

**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

**FORM 10-K**

(Mark One)

☒ **Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the fiscal year ended December 31, 2013

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 001-36030

**Marrone Bio Innovations, Inc.**

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

20-5137161  
(I.R.S. Employer  
Identification No.)

2121 Second St. Suite A-107, Davis, CA 95618  
(Address of principal executive offices and zip code)

(530) 750-2800  
(Registrant's telephone number, including area code)

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

Class  
Common Stock, \$0.00001 par value

Exchange on which registered  
NASDAQ Global Market

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

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

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

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

Indicate by check mark whether the registrant has submitted electronically 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 (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 or Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of the 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. ☒

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 "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer ☐ Accelerated filer ☐

Non-accelerated filer ☒ (Do not check if a smaller reporting company) Smaller reporting company ☐

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

As of June 30, 2013, the last day of the registrant's most recently completed second quarter, the registrant's common stock was not publicly traded. The registrant's common stock began trading on the NASDAQ Global Market on August 1, 2013. As of December 31, 2013, the last business day of the registrant's most recently completed fiscal year, the aggregate market value of registrant's voting and non-voting common stock held by non-affiliates was approximately \$139,355,337, based upon the closing sale price of the common stock as reported on the NASDAQ Global Market. This calculation excludes the shares of common stock held by each officer, director and holder of 5% or more of the outstanding common stock as of December 31, 2013. This calculation does not reflect a determination that such persons are affiliates for any other purposes.

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class  
Common Stock, \$0.00001 par value

Shares Outstanding at March 14, 2014  
19,616,399

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## Special Note Regarding Forward-Looking Statements and Trade Names

*This Annual Report on Form 10-K, including this Management's Discussion and Analysis of Financial Condition and Results of Operations, includes a number of forward-looking statements that involve many risks and uncertainties. Forward-looking statements are identified by the use of the words "would," "could," "will," "may," "expect," "believe," "should," "anticipate," "outlook," "if," "future," "intend," "plan," "estimate," "predict," "potential," "targets," "seek" or "continue" and similar words and phrases, including the negatives of these terms, or other variations of these terms, that denote future events. These forward-looking statements include: our plans to target our existing products for new markets and for new uses and applications; our plans with respect to growth in sales of new product lines, including Grandevo and Zequanox; our ability and plans to screen, source, in-license develop, register and commercialize additional new product candidates and bring new products to market across multiple categories faster and at a lower cost than other developers of pest management products; our expectations regarding registering new products and new formulations and expanded use labels for existing products, including submitting new products to the EPA; our belief that challenges facing the use of conventional chemical pesticides will continue to grow; our beliefs regarding the growth of markets for, and unmet demand for, biopesticides; our beliefs regarding market adoption for our products; our intention to maintain existing and develop new, supply, sales and distribution channels and extend market access; our anticipation that we will receive future payments under our strategic collaboration and development agreements for the achievement of testing validation, regulatory progress and commercialization events; our plans regarding repurposing and expanding capacity at our manufacturing facility; our plans to grow our business and expand operations; our intention to continue to devote significant resources toward our proprietary technology and research and development and the potential for pursuing acquisition and collaboration opportunities to gain access to third-party products and technologies; our expectations that sales will be seasonal and the impact of continued drought conditions; our ability to protect our intellectual property in the United States and abroad; our expectations regarding market risk, including interest rate changes, foreign currency fluctuations and commodity price changes; and our future financial and operating results. These statements reflect our current views with respect to future events and our potential financial performance and are subject to risks and uncertainties that could cause our actual results and financial position to differ materially and adversely from what is projected or implied in any forward-looking statements included in this Annual Report on Form 10-K. These factors include, but are not limited to, the risks described under Item 1A of Part I— "Risk Factors," Item 7 of Part II— "Management's Discussion and Analysis of Financial Condition and Results of Operations," elsewhere in this Annual Report on Form 10-K and those discussed in other documents we file with the SEC. We make these forward-looking statements based upon information available on the date of this Annual Report on Form 10-K, and we have no obligation (and expressly disclaim any such obligation) to update or alter any forward-looking statements, whether as a result of new information or otherwise except as otherwise required by securities regulations.*

*As used herein, "MBI," the "Company," "we," "our," and similar terms refer to Marrone Bio Innovations, Inc., unless the context indicates otherwise.*

*Except as context otherwise requires, references in this Annual Report on Form 10-K to our product lines, such as Regalia, refer collectively to all formulations of the respective product line, such as Regalia Maxx or Regalia SC, and all trade names under which our distributors sell such product lines internationally, such as Sakalia.*

*Our logos, "Grandevo®," "OpportuneTM," "Regalia®," "VenerateTM," "Zequanox®" and other trade names, trademarks or service marks of Marrone Bio Innovations, Inc. appearing in this prospectus are the property of Marrone Bio Innovations, Inc. This prospectus contains additional trade names, trademarks and service marks of other companies. We do not intend our use or display of other companies' trade names, trademarks or service marks to imply relationships with, or endorsement or sponsorship of us by, these other companies.*

## **PART I**

### **ITEM 1. BUSINESS**

We make bio-based pest management and plant health products. Bio-based products are comprised of naturally occurring microorganisms, such as bacteria and fungi, and plant extracts. We target the major markets that use conventional chemical pesticides, including certain agricultural and water markets, where our bio-based products are used as substitutes for, or in connection with, conventional chemical pesticides. We also target new markets for which there are no available conventional chemical pesticides, the use of conventional chemical products may not be desirable or permissible because of health and environmental concerns or the development of pest resistance has reduced the efficacy of conventional chemical pesticides. All of our current products are EPA-approved and registered as “biopesticides.” We believe our current portfolio of products and our pipeline address the growing global demand for effective, efficient and environmentally responsible products.

Our products currently target two core end markets: crop protection and water treatment. Crop protection products consist of herbicides (for weed control), fungicides (for plant disease control), nematocides (for parasitic roundworm control), insecticides (for insect and mite control) and plant growth regulators and stimulants that growers use to increase crop yields, improve plant health, manage pest resistance and reduce chemical residues. Our products can be used in both conventional and organic crop production. We currently sell our crop protection product lines, Regalia, for plant disease control and plant health, and Grandevo, for insect and mite control, to growers of specialty crops such as grapes, citrus, tomatoes, vegetables, nuts, leafy greens and ornamental plants. We have also had sales of Regalia for large-acre row crops such as corn and soybeans. Water treatment products target invasive water pests across a broad range of applications, including hydroelectric and thermoelectric power generation, industrial applications, drinking water, aquaculture, irrigation and recreation. Our current water treatment product line, Zequanox, which we began selling in the second half of 2012, selectively kills invasive mussels that cause significant infrastructure and ecological damage.

In addition to our current two core end markets, we are also taking steps through strategic collaborations to commercialize products for other non-crop pest management markets. These products can be different formulations of our crop protection products that are specifically targeted for industrial and institutional, turf and ornamental, home and garden and animal health uses such as controlling grubs, cockroaches, flies and mosquitoes in and around schools, parks, golf courses and other public-use areas.

The agricultural industry is increasingly dependent on effective and sustainable pest management practices to maximize yields and quality in a world of increased demand for agricultural products, rising consumer awareness of food production processes and finite land and water resources. We believe that our competitive strengths, including our commercially available products, robust pipeline of novel product candidates, proprietary technology and product development process, commercial relationships and industry experience, position us for rapid growth by providing solutions for these global trends.

#### **Industry Overview**

Pest management is an important global industry. Most of the markets we currently target or plan to target primarily rely on conventional chemical pesticides, supplemented in certain agricultural markets by the use of genetically modified crops. Conventional chemical pesticides are generally synthetic materials that directly kill or inactivate pests. Phillips McDougall, an independent advisory firm, estimates the 2013 agrichemical market at \$59.2 billion (including non-crop pesticides), up from 2012 by 10%. Agranova, an independent market research firm, estimated that global agrichemical sales for the crop protection market were \$50.0 billion in 2012, which represented an increase of 8.2% from 2011. The market for treatment of fruits and vegetables, the largest current users of bio-based pest management and plant health products, accounted for \$16.2 billion of this total. Other agricultural applications, notably crops such as corn, soybeans, rice, cotton and cereals, which we expect will become increasingly important users of bio-based products, accounted for \$24.7 billion of the total.

Demand for effective and environmentally responsible bio-based products for crop protection and water treatment continues to increase. The global market for biopesticides, which control pests by non-toxic mechanisms such as attracting pests to traps or interfering with their ability to digest food, was valued at \$1.6 billion for 2009 and is expected to reach \$3.3 billion by 2014, with a 15.6% compound annual growth projected during that period, according to BCC Research, an independent market research firm. Markets and Markets, an independent market research firm, estimates the global biopesticide market at \$1.3 billion in 2011 and growing at 15.8% compound annual growth from 2012 to 2017. In comparison, global agrichemical sales were projected at a 5.5% compound annual growth during the period from 2011 through 2016, according to AgroPages, an independent market research firm. We believe these trends will continue as the benefits of using bio-based pest management and plant health products become more widely known.

### ***Crop Protection***

*Conventional Production.* Growers are constantly challenged to supply the escalating global demand for food, while reducing the negative impact of crop protection practices on consumers, farm workers and the environment. The dominant technologies for crop protection are conventional chemical pesticides and genetically modified crops. Major agrichemical companies have invested billions of dollars to develop genetically modified crops that resist pests or have high tolerance to conventional chemical pesticides. The market for genetically modified crops was estimated at \$12.0 billion in 2011 and is predicted to grow 5% annually through 2015, according to Phillips McDougall. In addition, according to the International Service for the Acquisition of Agri-biotech Applications, a third-party not-for-profit organization, in 2012, 170 million hectares (420 million acres) were planted with genetically modified crops. Soybean, corn and cotton plantings have made the greatest inroads, accounting for 47%, 32% and 15%, respectively, of genetically modified seeds planted globally.

Conventional chemical pesticides and genetically modified crops have historically been effective in controlling pests. However, there are increasing challenges facing the use of conventional chemical pesticides such as pest resistance and environmental, consumer and worker safety concerns. Governmental agencies are further pressuring growers by restricting or banning certain forms of conventional chemical pesticide usage, particularly in the European Union, as some conventional chemical pesticide products are being phased out. At the same time, a number of supermarket chains and food processors, key purchasers of specialty fruits, nuts and vegetables, are imposing synthetic chemical residue restrictions, limiting options available to growers close to harvest. Consumers, scientists and environmental groups have also voiced concerns about the unintended effects of genetically modified crops, including pest resistance and contamination of non-genetically modified crops. In response to consumer and environmental group concerns and restrictions by importing countries, several large-scale food purchasers have demanded that their contracted growers supply them only non-genetically modified crops.

These factors are significant market drivers for conventional producers, and their impact is continuing to grow. An increasing number of growers are implementing integrated pest management (IPM) programs that, among other things, combine bio-based pest management products and crop cultivating practices and techniques such as crop rotation, with conventional chemical pesticides and genetically modified crops. Bio-based pest management products are becoming a larger component of IPM programs due in part to the challenges associated with conventional chemical pesticides and genetically modified crops.

