ChromaDex Corp.
Form 10-K
March 15, 2012

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, 2011

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

Commission file number 000-53290

CHROMADEX CORPORATION
(Exact name of Registrant as specified in its Charter)

| | |
|---|---|
| Delaware<br>(State or other jurisdiction of incorporation) | 26-2940963<br>(Employer Identification No.) |
| 10005 Muirlands Blvd. Suite G, Irvine, California<br>(Address of Principal Executive Offices) | 92618<br>(Zip Code) |

Registrant's telephone number, including area code (949) 419-0288

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

| Title of each class | Name of Each Exchange on Which Registered |
|---|---|
| N/A | N/A |

Securities registered pursuant to Section 12(g) of the Act: Common Stock, $0.001 par value

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes [X] No [ ]

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [ ]

Table of Contents

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 | o | Accelerated Filer | o |
| Non-accelerated filer | o | Smaller Reporting Company | x |

(Do not check if smaller reporting company)
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 July 2, 2011, the aggregate market value of the common stock held by non-affiliates of the Registrant was approximately $80,631,655.

Number of shares of common stock of the registrant outstanding as of March 15, 2012 : 90,934,991

| DOCUMENTS INCORPORATED BY REFERENCE | PART OF |
|---|---|
| Definitive Proxy Statement for the 2012 Annual Meeting of Stockholders which will be filed within 120 days of the fiscal year ended December 31, 2011. | Part III of Form 10-K |

Table of Contents

TABLE OF CONTENTS

Table of Contents

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, and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements reflect the current view about future events. When used in this Form 10-K the words "anticipate," "believe," "estimate," "expect," "future," "intend," "plan" or the negative of these terms and similar expressions a relate to us or our management identify forward looking statements. 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, 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 continued 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. We cannot guarantee future results, levels of activity, performance or achievements. Except as required by applicable law, including the securities laws of the United States, 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

Company Overview

The business of ChromaDex Corporation is conducted by our principal subsidiaries, ChromaDex, Inc. and Chromadex Analytics, Inc. ChromaDex Corporation and its subsidiaries (collectively referred to herein as "ChromaDex" or the "Company" or, in the first person as "we" "us" and "our") supplies phytochemical reference standards, which are small quantities of plant-based compounds typically used to research an array of potential attributes, and reference materials, related contract services, and proprietary ingredients. We perform chemistry-based analytical services at our laboratory in Boulder, Colorado, typically in support of quality control or quality assurance activities within the dietary supplement industry. We have recently developed and launched the BluScience line of new retail dietary supplement products containing one of these proprietary ingredients, pTeroPure, which we also sell as an ingredient for incorporation into the products of other companies. For the fiscal years ended December 31, 2011 and January 1, 2011, ChromaDex had revenues of $8,112,610 and $7,566,370, respectively.

Table of Contents

We are a leading provider of research and quality-control products and services to the natural products industry. Customers worldwide in the dietary supplement, food & 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. Customers also use our analytical chemistry services to support their quality assurance activities, primarily to ensure the identity, potency and safety of their consumer products. We have conducted this core business since 1999.

We believe there is a growing need at both the manufacturing and government regulatory levels for reference standards, analytical methods and other quality assurance methods to ensure that products that contain plants, plant extracts and naturally occurring compounds distributed to consumers are safe. We further believe that this need is driven by the perception at the consumer level of a lack of adequate quality controls related to certain functional food or dietary supplement based products, as well as increased effort on the part of the FDA to assure Good Manufacturing Practices ("GMP").

Our core standards and contract service businesses provide us with the opportunity to become aware of the results from research and screening activities performed on thousands of potential natural product candidates. By selecting the most promising ingredients from this market-based screening model, which is grounded in primary research performed by leading universities and institutions, followed by selective investments in further research and development, new natural products-related intellectual property can be identified and brought to various markets with a much lower investment cost and an increased chance of success. The first of these proprietary compounds, pTeroPure, is our brand name for the compound, pterostilbene. Pterostilbene is a polyphenol and a powerful antioxidant that shows promise in a range of health related issues. We have in-licensed patents pending related to the use of pterostilbene for a number of these benefits, and has filed additional patents related to additional benefits, such as a patent jointly filed with University of California at Irvine related to its effects on non-melanoma skin cancer. We are currently conducting a clinical trial, together with the University of Mississippi, related to its cholesterol lowering potential, which is the subject of one of the patents we licensed. We expect to conduct additional clinical trials on this compound and we anticipate entering the dietary supplement, animal health and, if clinical results are favorable, the pharmaceutical market . We believe that we have opportunities in the skin care market and we will continue to investigate developing these opportunities internally or through third party partners. We anticipate conducting additional clinical trials on other compounds in our pipeline to provide differentiation as we market these ingredients and support various health-related claims or obtain additional regulatory clearances.

