual Report on Form 10-K, and to the applicable provisions of the Delaware General Corporation Law. Our amended and restated certificate of incorporation, as amended, authorizes us to issue 150,000,000 shares of common stock, par value $0.001 per share.

Voting

Our common stock is entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and does not have cumulative voting rights. Accordingly, the holders of a majority of the shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election.

Dividends

The holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

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

Rights and Preferences

Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock.

Delaware Anti-Takeover Law and Provisions of Our Amended and Restated Certificate of Incorporation, as amended, and Bylaws, as amended

Our amended and restated certificate of incorporation, as amended, and our bylaws, as amended, contain certain provisions that could have the effect of delaying, deterring or preventing another party from acquiring control of us, and therefore could adversely affect the market price of our common stock. These provisions and certain provisions of Delaware General Corporation Law (the "DGCL"), which are summarized below, may also discourage coercive takeover practices and inadequate takeover bids, and are designed, in part, to encourage persons seeking to acquire control of us to negotiate first with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate more favorable terms with an unfriendly or unsolicited acquirer outweigh the disadvantages of potentially discouraging a proposal to acquire us.

Delaware Anti-Takeover Law

We are subject to Section 203 of the DGCL ("Section 203"). Section 203 generally prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years following the time that such stockholder became an interested stockholder, unless:

- prior to such time the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

- at or subsequent to such time the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;

- any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;

- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;

- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; and

- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Amended and Restated Certificate of Incorporation, as amended, and Bylaws, as amended

Among other things, our amended and restated certificate of incorporation, as amended, and bylaws, as amended:

- provide that the authorized number of directors may be changed only by resolution of our board of directors;
- provide that directors may be removed with or without cause by the holders of at least a majority of the voting power of all of our then-outstanding shares of the capital stock then entitled to vote;
- provide that all vacancies, including newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide advance notice in writing, and also specify requirements as to the form and content of a stockholder's notice;
- do not provide for cumulative voting rights (therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose); and
- provide that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers to our company or our stockholders, (iii) any action asserting a claim against our company arising pursuant to any provision of the Delaware General Corporation Law or our amended and restated certificate of incorporation or Bylaws, or (iv) any action asserting a claim against our company governed by the internal affairs doctrine; provided that this choice of forum provision does not apply to suits brought to enforce a duty or liability created by the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, or any other claim for which the federal courts have exclusive jurisdiction.

The amendment of any of these provisions would require the affirmative vote of the holders of at least a majority of the voting power of all of our then outstanding common stock.

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

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Inc.

Listing on The Nasdaq Capital Market

Our common stock is listed on The Nasdaq Capital Market under the symbol "CDXC".

Exhibit 10.45

BUSINESS FINANCING AGREEMENT

Borrower:	**CHROMADEX CORPORATION,a Delaware corporation**	**Lender: WESTERN ALLIANCE BANK, an Arizona corporation** **55 Almaden Boulevard, Suite 100** **San Jose, CA 95113**
	CHROMADEX, INC., a California corporation	
	CHROMADEX ANALYTICS, INC., a Nevada corporation	
	HEALTHSPAN RESEARCH LLC, a Delaware limited liability company	
	10900 Wilshire Blvd., Suite 650Los Angeles, CA 90024	

This BUSINESS FINANCING AGREEMENT, dated as of November 12, 2019 ("**Closing Date**"), is made and entered into among WESTERN ALLIANCE BANK, an Arizona corporation ("**Lender**"), and CHROMADEX CORPORATION, a Delaware corporation, CHROMADEX, INC., a California corporation, CHROMADEX ANALYTICS, INC., a Nevada corporation, and HEALTHSPAN RESEARCH LLC, a Delaware limited liability company (individually and collectively, "**Borrower**"), on the following terms and conditions:

1. CREDIT EXTENSIONS.

1.1 **REVOLVING CREDIT LINE**.

(a) **Advances**. Subject to the terms and conditions of this Agreement, from the date on which this Agreement becomes effective until the Maturity Date, Lender will make Advances to Borrower not exceeding the Credit Limit or the Borrowing Base, whichever is less; provided that in no event shall Lender be obligated to make any Advance that results in an Overadvance or while any Overadvance is outstanding. Amounts borrowed under this Section may be repaid and subject to the terms and conditions hereof reborrowed during the term of this Agreement. It shall be a condition to each Advance that an Advance Request acceptable to Lender has been received by Lender, all of the representations and warranties set forth in Section 3 are true and correct in all material respects on the date of such Advance as though made at and as of each such date, and no Default has occurred and is continuing, or would result from such Advance.

(b) **Advance Requests**. Borrower may request that Lender make an Advance by delivering to Lender an Advance Request therefor and Lender shall be entitled to rely on all the information provided by Borrower to Lender on or with the Advance Request. Lender may honor Advance Requests, instructions or repayments given by Borrower (if an individual) or by any Authorized Person. So long as all of the conditions for an Advance set forth herein have been satisfied, Lender shall fund such Advance into Borrower's Account within one business day of Lender's receipt of the applicable Advance Request.

(c) **Due Diligence**. Lender shall (a) audit Borrower's Receivables and any and all records pertaining to the Collateral, once every twelve (12) months or more frequently at Lender's sole discretion, and (b) conduct an appraisal on Borrower's Inventory once every twelve (12) months or, if an Event of Default has occurred and is continuing, more frequently at Lender's sole discretion, in each case at Borrower's expense. Lender may at any time and from time to time contact Account Debtors and other persons obligated or knowledgeable in respect of Receivables to confirm the Receivable Amount of such Receivables, to determine whether Receivables constitute Eligible Receivables, and for any other purpose in connection with this Agreement. If any of the Collateral or Borrower's books or records pertaining to the Collateral are in the possession of a third party, Borrower authorizes that third party to permit Lender or its agents to have access to perform inspections or audits thereof and to respond to Lender's requests for information concerning such Collateral and records.

(d) **Collections**.

(i) Lender shall have the exclusive right to receive all Collections on all Receivables, and Borrower shall take the actions set out herein to effectuate Lender's right. Borrower shall promptly notify, transfer and deliver to Lender all Collections Borrower receives for deposit into the Collection Account. On or about the Closing Date, Borrower shall promptly enter into a collection services agreement acceptable to Lender (the "**Lockbox Agreement**") pursuant to which all Collections received in the Lockbox shall be deposited into the Collection Account. Borrower shall use the Lockbox address as the remit to and payment address for all of Borrower's Collections from Account Debtors, and Borrower shall instruct all Account Debtors to make payments either directly to the Lockbox for deposit by Lender directly into the Collection Account, or instruct them to deliver such payments to Lender by wire transfer, ACH, or other means as Lender may direct for deposit to the Lockbox or Collection Account. It will be considered an immediate Event of Default if Borrower fails, in any material respect, to complete this transition with all Account Debtors within 90 days of the date of this Agreement (the "**Transition Period**"). During the Transition Period, Borrower shall forward all collections to Lender along with a weekly cash receipts journal in form and substance reasonably satisfactory to Lender.

(ii) Lender shall when a Streamline Period is in effect, transfer all Collections deposited into the Collection Account to Borrower's Account, or when a Streamline Period is not in effect, apply the Collections deposited into the Collection Account to the outstanding Account Balance, in either case, within three business days of the date received; provided that upon the occurrence and during the continuance of any Event of Default, Lender may apply all Collections to the Obligations in such order and manner as Lender may determine. Lender has no duty to do any act other than to apply such amounts as required above. If an item of Collections is not honored or Lender does not receive good funds for any reason, any amount previously transferred to Borrower's Account or applied to the Account Balance shall be reversed as of the date transferred or applied, as applicable, and, if applied to the Account Balance, the Finance Charge will accrue as if the Collections had not been so applied. Lender shall have, with respect to any goods related to the Receivables, all the rights and remedies of an unpaid seller under the UCC and other applicable law, including the rights of replevin, claim and delivery, reclamation and stoppage in transit.

(e) **Receivables Activity Report**. Within 30 days after each Month End, Lender shall send to Borrower a report covering the transactions for the prior billing period, including the amount of all Advances, Collections, Adjustments, Finance Charges, and other fees and charges. The accounting shall be deemed correct and conclusive absent manifest error unless Borrower makes written objection to Lender within 30 days after Lender sends the accounting to Borrower.

(f) **Adjustments**. In the event any Adjustment or dispute is asserted by any Account Debtor, Borrower shall promptly advise Lender and shall resolve such disputes and advise Lender of any Adjustments; provided that in no case will the aggregate Adjustments made with respect to any Receivable exceed 5% of its original Receivable Amount unless Borrower has obtained the prior written consent of Lender, which consent shall not be unreasonably withheld or delayed. So long as any Obligations are outstanding, Lender shall have the right, at any time after the occurrence and during the continuance of an Event of Default, to take possession of any rejected, returned, or recovered personal property. If such possession is not taken by Lender, Borrower is to resell it for Lender's account at Borrower's expense with the proceeds made payable to Lender.

(g) **Recourse; Maturity**. Advances and the other Obligations shall be with full recourse against Borrower. On the Maturity Date, Borrower will pay all then outstanding Advances and other Obligations to Lender or such earlier date as shall be herein provided.

(h) **Cash Management Services**. Borrower may use availability hereunder up to the Cash Management Sublimit for Lender's cash management services, which may include merchant services, controlled disbursement accounts, direct deposit of payroll, business credit card, and check cashing services identified in various cash management services agreements related to such services (the "**Cash Management Services**"). Amounts outstanding under the Cash Management Sublimit will be treated as an Advance for purposes of determining availability under the Credit Limit and shall decrease, on a dollar-for-dollar basis, the amount available for other Advances. The Cash Management Services shall be subject to additional terms set forth in applicable cash management services agreements.

(i) **International Sublimit**.

(i) **Letter of Credit Line.** Subject to the terms and conditions of this Agreement, Lender hereby agrees to issue or cause an Affiliate to issue letters of credit for the account of Borrower (each, a "**Letter of Credit**" and collectively, "**Letters of Credit**") from time to time; provided that the Letter of Credit Obligations shall not at any time exceed the International Sublimit less any FX Amount (as defined below) and the Letter of Credit Obligations will be treated as Advances for purposes of determining availability under the Credit Limit and shall decrease, on a dollar-for-dollar basis, the amount available for other Advances. The form and substance of each Letter of Credit shall be subject to approval by Lender, in its sole discretion. Each Letter of Credit shall be subject to the additional terms of the Letter of Credit agreements, applications and any related documents required by Lender in connection with the issuance thereof (each, a "**Letter of Credit Agreement**"). Each draft paid under any Letter of Credit shall be repaid by Borrower in accordance with the provisions of the applicable Letter of Credit Agreement. No Letter of Credit shall be issued that results in an Overadvance or while any Overadvance is outstanding.

(ii) **Foreign Exchange Facility.** Borrower may enter in foreign exchange forward contracts with Lender under which Borrower commits to purchase from or sell to Lender a set amount of foreign currency more than one business day after the contract date (the "**FX Forward Contract**"). The total FX Forward Contracts at any one time may not exceed 10 times an amount equal to the International Sublimit minus the face amount of all outstanding Letters of Credit. Ten percent (10%) of the amount of each outstanding FX Forward Contract shall be treated as an Advance for purposes of determining availability under the Credit Limit and shall decrease, on a dollar-for-dollar basis, the amount available for other Advances (the "**FX Amount**"). Lender may terminate the FX Forward Contracts if an Event of Default occurs. Each FX Forward Contract shall be subject to additional terms set forth in the applicable FX Forward Contract or other agreements executed in connection with the foreign exchange facility.