*Organic Production.* Certified organic crops such as food, cotton and ornamental plants, are produced without the use of synthetic chemicals, genetic modification or any other bioengineering or adulteration. As such, organic growers are limited in the number of alternatives for pest management. The U.S. Department of Agriculture, or the USDA, approved national production and labeling standards for organic food marketed in the United States in late 2000. These standards have contributed to the growth of organic food consumption in the United States, and other countries have implemented similar programs. The global market for organic food and beverages is projected to grow to \$105.0 billion by 2015, a 67% increase from 2011, according to the United Nations Environment Program. We believe this growth is primarily driven by concerns about food safety and the adverse

environmental effects of conventional chemical pesticides and genetically modified crops. Large food processors and agricultural businesses such as Dole, General Mills, Gerber, H.J. Heinz and Kellogg have developed products aimed at organic food consumers. Major supermarket chains in the United States such as Krogers, Safeway and Wal-Mart and in Europe such as Marks & Spencer, Sainsbury and Tesco offer a wide selection of organic food products.

### ***Water Treatment***

Global demand for water treatment products was estimated to be \$48 billion in 2012, according to The Freedonia Group, an independent market research firm, and the global market for specialty biocide chemicals for water treatment was projected to be \$5.2 billion in 2013, according to BCC Research. Invasive and native pest species are increasingly a concern in diverse applications such as hydroelectric and thermoelectric power generation, industrial applications, drinking water, aquaculture, irrigation and recreation. However, discharge of water treatment chemicals to target these pests is highly regulated, and in many cases, such as with management of open waters and sensitive environmental habitats, use of conventional chemicals is prohibited.

One particular area of concern has been the damage caused by invasive zebra and quagga mussels, which clog pipes, disrupt ecosystems, encrust infrastructure and blanket beaches with razor-sharp shells. These species initially infested the Great Lakes region and have spread across the United States. Industry reports estimate that these mussels cause approximately \$1.0 billion in damage and associated control costs annually in parts of the United States alone. There are limited treatment options available, many of which are toxic to aquatic flora and fauna. To date, most treatment options have been focused either on manual removal of the mussels, which is time consuming and costly, or conventional chemical treatments, which potentially jeopardize the environment and are thus controlled tightly by regulatory agencies.

The water treatment market also includes products to control algae, aquatic weeds and unwanted microorganisms. For example, one of the most effective and popular methods for controlling algae and unwanted microorganisms is chlorination. One of the major concerns in using chlorination in surface water supplies is that chlorine combines with various organic compounds to form by-products, some of which are considered possible carcinogens.

### ***Other Target Markets***

Although conventional chemical pesticides have traditionally serviced the industrial and institutional, professional turf and ornamental, home and garden and animal health markets, governmental regulations are restricting their use, and reports indicate that end users increasingly value environmentally friendly products; with some households willing to forego pest control treatments entirely if alternatives to conventional chemical pesticides are not available.

*Industrial and Institutional.* Significant amounts are spent annually worldwide on conventional chemical pesticide products to control pests such as cockroaches, flies and mosquitoes in the institutional market, including in and around schools, parks, golf courses and other public-use areas.

*Professional Turf and Ornamental.* Manufacturer sales of pesticides for use on turf and ornamental plants in the United States rose by 4.9% to \$737.0 million in 2012, continuing a 3.1% sales growth trend for 2011, according to Specialty Products Consultants, an independent market research firm. Insecticides and pre-emergence herbicides were the fastest growing product category within this market. Historically, nearly half of sales for this market have been fungicides, herbicides, insecticides and plant growth regulators for use in golf courses.

*Home and Garden.* U.S. demand for home and garden pesticides is projected to be \$1.7 billion in 2013, according to The Freedonia Group. The number of U.S. households that use only all-natural or organic fertilizer, insect controls and weed controls increased from an estimated 5 million households in 2004 to 12 million in

2008, according to the National Gardening Association. We believe this trend reflects the increasing importance people attribute today to maintaining lawns and gardens in an environmentally friendly way.

*Animal Health.* Homes with pets and producers of livestock such as cattle, swine and poultry use pest management products to control fleas, ticks and other pests and parasites.

### **Benefits of Bio-Based Pest Management**

While conventional chemical pesticides are often effective in controlling pests, some of these chemicals are acutely toxic, some are suspected carcinogens and some can have other harmful effects on the environment and other animals. Health and environmental concerns have prompted stricter legislation around the use of conventional chemical pesticides, particularly in Europe, where the use of some highly toxic or endocrine-disrupting chemical pesticides is banned or severely limited and the importation of produce is subject to strict regulatory standards on pesticide residues. In addition, the European Union has passed the Sustainable Use Directive, which requires EU-member countries to reduce the use of conventional chemical pesticides and to use alternative pest management methods, including bio-based pest management products. Over the past two decades, U.S. regulatory agencies have also developed stricter standards and regulations. Furthermore, a growing shift in consumer preference towards organic and sustainable food production has led many large, global food retailers to require their supply chains to implement these practices, including the use of bio-based pest management and fertilizer solutions, water and energy efficiency practices, and localized food product sourcing. For example, in 2010, Wal-Mart announced its global sustainable agriculture goals to require sustainable best practices throughout its global food supply chain.

Aside from the health and environmental concerns, conventional chemical pesticide users face additional challenges such as pest resistance and reduced worker productivity, as workers may not return to the fields for a certain period of time after treatment. Similar risks and hazards are also prevalent in the water treatment market, as chlorine and other chemicals used to control invasive water pests contaminate and endanger natural waterways. Costs of using conventional chemical pesticides are also increasing due to a number of factors, including raw materials costs such as rising costs of petroleum, stringent regulatory requirements and pest resistance to conventional chemical pesticides, which requires increasing application rates or the use of more expensive substitute products.

As the cost of conventional chemical pesticides increases and the use of conventional chemical pesticides and genetically modified crops meets increased opposition from government agencies and consumers, and the efficacy of bio-based pest management products becomes more widely recognized among growers, bio-based pest management products are gaining popularity and represent a strong growth sector within the market for pest management technologies. Growers are increasingly incorporating bio-based pest management products into IPM programs, and bio-based pest management products help create the type of sustainable agriculture programs that growers and food companies increasingly emphasize.

Bio-based pest management products include biopesticides, as well as minerals such as copper and sulfur. The EPA registers biopesticides in two major categories: (i) microbial pesticides, which contain a microorganism such as a bacterium or fungus as the active ingredient and (ii) biochemical pesticides, which are naturally occurring substances such as insect sex pheromones, certain plant extracts and fatty acids.

We believe many bio-based pest management products perform as well as or better than conventional chemical pesticides. When used in alternation or in spray tank mixtures with conventional chemical pesticides, bio-based pest management products can increase crop yields and quality over chemical-only programs. Agricultural industry reports, as well as our own research, indicate that bio-based pest management products can affect plant physiology and morphology in ways that may improve crop yield and can increase the efficacy of conventional chemical pesticides. In addition, pests rarely develop resistance to bio-based pest management products due to their complex modes of action. Likewise, bio-based pest management products have been shown to extend the product life of conventional chemical pesticides and limit the development of pest resistance, a key issue facing



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users of conventional chemical pesticides, by eliminating pests that survive conventional chemical pesticide treatments. Most bio-based pest management products are listed for use in organic farming, providing those growers with compelling pest control options to protect yields and quality. Given their generally lower toxicity compared with many conventional chemical pesticides, bio-based pest management products can add flexibility to harvest timing and worker re-entry times and can improve worker safety. Many bio-based pest management products are also exempt from conventional chemical residue tolerances, which are permissible levels of chemical residue at the time of harvest set by governmental agencies. Bio-based pest management products may not be subject to restrictions by food retailers and governmental agencies limiting chemical residues on produce, which enables growers to export to wider markets.

In addition to performance attributes, bio-based pest management products registered with the EPA as biopesticides can offer other advantages over conventional chemical pesticides. From an environmental perspective, biopesticides have low toxicity, posing low risk to most non-target organisms, including humans, other mammals, birds, fish and beneficial insects. Biopesticides are biodegradable, resulting in less risk to surface water and groundwater and generally have low air-polluting volatile organic compounds content. Because biopesticides tend to pose fewer risks than conventional pesticides, the EPA offers a more streamlined registration process for these products, which generally requires significantly less toxicological and environmental data and a lower registration fee. As a result, both the time and money required to bring a new product to market are reduced.

### **Our Solution**

Our technology platform produces bio-based pest management and plant health products that are highly effective and generally designed to be compatible with existing pest control equipment and infrastructure. This allows them to be used as substitutes for, or in connection with, conventional chemical pesticides, as well as in markets for which there are no available conventional chemical pesticides or the use of conventional chemical products may not be desirable or permissible because of health and environmental concerns. We believe that compared with conventional chemical pesticides, our products:

- are competitive in both price and efficacy;
- provide viable alternatives where conventional chemical pesticides and genetically modified crops are subject to regulatory restrictions;
- comply with market-imposed requirements for pest management programs by food processors and retailers;
- are environmentally friendly;
- meet stringent organic farming requirements;
- improve worker productivity by shortening field re-entry times after spraying and allowing spraying up to the time of harvest;
- are exempt from residue restrictions applicable to conventional chemical pesticides in both the agriculture and water markets; and
- are less likely to result in the development of pest resistance.

In addition, our experience has shown that when our products are used in connection with conventional chemical pesticides, they can:

- increase the effectiveness of conventional chemical pesticides while reducing their required application levels;
- increase levels of pest control and consistency of control;
- increase crop yields;

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- increase crop quality, including producing crops with higher levels of protein, better taste and color and more attractive flowers; and
- delay the development of pest resistance to conventional chemical pesticides.

We believe that the benefits of our products will encourage sustained adoption by end users. For example, we have seen that growers that have used our products on a trial basis in one year have generally continued to use our products in higher levels in subsequent years.

### **Our Competitive Strengths**

#### ***Commercially Available Products***

We have three commercially available product lines: Regalia, Grandevo and Zequanox. We believe these product lines provide us the foundation for continuing to build one of the leading portfolios of bio-based pest management products. In connection with our progress in solving the issues facing growers of conventional and organic crops, our products aimed at solving pest issues for water treatment provide us with access to several distinct multibillion dollar markets subject to different market forces, diversifying our revenues portfolio.

#### ***Robust Pipeline of Novel Product Candidates***

Our pipeline of early-stage discoveries and new product candidates extends across a variety of product types for different end markets, including herbicides, fungicides, nematocides, insecticides, algaecides (for algae control), molluscicides (for mussel and snail control) and plant growth regulators. Our product candidates are developed both internally and sourced from third parties. Our research and development process enables us to discover, source and develop multiple products in parallel, which keeps our pipeline robust. For example, we received EPA approval for Opportune, an herbicidal biopesticide, or “bioherbicide,” in April 2012 and are conducting a targeted placement with growers, and we received EPA approval for Venerate, an insecticidal biopesticide, or “bioinsecticide,” in February 2014 and expect to begin sales to distributors in 2014. MBI-011, a weed-controlling bioherbicide, and MBI-302, a biological nematocide, have been submitted for EPA registration. These products are still undergoing commercialization, and we have additional product candidates at various other stages of development. In addition, while we expect individual product sales to remain seasonal and impacted by weather as a result of certain of our products being targeted to specific pests and geographic areas, as we develop and commercialize additional product candidates we believe these effects will have a reduced impact on our overall operating results. For example, during periods of hot, dry weather, sales of biofungicides such as Regalia, may decline, but we expect that our revenues may be offset by increased sales of bioinsecticides such as Grandevo.