Company Background

On May 21, 2008, Cody Resources, Inc., a Nevada corporation, or Cody, entered into an Agreement and Plan of Merger, or Merger Agreement, by and among Cody, CDI Acquisition, Inc., a California corporation and wholly-owned subsidiary of Cody, or Acquisition Sub, and ChromaDex, Inc. Subsequent to the signing of the Merger Agreement, Cody merged with and into a Delaware corporation that we refer to as Cody-DE for the sole purpose of changing the domicile of Cody to the State of Delaware. Subsequent to the closing of the Merger Agreement, Cody-DE amended its certificate of incorporation to change its name to "ChromaDex Corporation."

Pursuant to the terms of the Merger Agreement, and upon satisfaction of specified conditions, including approval by ChromaDex, Inc.'s stockholders on June 18, 2008, Acquisition Sub merged with and into ChromaDex, Inc. and ChromaDex, Inc., as the surviving corporation, became a wholly-owned subsidiary of Cody-DE.

Cody was incorporated on July 19, 2006 under the laws of the State of Nevada. At the time of the Merger, Cody had been an inactive shell corporation and Cody's actions as a going concern prior to the Merger are immaterial to the business of ChromaDex.

ChromaDex, Inc. was originally formed as a California corporation on February 19, 2000. On April 23, 2003, ChromaDex acquired the research and development group of a competing natural product company called Napro Biotherapeutics (now Tapestry Pharmaceuticals) located in Boulder, Colorado. The assets acquired in this transaction were placed in a newly-formed, wholly-owned subsidiary of ChromaDex named Chromadex Analytics, Inc., a Nevada corporation.

Table of Contents

Our Strategy

Our business strategy is to identify, acquire, reduce-to-practice, and commercialize innovative new natural products and technologies, with an initial industry focus on the dietary supplement, nutraceutical, food and beverage, functional food, pharmaceutical and skin care markets. We plan to utilize our experienced management team to commercialize these natural product technologies by advancing them through any required regulatory approval processes, selectively conducting clinical trials, arranging for reliable and cost-effective manufacturing, and ultimately either directly selling the products or licensing the intellectual property to third parties. We plan to conduct clinical trials to (a) reinforce the health benefits that may be associated with our ingredients in support of sales made into the dietary supplement and food and beverage markets, (b) potentially improve the quality or specificity of FDA approved claim we can make with respect to these health benefits, and (c) potentially lead us toward pharmaceutical applications for our ingredients.

- Commercialization of intellectual property: We believe that many of our products currently in development have the potential to spin off technologies that may themselves be independently capable of commercialization and becoming significant new revenue sources. We believe that new intellectual property can also be developed from our expansion into new markets.

- Launch of new dietary supplement product line: Our new dietary supplement product line based on the ingredient pTeroPure, BluScience, has recently been launched at most GNC corporate-owned stores nationwide. Two BluScience products are now available at Walgreen's, and we anticipate that this retailer will soon be offering additional BluScience products for sale. BluScience is also now available at Drugstore.com. Beyond the distribution obtained to date at GNC, Drugstore.com and Walgreen's, we are seeking to launch BluScience at several additional retailers.

- Expansion and growth of the core business: We intend to continue to expand our phytochemical standards offerings, the core of our business. Currently, we have approximately 4,000 defined standards. We expect to add 500 to 1,000 new standards each year for the foreseeable future.

- Expansion into new markets: We are developing business in new domestic and international markets. These markets include both the domestic and international botanical drug market and the market for novel therapeutic botanicals from Asia, South America and Africa. We have also added what we believe to be new and innovative product offerings, including the screening of compound libraries and the offering of unique, value-added raw materials.

- Expansion through acquisitions: We are a leader in the phytochemical standards market. We believe other smaller competitors are having difficulty expanding their revenue base and are prime candidates for acquisition by us. We believe that a long-term roll-up strategy could eventually lead to ChromaDex positioning itself as a provider of choice for phytochemical standards and libraries.