(j) **Overadvances**. Upon any occurrence of an Overadvance, Borrower shall immediately pay down the Advances such that, after giving effect to such payments, no Overadvance exists.

1.2 RESERVED.

1.3 CONDITIONS PRECEDENT TO INITIAL CREDIT EXTENSION. The obligation of Lender to make the initial Credit Extension is subject to the condition precedent that Lender shall have received, in form and substance satisfactory to Lender, the following:

(a) duly executed signatures to this Agreement and the other Loan Documents;

(b) a certificate of the Secretary of Borrower with respect to incumbency and resolutions authorizing the execution and delivery of this Agreement;

(c) evidence satisfactory to Lender that the insurance required by Section 4.4 is in full force and effect;

(d) an initial audit of the Receivables as contemplated by Section 1.1(c)(a);

(e) payment of the fees and expenses then due specified in Section 2.2 and Section 9 hereof, respectively; and

(f) termination statements on all liens other than those expressly permitted under this Agreement.

2. FEES AND FINANCE CHARGES.

2.1 Finance Charges and Interest.

(a) **Advances.** Lender may, but is not required to, deduct the amount of accrued Finance Charge from Collections received by Lender. The accrued and unpaid Finance Charge shall be due and payable within 10 calendar days after each Month End during the term hereof.

2.2 Fees.

(a) **Revolving Termination Fee**. In the event this Agreement is terminated prior to the first anniversary of the date of this Agreement, Borrower shall pay the Revolving Termination Fee to Lender, provided, that, the Revolving Termination Fee shall be waived by Lender if the Credit Extensions are refinanced with Lender or Lender's affiliates.

(b) **Revolving Facility Fee**. Borrower shall pay the Revolving Facility Fee to Lender promptly on the Closing Date and on the first (1st) year anniversary of the Closing Date.

(c) **Letter of Credit Fees**. Borrower shall pay to Lender fees upon the issuance of each Letter of Credit, upon the payment or negotiation of each draft under any Letter of Credit and upon the occurrence of any other activity with respect to any Letter of Credit (including without limitation, the transfer, amendment or cancellation of any Letter of Credit) determined in accordance with Lender's standard fees and charges then in effect for such activity.

(d) **Cash Management and FX Forward Contract Fees**. Borrower shall pay to Lender fees in connection with the Cash Management Services and the FX Forward Contracts as determined in accordance with Lender's standard fees and charges then in effect for such activity.

(e) **Due Diligence Fee**. Borrower shall pay the Due Diligence Fee to Lender on each anniversary of this Agreement.

3. REPRESENTATIONS AND WARRANTIES. Borrower represents and warrants:

3.1 No representation, warranty or other statement of Borrower in any certificate or written statement given to Lender contains any untrue statement of a material fact or omits to state a material fact necessary to make the statement contained in the certificates or statement not misleading when made or deemed made.

3.2 Borrower is duly existing and in good standing in its state of formation and qualified and licensed to do business in, and in good standing in, any state in which the conduct of its business or its ownership of property requires that it be qualified except to the extent that any failure to remain so qualified could not reasonably be expected to have a material adverse effect on the business, operations or financial condition of the Borrower, taken as a whole, or a material adverse effect on the Collateral or the priority of Lender's Lien on the Collateral.

3.3 The execution, delivery and performance of this Agreement has been duly authorized, and does not conflict with Borrower's organizational documents, nor constitute an Event of Default under any material agreement by which Borrower is bound. Borrower is not in default under any agreement to which or by which it is bound.

3.4 Borrower has good title to the Collateral and all Inventory is in all material respects of good and marketable quality, free from material defects.

3.5 As of the date hereof, Borrower's name, form of organization, chief executive office, and the place where the records concerning all Receivables and Collateral are kept is set forth at the beginning of this Agreement, as of the date hereof, Borrower is located at its address for notices set forth in this Agreement. In addition, upon any change to any of the foregoing Borrower will provide to Lender ten (10) Business Days prior written notice of any such change.

3.6 If Borrower owns, holds or has any interest in, any registered copyrights, patents or trademarks, and material inbound licenses of any of the foregoing, such interest has been specifically disclosed and identified to Lender in writing.

3.7 The Eligible Receivables are bona fide existing obligations. The property and services giving rise to such Eligible Receivable has been delivered or rendered to the account debtor or to the account debtor's agent for immediate and unconditional acceptance by the account debtor. Borrower has not received notice of actual or imminent Insolvency Proceeding of any Account Debtor that is included in any Borrowing Base Certificate as an Eligible Receivable.

4. MISCELLANEOUS PROVISIONS. Borrower will:

4.1 At all times maintain its corporate existence and good standing in its jurisdictions of incorporation and maintain its qualification in each jurisdiction necessary to Borrower's business or operations and in which any failure to remain so qualified could reasonably be expected to have a material adverse effect on the business, operations or financial condition of the Borrower, taken as a whole, or a material adverse effect on the Collateral or the priority of Lender's Lien on the Collateral, and not merge or consolidate with or into any other business organization, or acquire all or substantially all of the capital stock or property of a third party, unless any such acquired entity becomes a "borrower" under this Agreement and Lender has previously consented to the applicable transaction in writing.

4.2 Give Lender at least thirty (30) days prior written notice of changes to its name, type of organization, chief executive office or location of records.

4.3 Pay all its taxes including gross payroll, withholding and sales taxes when due, unless (i) such taxes are being contested in good faith by appropriate proceedings and for which Borrower has maintained adequate reserves in accordance with GAAP, or (ii) with respect to withholding and sales taxes only, such withholding and sales taxes do not, individually or in the aggregate, exceed Ten Thousand Dollars ($10,000) and are satisfied by Borrower within ten (10) days of Borrower's knowledge of non-payment, and will deliver satisfactory evidence of payment to Lender if requested.

4.4 Maintain at all times:

(a) insurance satisfactory to Lender as to amount, nature and carrier covering property damage (including loss of use and occupancy) to any of Borrower's properties, business interruption insurance, public liability insurance including coverage for contractual liability, product liability and workers' compensation, and any other insurance which is usual for Borrower's business. Each such policy shall provide for at least thirty (30) days prior notice to Lender of any cancellation thereof.

(b) all risk property damage insurance policies (including without limitation windstorm coverage, and hurricane coverage as applicable) covering the tangible property comprising the Collateral. Each insurance policy must be for the full replacement cost of the Collateral and include a replacement cost endorsement, or be in an amount acceptable to Lender. The insurance must be issued by an insurance company acceptable to Lender and must include a lender's loss payable endorsement in favor of Lender in a form acceptable to Lender.

Upon the request of Lender, Borrower shall deliver to Lender a copy of each insurance policy, or, if permitted by Lender, a certificate of insurance listing all insurance in force.

4.5 Promptly upon receipt, transfer and deliver to Lender all Collections Borrower receives.

4.6 Not create, incur, assume, or be liable for any indebtedness, other than Permitted Indebtedness.

4.7 Not pay any dividends or make any other distribution or payment on account of or in redemption, retirement or purchase of any capital stock, or permit any of its subsidiaries to do so, other than the conversion of Borrower's capital stock, dividends payable in capital stock of Borrower, cash in lieu of fractional shares upon exercise or conversion of the capital stock of Borrower contemplated in clause (i) of this Section 4.7, and as disclosed in Schedule 4.7 of the Disclosure Letter.

4.8 Not directly or indirectly acquire or own, or make any Investment in or to any Person, or permit any of its subsidiaries so to do, other than Permitted Investments.

4.9 Not directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower except for transactions that are in the ordinary course of Borrower's business, upon fair and reasonable terms that are no less favorable to Borrower than would be obtained in an arm's length transaction with a non-affiliated Person.

4.10 Not make any payment in respect of any Subordinated Debt, or permit any of its subsidiaries to make any such payment, except in compliance with the terms of the subordination agreement among Lender and the creditors for such Subordinated Debt, or amend any provision contained in any documentation relating to the Subordinated Debt in a manner adverse to the interest of Lender without Lender's prior written consent.

4.11 Not become an "investment company" or be controlled by an "investment company," within the meaning of the Investment Company Act of 1940, or become principally engaged in, or undertake as one of its important activities, the business of extending credit for the purpose of purchasing or carrying margin stock, or use the proceeds of any Credit Extension for such purpose. In any material respect, fail to meet the minimum funding requirements of ERISA, permit a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur, fail to comply with the Federal Fair Labor Standards Act or violate any law or regulation, which violation could reasonably be expected to have a material adverse effect on Borrower's business, or a material adverse effect on the Collateral or the priority of Lender's Lien on the Collateral, or permit any of its subsidiaries to do any of the foregoing.

4.12 Store any Collateral with a bailee, warehouseman, or other third party unless the third party has been notified of Lender's security interest and if Lender reasonably requests, Lender has received an acknowledgment from the third party that it is holding or will hold the Collateral for Lender's benefit on terms satisfactory to Lender. In addition, Borrower shall not store or maintain any Collateral at a location (including any premises leased by Borrower) other than (x) locations disclosed to Lender in writing and (y) to the extent Lender so requests in its reasonable discretion and to the extent commercially practicable, Lender has received a landlord waiver from the applicable landlord and/or sublandlord in form and substance satisfactory to Lender.

4.13 Promptly (and in any event within fifteen (15) Business Days) notify Lender if Borrower hereafter obtains any interest in any copyrights, patents, trademarks or licenses that are significant in value or are material to the conduct of its business.

4.14 Provide the following financial information and statements in form acceptable to Lender, and such additional information as may be requested by Lender from time to time. Lender has the right to require Borrower to deliver financial information and statements to Lender more frequently than otherwise provided below, and to use such additional information and statements to measure any applicable financial covenants in this Agreement.

(a) Within one hundred eighty (180) days of the fiscal year end, the annual financial statements of Borrower, certified and dated by an authorized financial officer. These financial statements must be audited (with an opinion from such auditors not containing any "going concern" qualifications) by a nationally recognized firm of certified public accountants reasonably acceptable to Lender (and for the avoidance of doubt, Marcum LLP is hereby deemed to be acceptable to Lender). The statements shall be prepared on a consolidated basis.

(b) No later than thirty (30) days after the end of each month (including the last period in each fiscal year), monthly financial statements of Borrower including a balance sheet, income statement, statement of cash flows, and sell through reports, certified and dated by an authorized financial officer. The statements shall be prepared on a consolidated basis.

(c) Promptly, upon sending or receipt, copies of any management letters and correspondence relating to management letters, sent or received by Borrower to or from Borrower's auditor.

(d) If applicable, within five (5) days of filing, copies of the Form 10-K Annual Report, Form 10-Q Quarterly Report and Form 8-K Current Report for Borrower filed with the Securities and Exchange Commission, provided that delivery of any such reports shall be deemed satisfied upon posting on the Electronic Data Gathering, Analysis and Retrieval database maintained by the Securities and Exchange Commission so long as Borrower provides a link to such filing on Borrower's website.

(e) Financial projections covering the current fiscal year, specifying the assumptions used in creating the projections and setting forth calculations showing compliance with the financial covenants set forth in this Agreement, and an annual budget approved by the Board of Directors of Borrower. Annual projections and annual Board-approved budgets shall in any case be provided to Lender no later than sixty (60) days after the beginning of each fiscal year.