#### ***Rapid and Efficient Development Process***

We believe we can develop and commercialize novel and effective products faster and at a lower cost than many other developers of pest management products. For example, we have moved each of Regalia, Grandevo and Zequanox through development, EPA approval and U.S. market launch in approximately four years at a cost of \$6.0 million or less. In comparison, a report from Phillips McDougall shows that the average cost for major agrichemical companies to bring a new crop protection product to market is over \$250.0 million, and these products have historically taken an average of nearly ten years to move through development, regulatory approval and market launch.

#### ***Proprietary Discovery Process***

Our discovery process allows us to efficiently discover microorganisms and plant extracts that produce or contain compounds that display a high level of pesticidal activity against various pests. We then use various analytical chemistry techniques to identify and characterize the natural product chemistry of the compounds, which we

optimize and patent. Our research has shown that on average, major agrichemical companies synthesize approximately 108 thousand chemicals to yield each candidate for crop protection product development. In contrast, with 25 candidates identified for product development, we have identified more than one potential bio-based pest management product for every thousand microorganisms or plant extracts in our database. Five of our product candidates, one of which is EPA-approved and one of which has been submitted to the EPA, are what we believe to be newly identified microorganisms/species. We believe that three of our product candidates produce novel compounds that we identified, and four of our product candidates have been found to have, or produce compounds with, a novel mode of action. Our proprietary discovery process is protected by patents on the microorganisms, their natural product compounds and their uses for pest management, as well as a patent application we have filed on a screening process to identify enzyme-inhibiting herbicides. We also maintain trade secrets related to the discovery, formulation, process development and manufacturing capabilities. By conducting our own discovery as well as working with outside collaborators, we are able to access the broadest range of products for commercialization, giving us an advantage over other natural bio-based pest management companies.

#### ***Sourcing and Commercialization Expertise***

We use our technical and commercial development expertise to evaluate early-stage discoveries by third parties to determine commercial viability, secure promising technologies through in-licensing and add considerable value to these in-licensed product candidates. Our efficient development process and significant experience in applying natural product chemistry has led universities, corporations and government entities to collaborate with us to develop or commercialize a number of their early-stage discoveries. As with our internally discovered products, early-stage products we source and commercialize are subject to our own patents and trade secrets related to our added value in characterizing, formulating, developing and manufacturing marketable products. For example, we developed an analytical method to measure and characterize the major compounds in the extract we licensed to produce Regalia, and we enhanced these compounds several times in new formulations, providing Regalia with a broader spectrum of activity and better efficacy than the original licensed product.

#### ***Existing Agreements with Global Market Leaders***

The markets for pest management products are intensely competitive. This has presented a significant challenge for biopesticide companies looking to enter these markets, which are typically dominated by major multinational agrichemical companies with significant resources, brand recognition and established customer bases. To help address this challenge, we have entered into strategic agreements with global market leaders across agricultural and consumer retail markets. For example, we have signed exclusive international distribution agreements for Regalia with Syngenta in Africa, Europe and the Middle East and with FMC in Latin America. We also have a technology evaluation and development agreement with Scotts Miracle-Gro, which grants it a right of first access to the active ingredients in our full portfolio of bio-based pest management and plant health products for use in its consumer lawn and garden products. We believe we will be able to further leverage these distribution channels to gain robust geographic market penetration, particularly in the highly competitive European and Latin American markets, with modest sales and marketing expenditures.

#### ***Management Team with Significant Industry Experience***

Our management team has deep experience in bio-based pest management products and the broader agriculture industry. Our chief executive officer, chief operating officer and other key employees average over 25 years of experience and include individuals who have led agrichemical sales and marketing organizations, top scientists and industry experts, some of whom have served in leadership roles at large multinational corporations and governmental agencies, commercialized multiple products, brought multiple products through EPA, state and foreign regulatory processes, filed patent applications and received patents, led groundbreaking research studies and published numerous scientific articles. In addition, we have recently hired a new chief financial officer, who brings over 30 years of financial management experience spanning a variety of industries, including over 12 years of service as several public companies' chief financial officer.

## **Our Growth Strategy**

### ***Continue to Develop and Commercialize New Products in Both Existing and New Markets***

Our goal is to rapidly and efficiently develop, register and commercialize new products each year, with the goal of developing a full suite of pest management and plant health products. For example, while our current crop protection products address plant diseases and insects, we intend to provide products that can also control nematodes and weeds as well as products for improving fertilizer efficiency and reducing drought stress. We are also currently screening for water treatment products that control algae and aquatic weeds to complement Zequanox, our invasive mussel control product line.

### ***Expand Applications of Our Existing Product Lines***

Biopesticide products, including our bio-based pest management and plant health products, are generally initially approved for use in a limited number of applications. However, we have identified opportunities to broaden the commercial applications and expand the use of our existing products lines into several key end markets, including large-acre row crop applications, seed treatment, irrigation, aquaculture and animal health. In addition, we recently expanded sales of Regalia in large-acre row crops. We believe these opportunities could help to drive significant growth for our company.

### ***Accelerate Adoption of New Products, Product Applications and Product Lines***

Our goal is to provide growers with complete and effective solutions to a broad range of pest management needs that can be used individually, together and in connection with conventional chemical pesticides to maximize yield and quality. We believe we will be able to leverage relationships with existing distributors as well as growers' positive experiences using our Regalia and Grandevo product lines to accelerate adoption of new products, product applications and product lines. We will also continue to target early adopters of new pest management technologies with controlled product launches and to educate growers and water resource managers about the benefits of bio-based pest management products through on-farm and in-facility demonstrations to accelerate commercial adoption of our products. We believe that these strategies and the strength of our products have led to an adoption rate for Grandevo for use in U.S. specialty crops that would outpace that of leading chemical insecticides.

### ***Leverage Existing Distribution Arrangements and Develop New Relationships***

To expand the availability of our products, we intend to continue to use relationships with conventional chemical pesticide distributors in the United States and leverage the international distribution capabilities under our existing strategic collaboration and distribution agreements. We continue to form new strategic relationships with other market-leading companies in our target markets and regions to expand the supply of our products globally. For example, we have engaged distributors to help develop Grandevo and Venerate for key countries in Europe and Latin America and sell Regalia in Canada for specialty crops, in the United States for turf and ornamental plants and in parts of the Midwest United States for row crops. We have also engaged a distributor that launched Grandevo in the United States for turf and ornamental plants.

### ***Develop and Expand Manufacturing Capabilities***

We currently use third-party manufacturers to produce our products on a commercial scale. These arrangements have historically allowed us to focus our time and direct our capital towards discovering and commercializing new product candidates. We are repurposing a manufacturing facility that we purchased in July 2012 and plan to further expand capacity at this facility. Phase 1 of the project, which we anticipate will be completed in 2014, includes installation of the first of three fermentation tanks, and the construction of a dedicated building to house them. Phase 2 will include increasing the capacity of the facility's utilities, installing drying capacity and installing larger fermenters that will accommodate production of multiple products at higher volumes. We

believe that greater control of our own manufacturing capacity will allow us to scale-up processes and institute process changes more quickly and efficiently while lowering manufacturing costs over time to achieve the desired margins and protecting the proprietary position of our products.

### ***Pursue Strategic Collaborations and Acquisitions***

We intend to continue collaborating with chemical manufacturers to develop products that combine our bio-based pest management products with their technologies, delivering more compelling product solutions to growers. We also may pursue acquisition and in-licensing opportunities to gain access to later-stage products and technologies that we believe would be a good strategic fit for our business and would create additional value for our stockholders.

### **Our Products**

We produce both microorganism-based and plant extract-based products. Our technology platform enables us to develop bio-based pest management and plant health products that offer customers an attractive value proposition when compared against conventional chemical pesticide and genetically modified crop alternatives alone. We are focused on producing bio-based products that we sell into the crop protection, water treatment and other target markets. We believe that we should be able to continue to develop products in our product pipeline in a manner consistent with our historical experience. We have historically been able to move our products through development, EPA approval and U.S. market launch in four years or less and at a cost of under \$6.0 million. We currently believe that we can obtain similar results for the majority of our other product candidates, such as Venerate, MBI-011, MBI-010, MBI-302, MBI-303, MBI-601 and MBI-110, but we cannot assure that this will be true for each product and that we will not encounter unexpected delays or cost overruns.

### ***Regalia***

- Biofungicide
- Crop Protection, Home and Garden, Turf: Targets Plant Disease, Improves Plant Health
- Commercially Available

Regalia, a plant extract-based fungicidal biopesticide, or “biofungicide,” is EPA-registered for crop and non-crop uses and approved for use on foliage and roots in all states in the United States, including California and Florida, where the majority of the specialty crops are grown. It is also approved for sale in Ecuador (flowers), Mexico (vegetables and grapes), Turkey (covered vegetables), Canada (tomatoes, grapes, strawberries, cucurbits, ornamental plants and wheat), Panama (cane, tobacco, rice, coffee, avocado, dried beans, cucurbits, citrus and papaya), Peru (grapes), and El Salvador, Guatemala and Honduras (potatoes, tomatoes, peppers, tobacco, cucurbits, beans, avocados, citrus, papayas and strawberries). University researchers have extensively tested the product against several important plant diseases, especially against mildews. We have also conducted hundreds of trials in the United States and abroad, including four years of crop trials in Europe. The data show that Regalia is an effective addition to a disease management program against a broad range of diseases and can increase yields in crops such as strawberries, tomatoes, potatoes, soybeans and corn.

Regalia is made from an extract of the giant knotweed plant and acts by turning on a plant’s “immune system,” a process called induced systemic resistance. Regalia also enhances the efficacy of major conventional chemical fungicides, and we have filed a patent application on this synergism. Regalia is also effective for seed treatment of soybean, corn and cotton, for which we have filed a patent application, and we have filed a patent application on the effects on root growth and yield when Regalia is applied to the seed or as a root stimulant. For example, in field tests and in actual grower use, Regalia has shown significant yield increases on strawberries, tomatoes, potatoes, soybeans and corn.

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We obtained an exclusive license relating to the technology used in our Regalia product line while Regalia was in the process development and formulation stage of product development. In addition to developing the supply chain to commercially market the product, using our natural product chemistry expertise, we developed an analytical method to measure and characterize the major compounds in the plant extract, and we enhanced these compounds several times in new formulations, providing Regalia with a broader spectrum of activity and better efficacy than the original licensed product. In addition, we improved the physical properties of our Regalia formulations and developed four formulations that meet organic farming standards. We have filed several patent applications with respect to these innovations. In addition, we have received a U.S. patent for modulating plant growth by treating roots of plants with Regalia (or other compounds or extracts of knotweed), and transplanting the plants into soil.

We launched Regalia SC, an earlier formulation of Regalia, into the Florida fresh tomatoes market in December 2008. This formulation had a limited label with a few crops and uses on the label and it was not compliant for organic listing. In 2009, we began sales of Regalia in the United Kingdom and Ecuador, and we received a revised, broader label with hundreds of crops for a new organic formulation, which we subsequently launched into the Florida vegetables and Arizona leafy greens markets. In January 2010, we received state approval in California and immediately launched Regalia into the leafy greens and walnuts markets. Key markets include vegetables in the southeast, citrus in Florida, leafy greens and vegetables in California and Arizona, walnuts and stone fruit in California and pome fruit and grapes in California and the Pacific Northwest. In December 2011 and August 2012, we received EPA approval and California regulatory approval, respectively, for an expanded label that includes new soil applications, instructions for yield improvement in corn and soybeans and additional crops and target pathogens. We submitted Regalia for registration in the European Union, which according to our research has recently been the largest fungicide market in the world, and in Brazil, and we received completeness checks with respect to such submissions in March 2012 and May 2012, respectively. We received regulatory approval for Regalia in South Africa in June 2013, new product registrations in El Salvador, Guatemala and Honduras in December 2013, and new product registration in Peru in March 2014.