Overview of our Products and Services

We are headquartered in Irvine, California, and our analytical and research laboratory facility, Chromadex Analytics, is located in Boulder, Colorado. Chromadex Analytics operates a facility with 13,000 square feet of laboratory and office space. While we perform many of the contract services and research for our clients, Chromadex Analytics manufactures certain phytochemical reference standards, provides research and development, all analytical services and laboratory support for ChromaDex.

Since 2003, we have invested in excess of $2 million in laboratory equipment, and we currently have personnel possessing over 150 years of combined pharmaceutical and natural products chemistry experience.

Table of Contents

Current products and services provided are:

- Dietary supplement products. Formulated with the proprietary compound pterostilbene, we currently offer four specific products under the BluScience line: HeartBlu, EternalBlu, Blu2Go and TrimBlu, each of which is directed toward providing a specific health benefit such as anti-aging, heart health, focus and energy and weight management. MemoryBlu is currently being developed with intentions of improving cognitive function and is planned to be launched in April 2012.

- Novel dietary supplement and food ingredients. We offer novel bulk raw materials for inclusion in dietary supplements, food, beverage and cosmetic products. This is an area where we are increasing our focus, as we believe we can secure and defend our market positions through patents and long-term manufacturing agreements with our customers and vendors.

- Supply of reference standards, materials & kits. Through our catalog, we supply a wide range of products necessary to conduct quality control of raw materials and consumer products. Reference standards and materials and the kits created from them are used for research and quality control in the dietary supplements, cosmetics, food and beverages, and pharmaceutical industries.

- Supply of fine chemicals and phytochemicals. As demand for new natural products and phytochemicals increases, we can scale up and supply our core products in the gram to kilogram scale for companies that require these products for research and new product development.

- Contract services. ChromaDex, through Chromadex Analytics, provides a wide range of contract services ranging from routine contract analysis for the production of dietary supplements, cosmetics, foods and other natural products to elaborate contract research for clients in these industries.

- Consulting services. We provide a comprehensive range of consulting services in the areas of regulatory support, new ingredient or product development, risk management and litigation support.

- Process development. Developing cost effective and efficient processes for manufacturing natural products can be very difficult and time consuming. We can assist customers in creating processes for cost-effective manufacturing of natural products, using “green chemistry.”

Products and services in development:

- Additional dietary supplement products. Other than the four specific products we are already offering (HeartBlu, EternalBlu, Blu2Go and TrimBlu), we intend to develop and offer additional products under our BluScience retail line. During the first half of 2012, we are planning to add MemoryBlu in to our stock- keeping units. MemoryBlu is currently being developed with intentions of improving cognitive function and is planned to be launched in April 2012.

- Anthocyanin. We are working to establish cost-effective methodologies for the efficient production of anthocyanins from genetically engineered bacteria. Anthocyanins are secondary plant metabolites that are mainly responsible for the colors in plant tissues, primarily reds, purples and blues. They are non-toxic and have been observed to possess antioxidant, anticancer and anti-inflammatory activities, making them attractive candidates in the pharmaceutical, dietary supplement and food colorants industries.

Table of Contents

- Nicotinamide riboside. We are working to establish cost-effective methodologies for the efficient production of nicotinamide riboside. Nicotinamide riboside, a recently discovered vitamin found naturally in milk, is a more potent version of the more commonly known niacin (vitamin B3). Nicotinamide riboside has shown promise for improving cardiovascular health, glucose levels and cognitive function and has demonstrated evidence of anti-aging effects.

- Process scale manufacturing. We intend to invest in a pilot plant facility that has the capability of manufacturing at a process scale for products that have gone to market.

- Phytochemical libraries. We intend to continue investing in the development of natural product based libraries by continuing to create these libraries internally as well as through product licensing.

- Plant extracts libraries. We intend to continue our efforts to create an extensive library of plant extracts using our already extensive list of botanical reference materials.

- Databases for cross-referencing phytochemicals. We are working on building a database for cross referencing phytochemicals against an extensive list of plants, including links to references to ethnopharmacological, ethnobotanical, and biological activity, as well as clinical evidence.

- Intellectual property. We plan to utilize our expertise in natural products to license and develop new intellectual property that can be licensed to clients in our target industries.