(f) Within thirty (30) days after each Month End, a compliance certificate of Borrower, signed by an authorized financial officer and setting forth the information and computations (in sufficient detail) to establish compliance with all financial covenants at the end of the period covered by the financial statements then being furnished and whether there existed as of the date of such financial statements and whether there exists as of the date of the certificate, any Default or Event of Default under this Agreement and, if any such Default or Event of Default exists, specifying the nature thereof and the action Borrower is taking and proposes to take with respect thereto.

(g) Within fifteen (15) days after each Month End, a roll forward borrowing base certificate substantially in the form attached hereto as Exhibit B, in form and substance satisfactory to Lender, setting forth Eligible Receivables and Receivable Amounts thereof and Eligible Inventory as of the last day of the preceding calendar month (a "**Borrowing Base Certificate**"); provided, however, when a Streamline Period is not in effect, Borrower shall also deliver to Lender at the funding of each Advance a Borrowing Base Certificate (except that such Borrowing Base Certificate need not include updates to Eligible Inventory) as of a date no more than three (3) business days from the date of such Advance.

(h) Within fifteen (15) days after each Month End and when a Streamline Period is not in effect, at the funding of each Advance (as of a date no more than three (3) business days from the date of such Advance), a detailed aging of Borrower's Receivables by invoice or a summary aging by Account Debtor, together with payable aging, deferred revenue report, sales and billings journals, cash receipts journals, and such other matters as Lender may reasonably request.

(i) Prompt reports of any material updates (as information becomes available to Borrower) in connection with Borrower's litigation matters.

(j) Promptly upon Lender's request, such other financial information, books, records, statements, lists of property and accounts, budgets, forecasts or reports as to Borrower and as to each guarantor of Borrower's obligations to Lender as Lender may request, including without limitation, invoices, purchase orders, proof of delivery, and acceptance documentation.

4.15 Within 90 days from the Closing Date, maintain all of its and its U.S. subsidiaries' primary depository relationship, including operating and deposit accounts with Lender; provided, that, any accounts maintained outside of Lender shall be subject to a deposit account control agreement in favor of Lender and in form and substance satisfactory to Lender except for Borrower's accounts maintained with Adyen, PayPal, Humboldt, Stripe or other merchant processors so long as Borrower transfers the entire balance with such merchant processors to an operating account with Lender on a weekly basis. Borrower and its subsidiaries will endeavor to utilize Lender's International Banking Division for services offered by such division including, without limitation, services related to foreign currency wires, hedging, swaps, and letters of credit.

4.16 Promptly provide to Lender such additional information and documents regarding the finances, properties, business or books and records of Borrower or any guarantor or any other obligor as Lender may request.

4.17 Maintain Borrower's financial condition as follows in accordance with GAAP and used consistently with prior practices (except to the extent modified by the definitions herein):

(a) **RML**. Borrower shall maintain at all times, tested as of each Month End, RML of at least four (4) months, provided, that, for any month in which Borrower's Average EBDAS is at least Zero Dollars ($0), RML shall not be tested.

(b) **Cash**. Borrower shall maintain at all times, tested as of each Month End, unrestricted and unencumbered cash at Lender of at least Three Million Dollars ($3,000,000).

4.18 Not make or contract to make, without Lender's prior written consent, (i) capital expenditures, including leasehold improvements, in any fiscal year in excess of One Million Dollars ($1,000,000), or (ii) incur liability for rentals of property (including both real and personal property) in any fiscal year in excess of Five Million Dollars ($5,000,000).

5. SECURITY INTEREST. To secure the prompt payment and performance to Lender of all of the Obligations, Borrower hereby grants to Lender a continuing security interest in the Collateral. Borrower is not authorized to sell, assign, transfer or otherwise convey any Collateral without Lender's prior written consent, except for the sale of Inventory in Borrower's usual course of business. Borrower agrees to sign any instruments and documents requested by Lender to evidence, perfect, or protect the interests of Lender in the Collateral. Borrower agrees to deliver to Lender the originals of all instruments, chattel paper and documents evidencing or related to Receivables and Collateral. Borrower shall not grant or permit any lien or security in the Collateral or any interest therein other than Permitted Liens. If this Agreement is terminated, Lender's lien in the Collateral shall continue until the Obligations (other than inchoate indemnity obligations) are repaid in full in cash. Upon payment in full in cash of the Obligations (other than inchoate indemnity obligations) and at such time as Lender's obligation to make Advances has terminated, Lender shall, at the sole cost and expense of Borrower, release its liens in the Collateral and all rights therein shall revert to Borrower. In the event (x) all Obligations (other than inchoate indemnity obligations), except for Obligations under Cash Management Services, Letter of Credit Obligation and FX Amount, are satisfied in full, and (y) this Agreement is terminated, Lender shall terminate the security interest granted herein upon Borrower providing cash collateral in an amount equal to at least one hundred ten percent (110%), of the U.S. dollar equivalent of the Obligations outstanding, Cash Management Services, Letter of Credit Obligation and FX Amount, plus all interest, fees, and costs due or to become due in connection therewith (as estimated by Lender is its sole discretion), to secure all of the Obligations relating to such Cash Management Services, Letter of Credit Obligation and FX Amount.

6. POWER OF ATTORNEY. Borrower irrevocably appoints Lender and its successors as Borrower's true and lawful attorney in fact, and authorizes Lender to, whether or not there has been an Event of Default, demand, collect, receive, sue, and give releases to any Account Debtor for the monies due or which may become due upon or with respect to the Receivables and to compromise, prosecute, or defend any action, claim, case or proceeding relating to the Receivables, including the filing of a claim or the voting of such claims in any bankruptcy case, all in Lender's name or Borrower's name, as Lender may choose; prepare, file and sign Borrower's name on any notice, claim, assignment, demand, draft, or notice of or satisfaction of lien or mechanics' lien or similar document; verify and confirm directly with the respective Account Debtors the validity, amount and other matters relating to the Receivables, either in the name of Borrower or Lender or such other name as Lender may choose; (iv) with notice to Borrower (provided failure to provide notice shall not give rise to any liability to Lender), notify all Account Debtors with respect to the Receivables to pay Lender directly; (v) receive and open all mail addressed to Borrower for the purpose of collecting the Receivables; (vi) endorse Borrower's name on any checks or other forms of payment on the Receivables; (vii) execute on behalf of Borrower any and all instruments, documents, financing statements and the like to perfect Lender's interests in the Receivables and Collateral; (viii) debit any Borrower's deposit accounts maintained with Lender for any and all Obligations due under this Agreement; and (ix) do all acts and things necessary or expedient, in furtherance of any such purposes, and to, upon the occurrence and during the continuance of an Event of Default, sell, assign, transfer, pledge, compromise, or discharge the whole or any part of the Receivables. Upon the occurrence and continuation of an Event of Default, all of the power of attorney rights granted by Borrower to Lender hereunder shall be applicable with respect to all Receivables and all Collateral.

7. DEFAULT AND REMEDIES.

7.1 **Events of Default**. The occurrence of any one or more of the following shall constitute an Event of Default hereunder.

(a) **Failure to Pay**. Borrower fails to make a payment when due under this Agreement.

(b) **Lien Priority**. Lender fails to have an enforceable first lien (except for Permitted Liens) on or a security interest in the Collateral.

(c) **False Information**. Borrower (or any guarantor) has given Lender any materially false or misleading information or representations or has failed to disclose any material fact relating to the subject matter of this Agreement necessary to make such information or representations true, correct and complete in all material respects when made or deemed made.

(d) **Attachment**. If any material portion of Borrower's assets is attached, seized, subjected to a writ or distress warrant, or is levied upon, or comes into the possession of any trustee, receiver or person acting in a similar capacity and such attachment, seizure, writ or distress warrant or levy has not been removed, discharged or rescinded within ten (10) days, or if Borrower is enjoined, restrained, or in any way prevented by court order from continuing to conduct all or any material part of its business affairs, or if a judgment or other claim becomes a lien or encumbrance upon any material portion of Borrower's assets, or if a notice of lien, levy, or assessment is filed of record with respect to any of Borrower's assets by the United States Government, or any department, agency, or instrumentality thereof, or by any state, county, municipal, or governmental agency, and the same is not paid within ten (10) days after Borrower receives notice thereof, provided that none of the foregoing shall constitute an Event of Default where such action or event is stayed or an adequate bond has been posted pending a good faith contest by Borrower (provided that no Credit Extensions will be required to be made during such cure period).

(e) **Bankruptcy**. An involuntary bankruptcy petition is filed against Borrower (or any guarantor) which is not dismissed or vacated within thirty (30) days of filing (provided no Credit Extensions shall be made during such period), or Borrower (or any guarantor) files a bankruptcy petition, or Borrower (or any guarantor) makes a general assignment for the benefit of creditors.

(f) **Receivers**. A receiver or similar official is appointed for a substantial portion of Borrower's (or any guarantor's) business, or the business is terminated.

(g) **Judgments**. Any judgments or arbitration awards are entered against Borrower (or any guarantor), or Borrower (or any guarantor) enters into any settlement agreements with respect to any litigation or arbitration and the aggregate amount of all such judgments, awards, and agreements exceeds Five Hundred Thousand Dollars ($500,000) to the extent not covered by insurance.

(h) **Material Adverse Change**. A material adverse change occurs in Borrower's (or any guarantor's) business condition (financial or otherwise), operations, or properties, or ability to repay the credit extended by Lender under this Agreement.

(i) **Cross-default**. Any default occurs under any agreement in connection with any indebtedness Borrower (or any guarantor) or any of Borrower's Affiliates has obtained from anyone else or which Borrower (or any guarantor) or any of Borrower's Affiliates has guaranteed in excess of Two Hundred Fifty Thousand Dollars ($250,000), the result of which gives the holder of such indebtedness the right (whether or not exercised) to accelerate the date for payment of such indebtedness.

(j) **Default under Related Documents**. Any default occurs under any guaranty, subordination agreement, security agreement, deed of trust, mortgage, or other document required by or delivered in connection with this Agreement or any such document is no longer in effect.

(k) **Other Agreements**. Borrower (or any guarantor) or any of Borrower's Affiliates fails to meet the conditions of, or fails to perform any obligation under any other agreement Borrower (or any guarantor) or any of Borrower's Affiliates has with Lender or any Affiliate of Lender and, as to any such default that can be cured, has failed to cure such default within ten (10) days after Borrower or Affiliate receives notice thereof or any officer of Borrower or Affiliate becomes aware thereof (provided that no Credit Extensions will be required to be made during such cure period).

(l) **Change of Control**. A transaction or series of transactions (other than an offering of the Borrower's stock to the general public through a registration statement filed with the Securities and Exchange Commission) whereby any "person" or related "group" of "persons", as such terms are used in Sections 13(d) and 14(d)(2) of the Securities Exchange Act of 1934 (other than the Borrower, any of its subsidiaries, an employee benefit plan maintained by the Borrower or any of its subsidiaries or a "person" that, prior to such transaction, directly or indirectly controls, is controlled by, or is under common control with, the Borrower) directly or indirectly acquires beneficial ownership (within the meaning of Rule 13d-3 under the Securities Exchange Act of 1934) of securities of the Corporation possessing more than 50% of the total combined voting power of the Corporation's securities outstanding immediately after such acquisition.