### **Grandevo**

- Bioinsecticide
- Crop Protection, Home and Garden, Turf, Animal Health: Targets Insects and Mites
- Commercially Available

Grandevo is based on a new species of microorganism, *Chromobacterium subtsugae*, which was discovered by a scientist at the USDA in Beltsville, Maryland, and which we have licensed and commercialized. Grandevo is a powerful feeding inhibitor: insects and mites become agitated when encountering it and will not feed and starve, or, if they do ingest it, die from disruption to their digestive system. Grandevo also has repellent effects on and reduces egg hatching and reproduction of target insects and mites. Grandevo is particularly effective against chewing insects (such as caterpillars and beetles) and sucking insects (such as stinkbugs and mealybugs, as well as thrips and psyllids, which are respectively known as “corn lice” and “plant lice”). Field trials are in progress to further characterize Grandevo’s efficacy. Trials to date and reports from grower use have shown instances of commercial levels of efficacy as good as the leading conventional chemical pesticides on a range of chewing and sucking insect and mite pests, including two invasive species of psyllid affecting citrus and potato crops, and indicate that the length of control is as long as three weeks, matching leading conventional chemical pesticides. Grandevo has also shown significant control of other pests such as plant-feeding fly larvae, mosquitoes, white grubs in turf grass, “leafmining” caterpillar larvae and other leaf-eating caterpillars.

We obtained a co-exclusive license for the bacterial strain used in our Grandevo product line while Grandevo was undergoing primary screening as a potential product candidate. At the time we entered into this agreement, the licensor had produced no toxicology or field efficacy data; all of these data were subsequently created by us. In addition, since licensing the microorganism, we completed the testing and development necessary to produce

and commercialize an EPA-approved product and have filed our own patent applications with respect to the microorganism, including its genome, as well as the chemistry produced by the microorganism upon which Grandevo is based, including a novel compound produced by the bacteria, synergistic combinations with conventional chemical pesticides, product formulations containing the bacterial strain and novel insecticidal and nematocidal uses.

We launched a liquid formulation of Grandevo on a targeted basis under a limited label into the Florida citrus crop market in 2011. Commencing in the summer of 2012, we launched a dry formulation of Grandevo in markets across the United States where state registrations have been approved, targeting key markets, including citrus, tomatoes, peppers, strawberries, potatoes, leafy greens and other fruits and vegetables. This dry formulation has improved shelf life and efficacy, can be used on more crops and pests than the original liquid formulation, was approved by the EPA in May 2012 and has been registered in 49 of 50 states (Hawaii pending) as well as Puerto Rico. In May 2013, we received EPA approval for a revised label reflecting Grandevo's safety for bees. In addition, we submitted the registration dossier for Grandevo to Mexico and also received permission to field test Grandevo in Brazil and South Africa allowing us to prepare the dossiers for submission in those countries. We expect to submit dossiers for Grandevo registration in Europe and Canada in 2014.

### ***Zequanox***

- Biomolluscicide
- Water Treatment: Targets Invasive Mussels
- Commercially Available

Zequanox is a biopesticide targeted at mussels, or "biomolluscicide," derived from a common microbe found in soil and water bodies, *Pseudomonas fluorescens*, which we licensed from the University of the State of New York and subsequently developed and commercialized. Zequanox is an environmentally friendly bio-based pest management product that is designed to kill over 75% of invasive mussels in treated pipe systems without causing collateral ecological damage. In July 2012, we conducted an open water trial in Deep Quarry Lake, Illinois, where the Zequanox treatment killed more than 90% of the invasive mussels on the lake bed. This level of control in open water treatments was repeated in 2013. The application to register Zequanox for open water treatments was submitted to the EPA in 2013.

At recommended application rates, Zequanox is not toxic to other aquatic life, including ducks, fish, crustaceans and other bivalve species such as native clams or mussels.

Invasive zebra mussels and quagga mussels are having a billion-dollar impact on the North American economy and major negative impacts on freshwater ecosystems. Introduced into North America from Eastern Europe in the 1980s, mussels damage freshwater ecosystems and clog the intake pipes of industrial facilities that draw water from infested lakes and rivers. Power plants and other water-dependent facilities currently use non-selective, polluting chemicals to reduce densities of fouling mussels. For open water habitats such as rivers and lakes, because there is no cost-effective and environmentally friendly solution, invasive mussels continue to spread, causing economic damage to industry, recreational users and waterfront property and substantial ecological harm.

We believe Zequanox has significant benefits over conventional chemical pesticide treatments, which can be toxic to beneficial species and pollute waterways. Zequanox is safe to workers, less labor intensive and requires shorter treatment times compared with conventional chemical pesticides. Zequanox can be used by power plants and raw water treatment facilities as an alternative to conventional chemical treatments such as chlorine, or as a complement to those products.

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We entered into a license agreement with The University of the State of New York pursuant to which we were granted an exclusive license under the University's rights relating to the bacterial strain used in our Zequanox product line while the product's natural product chemistry was still under investigation. Since then, we have developed dry powder formulations, significantly improved the fermentation process for higher cell yield, allowing us to increase manufacturing scale, and we have filed patent applications relating to natural product compounds in the Zequanox cells we have identified and product formulations we have developed.

We collaborated with the U.S. Bureau of Reclamation and Ontario Power Generation in Canada, two organizations seeking ways to treat issues they continuously face with mussel damage in their hydroelectric plants, to test early and improved versions of Zequanox we developed. In 2011 and 2012, we successfully treated the cooling water of a hydroelectric facility managed by the U.S. Bureau of Reclamation on the lower Colorado River and achieved a commercial level of mussel control. In 2013, we initiated a juvenile mussel preventive treatment program at the Hoover Dam along the Colorado River. In 2012, we achieved a commercial level of control in two cooling water treatments of an Ontario Power Generation facility along the Niagara River, and in 2012 and 2013 we generated revenues for treating an Oklahoma Gas & Electric facility. In addition, we have received \$1.1 million in grants from the National Science Foundation for work needed to commercialize the bacterial strain in Zequanox, which is currently being marketed and sold directly to U.S. power and industrial companies.

### ***Opportune***

- Bioherbicide
- Crop Protection, Home and Garden, Turf: Targets Weeds
- EPA Approved; Targeted Placement with Key Customers

Opportune is based on a *Streptomyces* species. Opportune demonstrates a novel mode of herbicidal action, producing a compound, thaxtomin, which disrupts the production of cellulose in certain plants, killing weeds before they emerge and selectively killing broad-leaved weeds after they have emerged. This product, in its initial testing, has been shown not to be harmful to crops such as rice, wheat, corn, sorghum and turf. It controls sedges and broadleaf weeds in rice, for which there are few solutions, either for conventional or organic growers. Based on field trials, we believe that Opportune provides longer duration of weed control than other bioherbicides. Opportune has also demonstrated synergistic activity with several conventional chemical pesticides, resulting in better weed control than either Opportune or the conventional chemical pesticides when used alone.

We entered into an agreement with DuPont and Instituto Biomar for ownership of certain technology related to our Opportune product line. At the time we entered into this agreement, DuPont and Instituto Biomar had produced no toxicology and minimal efficacy data; all of these data were subsequently created by us. We have conducted field trials on rice, wheat, turf and other crops, improved the fermentation process and developed a commercial formulation, and in July 2013, we were granted a U.S. patent with respect to synergistic and other uses of the product. We received EPA approval for Opportune in April 2012, California Department of Pesticide Regulation approval in September 2013 and Canadian Pest Management Regulatory registration in February 2014. We continue to conduct development work to reduce the cost of goods to allow us to launch more broadly in the market.

### ***Venerate***

- Bioinsecticide
- Crop Protection, Home and Garden, Turf, Animal Health: Targets Insects and Mites
- EPA Approved

Venerate is based on a microbial fermentation of a new bacterial species we isolated using our proprietary discovery process. We have identified compounds produced by the microorganism in Venerate that kill a broad



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range of chewing and sucking insects and mites, as well as flies and plant parasitic nematodes, on contact, which is complementary to the anti-feeding effects of Grandevo. Venerate was approved by the EPA in February 2014. We submitted Venerate for the Canadian Pest Management Regulatory Agency registration in August 2010. We have conducted field trials on several crops and insects and mites, many of which show efficacy as good as leading conventional chemical pesticides. We have filed patent applications on the microorganism and the natural product compounds that demonstrate insecticidal and nematocidal activity, as well as product formulations containing the microorganism. We expect to have commercial sales of Venerate in 2014.

### ***MBI-302 and MBI-303***

- Bionematicides and Plant Health
- Crop Protection, Turf: Targets Nematodes and Plant Health
- One Submitted for EPA Registration; Both Under Development

We isolated MBI-302 and MBI-303, nematocidal biopesticides, or “bionematicides,” using our proprietary discovery process. MBI-302 is based on a new species of bacteria that produces natural fermentation products, some of which are novel. MBI-303 is based on a novel strain of a known species of bacteria that produces natural fermentation products that we discovered have nematocidal properties. MBI-302 and MBI-303 kill juvenile root knot and sting nematodes, serious global pests of many crops, and reduce the number of eggs produced by the female nematodes. These products have also been shown to improve plant growth in absence of the pest nematodes. We have filed a patent application on the bacterial strains and the compounds produced by the bacteria in these products, and the EPA accepted MBI-302 for review in January 2014.

### ***MBI-505***

- Anti-transpirant
- Crop Protection, Turf, Ornamentals: Enhances Crop Yields and Plant Health
- Submitted for State Registration; Under Development

MBI-505, a plant health product that helps prevent plants from drying out, or “anti-transpirant,” is based on a technology of naturally-derived, plant-based compounds that we licensed from Kao Corporation for use in the United States. The licensed patents are directed to methods of promoting plant growth and increasing biomass and crop yield. We have been actively developing new formulations and conducting field trials with product candidates that promote plant growth by reducing plant water loss, allowing crops to thrive better in sun-stressed environments. We believe that products based on this technology will utilize a unique mode of action, which will be the first of this mode of action to reach the market. We have submitted MBI-505 to certain states that require registrations. The EPA does not require that we submit MBI-505 for approval as a biopesticide and some states exempt registration as well. We expect to release MBI-505 to the market in 2014.

### ***MBI-011***

- Bioherbicide
- Crop Protection, Home, Turf: Targets Weeds
- Submitted for EPA Registration; Under Development

MBI-011 is based on an herbicidal compound, sarmentine, extracted from a Chinese pepper plant we screened using our proprietary discovery process. MBI-011 kills a broad range of weeds and acts as a “bumdown” herbicide (controls weed foliage). In June 2013, we received a patent with respect to the use of sarmentine as an herbicide and weed killer and have filed a patent application disclosing and claiming a synergistic composition with Opportune. We submitted MBI-011 to the EPA in December 2012.

### ***MBI-010***

- Bioherbicide
- Crop Protection, Home and Garden, Turf: Targets Weeds
- Under Development

MBI-010 is based on the same species of bacteria that we isolated to produce Venerate using our proprietary discovery process that identifies herbicides that inhibit a certain plant enzyme. MBI-010 produces several herbicidal compounds, some of which are novel, that are rapidly taken up by germinating seeds and by the roots of seedling and mature weeds. MBI-010 has demonstrated effectiveness against a range of weeds either after or before the weeds' emergence. MBI-010 has also demonstrated a novel mode of action, in which it is transmitted systemically through the vascular structure of a weed. We have filed a patent application with respect to the MBI-010 formulation uses, and its associated natural product compounds as an herbicide. We also filed a patent application on the process we used to discover MBI-010 and other bioherbicides. We expect to submit MBI-010 to the EPA in 2014.