Sales and Marketing Strategy

For our retail dietary supplement product line, we are partnering with global advertising, media and public relations leaders to drive awareness of our brands BluScience and pTeroPure, centered on the health benefits of pterostilbene. During the first half of 2012, we plan to launch a major advertising campaign through media channels such as television, radio and the internet. These marketing plans are being developed to support the launch of BluScience product line at numerous national retailers.

Our sales platform for the chemical and analytical service business is based on direct, inside technical sales model. We hire technical sales staff with appropriate scientific background in chemistry, biology, biochemistry or other related scientific fields. Our sales staff currently operates at our Irvine, California office and performs sales duties by using combinations of telemarketing, e-mail, tradeshows and customer visits. Sales staff are required to perform both sales and customer service responsibilities. We plan to add outside field sales representatives in the future as needed. All sales staff are compensated based on a uniform basic pay model based on salary and commission.

USA and Canada:

For our retail dietary supplement product line, we are developing a comprehensive marketing plan with our advertising, media and public relations partners to promote awareness through the following marketing activities:

- Advertising – Television, radio, etc.
- Public relations including social media
- Search engine marketing and search engine optimization
- Advocacy from dieticians, physicians and other thought leaders

Table of Contents

- Website
- Tradeshows and conferences
- Press releases

These marketing activities will support the launch of the BluScience product line through all retail distribution channels.

For our core reference standards and analytical service business, we employ the use of an aggressive, direct mail marketing strategy (catalogs, brochures and flyers) in combination with a range of the following marketing activities to promote and sell our products and services:

- Tradeshows and conferences
- Monthly newsletters (via e-mail)
- Internet
- Website
- Advertising in trade publications
- Press releases

We intend to continue to use an aggressive, direct marketing approach to promote our products and services to all markets that we target for direct sales.

International:

For our retail dietary supplement product line, we are currently exploring opportunities to effectively sell our products in international markets. For Latin America, we have recently entered into a collaborative relationship with OPKO Health to market our new product offerings for distribution and business development, with the BluScience line as the initial products to be commercialized. For other international markets, we have not decided on a firm marketing strategy.

For our core reference standards business, 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. Currently, we have exclusive distribution agreements in place with the following distributors for the following countries or regions:

- Europe (LGC Standards)
- South America (JMC)
- Korea (Dong Myung Scientific)
- India (LGC Promochem India Pvt. Ltd.)

Table of Contents

We also use non-exclusive distributors for each of the following countries or groups of countries:

- Japan
- Australia and New Zealand
- China
- Indonesia, Malaysia, Singapore and Thailand
- Mexico

Non-exclusive distributors who show significant productivity are considered for becoming exclusive distributors.

Business Market

According to the Natural Marketing Institute, the Dietary Supplement, Functional Food and Beverage, and Natural Personal Care markets represent more than $250 billion in annual worldwide sales. The quality control and assurance of some of the products in these markets are, as previously noted, largely "under regulated." This scenario leads to the establishment of the basis of one of our business strategies: concentration on the overall content of products, as well as active/marker components, uniformity of production, and toxicology of products in these markets in ways similar to analysis by other companies focused in the pharmaceutical industry. There is an increasing demand for new products, ingredients and ideas for natural products. The pressure for new, innovative products, which are "natural" or "green"-based, cuts across all markets including food, beverage, cosmetic and pharmaceutical.

While we believe that doctors and patients have become more receptive to the use of botanical and herbal-based and natural and dietary ingredients to prevent or treat illness and improve quality of life, the medical establishment has conditioned its acceptance on significantly improved demonstration of efficacy, safety and quality control comparable to that imposed on pharmaceuticals. Nevertheless, little is currently known about the constituents, active compounds and safety of many botanical and herbal natural ingredients and few qualified chemists and technology based companies exist to supply the information and products necessary to meet this burgeoning market need. Natural products are complex mixtures of many compounds, with significant variability arising from growing and extraction conditions. The following developments are some that highlight the need for standards control and quality assurance:

- The FDA published its draft guidance for Good Manufacturing Practices ("GMPs") for dietary supplements on March 13, 2003. The final rule from this guidance was made effective in June 2007, and full compliance was required by June 2010;

- Regulatory agencies around the world have started to review the need for the regulation of herbal and natural supplements and are considering regulations that will include testing for the presence of toxic or adulterating compounds, drug/compound interactions and evidence that the products are biologically active for their intended use.