(m) **Other Breach Under Agreement**. (i) Borrower fails to perform any obligation under Section 1 or Section 4 of this Agreement; or (ii) Borrower fails to meet the conditions of, or fails to perform any obligation under, any term of this Agreement not specifically referred to above, and, as to any such default that can be cured, has failed to cure such default within ten (10) days after Borrower receives notice thereof or any officer of Borrower becomes aware thereof (provided that no Credit Extensions will be required to be made during such cure period).

7.2 **Remedies**. Upon the occurrence of an Event of Default, without implying any obligation to do so, Lender may cease making Credit Extensions or extending any other financial accommodations to Borrower; all or a portion of the Obligations shall be, at the option of and upon demand by Lender, or with respect to an Event of Default described in Section 7.1(e), automatically and without notice or demand, due and payable in full; and Lender shall have and may exercise all the rights and remedies under this Agreement and under applicable law, including the rights and remedies of a secured party under the UCC, all the power of attorney rights described in Section 6 with respect to all Collateral, and the right to collect, dispose of, sell, lease, use, and realize upon all Receivables and all Collateral in any commercially reasonable manner.

8. **ACCRUAL OF INTEREST.** All interest and finance charges hereunder calculated at an annual rate shall be based on a year of 360 days, which results in a higher effective rate of interest than if a year of 365 or 366 days were used. Lender may charge interest, finance charges and fees based upon the projected amounts thereof as of the due dates therefor, and adjust subsequent charges to account for the actual accrued amounts. If any amount due under Section 2.2, amounts due under Section 9, and any other Obligations not otherwise bearing interest hereunder is not paid when due, such amount shall bear interest at a per annum rate equal to the Finance Charge Percentage until the earlier of payment in good funds or entry of a trial judgment thereof, at which time the principal amount of any money judgment remaining unsatisfied shall accrue interest at the highest rate allowed by applicable law.

9. FEES, COSTS AND EXPENSES; INDEMNIFICATION. Borrower will pay to Lender upon demand all fees, costs and expenses (including fees of attorneys and professionals and their costs and expenses) that Lender incurs or may from time to time impose in connection with any of the following: preparing, negotiating, administering, and enforcing this Agreement or any other agreement executed in connection herewith, including any amendments, waivers or consents in connection with any of the foregoing, any litigation or dispute (whether instituted by Lender, Borrower or any other person) in any way relating to the Receivables, the Collateral, this Agreement or any other agreement executed in connection herewith or therewith, enforcing any rights against Borrower or any guarantor, or any Account Debtor, protecting or enforcing its interest in the Receivables or the Collateral, collecting the Receivables and the Obligations, or the representation of Lender in connection with any bankruptcy case or insolvency proceeding involving Borrower, any Receivable, the Collateral, any Account Debtor, or any guarantor. Borrower shall indemnify and hold Lender harmless from and against any and all claims, actions, damages, costs, expenses, and liabilities of any nature whatsoever arising in connection with any of the foregoing.

10. INTEGRATION, SEVERABILITY WAIVER, CHOICE OF LAW, FORUM AND VENUE.

10.1 This Agreement and any related security or other agreements required by this Agreement, collectively: represent the sum of the understandings and agreements between Lender and Borrower concerning this credit; replace any prior oral or written agreements between Lender and Borrower concerning this credit; and are intended by Lender and Borrower as the final, complete and exclusive statement of the terms agreed to by them. In the event of any conflict between this Agreement and any other agreements required by this Agreement, this Agreement will prevail. If any provision of this Agreement is deemed invalid by reason of law, this Agreement will be construed as not containing such provision and the remainder of the Agreement shall remain in full force and effect. Lender retains all of its rights, even if it makes a Credit Extension after a default. If Lender waives a default, it may enforce a later default. Any consent or waiver under, or amendment of, this Agreement must be in writing, and no such consent, waiver, or amendment shall imply any obligation by Lender to make any subsequent consent, waiver, or amendment.

10.2 THIS AGREEMENT SHALL BE GOVERNED BY AND INTERPRETED IN ACCORDANCE WITH THE INTERNAL LAWS OF THE STATE OF CALIFORNIA. THE PARTIES HERETO AGREE THAT ALL ACTIONS OR PROCEEDINGS ARISING IN CONNECTION WITH THIS AGREEMENT OR ANY OTHER RELATED DOCUMENTS SHALL BE TRIED AND LITIGATED ONLY IN THE STATE AND FEDERAL COURTS LOCATED IN THE COUNTY OF SANTA CLARA, CALIFORNIA, OR, AT THE SOLE OPTION OF LENDER, IN ANY OTHER COURT IN WHICH LENDER SHALL INITIATE LEGAL OR EQUITABLE PROCEEDINGS AND WHICH HAS JURISDICTION OVER THE SUBJECT MATTER AND PARTIES IN CONTROVERSY. EACH PARTY HERETO WAIVES ANY RIGHT TO ASSERT THE DOCTRINE OF FORUM NON CONVENIENS OR TO OBJECT TO VENUE TO THE EXTENT ANY PROCEEDING IS BROUGHT IN ACCORDANCE WITH THIS SECTION AND STIPULATES THAT THE STATE AND FEDERAL COURTS LOCATED IN THE COUNTY OF SANTA CLARA, CALIFORNIA SHALL HAVE IN PERSONAM JURISDICTION AND VENUE OVER EACH SUCH PARTY FOR THE PURPOSE OF LITIGATING ANY SUCH DISPUTE, CONTROVERSY, OR PROCEEDING ARISING OUT OF OR RELATED TO THIS AGREEMENT, OR ANY OTHER RELATED DOCUMENTS. SERVICE OF PROCESS SUFFICIENT FOR PERSONAL JURISDICTION IN ANY ACTION AGAINST THE BORROWER MAY BE MADE BY REGISTERED OR CERTIFIED MAIL, RETURN RECEIPT REQUESTED, TO ITS ADDRESS SPECIFIED FOR NOTICES PURSUANT TO SECTION 11.

11. NOTICES; TELEPHONIC AND TELEFAX AUTHORIZATIONS. All notices shall be given to Lender and Borrower at the addresses or faxes set forth on the signature page of this agreement and shall be deemed to have been delivered and received: if mailed, three (3) calendar days after deposited in the United States mail, first class, postage pre-paid, one (1) calendar day after deposit with an overnight mail or messenger service; or on the same date of confirmed transmission if sent by hand delivery, telecopy, telefax or telex. Lender may honor telephone or telefax instructions for Credit Extensions or repayments given, or purported to be given, by any one of the Authorized Persons. Borrower will indemnify and hold Lender harmless from all liability, loss, and costs in connection with any act resulting from telephone or telefax instructions Lender reasonably believes are made by any Authorized Person. This paragraph will survive this Agreement's termination, and will benefit Lender and its officers, employees, and agents.

12. CO-BORROWERS.

12.1 Co-Borrowers. Borrowers are jointly and severally liable for the Obligations and Lender may proceed against one Borrower to enforce the Obligations without waiving its right to proceed against the other Borrower. This Agreement and the Loan Documents are a primary and original obligation of each Borrower and shall remain in effect notwithstanding future changes in conditions, including any change of law or any invalidity or irregularity in the creation or acquisition of any Obligations or in the execution or delivery of any agreement between Lender and any Borrower. Each Borrower shall be liable for existing and future Obligations as fully as if all of the Credit Extensions were advanced to such Borrower. Lender may rely on any certificate or representation made by any Borrower as made on behalf of, and binding on, each Borrower, including without limitation Advance Request Forms and Compliance Certificates. Each Borrower appoints each other Borrower as its agent with all necessary power and authority to give and receive notices, certificates or demands for and on behalf of each Borrower, to act as disbursing agent for receipt of any Advances on behalf of each Borrower and to apply to Lender on behalf of each Borrower for Advances, any waivers and any consents. This authorization cannot be revoked, and Lender need not inquire as to one Borrower's authority to act for or on behalf of another Borrower.

12.2 Subrogation and Similar Rights. Notwithstanding any other provision of this Agreement or any other Loan Document, each Borrower irrevocably waives, until all Obligations (other than inchoate indemnity obligations) are paid in full and Lender has no further obligation to make Credit Extensions to each Borrower, all rights that it may have at law or in equity (including, without limitation, any law subrogating a Borrower to the rights of Lender under the Loan Documents) to seek contribution, indemnification, or any other form of reimbursement from any other Borrower, or any other Person now or hereafter primarily or secondarily liable for any of the Obligations, for any payment made by a Borrower with respect to the Obligations in connection with the Loan Documents or otherwise and all rights that it might have to benefit from, or to participate in, any security for the Obligations as a result of any payment made by a Borrower with respect to the Obligations in connection with the Loan Documents or otherwise. Any agreement providing for indemnification, reimbursement or any other arrangement prohibited under this Section shall be null and void. If any payment is made to a Borrower in contravention of this Section, such Borrower shall hold such payment in trust for Lender and such payment shall be promptly delivered to Lender for application to the Obligations, whether matured or unmatured.

12.3 Waivers of Notice. Each Borrower waives, to the extent permitted by law, notice of acceptance hereof; notice of the existence, creation or acquisition of any of the Obligations; notice of an Event of Default except as set forth herein; notice of the amount of the Obligations outstanding at any time; notice of any adverse change in the financial condition of any other Borrower or of any other fact that might increase a Borrower's risk; presentment for payment; demand; protest and notice thereof as to any instrument; and all other notices and demands to which Borrower would otherwise be entitled by virtue of being a co-borrower or a surety. Each Borrower waives any defense arising from any defense of any other Borrower, or by reason of the cessation from any cause whatsoever of the liability of any other Borrower. Lender's failure at any time to require strict performance by any Borrower of any provision of the Loan Documents shall not waive, alter or diminish any right of Lender thereafter to demand strict compliance and performance therewith. Each Borrower also waives any defense arising from any act or omission of Lender that changes the scope of Borrower's risks hereunder. Each Borrower hereby waives any right to assert against Lender any defense (legal or equitable), setoff, counterclaim, or claims that such Borrower individually may now or hereafter have against another Borrower or any other Person liable to Lender with respect to the Obligations in any manner or whatsoever.

12.4 Subrogation of Defenses. For so long as any Obligations are outstanding or Lender has any obligations to make Credit Extensions to Borrower hereunder, each Borrower hereby agrees not to assert any defense based on impairment or destruction of its subrogation or other rights against any other Borrower and waives all benefits which might otherwise be available to it under California Civil Code Sections 2809, 2810, 2819, 2839, 2845, 2848, 2849, 2850, 2899, and 3433 and California Code of Civil Procedure Sections 580a, 580b, 580d and 726, as those statutory provisions are now in effect and hereafter amended, and under any other similar statutes now and hereafter in effect. This Section 14.4 shall have no further force or effect and shall terminate automatically upon the indefeasible repayment in full in cash of all Obligations owing to Lender and the termination of this Agreement and Lender's obligation to make Credit Extensions to Borrower hereunder.

12.5 Right to Settle, Release.

12.5.1 The liability of Borrower hereunder shall not be diminished by (i) any agreement, understanding or representation that any of the Obligations is or was to be guaranteed by another Person or secured by other property, or (ii) any release or unenforceability, whether partial or total, of rights, if any, which Lender may now or hereafter have against any other Person, including another Borrower, or property with respect to any of the Obligations.