### ***MBI-110***

- Biofungicide
- Crop Protection, Home and Garden: Targets Plant Disease, Improves Plant Health
- Under Development

MBI-110 is based on a microbial fermentation of a newly identified *Bacillus* strain we isolated using our proprietary screening platform, targeting difficult to control plant diseases such as gray mold and downy mildews (such as potato late blight). We have identified compounds, some of which are novel, produced by the microorganism in MBI-110 that control a broad range of plant diseases. MBI-110 has also been shown to increase plant growth in the absence of plant disease. This product has demonstrated increased efficacy in disease control when used synergistically with Regalia, and as a result, we expect to market this product both separately and in combination with Regalia. We expect to submit this product to the EPA in 2014.

### ***MBI-601***

- Biofumigant
- Crop Protection, Home, Industrial: Targets Plant Disease, Nematodes and Insects
- Under Development

MBI-601, a biopesticide that produces gaseous natural compounds, or "biofumigant," is based on a novel and proprietary genus of fungus, *Muscador*, which was discovered by a scientist at Montana State University. We obtained a co-exclusive license for several strains and species of this fungus, which produces a suite of gaseous natural product compounds that have been shown to kill certain species of harmful fungi and bacteria that cause plant diseases and to kill nematodes and some insect species. We believe that MBI-601 may be used for agricultural and industrial applications, including post-harvest control of fruit and flower decay and pre-planting control of plant diseases and nematodes, as a viable alternative to methyl bromide, which is subject to significant regulatory restrictions and for which few effective, non-toxic alternatives are available. We expect to submit this product to the EPA in 2014.

### ***Other Candidates***

We have also discovered MBI-701, an algacide, and over 25 additional algacide, fungicide, herbicide, insecticide and nematocide candidates using our proprietary screening platform. We also have produced a

collection of microorganisms from taxonomic groups that research suggests may enhance nutrient uptake in plants, reduce stress and otherwise increase plant growth such as MBI-506, a plant yield and drought tolerance enhancer.

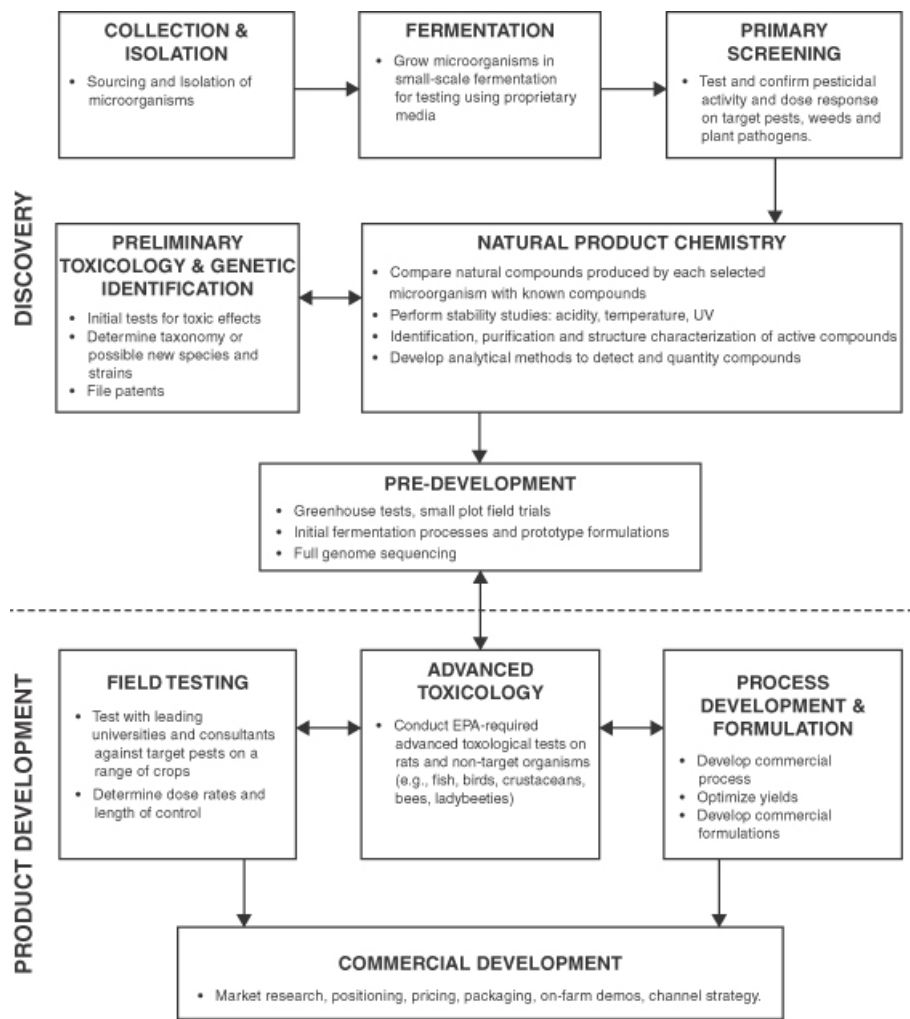
### **Our Technology and Product Development Process**

Our proprietary technology comprises a sourcing process for microorganisms and plant extracts, an extensive proprietary microorganism collection, microbial fermentation technology, screening technology and a process to identify and characterize natural compounds with pesticidal activity. Our technology enables us to isolate and screen naturally occurring microorganisms and plant extracts in an efficient manner and to identify those that may have novel, effective and safe pest management or plant health promoting characteristics. We then analyze and characterize the structures of compounds either produced by selected microorganisms or found in plant extracts to identify product candidates for further development and commercialization. As of December 31, 2013, we have screened more than 18,000 microorganisms and 350 plant extracts, and we have identified multiple product candidates that display significant levels of activity against insects, nematodes, weeds, plant diseases and invasive species such as zebra and quagga mussels, aquatic weeds and algae. We also have produced a collection of microorganisms from taxonomic groups that may enhance nutrient uptake in plants, reduce stress and otherwise increase plant growth. Our product candidates come primarily from our own discovery and development as well as in-licensed technology from universities, corporations and governmental entities.

Our proprietary product development process includes several important components. For all of our product candidates, we develop an analytical method to detect the quantity of the active natural product compounds that are produced by the microorganism or that are extracted from plants. For microbial products, we develop unique proprietary fermentation processes that increase the active natural compounds produced by the microorganisms. We also scale-up fermentation volumes to maximize yields consistently in each batch. Similarly, for our plant extract-based products, we develop a manufacturing process that increases the amount of active natural compounds extracted from plant materials. Our deep understanding of natural product chemistry allows us to develop formulations that optimize the efficacy and stability of compounds produced by microorganisms or plants. Products are not released for sale unless the quantity of the compounds meets our desired efficacy specifications. These methods allow us to produce products that are highly effective and of a consistent quality on a commercial scale.

These product formulations are tailored to meet customers' needs and display enhanced performance characteristics such as effectiveness, shelf life, compatibility with other pesticides and ease of use. Our senior management's numerous years of experience in the development of commercial products and formulations have resulted in a highly efficient product development process, which allows us to rapidly commercialize new products.

Our discovery and development process is illustrated in the following diagram:



## ***Discovery***

We have found over 25 candidates for commercial development from our proprietary discovery process, including Venerate, a new bacterial species and bioinsecticide, MBI-011, a burndown bioherbicide, MBI-010, a systemic bioherbicide, MBI-302 and MBI-303, bionematicides, MBI-110, a biofungicide, as well as several bioalgaecides, additional biofungicides, bioherbicides and bionematicides and plant growth enhancers. Key aspects of our discovery process include:

*Collection and isolation.* Using our years of experience, we target selected habitats and niches of high biodiversity to collect soil, compost, insects, flowers, or other biological matter from which we isolate our proprietary microorganisms on proprietary media. We capture information in a microorganism database such as taxonomic groups, geographical locations, types of samples, niches and habitats where collected and biological activity. We also isolate microorganisms that improve the efficiency of plants to uptake nitrogen and phosphorous. In addition to isolating our own microorganisms, which make up approximately 90% of our collection, we have collaborations with three companies plus the Scripps Institution of Oceanography to diversify our sourcing of microorganisms.

*Fermentation.* For our microbial products, before testing the selected microorganisms for activity against pests, we ferment them to produce sufficient quantities for testing. We grow the selected microorganisms in proprietary media, which maximizes their pesticidal properties. In addition, we use proprietary fermentation processes that are designed to replicate those that would be required for large-scale fermentation and commercial production, avoiding the time and expense of an unsuccessful scale-up.

*Primary screening.* We use automated, miniaturized biological assays to test the selected microorganism's or plant extract's effectiveness against several weed, insect and nematode pests and plant pathogens and algae. We compare those results to conventional chemical pesticide standards. When a microorganism shows a high level of pesticidal activity, we conduct further tests to determine the spectrum of activity, mode of action, stability and activity on plants. We also test for the microorganisms' ability to reduce plant stress and promote growth.

*Novel and proprietary screening methods for weeds and nematodes.* We have proprietary assays based on specific enzymes that find systemic herbicidal compounds from microorganisms, one of which is subject of a pending patent application covering identification of compounds that act systemically through plants' vascular systems. We have developed a rapid, efficient method to find microorganisms that produce compounds with a high level of activity against plant parasitic nematodes.

*Natural product chemistry.* Using high-performance liquid chromatography (HPLC) with diode array detection technology, liquid chromatography-mass spectroscopy (LCMS), gas chromatography-mass spectroscopy (GC-MS) and nuclear magnetic resonance (NMR), we compare the natural product compounds produced by each of the selected microorganisms with known compounds. This allows us to eliminate those microorganisms that produce known toxins and to select those that we believe are novel and safe. From the selected microorganisms, we identify and characterize the natural product compounds responsible for their pesticidal activity by using HPLC, LCMS, GC-MS and NMR equipment. We then develop analytical methods to measure the quantity of these compounds in individual fermentation batches, determine the quantities needed to maximize efficacy and to insure consistent levels of these compounds from batch to batch.

*Genetic identification.* After confirming pesticidal activity during our primary screen, we perform the initial genetic identification of the microorganisms. Further characterization of the genome of our early stage candidates is contracted with one of several genome sequencing service companies. This characterization allows us to determine novelty compared to discoveries from others, the relatedness to human or animal pathogens, genes for compounds that are not expressed in fermentation or detected by our chemists, and information about the possible mode of action on the target pest. We also file additional patent applications based on the results of these genetic identification processes.

## Product Development

We believe that by maintaining a strong reputation in the industry, many opportunities come to us for development in addition to our own discoveries from our in-house efforts. Once we discover or are brought an opportunity, we make a preliminary assessment of the commercial potential of a natural product determined through laboratory, greenhouse and initial field tests. We then select product candidates we have discovered in-house or in-licensed for further development. Key aspects of our product development include:

*Development of the manufacturing process that maximizes the active natural product compounds.* For our microbial products, we develop proprietary processes that increase the yield of both the microorganism and the active natural product compounds produced by the microorganism during fermentation. Similarly, for our plant extract-based products, we develop proprietary processes that increase the amount of active natural compounds extracted from plant materials. This process development allows us to produce products that have superior performance. For our microbial products, we then scale-up these proprietary processes in progressively larger fermentation tanks. We develop quality control methods based on the active natural product compounds rather than just the microorganisms or plant extracts. This approach results in a more consistent and effective product.