Business Model

We have taken advantage of both supply chain needs and regulatory requirements such as the GMPs for dietary supplements to build our core standards and analytical services businesses. We create value throughout the supply chain of the pharmaceutical, dietary supplements, functional foods and personal care markets. We do this by:

Table of Contents

- Combining the analytical methodology and characterization of materials with the technical support for the sale of reference materials by our clients;
- Helping companies to comply with new government regulations; and
- Providing value-added solutions to every layer of the supply chain in order to increase the overall quality of products being produced.

We believe we are now in a position to expand this aspect of our business and, most importantly, 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 our standards and services.

Our core standards and contract service businesses provide us with the opportunity to become aware of the results from research and screening activities performed on thousands of potential natural product candidates. By selecting the most promising ingredients from this market-based screening model, which is grounded in primary research performed by leading universities and institutions, followed by selective investments in further research and development, new natural products-related intellectual property can be identified and brought to various markets with a much lower investment cost and an increased chance of success. The first of these proprietary compounds, pTeroPure, is our brand name for the compound, pterostilbene. Pterostilbene is a polyphenol and a powerful antioxidant that shows promise in a range of health-related issues. We have in-licensed patents pending related to the use of pterostilbene for a number of these benefits, and have filed additional patents related to additional benefits, such as a patent jointly filed with University of California at Irvine related to its effects on non-melanoma skin cancer. We are currently conducting a clinical trial, together with the University of Mississippi, related to its cholesterol lowering potential, which is the subject of one of the patents we licensed. We expect to conduct additional clinical trials on this compound and we anticipate entering the dietary supplement, , animal health and, if clinical results are favorable, possibly the pharmaceutical markets with it. We believe that we have opportunities in the skin care market and we will continue to investigate developing these opportunities internally or through third party partners. We anticipate conducting additional clinical trials on other compounds in our pipeline to provide differentiation as we market these ingredients and support various health-related claims or obtain additional regulatory clearances.

ChromaDex continues to identify and in-license novel, proprietary compounds with significant potential health benefits. Among these next generation compounds are anthocyanins, which are compounds responsible for the dark pigment found in certain berries and flowers, and nicotinamide riboside, a compound similar to the B-vitamin, niacin. Like pTeroPure®, these compounds also have potential in multiple markets.

Government Regulation

Some of our operations are subject to regulation by various United States federal agencies and similar state and international agencies, including the FDA, the 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.

Table of Contents

FDA Regulation

Dietary supplements are subject to FDA regulations. For example, the FDA's final rule on GMPs for dietary supplements published in June 2007 requires companies to evaluate products for identity, strength, purity and composition. These regulations in some cases, particular 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, or FDCA, can regulate:

- product testing;
- product labeling;
- product manufacturing and storage;
- premarket clearance or approval;
- 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, known as 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, a "new" dietary ingredient (a dietary ingredient that was not marketed in the United States before October 15, 1994) is subject to a new dietary ingredient, or 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.

In order for any new ingredient developed by us to be used in conventional food or beverage products in the United States, the product would either have to be approved by the FDA as a food additive pursuant to a food additive petition, or FAP, or be generally recognized as safe, or 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.

Advertising Regulation

In addition to FDA regulations, the FTC regulates the advertising of dietary supplements, foods, cosmetics, and over-the-counter, or 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.

Table of Contents

In addition, The National Advertising Division of the Council of Better Business Bureaus (CBBB) reviews national advertising for truthfulness and accuracy. The NAD 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

Our international sales of dietary supplements and ingredients 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. In addition, the export by us of certain of our products that have not yet been cleared or approved for domestic distribution may be subject to FDA export restrictions. We may be unable to obtain on a timely basis, if at all, any foreign government or United States export 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.

Competitive Business Conditions

For our retail dietary supplement product line, we face competition from dietary supplement manufacturers and suppliers all over the world. These competitors not only include nutraceutical companies but also major pharmaceutical companies who offer dietary supplements as part of overall health care . Many of our competitors are well-established, successful companies that have been offering dietary supplement products for a long time. Below is a list of some of the leading competitors for our BluScience product line.