12.5.2 Without notice to any given Borrower and without affecting the liability of any given Borrower hereunder, Lender may (i) compromise, settle, renew, extend the time for payment, change the manner or terms of payment, discharge the performance of, decline to enforce, or release all or any of the Obligations with respect to any other Borrower by written agreement with such other Borrower, (ii) grant other indulgences to another Borrower in respect of the Obligations, (iii) modify in any manner any documents relating to the Obligations with respect to any other Borrower by written agreement with such other Borrower, (iv) release, surrender or exchange any deposits or other property securing the Obligations, whether pledged by a Borrower or any other Person, or (v) compromise, settle, renew, or extend the time for payment, discharge the performance of, decline to enforce, or release all or any obligations of any guarantor, endorser or other Person who is now or may hereafter be liable with respect to any of the Obligations.

12.6 **Subordination**. All indebtedness of a Borrower now or hereafter arising held by another Borrower, except as disclosed in the Disclosure Letter, is subordinated to the Obligations and Borrower holding the indebtedness shall take all actions requested by Lender to effect, to enforce and to give notice of such subordination.

13. DEFINITIONS AND CONSTRUCTION.

13.1 **Definitions**. In this Agreement:

"**Account Balance**" means at any time the aggregate of the Advances outstanding as reflected on the records maintained by Lender, together with any past due Finance Charges thereon.

"**Account Debtor**" has the meaning in the UCC and includes any person liable on any Receivable, including without limitation, any guarantor of any Receivable and any issuer of a letter of credit or banker's acceptance assuring payment thereof.

"**Adjustments**" means all discounts, allowances, disputes, offsets, defenses, rights of recoupment, rights of return, warranty claims, or short payments, asserted by or on behalf of any Account Debtor with respect to any Receivable.

"**Advance**" means an advance made by Lender to Borrower under this Agreement.

"**Advance Request**" means a writing in form and substance satisfactory to Lender and signed by an Authorized Person requesting an Advance.

"**Affiliate**" means, as to any person or entity, any other person or entity directly or indirectly controlling or controlled by, or under direct or indirect common control with, such person or entity.

"**Agreement**" means this Business Financing Agreement.

"**Authorized Person**" means Borrower (if an individual) or any one of the individuals authorized to sign on behalf of Borrower, and any other individual designated by any one of such authorized signers.

"**Availability Amount**" means the lesser of (a) the Credit Limit or (b) the Borrowing Base, minus the outstanding principal balance of Advances.

"**Average EBDAS**" means, as of the date of determination, (a) EBDAS measured for the trailing three (3) months then ended, divided by (b) three (3).

"**Borrower**" is defined in the preamble of this Agreement.

"**Borrower's Account**" means Borrower's general operating account maintained with Lender, into which all Credit Extensions will be deposited unless otherwise instructed by Borrower in writing.

"**Borrowing Base**" means at any time the sum of (i) the Eligible Receivable Amount multiplied by the Eligible Receivable Advance Rate plus (ii) the lesser of (x) the Eligible Inventory Value or (y) the Inventory Sublimit (provided, however, that the Borrowing Base shall not be comprised of more than forty percent (40%) of Eligible Inventory and no Eligible Inventory shall be part of the Borrowing Base until Lender has received an inventory appraisal satisfactory to Lender), minus (iii) such reserves as Lender may deem proper and necessary from time to time.

"**Borrowing Base Certificate**" is defined in Section 4.14(g).

"**Cash Management Services**" is defined in Section 1.1(h).

"Cash Management Sublimit" means One Hundred Fifty Thousand Dollars ($150,000).

"**Collateral**" means all of Borrower's rights and interest in any and all personal property, whether now existing or hereafter acquired or created and wherever located, and all products and proceeds thereof and accessions thereto, including but not limited to the following (collectively, the "**Collateral**"): (a) all accounts (including health care insurance receivables), chattel paper (including tangible and electronic chattel paper), Inventory (including all goods held for sale or lease or to be furnished under a contract for service, and including returns and repossessions), equipment (including all accessions and additions thereto), instruments (including promissory notes), investment property (including securities and securities entitlements), documents (including negotiable documents), deposit accounts, letter of credit rights, money, any commercial tort claim of Borrower which is now or hereafter identified by Borrower or Lender, general intangibles (including payment intangibles and software), goods (including fixtures) and all of Borrower's books and records with respect to any of the foregoing, and the computers and equipment containing said books and records; and (b) any and all cash proceeds and/or noncash proceeds thereof, including without limitation, insurance proceeds, and all supporting obligations and the security therefore or for any right to payment. Notwithstanding the foregoing, Collateral shall not include (a) rights of Borrower held under a license that are not assignable by their terms without the consent of the licensor thereof (but only to the extent such restriction on assignment is enforceable under applicable law), (b) any interest of Borrower as a lessee or sublessee under a real property lease or an equipment lease if Borrower is prohibited by the terms of such lease from granting a security interest in such lease or under which such an assignment or Lien would cause a default to occur under such lease (but only to the extent that such prohibition is enforceable under all applicable laws including, without limitation, the UCC); provided, however, that upon termination of such prohibition, such interest shall immediately become Collateral without any action by Borrower or Lender or (c) any intent-to-use trademark application prior to the filing of a "Statement of Use" or "Amendment to Allege Use" with respect thereto, to the extent, if any, that, and solely during the period, if any, in which the grant of a security interest therein would impair the validity or enforceability of such intent-to-use trademark application under applicable federal law.

"**Collection Account**" means the deposit account maintained with Lender which, pursuant to the Lockbox Agreement, all Collections received in the Lockbox are to be deposited, and as to which Borrower has no right to withdraw funds.

"**Collections**" means all payments from or on behalf of an Account Debtor with respect to Receivables.

"**Compliance Certificate**" means a certificate in the form attached as Exhibit A to this Agreement by an Authorized Person that, among other things, the representations and warranties set forth in this Agreement are true and correct in all material respects as of the date such certificate is delivered.

"**Credit Extension**" means each Advance or any other extension of credit by Lender for the benefit of Borrower hereunder.

"**Credit Limit**" means Seven Million Dollars ($7,000,000), which is intended to be the maximum amount of Advances at any time outstanding.

"**Default**" means any Event of Default or any event that with notice would constitute an Event of Default.

"**Deferred Revenue**" is all amounts received or invoiced, as appropriate, in advance of performance under contracts and not yet recognized as revenue.

"**Disclosure Letter**" means that certain Disclosure Letter delivered to Lender by Borrower on the date hereof.

"**Due Diligence Fee**" means a payment of an annual fee equal to Nine Hundred Dollars ($900) due upon the date of this Agreement and Nine Hundred Dollars ($900) due upon each anniversary thereof so long as any Advance is outstanding or available hereunder.

"**EBDAS**" means net income before depreciation and amortization expenses and non-cash stock compensation expenses.

"**Eligible Inventory**" means Inventory which shall be valued in accordance with the definition of "Eligible Inventory Value", and which satisfies the following requirements:

(a) the Inventory is owned by Borrower free of any title defects or any liens or interests of others except the security interest in favor of Lender;

(b) the Inventory is held for sale or use in the ordinary course of Borrower's business and is of good and merchantable quality. Display items, raw materials, work-in-process, parts, samples, and packing and shipping materials are not eligible. Inventory which is obsolete, unsalable, damaged, defective, used, discontinued, perishable or slow-moving, or which has been returned by the buyer, is not eligible;

(c) the Inventory is covered by insurance as required in Section 4.4 of this Agreement;

(d) the Inventory has not been manufactured to the specifications of a particular Account Debtor;

(e) the Inventory is not subject to any licensing agreements which would prohibit or restrict in any way the ability of Lender to sell the Inventory (including its packaging) to third parties;

(f) the portion of the Inventory actually manufactured or assembled by Borrower has been produced in compliance with the requirements of the U.S. Fair Labor Standards Act (29 U.S.C. §§201 et seq.);

(g) the Inventory is not on consignment;

(h) the Inventory is located in the United States and is located at the locations identified by Borrower in the Perfection Certificate where it maintains Inventory for which Lender has received a landlord waiver or a bailee agreement in form and substance satisfactory to Lender signed by the landlord or bailee, as applicable;

(i) Lender has received an audit on the Inventory satisfactory to Lender in its sole discretion; and

(j) the Inventory is otherwise acceptable to Lender in the exercise of its sole discretion.

"**Eligible Inventory Value**" means for Inventory, forty-five percent (45%) of the book value of such Eligible Inventory, or such greater or lesser percentage as Lender may from time to time establish in its sole discretion upon notice to Borrower.

"**Eligible Jurisdiction**" means the United States and any Province in Canada except for the Province of Quebec.

"**Eligible Receivable**" means a Receivable that satisfies all of the following:

(a) The Receivable has been created by Borrower in the ordinary course of Borrower's business and without any obligation on the part of Borrower to render any further performance.

(b) There are no conditions which must be satisfied before Borrower is entitled to receive payment of the Receivable, and the Receivable does not arise from COD sales, consignments or guaranteed sales.

(c) The Account Debtor upon the Receivable does not claim any defense to payment of the Receivable, whether well founded or otherwise.

(d) The Receivable is not the obligation of an Account Debtor who has asserted or may be reasonably be expected to assert any counterclaims or offsets against Borrower (including offsets for any "contra accounts" owed by Borrower to the Account Debtor for goods purchased by Borrower or for services performed for Borrower).

(e) The Receivable represents a genuine obligation of the Account Debtor and to the extent any credit balances exist in favor of the Account Debtor, such credit balances shall be deducted in calculating the Receivable Amount.

(f) Borrower has sent an invoice to the Account Debtor in the amount of the Receivable.

(g) Borrower is not prohibited by the laws of the state where the Account Debtor is located from bringing an action in the courts of that state to enforce the Account Debtor's obligation to pay the Receivable. Borrower has taken all appropriate actions to ensure access to the courts of the state where Account Debtor is located, including, where necessary; the filing of a Notice of Business Activities Report or other similar filing with the applicable state agency or the qualification by Borrower as a foreign corporation authorized to transact business in such state.

(h) The Receivable is owned by Borrower free of any title defects or any liens or interests of others except the security interest in favor of Lender, and Lender has a perfected, first priority security interest in such Receivable.

(i) The Account Debtor on the Receivable is not any of the following: an employee, Affiliate, parent or subsidiary of Borrower, or an entity which has common officers or directors with Borrower; the U.S. government or any agency or department of the U.S. government unless Borrower complies with the procedures in the Federal Assignment of Claims Act of 1940 (41 U.S.C. §15) with respect to the Receivable, and the underlying contract expressly provides that neither the U.S. government nor any agency or department thereof shall have the right of set-off against Borrower, provided that such Receivables may be permitted to be included as Eligible Receivables hereunder by Lender in its sole discretion on a case-by-case basis; any person or entity located outside an Eligible Jurisdiction, unless the Receivable is supported by an irrevocable letter of credit issued by a bank acceptable to Lender, and if requested by Lender, the original of such letter of credit and/or any usance drafts drawn under such letter of credit and accepted by the issuing or confirming bank have been delivered to Lender or the Receivable is supported by other insurance, bond, or assurance acceptable to Lender, provided that such Receivables may be permitted to be included as Eligible Receivables hereunder by Lender in its sole discretion on a case-by-case basis; or an Account Debtor as to which thirty-five percent (35%) or more of the aggregate dollar amount of all outstanding Receivables owing from such Account Debtor have not been paid within ninety (90) days from invoice date.