*Formulation.* We are able to develop proprietary water-soluble powder, liquid and granule formulations that allow us to tailor our products to customers' needs. This allows us to develop product formulations with enhanced performance characteristics such as effectiveness, value, shelf life, suitability for organic agriculture, water solubility, rain resistance, compatibility with other pesticides and ease of use. Formulation is critical to ensuring a bio-based pest management and plant health product's performance. Our understanding of the natural product chemistry allows us to develop formulations that maximize the effectiveness and stability of the compounds produced by the microorganisms or plants.

*Field testing.* We conduct numerous field trials for each product candidate that we develop. These field trials are conducted in small plots on commercial farms or research stations by our own field development specialists as well as private and public researchers to determine large-scale effectiveness, use rates, spray timing and crop safety. We conduct crop protection product field trials globally in both hemispheres to accelerate the results of our field trials and provide alternate season learning opportunities. As the crop protection product candidate nears commercialization, we conduct demonstration trials on the farm. These trials are conducted with distributors, influential growers and food processors on larger acreages. For Zequanox, we have been working with large power and industrial customers both in the United States and Canada to obtain field trial data to help with product commercialization efforts and to obtain efficacy data.

## Sales, Marketing and Distribution

In the United States, we sell our products through our own internal sales force, which consists of 12 direct employees focused on managing distributor relationships and creating pull-through demand at the end user level, or grower for our products. Our sales force spans across all major regions in the United States, including, California, Pacific Northwest, Southeast, Northeast, Mid-Atlantic, and Midwest. We currently sell our crop protection product lines, Regalia and Grandevo, through leading agricultural distributors such as Crop Production Services, Simplot and members of the Integrated Agribusiness Professionals group. These are the same distribution partners that all major agrichemical companies use for delivering solutions to growers across the country. For our water treatment product line, Zequanox, we are in the process of staffing our own sales organization to manage demand creation at the end user level. Zequanox is currently being marketed and sold directly to U.S. power and industrial companies.

With respect to sales outside of the United States, we have signed exclusive international distribution agreements for Regalia with FMC (for markets in Latin America), Syngenta (for markets in Africa, Europe and the Middle East) and Engage Agro (for markets in Canada and professional turf and ornamental plants in the United States). We have also entered into initial Memorandums of Understanding for Grandevo and Venerate with DeSangosse (for markets in France) and with CBC/Intrachem (for markets in Italy). We are also in discussions with several leaders in water treatment technology and applications regarding potential arrangements to distribute Zequanox in international markets.

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In addition, we have signed a technology evaluation and development agreement with Scotts Miracle-Gro under which we have granted Scotts Miracle-Gro first rights to negotiate for exclusive worldwide distribution rights with respect to bio-based pest management and plant health products we jointly develop for the consumer lawn and garden market.

We derived approximately 97%, 96% and 96% of our revenues from Regalia and Grandevo for the years ended December 31, 2013, 2012 and 2011, respectively. In addition, we currently rely, and expect to continue to rely, on a limited number of distributors for a significant portion of our revenues since we sell through highly concentrated, traditional distribution channels. We currently sell our crop protection products through the same leading agricultural distributors used by the major agrichemical companies. For the year ended December 31, 2013, our top two distributors accounted for 38% of our total revenues, with Crop Production Services and The Tremont Group accounting for 28% and 10% of our total revenues, respectively. The Tremont Group is an affiliate of Les Lyman, who is one of our directors.

While the biopesticide industry has been growing, customers in the crop production sector and the water treatment sector are generally cautious in their adoption of new products and technologies and may perceive bio-based pest management products as less effective than conventional chemical pesticides. Growers often require on-farm demonstrations of a given pest management or plant health product, and given the relative novelty of our water treatment products, consumers of those products will continue to require education on their use. We anticipate adding additional sales and marketing personnel in the United States and in international territories, and we are implementing the following strategies to accelerate adoption rates and promote sales of our bio-based pest management and plant health products:

*Target early adopters of new pest management technologies.* For crop protection products, we target large commercial growers in the United States, who generally set industry standards through early adoption of new pest management technologies. We plan to continue to recruit leading growers and their consultants to participate in field trials, enabling them to become familiar with our bio-based pest management and plant health products and to experience their benefits firsthand. For Zequanox, we have developed strategic relationships with early adopters in the power generation business to do efficacy demonstrations while perfecting the formulations and application of the product.

*Educate growers and water resource managers about the benefits of our bio-based pest management products.* We will continue to perform on-farm and in-facility demonstrations and provide field data packages to support and validate our products claims. We will also continue to participate in trade shows and conferences to educate growers, their licensed pest control advisors and water resource managers about the benefits of our bio-based pest management products. We have provided a free application for mobile phones users to assist in calculating tank mix quantities as well as a webinar, and an online course on bio-based pest management products, which can be taken by growers for continuing education credit to maintain crop protection product applicator licenses. We intend to continue and expand our efforts to work with utilities, which we believe will create increased demand for Zequanox in adjacent market spaces beyond the current power and industrial treatment opportunities we are currently targeting.

*Enhance distribution relationships.* We will continue using established agrichemical distribution channels to distribute Regalia, Grandevo and our future crop protection products. We intend to provide distributors with a portfolio of products that we believe will offer attractive profit margins and growth potential. In addition, we will continue to provide distributors access to innovative alternative pest management solutions, which we believe will provide them additional value that chemical pesticides do not provide.

*Develop and leverage relationships with key industry influencers.* We will continue to develop relationships early in the product development process with influential members within our target markets, including large innovative growers, technical experts at leading agricultural universities, licensed pest control advisors, wineries, food processors, produce packers, retailers and power facilities. We believe that educating industry influencers about the benefits of Regalia, Grandevo, Zequanox and our future products increases the likelihood that they will recommend our products to our distributors and end users.

*Focus our own sales and marketing on the United States and Canada, while signing strategic agreements for international markets, turf, ornamental plants and consumer retail.* Because of the concentration of large growers and large power and industrial customers in the United States and Canada, we can access these customers through our own sales force. For international markets for Zequanox, we intend to develop strategic partnerships with large water companies. For Regalia, we have signed distribution agreements with leading agrichemical companies and regional distributors. For Grandevo and future products, distribution agreements will be developed with regional and national distributors or large multinationals on a case-by-case basis, depending on their expertise in the regions. We have engaged distributors that are selling Regalia in Canada for specialty crops, in the United States for turf and ornamental plants, and in parts of the Midwest United States for row crops. We have also engaged a distributor that is selling Grandevo in the United States for turf and ornamental plants. We have an exclusive relationship with Scotts Miracle-Gro for the consumer retail market.

### **Strategic Collaborations and Relationships**

We will continue to pursue strategic collaborations and relationships with agrichemical, water treatment and industrial and consumer retail companies to support the development and commercialization of bio-based pest management and plant health product candidates identified through our proprietary technology platform and those which we obtain through in-licensing efforts. We collaborate with chemical manufacturers to develop products that combine our bio-based pest management products with their technologies to deliver more compelling products to growers. We also use relationships with conventional chemical pesticide distributors to expand the availability of our products. The terms of the strategic collaborations and relationships we undertake depend on the nature and stage of development of the particular product candidate. We believe these strategic collaborations and relationships can allow us to maximize the potential value and reinforce the credibility of our proprietary technology platform, as well as enhance our market presence and revenues growth.

We have entered into the following key strategic collaboration and distribution agreements:

*Syngenta.* In February 2011, we entered into a commercial agreement with Syngenta Crop Protection AG, referred to as Syngenta, whereby we have designated Syngenta as our exclusive distributor for Regalia in specialty crop markets in Europe, Africa and the Middle East. Syngenta's exclusive rights under this agreement will terminate with respect to each country identified on the earlier to occur of five years after the date of Syngenta's first sale of Regalia under the agreement in such country or 15 years after the date of the first registration of Regalia completed in these regions. In addition to buying Regalia products from us, under this agreement, Syngenta will pay us upon achievement of testing validation, regulatory progress and commercialization events, and Syngenta is committed to making upfront investments to prepare the platform for launching Regalia and other development- and marketing-related costs.

*FMC.* In August 2011, we entered into an exclusive development and distribution agreement with FMC Corporation, referred to as FMC, whereby we have designated FMC as our exclusive distributor for Regalia in specialty crop and large-acre row crop markets in certain Latin American countries. This agreement expires 10 years from the date of the first registration to be completed in Argentina, Brazil or Colombia. FMC remitted an initial payment to us upon signing the agreement, and, in addition to buying Regalia products from us, FMC will pay us additional amounts upon the achievement of regulatory progress events.

*Scotts Miracle-Gro.* In September 2011, we entered into a technology evaluation and master development agreement with The Scotts Company LLC, a subsidiary of The Scotts Miracle-Gro Company and referred to as Scotts Miracle-Gro, a world-leading marketer of branded consumer lawn and garden products. Under the agreement, we have granted Scotts Miracle-Gro a right of first refusal to evaluate, develop and serve as our exclusive distributor for existing and future pipeline products for consumer markets until 2016, and we will enter into separate supply and license agreements with Scotts Miracle-Gro for each of our technologies that they elect to commercialize. Scotts Miracle-Gro made payments to us in 2011, and we anticipate receiving future payments to maintain exclusivity and for the achievement of a commercialization event under this agreement.



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As of December 31, 2013, we had received an aggregate of \$2.4 million in payments under our strategic collaboration and distribution agreements, of which \$1.0 million were received from a related party, and there were \$4.9 million in payments under these agreements that we could potentially receive if the testing validation, regulatory progress and commercialization events occur, of which \$3.0 million could potentially be received from a related party.

### **Manufacturing**

The active ingredient in our Regalia product line is derived from the giant knotweed plant, which we obtain from China. We have scaled production of Regalia using a single supplier to acquire raw knotweed from numerous regional sources and perform an extraction process on this plant and create a dried extract that is shipped to our third-party manufacturers in the United States for production and packaging to our product specifications. We do not maintain a long-term supply contract with this supplier. While there can be no assurance that we will continue to be able to obtain dried giant knotweed plant extract from our supplier in China at a competitive price point, we estimate that our current supply of the ingredient will be sufficient to manufacture product to meet the next 12 months' demand. Should we elect or be required to do so, we do not believe that we would have substantial difficulty in finding an alternative supplier as we have identified a number of new possible suppliers, although there can be no assurance that we will continue to be able to obtain dried extract from China at a competitive price point.

For Grandevo and Zequanox, we are currently using third-party manufacturers for fermentation production, downstream processing and formulation of liquids, freeze dried and spray-dried powders. In order to control product quality and the speed and timing of manufacturing for these products and new fermentation-based products we may introduce to market, we acquired a manufacturing facility, formerly used as a biodiesel plant, in July 2012. Repurposing and expansion of the facility will be completed in multiple phases with an anticipated total capital expenditure of \$32.0 million. Phase 1 of the project includes installation of the first of three fermentation tanks, and the construction of a dedicated building to house them. In December 2013, we produced the first test batch of Grandevo at this facility and expect to begin full-scale production of our products using our own manufacturing capacity in 2014. Phase 1 will also include full-scale production of Regalia, which we successfully produced in small-scale in 2013, and Zequanox. Phase 2 will include increasing the capacity of the facility's utilities, installing drying capacity and installing larger fermenters that will accommodate production of multiple products at higher volumes.