Dietary Supplement Competitors

- NBTY (NTY) (USA)
- Pharmavite (USA)
- Amway (USA)
- Herbalife (HLF) (Cayman Islands)
- Nutraceutical International Corporation (NUTR) (USA)
- Schiff Nutrition International (WNI) (USA)
- Pfizer (PFE) (USA)

For reference standards and analytical testing services, we face competition within the standardization and quality testing niche of the natural products market, though we know of no other companies that offer both reference standards and testing to their customers. Below is a current list of certain competitors. These competitors have already developed reference standards or contract services or are currently taking steps to develop botanical standards or contract services. Of the competitors listed, some currently sell fine chemicals, which, by default, are sometimes used as reference standards, and others are closely aligned with our market niche so as to reduce any barriers to entry if these companies wish to compete. Some of these competitors currently offer similar services and have the scale and

resources to compete with us for larger customer accounts. Because some of our competitors are larger in total size and capitalization, they likely have greater access to capital markets, and are in a better position than we are to compete nationally and internationally.

Table of Contents

Reference Standards and Analytical Testing Services Competitors

- Sigma-Aldrich (SIAL) (USA)
- Phytolab (Germany)
- US Pharmacopoeia (USP) (USA)
- Extrasynthese (France)
- Covance (CVD) (USA)
- Eurofins (ERF) (France)
- Silliker Canada Co. (Canada)

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. We currently have existing patents for products such as anythocyandian production, nicotinyl riboside methods of use and Jojoba extract (simmondsin) that require additional capital for product development, commercialization and marketing.

One of our business strategies is to use the intellectual property harnessed in the supply of reference materials to the industry as the basis for providing new and alternative mass marketable products to our customers. Our strategy is to develop these products 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 for us.

We have created a mechanism for harnessing ideas and turning them into finished products. For example, we spent between one and two years researching the viability of our Jojoba concept, but lacked the ability to finalize its development and to obtain necessary patent protection. After much scrutiny, we selected Avoca, a subsidiary of RJ Reynolds Tobacco, as the appropriate partner for completion of this project. Avoca finalized the manufacturing process for the Jojoba extract and then we and Avoca jointly filed a patent to protect the intellectual property created by this joint venture.

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 |
|---|---|---|---|---|---|
| 6,852,342 | Compounds for altering food intake in humans | 3/26/2002 | 2/8/2005 | 02/12/2022 | Co-owned by Avoca, Inc. and ChromaDex |
| 7,338,791 | Production of Flavanoids by Recombinant Microorganisms | 7/11/2005 | 3/4/2008 | 7/11/2025 | Licensed from The Research Foundation of State University of New York |
| 8,106,184 | Nicotinyl Riboside Compositions and Methods of Use | 11/17/2006 | 1/31/2012 | 11/17/2026 | Licensed from Cornell University |

Table of Contents

Manufacturing

For our retail dietary supplement product line, we are partnering with certain U.S. third-party manufacturers to manufacture and package our products. These manufacturers' operations are subject to GMPs, promulgated by the FDA, and other applicable regulatory standards. We believe these manufacturers and their processes comply with the GMPs for dietary supplements and/or foods, and generally have sufficient capacity to meet our currently anticipated sales. These third-party manufacturers formulate, mix ingredients, assemble and package the dietary supplement products to our specifications. We furnish proprietary ingredients, such as pterostilbene, to these third-party manufacturers.

For reference standards, Chromadex Analytics operates laboratory operations and a manufacturing facility. We currently maintain our own manufacturing equipment and have the ability to manufacture certain products in limited quantities, ranging from milligrams to kilograms. We intend to contract for the manufacturing of products that we develop and enter into strategic relationships or license agreements for sales and marketing of products that we develop when the quantities we require exceed our capacity at our Boulder, Colorado facility.

We intend to work with manufacturing companies that can meet the standards imposed by the FDA, the International Organization for Standardization, or ISO, 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.

Following the receipt of products or product components from third-party manufacturers, we currently inspect products, as needed. We expect to reserve the right to 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.

Sources and Availability of Raw Materials and The Names of Principal Suppliers

We believe that we have identified reliable sources and suppliers of chemicals, phytochemicals, ingredients and reference materials that will provide products in compliance with our guidelines.