(j) The Receivable is not in default (a Receivable will be considered in default if any of the following occur: the Receivable is not paid within ninety (90) days from its invoice date, provided that such Receivables may be permitted to be included as Eligible Receivables hereunder by Lender in its sole discretion on a case-by-case basis; the Account Debtor obligated upon the Receivable suspends business, makes a general assignment for the benefit of creditors, or fails to pay its debts generally as they come due; or any petition is filed by or against the Account Debtor obligated upon the Receivable under any bankruptcy law or any other law or laws for the relief of debtors).

(k) The Receivable does not arise from the sale of goods which remain in Borrower's possession or under Borrower's control.

(l) The Receivable is not subject to contractual arrangements between Borrower and an Account Debtor where payments shall be scheduled or due according to completion or fulfillment requirements (sometimes called contracts accounts receivable, progress billings, milestone billings, or fulfillment contracts), or owing from an Account Debtor the amount of which may be subject to withholding based on the Account Debtor's satisfaction of Borrower's complete performance (but only to the extent of the amount withheld; sometimes called retainage billings).

(m) The Receivable is not owing from an Account Debtor with respect to which Borrower has received Deferred Revenue (but only to the extent of such Deferred Revenue); provided that such Receivables may be permitted to be included as Eligible Receivables hereunder by Lender in its sole discretion on a case-by-case basis.

(n) The Receivable is not evidenced by a promissory note or chattel paper, nor is the Account Debtor obligated to Borrower under any other obligation which is evidenced by a promissory note.

(o) The Receivable is not that portion of Receivables due from an Account Debtor which is in excess of thirty percent (30%) of Borrower's aggregate dollar amount of all outstanding Receivables.

(p) The Receivable is not owing from an Account Debtor that has been invoiced for goods that have not been shipped to the Account Debtor unless Bank, Borrower, and the Account Debtor have entered into an agreement acceptable to Bank wherein the Account Debtor acknowledges that (1) it has title to and has ownership of the goods wherever located, (2) a bona fide sale of the goods has occurred, and (3) it owes payment for such goods in accordance with invoices from Borrower (sometimes called "bill and hold" accounts)

(q) The Receivable is not owing from Elysian Health, Covance, or any of their affiliates.

(r) The Receivable is not owing from A.S Watson Group or any of its affiliates unless covered by foreign credit insurance acceptable to Lender.

(s) The Receivable is otherwise acceptable to Lender in the exercise of its sole discretion.

"**Eligible Receivable Advance Rate**" means eighty percent (80%) or such lesser rate as Lender may establish in its discretion to the extent the twelve (12) month dilution of Receivables (excluding Elysian Health and Covance) deteriorates by more than five percent (5.0%).

"Eligible Receivable Amount" means at any time the sum of the Receivable Amounts of the Eligible Receivables.

"**ERISA**" means the Employee Retirement Income Security Act of 1974, as amended, and the regulations thereunder.

"**Event of Default**" has the meaning set forth in Section 7.1.

"**Finance Charge**" means an interest amount equal to the Finance Charge Percentage of the ending daily Account Balance for the relevant period.

"**Finance Charge Percentage**" means a floating rate per year equal to the Prime Rate plus one and one half of one percent (1.50%), plus an additional five percent (5.00%) during any period that an Event of Default has occurred and is continuing.

"**GAAP**" means generally accepted accounting principles consistently applied and used consistently with prior practices.

"**International Sublimit**" means Five Hundred Thousand Dollars ($500,000).

"**Inventory**" means and includes all of Borrower's now owned or hereafter acquired goods, merchandise and other personal property, wherever located, to be furnished under any consignment, arrangement, contract of service or held for sale or lease, all raw materials, work in process, finished goods and materials and supplies of any kind, nature or description which are or might be used or consumed in Borrower's business or used in selling or furnishing such goods, merchandise and other personal property, and all documents of title or other documents representing them.

"**Inventory Sublimit**" means Three Million Dollars ($3,000,000).

"**Investment**" means any beneficial ownership of (including stock, partnership interest or other securities) any Person, or any loan, advance or capital contribution to any Person.

"**Lender**" means WESTERN ALLIANCE BANK, an Arizona corporation, and its successors and assigns.

"**Letter of Credit**" has the meaning set forth in Section 1.1(i).

"**Letter of Credit Obligation**" means, at any time, the sum of, without duplication, (a) the maximum amount available to be drawn on all outstanding Letters of Credit issued by Lender or by Lender's Affiliate and (b) the aggregate amount of all amounts drawn and unreimbursed with respect to Letters of Credit issued by Lender or by Lender's Affiliate.

"**Liquidity**" means an amount equal to Borrower's unrestricted and unencumbered cash at Lender, plus the Availability Amount.

"**Loan Documents**" is defined in Section 14.2.

"**Lockbox**" is defined in the Lockbox Agreement.

"**Lockbox Agreement**" is defined in Section 1.1(d)(i).

"**Maturity Date**" means twenty-four (24) months from the date hereof or such earlier date as Lender shall have declared the Obligations immediately due and payable pursuant to Section 7.2.

"**Month End**" means the last calendar day of each month.

"**Obligations**" means all liabilities and obligations of Borrower to Lender of any kind or nature, present or future, arising under or in connection with this Agreement or under any other document, instrument or agreement, whether or not evidenced by any note, guarantee or other instrument, whether arising on account or by overdraft, whether direct or indirect (including those acquired by assignment) absolute or contingent, primary or secondary, due or to become due, now owing or hereafter arising, and however acquired; including, without limitation, all Credit Extensions, Finance Charges, Revolving Facility Fee, Revolving Termination Fee, fees, interest, expenses, professional fees and attorneys' fees.

"**Overadvance**" means at any time an amount equal to the greater of (a) the amounts (if any) by which the total amount of the outstanding Advances (including deemed Advances with respect to the International Sublimit and the total amount of the Cash Management Sublimit) exceeds the lesser of the Credit Limit or the Borrowing Base or (b) the amounts (if any) by which the total amount of the outstanding deemed Advances with respect to the International Sublimit or the Cash Management Sublimit exceeds its respective Subfacility Maximum.

"**Perfection Certificate**" means that certain completed certificate signed by Borrower, entitled "Perfection Certificate" and delivered to Lender on or about the Closing Date in connection with this Agreement.

"**Permitted Indebtedness**" means:

(a) Indebtedness under this Agreement or that is otherwise owed to Lender.

(b) Indebtedness existing on the date hereof and specifically disclosed on a schedule to the Disclosure Letter.

(c) Purchase money indebtedness (including capital leases) incurred to acquire capital assets in ordinary course of business and not exceeding One Million Dollars ($1,000,000) in total principal amount at any time outstanding.

(d) Indebtedness to trade creditors incurred in the ordinary course of business.

(e) Other indebtedness in an aggregate amount not to exceed Two Hundred Fifty Thousand Dollars ($250,000) at any time outstanding; provided that such indebtedness is junior in priority (if secured) to the Obligations and provided that the incurrence of such Indebtedness does not otherwise cause an Event of Default hereunder.

(f) Indebtedness incurred in the refinancing of any indebtedness set forth in (a) through (e) above, provided that the principal amount thereof is not increased and the terms thereof are not modified to impose more burdensome terms upon Borrower.

(g) Subordinated Debt.

"**Permitted Investment**" means:

(a) Investments existing on the Closing Date and specifically disclosed on a schedule to the Disclosure Letter;

(b) Investments (i) by Borrower in subsidiaries not to exceed Two Hundred Fifty Thousand Dollars ($250,000) in the aggregate in any fiscal year and (ii) by Subsidiaries in other Subsidiaries or in Borrower;

(c) Investments consisting of travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business;

(d) other Investments not to exceed One Hundred Thousand Dollars ($100,000) in the aggregate in any fiscal year of the Borrower; and

(e) (i) marketable direct obligations issued or unconditionally guaranteed by the United States of America or any agency or any State thereof maturing within one (1) year from the date of acquisition thereof, (ii) commercial paper maturing no more than one (1) year from the date of creation thereof and currently having rating of at least A-2 or P-2 from either Standard & Poor's Corporation or Moody's Investors Service, (iii) certificates of deposit maturing no more than one (1) year from the date of investment therein issued by Lender and (iv) Lender's money market accounts.

"**Permitted Liens**" means the following but only with respect to property not consisting of Receivables or Inventory:

(a) Liens securing any of the indebtedness described in clauses (a) through (d) of the definition of Permitted Indebtedness.

(b) Liens for taxes, fees, assessments or other governmental charges or levies, either not delinquent or being contested in good faith by appropriate proceedings, provided the same have no priority over any of Lender's security interest in the Collateral.

(c) Liens incurred in connection with the extension, renewal or refinancing of the indebtedness described in clause (f) of the definition of Permitted Indebtedness, provided that any extension, renewal or replacement lien shall be limited to the property encumbered by the existing lien and the principal amount of the indebtedness being extended, renewed or refinanced does not increase.

(d) Liens securing Subordinated Debt.

(e) carriers', warehousemen's, mechanics', materialmen's, repairmen's or other similar Liens arising in the ordinary course of business by operation of law (and that do not secure borrowed money) which are not delinquent or remain payable without penalty.

(f) Liens upon any equipment or other personal property acquired by Borrower after the date hereof not to exceed One Million Dollars ($1,000,000) in the aggregate to secure (i) the purchase price of such equipment or other personal property, or (ii) lease obligations or indebtedness incurred solely for the purpose of financing the acquisition, construction, installation, development or improvement of such equipment or other personal property provided that such Liens are confined solely to the equipment or other personal property so acquired, constructed, installed, developed or improved and the amount secured does not exceed the cost of such acquisition, installation, development or improvement.

(g) non-exclusive licenses of Intellectual Property entered into in the ordinary course of business.

(h) Judgment liens that do not constitute an Event of Default hereunder.

(i) Liens on cash for the purpose of securing obligations of Borrower for services provided with respect to cash management accounts, provided such Liens apply only to cash held in such management accounts.

(j) deposits or pledges made in connection with, or to secure payment of, workmen's compensation, unemployment insurance, old age pensions or other social security obligations and good faith deposits in connection with tenders, contracts or leases which Borrower or any Subsidiary deposits or pledges to secure, or in lieu of, surety, penalty or appeal bonds, performance bonds or other similar obligations not to exceed One Hundred Thousand Dollars ($100,000) in the aggregate.

"**Person**" means any individual, sole proprietorship, partnership, limited liability company, joint venture, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or governmental agency.

"**Prime Rate**" means the greater of four and three quarters of one percent (4.75%) per year or the Prime Rate published in the Money Rates section of the Western Edition of The Wall Street Journal, or such other rate of interest publicly announced from time to time by Lender as its Prime Rate. Lender may price loans to its customers at, above, or below the Prime Rate. Any change in the Prime Rate shall take effect at the opening of business on the day specified in the public announcement of a change in the Prime Rate.

"**Receivable Amount**" means as to any Receivable, the Receivable Amount due from the Account Debtor after deducting all discounts, credits, offsets, payments or other deductions of any nature whatsoever, whether or not claimed by the Account Debtor.

"**Receivables**" means Borrower's rights to payment arising in the ordinary course of Borrower's business, including accounts, chattel paper, instruments, contract rights, documents, general intangibles, letters of credit, drafts, and bankers acceptances.