While we intend to produce the majority of our products using our own manufacturing capacity, we expect to continue to utilize third-party manufactures for supplemental production capacity to meet excess seasonal demand.

We believe that greater control of our own manufacturing capacity will allow us to scale-up processes and institute process changes more quickly and efficiently while lowering manufacturing costs over time to achieve the desired margins and protecting the proprietary position of our products.

### **Research and Development**

As of December 31, 2013, we had 79 full-time equivalent employees dedicated to research and development and patent related activities, 16 of whom hold Ph.D. degrees, plus 24 sales and field development personnel who focus on technical support and demonstration and research field trials. Our research and development team has technical expertise in microbiology, natural product and analytical chemistry, biochemistry, fermentation, entomology, nematology, weed science, plant physiology, plant pathology and aquatic sciences. Our research and development activities are principally conducted at our Davis, California facility as well as by our field development specialists on crops and mussel-infested facilities in their respective regions. We have made, and will continue to make, substantial investments in research and development. Our research and development expenses, including patent expenses, were \$17.8 million, \$12.7 million and \$9.4 million in fiscal years 2013, 2012 and 2011, respectively.

## Intellectual Property Rights

We rely on patents and other proprietary right protections, including trade secrets and proprietary know-how, to preserve our competitive position. As of December 31, 2013, we had 8 issued U.S. patents and 17 issued foreign patents (of which 5 U.S. patents and 10 foreign patents were in-licensed), 32 pending provisional and non-provisional patent applications (of which 2 were in-licensed), and 246 pending foreign patent applications (of which 6 were in-licensed) relating to microorganisms and natural product compounds, uses and related technologies. As of December 31, 2013, we had received 11 U.S. trademark registrations and had 9 trademark applications pending in the United States. As of December 31, 2013, we also had received 19 trademark registrations and had 28 trademark applications pending in various other countries.

When we find a microbial product in our screen that kills or inhibits one or more pests or pathogens in at least three replicated tests and identify the microorganism and its associated chemistry, we file a patent application claiming any one or more of the following:

- the microorganism, its DNA products, as well as mutations and other derivatives;
- the use of the microorganism for pest management;
- novel natural product compounds, their analogs and unique mixtures of compounds produced by the microorganism;
- the new use of known natural product compounds for pest management;
- formulations of the microorganism or compounds; and
- synergistic mixtures of the microorganism or compounds with conventional chemical or other pesticides.

We have also entered into in-license and research and development agreements with respect to the use and commercialization of our three commercially available product lines and certain products under development, including Regalia, Grandevo and Zequanox. Under these licensing arrangements, we are obligated to pay royalty fees between 2% and 5% of net sales of these products, subject in certain cases to aggregate dollar caps. The exclusivity and royalty provisions of these agreements are generally tied to the expiration of underlying patents. The patents acquired for Regalia and in-licensed for Zequanox will expire in 2017, although we have filed separate patent applications with respect to both product lines and have been issued a U.S. patent with respect to Regalia. In addition, the in-licensed U.S. patent for Grandevo is expected to expire in 2024, but there is a pending in-licensed patent application relating to Grandevo that could expire later than 2024, if issued, and we have also filed separate patent applications for Grandevo. While third parties thereafter may develop products using the technology under the expired patents, we do not believe that they can produce competitive products without infringing other aspects of our proprietary technology, and we therefore do not expect the expiration of the patents or the related exclusivity obligations to have a significant adverse financial or operational impact on our business.

*Regalia.* We entered into an exclusive license agreement with a company co-founded by Dr. Hans von Amsberg, a former employee of German chemical producer BASF, in May 2007 for U.S. and limited international use of a U.S. patent and technology used in our Regalia product line. We have also filed patent applications with respect to new formulations of Regalia, synergistic combinations with biopesticides and conventional chemical pesticides and new uses for soil and roots.

*Grandevo.* We entered into a co-exclusive license agreement with the USDA in November 2007 for the use in the United States of a U.S.-issued patent and a U.S. patent application relating to the *Chromobacterium subsugae* bacteria used in our Grandevo product line. We have filed patent applications on the compounds produced in the bacterial cells, gene sequences, new uses for the *Chromobacterium subsugae* bacteria and for new uses and new formulations of our Grandevo product line. While a second company has licensed the USDA's patent with respect to the *Chromobacterium subsugae* bacteria and could develop products based on the same underlying intellectual property, we have not provided this company access to the proprietary technology we have developed relating to Grandevo.

*Zequanox*. We entered into a license agreement with The University of the State of New York in December 2009 pursuant to which we were granted an exclusive license under the University's rights for the worldwide use of a U.S.-issued patent and a Canadian-issued patent relating to the *Pseudomonas fluorescens* bacteria used in our Zequanox product line. We have filed patent applications on the natural, mussel-killing compounds in the bacteria, as well as applications relating to various Zequanox formulations.

### Regulatory Considerations

Our activities are subject to extensive federal, state, local and foreign governmental regulations. These regulations may prevent us or our collaborators from developing or commercializing products in a timely manner or under technically or commercially feasible conditions and may impose expenses, delays and other impediments to our product development and registration efforts. In the United States, the EPA regulates our bio-based pest management products under the Federal Insecticide, Fungicide and Rodenticide Act, the Federal Food, Drug and Cosmetics Act and the Food Quality Protection Act. In addition, some of our plant health products are regulated as fertilizers in each of the fifty states. In 2004, the United States Congress passed the Pesticide Registration Improvement Renewal Act, which was reauthorized in 2007 and 2012, a result of efforts from an industry coalition of pesticide companies and environmental groups, to codify pesticide approval times in return for user fees. This law facilitates faster approval times for biopesticides, with EPA approvals typically received within 16 to 24 months, compared with 36 months or longer for conventional chemical pesticides. Registration processes for state and foreign governments vary between jurisdictions and can take up to 12 months for state governments such as California and New York and up to 36 months for foreign governments. Because registration processes for California and foreign governments can be concurrent with EPA registrations, we generally expect to complete federal, state and foreign registration between two and three years after our initial EPA submission.

To register a crop protection product with the EPA, companies must demonstrate the product is safe to mammals, non-target organisms, endangered species and the environment. To demonstrate the bio-based pest management product's safety, required studies must be conducted that evaluate mammalian toxicology, toxicological effects to non-target organisms in the environment (ecotoxicological exposures) and physical and chemical properties of the product. The registration dossier is subject to both scientific and administrative reviews by EPA scientists and management before registration approval. The scientific review involves thorough evaluation of submitted data and completion of risk assessments for human dietary and ecotoxicological exposures. Upon completion of this process, the registration package, including the proposed label, is sent to the Office of General Council for legal review. The final step in the registration process is administrative sign-off by the EPA director of the Biopesticides and Pollution Prevention Division.

In addition to EPA approval, we are required to obtain regulatory approval from the appropriate state regulatory authority in individual states and foreign regulatory authorities before we can market or sell any pest management product in those jurisdictions. California and foreign jurisdictions also require us to submit product efficacy data, which the EPA historically has not required, but may request.

While these regulations substantially increase the time and cost associated with bringing our products to market, we believe that our management team's significant experience in bringing our and other companies' technologies through EPA, state and foreign regulatory approval, efficient development process, and ability to leverage our strategic collaborations to assist with registrations, particularly in Europe and Latin America, will enable us to overcome these challenges.

*Regalia*. The EPA granted approval for the Regalia SC formulation in August 2008, for the Regalia Maxx 5% formulation in May 2009, for the Regalia 20% formulation in January 2010 and for a "ready to use" consumer formulation in January 2010. Regalia is currently registered in all U.S. states. We have also registered Regalia in South Africa, Ecuador, Mexico, Turkey, Panama, El Salvador, Guatemala, Honduras, Peru and Canada, and we have submitted an Annex I registration dossier to the European Union. Our Regalia dossier for the European Union

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has been declared complete, and the registration package is under review by regulatory authorities in the United Kingdom, which will serve as lead for conducting the Annex 1 listing of Regalia for the European Union. In addition to obtaining the Annex 1 listing, we must obtain Annex 3 authorization approval from each country in which we plan to market and sell products. The Regalia dossier is also under review by Brazil.

*Grandevo*. In August 2011 and May 2012, the EPA granted approval for the Grandevo insecticide “technical grade active ingredient” and a dry flowable formulation, respectively. This dry flowable formulation is registered in 49 of 50 states (Hawaii pending) as well as Puerto Rico. In May 2013, we received EPA approval for a revised label reflecting Grandevo’s safety for bees. In addition, we submitted the registration dossier for Grandevo to Mexico and also received permission to field test Grandevo in Brazil and South Africa allowing us to prepare the dossiers for submission in those countries. We expect to submit dossiers for Grandevo registration in Europe and Canada in 2014.

*Zequanox*. In August 2010, the EPA granted the U.S. Bureau of Reclamation a Section 18 emergency use for Zequanox for three western states for use in pipe treatments in power facilities. Under this emergency use, we were allowed to sell various formulations of Zequanox. In July 2011, the EPA granted a conditional approval of the “technical grade active ingredient” in an early formulation of Zequanox, which allows us to market this product line once commercial production processes were concluded. We submitted the registration for open water uses to the EPA in May 2013. A spray dried powder formulation, which is improved over the “end product” approved in July 2011, was approved in March 2012, and this formulation is now commercially available. We have also received approval for Zequanox use in hydroelectric plants in Canada.

As with any pesticide, our pest management products will continue to be subject to review by the EPA and state regulatory agencies. The EPA has the authority to revoke the registration or impose limitations on the use of any of our pest management products if we do not comply with the regulatory requirements, if unexpected problems occur with a product or the EPA receives other newly discovered adverse information. See Part I, Item 1A, “Risk Factors—Risks Relating to Our Business and Strategy—Our inability to obtain regulatory approvals, or to comply with ongoing and changing regulatory requirements, could delay or prevent sales of the products we are developing and commercializing.” Our research and development activities are also subject to federal, state and local worker safety, air pollution, water pollution and solid and hazardous waste regulatory programs and periodic inspection. We believe that our facilities are in substantial compliance with all applicable environmental regulatory requirements.

### **Competition**

For pest management products, performance and value are critical competitive factors. To compete against manufacturers of conventional chemical pesticides and genetically modified crops, we need to demonstrate the advantages of our products over these more established pest management products. Many large agrichemical companies are developing and have introduced new conventional chemical pesticides and genetically modified products that they believe are safer and more environmentally friendly than older conventional chemical products.

The pest management market is very competitive and is dominated by multinational chemical and life sciences companies such as Arysta, BASF, Bayer, Dow Chemical, DuPont, FMC, Monsanto, Sumitomo Chemical and Syngenta. Universities, research institutes and government agencies may also conduct research, seek patent protection and, through collaborations, develop competitive pest management products. Other companies, including bio-specialized biopesticide businesses such as AgraQuest (now a part of Bayer), Certis USA (now a part of Mitsui), Novozymes and Valent Biosciences (now a part of Sumitomo) may prove to be significant competitors in the bio-based pest management and plant health market.

In many instances, agrichemical companies have substantially greater financial, technical, development, distribution and sales and marketing resources than we do. Moreover, these companies may have greater name recognition than we do and may offer discounts as a competitive tactic. There can be no assurance that our

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competitors will not succeed in developing pest management products that are more effective or less expensive than ours or that would render our products obsolete or less competitive. Our success will depend in large part on our ability to maintain a competitive position with our technologies and products.