Research and Development

We are currently conducting a clinical trial, together with the University of Mississippi, on our proprietary compound pterostilbene for its cholesterol lowering potential. We expect to conduct additional clinical trials on this compound and we anticipate entering the dietary supplement, animal health and, if clinical results are favorable, possibly the pharmaceutical markets as well. We anticipate conducting additional clinical trials on other compounds in our pipeline to provide differentiation as we market these ingredients and support various health-related claims or obtain additional regulatory clearances.

In addition, we are focused on developing products and services within our core standards and service offerings. Our own laboratory group has extensive experience in developing products related to our field of interest and works closely with our sales and marketing group to design products and services that are intended to increase revenue. To support development, we also have a number of contracts with outside labs that aid us in our research and development process.

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 in order to comply with Federal, state and local environmental laws and regulations.

Facilities

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

Table of Contents

Employees

As of December 31, 2011, ChromaDex (including Chromadex Analytics) had 64 employees, 54 of whom were full-time and 10 of whom were part-time. We consider our relationships with our employees to be satisfactory. None of our employees is covered by a collective bargaining agreement.

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 actually 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 and we may need additional financing to meet our future long term capital requirements.

We have a history of losses and may continue to incur operating and net losses for the foreseeable future. We incurred a net loss of approximately $7,895,000 for the year ended December 31, 2011 and a net loss of approximately $2,052,000 for the year ended January 1, 2011. As of December 31, 2011, our accumulated deficit was approximately $18,054,000. We have not achieved profitability on an annual basis. We may not be able to reach a level of revenue to achieve profitability. If our revenues grow slower than anticipated, or if operating expenses exceed expectations, then we may not be able to achieve profitability in the near future or at all, which may depress our stock price.

While we anticipate that our current cash, cash equivalents and cash generated from operations, and the capital raised subsequent to the year ended December 31, 2011 will be sufficient to meet our projected operating plans through December, 2012, 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. In the event that we are unable to obtain additional financing, we may be unable to implement our business plan. Even with such financing, we have a history of operating losses and there can be no assurance that we will ever become profitable.

Our short-term capital needs are uncertain and we may need to raise additional funds. Based on current market conditions, such funds may not be available on acceptable terms or at all.

We anticipate that our current cash and cash equivalents and the capital raised subsequent to the year ended December 31, 2011 will be sufficient to implement our operating plan through December, 2012. Our capital requirements will depend on many factors, including:

- the revenues generated by sales of our products, if any;
- 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;

Table of Contents

- 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.

As a result of these factors, we may seek to raise additional capital prior to the end of December, 2012 both to meet our projected operating plans after December, 2012 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.

Further deterioration 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 severe disruptions in the credit markets and the continuing impact of the recent global economic recession continue to materially impact our customers and other parties with whom we do business. These conditions could negatively affect our future sales of our retail and ingredient line as many consumers consider the purchase of nutritional products discretionary. Continued or increased deterioration 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.

The success of the retail launch of our BluScience line is dependent upon both retailer and consumer acceptance of our products.

We compete in a highly competitive market. Our prospects for success will therefore depend on our ability to successfully market our products and services, including the BluScience line. Demand and market acceptance for our products and services is subject to a high level of uncertainty. We have just begun to mass market our products through several retailers. Any failure to convince retailers to accept our products and/or consumers to regularly purchase our products could have a material, adverse effect on our business, financial condition, results of operations and future prospects.

Table of Contents

No Assurance of Successful Expansion of Operations.

Our significant increase in the scope and the scale of our product launch, 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 its results of operations.

The success of our retail 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 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.

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 particular 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, whether or not 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.

Table of Contents

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

As an ingredient supplier and retailer, marketer and manufacturer of 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 foods, 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, some of 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 a significant amount of key ingredients for our products from foreign suppliers, and may be negatively affected by the risks associated with international trade and importation issues.

We acquire a significant amount of key ingredients for a number of our products from suppliers outside of the United States, particularly India. 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, nonconformity to specifications or laws and regulations, tariffs, trade disputes and foreign currency fluctuations. While we have a supplier certification program and periodically audit and inspect our suppliers' facilities 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 Indian and 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.

Table of Contents

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

We depend greatly on Jeffrey Himmel, Debra Heim, Thomas C. Varvaro and Frank L. Jaksch Jr., who are our Chief Executive Officer and President, Chief Operating Officer, Chief Financial Officer and Chief Scientific Officer, 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;
- 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.

Table of Contents

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

•