"**Revolving Facility Fee**" means a payment of a fully earned and non-refundable annual fee equal to one half of one percent (0.50%) of the Credit Limit, due upon the date of this Agreement and each anniversary thereof so long as any Advance is outstanding or available hereunder.

"**Revolving Termination Fee**" means a payment equal to one percent (1.0%) of the Credit Limit.

"**RML**" means Liquidity, divided by the absolute value of Average EBDAS.

"**Streamline Period**" is, on and after the Closing Date, provided no Event of Default has occurred and is continuing, the period (a) commencing on the first day of the month following the day that Borrower provides to Lender a written report that Borrower has, as of the immediately preceding Month End maintained a RML as determined by Lender in its judgment, of at least 6 months (the "**Streamline Threshold**"); and (b) terminating on the earlier to occur of (i) the occurrence of an Event of Default, or (ii) the first day thereafter in which Borrower fails to maintain the Streamline Threshold, as determined by Lender in its judgment. Upon the termination of a Streamline Period, Borrower must maintain the Streamline Threshold for two (2) consecutive months as determined by Lender in its judgment, prior to entering into a subsequent Streamline Period. Each such Streamline Period shall commence on the first day of the month following the date Lender determines, in its judgment, that the Streamline Threshold has been achieved.

"**Subfacility Maximum**" means (a) One Hundred Fifty Thousand Dollars ($150,000) for the Cash Management Sublimit and (b) Five Hundred Thousand Dollars ($500,000) for the International Sublimit.

"**Subordinated Debt**" means indebtedness of Borrower that is expressly subordinated to the indebtedness of Borrower owed to Lender pursuant to a subordination agreement satisfactory in form and substance to Lender.

"**Transition Date**" has the meaning set forth in Section 4.15.

"**UCC**" means the California Uniform Commercial Code, as amended or supplemented from time to time.

13.2 Construction:

(a) In this Agreement: references to the plural include the singular and to the singular include the plural; references to any gender include any other gender; the terms "include" and "including" are not limiting; the term "or" has the inclusive meaning represented by the phrase "and/or," unless otherwise specified, section and subsection references are to this Agreement, and any reference to any statute, law, or regulation shall include all amendments thereto and revisions thereof.

(b) Neither this Agreement nor any uncertainty or ambiguity herein shall be construed or resolved using any presumption against either Borrower or Lender, whether under any rule of construction or otherwise. On the contrary, this Agreement has been reviewed by each party hereto and their respective counsel. In case of any ambiguity or uncertainty, this Agreement shall be construed and interpreted according to the ordinary meaning of the words used to accomplish fairly the purposes and intentions of all parties hereto.

(c) Titles and section headings used in this Agreement are for convenience only and shall not be used in interpreting this Agreement.

14. JURY TRIAL WAIVER. THE UNDERSIGNED ACKNOWLEDGE THAT THE RIGHT TO TRIAL BY JURY IS A CONSTITUTIONAL ONE, BUT THAT IT MAY BE WAIVED UNDER CERTAIN CIRCUMSTANCES. TO THE EXTENT PERMITTED BY LAW, EACH PARTY, AFTER CONSULTING (OR HAVING HAD THE OPPORTUNITY TO CONSULT) WITH COUNSEL OF ITS, HIS OR HER CHOICE, KNOWINGLY AND VOLUNTARILY, AND FOR THE MUTUAL BENEFIT OF ALL PARTIES, WAIVES ANY RIGHT TO TRIAL BY JURY IN THE EVENT OF LITIGATION ARISING OUT OF OR RELATED TO THIS AGREEMENT OR ANY OTHER DOCUMENT, INSTRUMENT OR AGREEMENT BETWEEN THE UNDERSIGNED PARTIES.

15. JUDICIAL REFERENCE PROVISION.

15.1 In the event the Jury Trial Waiver set forth above is not enforceable, the parties elect to proceed under this Judicial Reference Provision.

15.2 With the exception of the items specified in Section 15.3, below, any controversy, dispute or claim (each, a "**Claim**") between the parties arising out of or relating to this Agreement or any other document, instrument or agreement between the undersigned parties (collectively in this section, the "**Loan Documents**") will be resolved by a reference proceeding in California in accordance with the provisions of Sections 638 et seq. of the California Code of Civil Procedure ("**CCP**"), or their successor sections, which shall constitute the exclusive remedy for the resolution of any Claim, including whether the Claim is subject to the reference proceeding. Except as otherwise provided in the Loan Documents, venue for the reference proceeding will be in the state or federal court in the county or district where the real property involved in the action, if any, is located or in the state or federal court in the county or district where venue is otherwise appropriate under applicable law (the "**Court**").

15.3 The matters that shall not be subject to a reference are the following: nonjudicial foreclosure of any security interests in real or personal property, exercise of self-help remedies (including, without limitation, set-off), appointment of a receiver, and temporary, provisional or ancillary remedies (including, without limitation, writs of attachment, writs of possession, temporary restraining orders or preliminary injunctions). This reference provision does not limit the right of any party to exercise or oppose any of the rights and remedies described in clauses (a) and (b) or to seek or oppose from a court of competent jurisdiction any of the items described in clauses (c) and (d). The exercise of, or opposition to, any of those items does not waive the right of any party to a reference pursuant to this reference provision as provided herein.

15.4 The referee shall be a retired judge or justice selected by mutual written agreement of the parties. If the parties do not agree within ten (10) days of a written request to do so by any party, then, upon request of any party, the referee shall be selected by the Presiding Judge of the Court (or his or her representative). A request for appointment of a referee may be heard on an ex parte or expedited basis, and the parties agree that irreparable harm would result if ex parte relief is not granted. Pursuant to CCP § 170.6, each party shall have one peremptory challenge to the referee selected by the Presiding Judge of the Court (or his or her representative).

15.5 The parties agree that time is of the essence in conducting the reference proceedings. Accordingly, the referee shall be requested, subject to change in the time periods specified herein for good cause shown, to set the matter for a status and trial-setting conference within fifteen (15) days after the date of selection of the referee, if practicable, try all issues of law or fact within one hundred twenty (120) days after the date of the conference, and report a statement of decision within twenty (20) days after the matter has been submitted for decision.

15.6 The referee will have power to expand or limit the amount and duration of discovery. The referee may set or extend discovery deadlines or cutoffs for good cause, including a party's failure to provide requested discovery for any reason whatsoever. Unless otherwise ordered based upon good cause shown, no party shall be entitled to "**priority**" in conducting discovery, depositions may be taken by either party upon seven (7) days written notice, and all other discovery shall be responded to within fifteen (15) days after service. All disputes relating to discovery which cannot be resolved by the parties shall be submitted to the referee whose decision shall be final and binding.

15.7 Except as expressly set forth herein, the referee shall determine the manner in which the reference proceeding is conducted including the time and place of hearings, the order of presentation of evidence, and all other questions that arise with respect to the course of the reference proceeding. All proceedings and hearings conducted before the referee, except for trial, shall be conducted without a court reporter, except that when any party so requests, a court reporter will be used at any hearing conducted before the referee, and the referee will be provided a courtesy copy of the transcript. The party making such a request shall have the obligation to arrange for and pay the court reporter. Subject to the referee's power to award costs to the prevailing party, the parties will equally share the cost of the referee and the court reporter at trial.

15.8 The referee shall be required to determine all issues in accordance with existing case law and the statutory laws of the State of California. The rules of evidence applicable to proceedings at law in the State of California will be applicable to the reference proceeding. The referee shall be empowered to enter equitable as well as legal relief, enter equitable orders that will be binding on the parties and rule on any motion which would be authorized in a court proceeding, including without limitation motions for summary judgment or summary adjudication. The referee shall issue a decision at the close of the reference proceeding which disposes of all claims of the parties that are the subject of the reference. Pursuant to CCP § 644, such decision shall be entered by the Court as a judgment or an order in the same manner as if the action had been tried by the Court and any such decision will be final, binding and conclusive. The parties reserve the right to appeal from the final judgment or order or from any appealable decision or order entered by the referee. The parties reserve the right to findings of fact, conclusions of laws, a written statement of decision, and the right to move for a new trial or a different judgment, which new trial, if granted, is also to be a reference proceeding under this provision.

15.9 If the enabling legislation which provides for appointment of a referee is repealed (and no successor statute is enacted), any dispute between the parties that would otherwise be determined by reference procedure will be resolved and determined by arbitration. The arbitration will be conducted by a retired judge or justice, in accordance with the California Arbitration Act §1280 through § 1294.2 of the CCP as amended from time to time. The limitations with respect to discovery set forth above shall apply to any such arbitration proceeding.

15.10 THE PARTIES RECOGNIZE AND AGREE THAT ALL CONTROVERSIES, DISPUTES AND CLAIMS RESOLVED UNDER THIS REFERENCE PROVISION WILL BE DECIDED BY A REFEREE AND NOT BY A JURY. AFTER CONSULTING (OR HAVING HAD THE OPPORTUNITY TO CONSULT) WITH COUNSEL OF ITS, HIS OR HER OWN CHOICE, EACH PARTY KNOWINGLY AND VOLUNTARILY, AND FOR THE MUTUAL BENEFIT OF ALL PARTIES, AGREES THAT THIS REFERENCE PROVISION WILL APPLY TO ANY CONTROVERSY, DISPUTE OR CLAIM BETWEEN OR AMONG THEM ARISING OUT OF OR IN ANY WAY RELATED TO, THIS AGREEMENT OR THE OTHER LOAN DOCUMENTS.

16. EXECUTION, EFFECTIVENESS, SURVIVAL. This Agreement may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. This Agreement and the other documents executed in connection herewith constitute the entire contract among the parties relating to the subject matter hereof and supersede any and all previous agreements and understandings, oral or written, relating to the subject matter hereof. Delivery of an executed counterpart of a signature page of this Agreement by telecopy shall be effective as delivery of a manually executed counterpart of this Agreement. This Agreement shall become effective upon the execution and delivery hereof by Borrower and Lender and shall continue in full force and effect until the Maturity Date and thereafter so long as any Obligations remain outstanding hereunder. Lender reserves the right to issue press releases, advertisements, and other promotional materials describing any successful outcome of services provided on Borrower's behalf. Borrower agrees that Lender shall have the right to identify Borrower by name in those materials.

17. OTHER AGREEMENTS. Any security agreements, liens and/or security interests securing payment of any obligations of Borrower owing to Lender or its Affiliates also secure the Obligations, and are valid and subsisting and are not adversely affected by execution of this Agreement. An Event of Default under this Agreement constitutes a default under other outstanding agreements between Borrower and Lender or its Affiliates.

18. REVIVAL AND REINSTATEMENT OF OBLIGATIONS. If the incurrence or payment of the Obligations by Borrower or any guarantor, or the transfer to Lender of any property should for any reason subsequently be asserted, or declared, to be void or voidable under any state or federal law relating to creditors' rights, including provisions of the United States Bankruptcy Code relating to fraudulent conveyances, preferences, or other voidable or recoverable payments of money or transfers of property (each, a "Voidable Transfer"), and if Lender is required to repay or restore, in whole or in part, any such Voidable Transfer, or elects to do so upon the reasonable advice of its counsel, then, as to any such Voidable Transfer, or the amount thereof that Lender is required or elects to repay or restore, and as to all reasonable costs, expenses, and reasonable attorneys' fees of Lender related thereto, the liability of Borrower and such guarantor automatically shall be revived, reinstated, and restored and shall exist as though such Voidable Transfer had never been made.

19. PATRIOT ACT NOTIFICATION. Lender hereby notifies Borrower that pursuant to the requirements of the USA Patriot Act, Title III of Pub. L. 107-56, signed into law October 26, 2001 ("Patriot Act"), Lender is required to obtain, verify and record information that identifies Borrower, which information includes the names and addresses of Borrower and other information that will allow Lender to identify Borrower in accordance with the Patriot Act.

20. NOTICE OF FINAL AGREEMENT. BY SIGNING THIS DOCUMENT EACH PARTY REPRESENTS AND AGREES THAT: THIS WRITTEN AGREEMENT REPRESENTS THE FINAL AGREEMENT BETWEEN THE PARTIES, THERE ARE NO UNWRITTEN ORAL AGREEMENTS BETWEEN THE PARTIES, AND THIS WRITTEN AGREEMENT MAY NOT BE CONTRADICTED BY EVIDENCE OF ANY PRIOR, CONTEMPORANEOUS, OR SUBSEQUENT ORAL AGREEMENTS OR UNDERSTANDINGS OF THE PARTIES.

[Signature Page Follows.]

IN WITNESS WHEREOF, Borrower and Lender have executed this Agreement on the day and year above written.

BORROWER:

CHROMADEX CORPORATION, A DELAWARE CORPORATION

By /s/ Kevin M. Farr
Name: Kevin M. Farr
Title: CFO

CHROMADEX, INC., A CALIFORNIA CORPORATION
By /s/ Kevin M. Farr
Name: Kevin M. Farr
Title: CFO

CHROMADEX ANALYTICS, INC., A NEVADA CORPORATION
By /s/ Kevin M. Farr
Name: Kevin M. Farr
Title: CFO

HEALTHSPAN RESEARCH LLC, A DELAWARE LIMITED LIABILITY COMPANY

By /s/ Kevin M. Farr
Name: Kevin M. Farr
Title: CFO

Address for Notices:
c/o Chromadex Corporation
10900 Wilshire Blvd., Suite 650
Los Angeles, California 90024
Fax:
Email: kevinf@chromadex.com
Attn: Kevin Farr, CFO

LENDER:

WESTERN ALLIANCE BANK, AN ARIZONA CORPORATION

By /s/ Darin Cunningham
Name: Darin Cunningham
Title: Vice President

Address for Notices:
WESTERN ALLIANCE BANK
600 Anton Blvd., Suite 150
Costa Mesa, CA 92626
Fax:
Email: darin.cunningham@bridgebank.com
Attn: Darin Cunningham

EXHIBIT A
COMPLIANCE CERTIFICATE

TO: WESTERN ALLIANCE BANK, an Arizona corporation (the "**Lender**")

FROM: CHROMADEX CORPORATION, CHROMADEX, INC., CHROMADEX ANALYTICS, INC., and HEALTHSPAN RESEARCH LLC (collectively, "**Borrower**")

The undersigned authorized officer of Borrower hereby certifies that in accordance with the terms and conditions of the Business Financing Agreement among Borrower and Lender (the "Agreement"), (i) Borrower is in complete compliance for the period ending _____ with all required covenants except as noted below and (ii) all representations and warranties of Borrower stated in the Agreement are true and correct in all material respects as of the date hereof. Attached herewith are the required documents supporting the above certification. The Officer further certifies that these are prepared in accordance with Generally Accepted Accounting Principles (GAAP) and are consistently applied from one period to the next except as explained in an accompanying letter or footnotes.

Please indicate compliance status by circling Yes/No under "Complies" column.

Reporting Covenant	**Required**	**Complies**	
Monthly financial statements (consolidated) with Compliance Certificate	Monthly within 30 days	Yes	No
Annual financial statements (CPA Audited)	FYE within 180 days	Yes	No
Borrowing Base Certificates, A/R & A/P Agings, sales or billings journal, cash receipts report, deferred revenue report, and inventory report	Monthly within 15 days and, when a Streamline Period is not in Effect, at the date of each Advance (other than inventory report)	Yes	No
Board approved budget	FYE within 60 days and as amended/updated	Yes	No

Financial Covenant	**Required**	**Actual**	**Complies**	
RML (monthly)	4 months		Yes	No
Unrestricted cash at Lender (monthly)	$3,000,000		Yes	No

Streamline Threshold	**Required**	**Actual**	**Complies**	
RML (monthly)	6 months		Yes	No

Comments Regarding Exceptions: See Attached.

BANK USE ONLY

Received by:

Sincerely, AUTHORIZED SIGNER

CHROMADEX CORPORATION Date:

Verified:

SIGNATURE AUTHORIZED SIGNER

Date:

TITLE

Compliance Status Yes No

DATE

CHROMADEX, INC.

SIGNATURE

TITLE

DATE

CHROMADEX ANALYTICS,

INC.

SIGNATURE

TITLE

DATE

HEALTHSPAN RESEARCH LLC

SIGNATURE

TITLE

Exhibit B

Form of Compliance Certificate

[to be provided by Lender]

Exhibit 21.1

ChromaDex Corporation Corporate Organization Chart at December 31, 2019

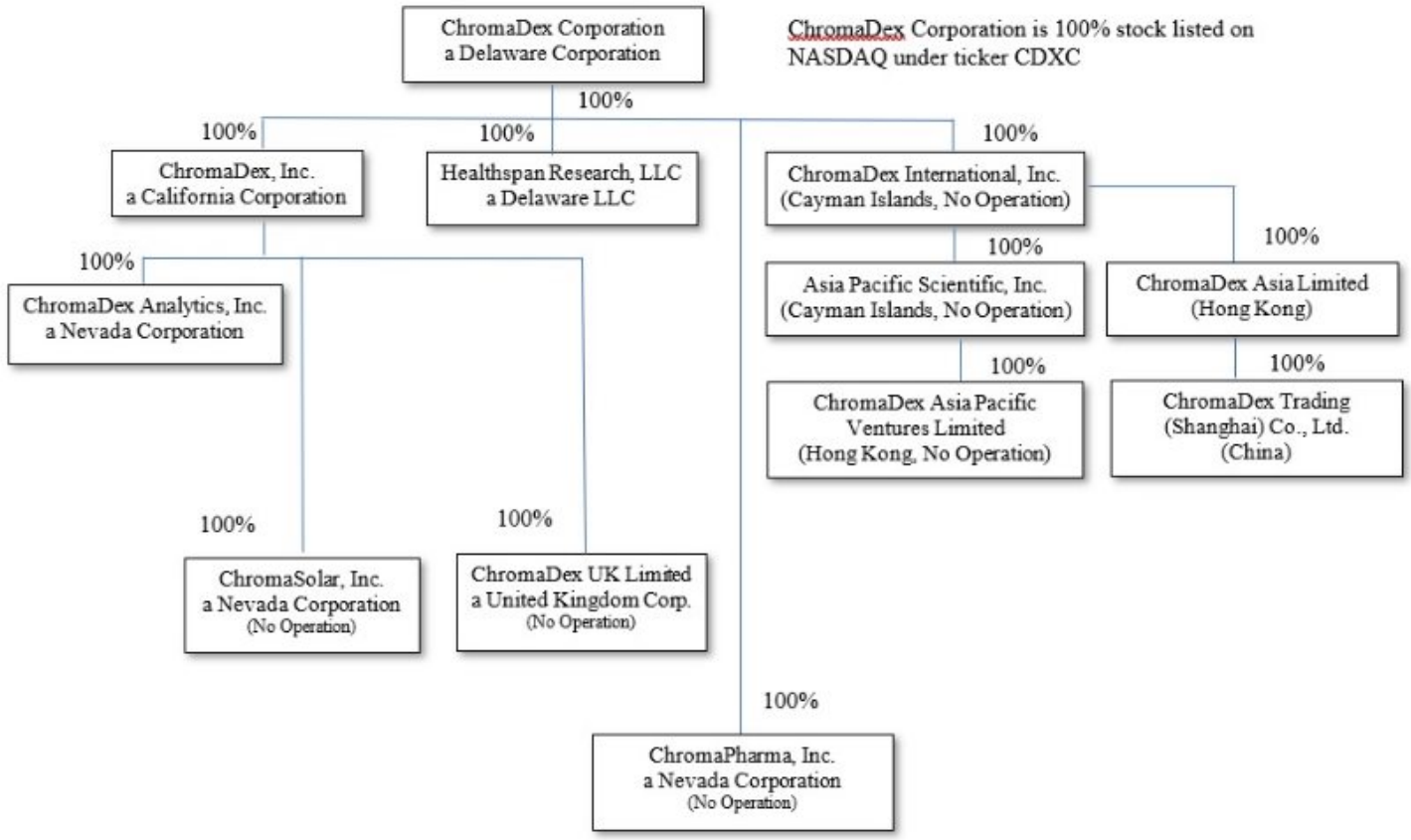

Exhibit 23.1

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in the Registration Statement of ChromaDex Corporation and Subsidiaries on Form S-3 and as amended [File No. 333-233729, File No. 333-222064, File No. 333-221245, File No. 333-218634 and File No. 333-176636] and on Form S-8 [File No. 333-226972, File No. 333-223889, File No. 333-221247, File No. 333-221246, File No. 333-196434, File No. 333-168029, File No. 333-154403 and File No. 333-154402] of our report dated March 10, 2020, with respect to our audits of the consolidated financial statements of ChromaDex Corporation and Subsidiaries as of December 31, 2019 and December 31, 2018 and for the years ended December 31, 2019 and December 31, 2018 and our report dated March 10, 2020 with respect to our audit of the effectiveness of internal control over financial reporting of ChromaDex Corporation and Subsidiaries as of December 31, 2019, which reports are included in this Annual Report on Form 10-K of ChromaDex Corporation and Subsidiaries for the year ended December 31, 2019.

Our report on the consolidated financial statements refers to a change in the method of accounting for leases due to the adoption of the guidance in ASC Topic 842 effective January 1, 2019.

/s/ Marcum LLP

Marcum LLP
New York, NY
March 10, 2020

Exhibit 31.1

Certification of the Principal Executive Officer
Pursuant to
§240.13a−14 or §240.15d−14 of the Securities Exchange Act of 1934, as amended

I, Robert Fried, certify that:

1. I have reviewed this annual report on Form 10−K of ChromaDex Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(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 10, 2020

/s/ ROBERT FRIED
Robert Fried
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

Certification of the Principal Financial Officer
Pursuant to
§240.13a−14 or §240.15d−14 of the Securities Exchange Act of 1934, as amended

I, Kevin Farr, certify that:

1. I have reviewed this annual report on Form 10−K of ChromaDex Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(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 10, 2020

/s/ KEVIN FARR
Kevin Farr
Chief Financial Officer
(Principal Accounting Officer)

Exhibit 32.1

Certification Pursuant to 18 U.S.C. Section 1350
(as adopted pursuant to Section 906 of the Sarbanes−Oxley Act of 2002)

In connection with this annual report of ChromaDex Corporation (the "Company") on Form 10−K for the year ending December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Robert Fried, Chief Executive Officer of the Company, and Kevin Farr, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes−Oxley Act of 2002, that, to our knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: March 10, 2020

/s/ ROBERT FRIED
Robert Fried
Chief Executive Officer

/s/ KEVIN FARR
Kevin Farr
Chief Financial Officer

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of ChromaDex Corporation under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.