**Employees**

As of December 31, 2013, we had 151 full-time equivalent employees, of whom 23 hold Ph.D. degrees. Approximately 79 employees are engaged in research and development and patent related activities, 33 in sales and marketing (including 24 sales and field development personnel who focus on technical support and demonstration and research field trials) and 39 in management, operations, accounting/finance and administration. None of our employees are represented by a labor union.

**Corporate Information**

We were originally incorporated in the State of Delaware in June 2006 as Marrone Organic Innovations, Inc. Our principal executive offices are located at 2121 Second St. Suite A-107, Davis, CA 95618. Our telephone number is (530) 750-2800. Our website address is [www.marronebioinnovations.com](http://www.marronebioinnovations.com).

## ITEM 1A. RISK FACTORS

*Our operations and financial results are subject to various risks and uncertainties, including those described below, which could adversely affect our business, financial condition, results of operations, cash flows, growth prospects and the trading price of our common stock.*

### Risks Relating to Our Business and Strategy

***We have a limited operating history and number of commercialized products, have incurred significant losses to date and anticipate continuing to incur losses in the future, and we may not achieve or maintain profitability.***

We are an early stage company with a limited operating history, and we only recently began commercializing our products. We have incurred operating losses since our inception in June 2006, and we expect to continue to incur operating losses for the foreseeable future. At December 31, 2013 and 2012, we had an accumulated deficit of \$105.4 million and \$75.6 million, respectively. For the years ended December 31, 2013, 2012 and 2011, we had a net loss attributable to common stockholders of \$29.9 million, \$40.8 million and \$13.2 million, respectively. As a result, we will need to generate significant revenues to achieve and maintain 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.

Through December 31, 2013, we have derived substantially all of our revenues from sales of Regalia and Grandevo. In addition, we have derived revenues from strategic collaboration and development agreements for the achievement of testing validation, regulatory progress and commercialization events, and from sales of other products. Accordingly, there is only a limited basis upon which to evaluate our business and prospects. Our future success depends, in part, on our ability to market and sell other products, as well as our ability to increase sales of Regalia, Grandevo and Zequanox. An investor in our stock should consider the challenges, expenses, and difficulties we will face as a company seeking to develop and manufacture new types of products in a relatively established market. We expect to derive future revenues primarily from sales of Regalia, Grandevo, Zequanox and other products, but we cannot guarantee the magnitude of such sales, if any. We expect to continue to devote substantial resources to expand our research and development activities, further increase manufacturing capabilities and expand our sales and marketing activities for the further commercialization of Regalia, Grandevo, Zequanox and other product candidates. We expect to incur additional losses for the next several years and may never become profitable.

***Our products are in the early stages of commercialization, and our business may fail if we are not able to successfully generate significant revenues from these products.***

Our future success will depend in part on our ability to commercialize the bio-based pest management and plant health product candidates we are developing. Our initial sales of our latest formulation of Regalia and our initial formulation of Grandevo occurred in the fourth quarter of 2009 and the fourth quarter of 2011, respectively, and we began selling Zequanox in the second half of 2012. Our ability to generate significant revenues from Zequanox is dependent on our ability to persuade customers to evaluate the costs of our Zequanox products compared to the overall cost of the chlorine treatment process, the primary current alternative to using Zequanox, rather than the cost of purchasing chemicals alone. Sales of Zequanox have also remained lower than our other products due to the length of the treatment cycle, the longer sales cycle (the bidding process with utility companies occurs on a yearly or multi-year basis) and the unique nature of the treatment approach for each customer based on the extent of the infestation and the design of the facility.

Our near-term development focus is on Venerate, which received EPA approval in February 2014, Opportune, which received EPA approval in April 2012, and MBI-505, MBI-110 and MBI-303 for plant health. In addition, as of December 31, 2013, we have identified over 25 additional product candidates using our proprietary discovery process, and we currently are focusing our development and commercialization efforts on five of these product candidates.

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Successful development of our product candidates will require significant additional investment, including costs associated with research and development, completing field trials and obtaining regulatory approval, as well as the ability to manufacture our products in large quantities at acceptable costs while also preserving high product quality. Difficulties often encountered in scaling up production include problems involving production yields, quality control and assurance, shortage of qualified personnel, production costs and process controls. In addition, we are subject to inherent risks associated with new products and technologies. These risks include the possibility that any product candidate may:

- be found unsafe;
- be ineffective or less effective than anticipated;
- fail to receive necessary regulatory approvals;
- be difficult to competitively price relative to alternative pest management solutions;
- be harmful to consumers, growers, farm workers or the environment;
- be harmful to crops when used in connection with conventional chemical pesticides;
- be difficult or impossible to manufacture on an economically viable scale;
- be subject to supply chain constraints for raw materials;
- fail to be developed and accepted by the market prior to the successful marketing of similar products by competitors;
- be impossible to market because it infringes on the proprietary rights of third parties; or
- be too expensive for commercial use.

### ***Adverse weather conditions and other natural conditions can reduce acreage planted or incidence of crop disease or pest infestations, which can adversely affect our results of operations.***

Production of the crops on which our products are typically applied is vulnerable to extreme weather conditions such as heavy rains, hurricanes, hail, floods, tornadoes, freezing conditions, drought, fires and floods. Weather conditions can be impacted by climate change resulting from global warming, including changes in precipitation patterns and the increased frequency of extreme weather events, or other factors. Unfavorable weather conditions can reduce both acreage planted and incidence (or timing) of certain crop diseases or pest infestations, each of which may reduce demand for our products. For example, in 2012, the United States experienced nationwide abnormally low rainfall or drought, reducing the incidence of fungal diseases such as mildews, and these conditions have continued to be present in some of our key markets, such as California. We believe these conditions have reduced industry-wide sales of fungicides in 2013 and 2012 relative to prior years, inhibiting growth in sales of Regalia, a biofungicide, and will affect sales of Regalia in California in 2014. These factors have created and can continue to create substantial volatility relating to our business and results of operations.

### ***If our ongoing or future field trials are unsuccessful, we may be unable to obtain regulatory approval of, or commercialize, our products on a timely basis.***

The successful completion of multiple field trials in domestic and foreign locations on various crops and water infrastructures is critical to the success of our product development and marketing efforts. If our ongoing or future field trials are unsuccessful or produce inconsistent results or unanticipated adverse side effects on crops or on non-target organisms, or if we are unable to collect reliable data, regulatory approval of our products could be delayed or we may be unable to commercialize our products. In addition, more than one growing or treatment season may be required to collect sufficient data and we may need to collect data from different geographies to prove performance for customer adoption. Although we have conducted successful field trials on a broad range of crops, we cannot be certain that additional field trials conducted on a greater number of acres, or on crops for which we have not yet conducted field trials, will be successful. Moreover, the results of our ongoing and future

field trials are subject to a number of conditions beyond our control, including weather-related events such as drought or floods, severe heat or frost, hail, tornadoes and hurricanes. Generally, we pay third parties such as growers, consultants and universities, to conduct field tests on our behalf. Incompatible crop treatment practices or misapplication of our products by these third parties could impair the success of our field trials.

***Our inability to obtain regulatory approvals, or to comply with ongoing and changing regulatory requirements, could delay or prevent sales of the products we are developing and commercializing.***

The field testing, manufacture, sale and use of pest management products, including Regalia, Grandevo, Zequanox and other products we are developing, are extensively regulated by the EPA and state, local and foreign governmental authorities. These regulations substantially increase the time and cost associated with bringing our products to market. If we do not receive the necessary governmental approvals to test, manufacture and market our products, or if regulatory authorities revoke our approvals, do not grant approvals in a timely manner or grant approvals subject to restrictions on their use, we may be unable to sell our products in the United States or other jurisdictions, which would result in our future revenues being less than anticipated.

We have received approval from the EPA for the active ingredients and certain end product formulations for Regalia, Grandevo, Zequanox, Opportune and Venerate. As we introduce new formulations of and applications for our products, we will need to seek EPA approval prior to commercial sale. For any such approval, the EPA may require us to fulfill certain conditions within a specified period of time following initial approval. We are also required to obtain regulatory approval from other state and foreign regulatory authorities before we market our products in their jurisdictions.

Some of these states and foreign countries may apply different criteria than the EPA in their approval processes. Although federal pesticide law preempts separate state and local pesticide registration requirements to some extent, state and local governments retain authority to control pesticide use within their borders.

There can be no assurance that we will be able to obtain regulatory approval for marketing our additional products or new product formulations and applications we are developing. Although the EPA has in place a registration procedure for biopesticides like Regalia and Grandevo that is streamlined in comparison to the registration procedure for conventional chemical pesticides, there can be no assurance that all of our products or product extensions will be eligible for this streamlined procedure or that additional requirements will not be mandated by the EPA that could make the procedure more time consuming and costly for our future products.

Additionally, for California state registration and registration in jurisdictions outside of the United States, all products need to be proven efficacious, which can require costly field trial testing and a favorable result is not assured. Because many of the products that may be sold by us must be registered with one or more government agencies, the registration process can be time consuming and expensive, and there is no guarantee that the product will obtain all needed registrations. We have intentionally obtained registration in some jurisdictions and not in others. California is one of the largest and most important producers of agricultural products in the world. Because of its stringent regulation of pesticides and environmental focus, we also view California as one of the most natural and attractive markets for our products. Given California's stringent regulations, it is possible that we may have products that have been registered by the EPA, in other states and in foreign countries, but which may not be sold in California. If this were to occur, our business would be harmed.

Even if we obtain all necessary regulatory approvals to market and sell our products, they will be subject to continuing review and extensive regulatory requirements, including periodic re-registrations. The EPA, as well as state and foreign regulatory authorities, could withdraw a previously approved product from the market upon receipt of newly discovered information, including an inability to comply with their regulatory requirements or the occurrence of unanticipated problems with our products, or for other reasons.



***Customers may not adopt our bio-based pest management and plant health products as quickly as we are projecting.***

Customers in the crop production sector and the water treatment sector are generally cautious in their adoption of new products and technologies. Growers often require on-farm demonstrations of a given pest management or plant health product. Initial purchases of the product tend to be conservative, with the grower testing on a small portion of their overall crop. As the product is proven, growers incorporate the product into their rotational programs and deploy it on a greater percentage of their operations. As a result, large scale adoption can take several growing seasons. Water treatment products must also pass efficacy and ecological toxicity tests. In addition, given the relative novelty of our water treatment products, consumers of those products will continue to require education on their use, which may delay their adoption.

***The high level of competition in the market for pest management products may result in pricing pressure, reduced margins or the inability of our products to achieve market acceptance.***

The markets for pest management products are intensely competitive, rapidly changing and undergoing consolidation. We may be unable to compete successfully against our current and future competitors, which may result in price reductions, reduced margins and the inability to achieve market acceptance for our products.

Many entities are engaged in developing pest management products. Our competitors include major multinational agrichemical companies such as Arysta, BASF, Bayer, Dow Chemical, DuPont, FMC, Monsanto, Sumitomo Chemical, Syngenta and specialized biopesticide businesses such as AgraQuest (now a part of Bayer), Certis USA (now a part of Mitsui), Novozymes and Valent Biosciences (now a part of Sumitomo). Many of these organizations have longer operating histories, significantly greater resources, greater brand recognition and a larger base of customers than we do. As a result, they may be able to devote greater resources to the manufacture, promotion or sale of their products, receive greater resources and support from independent distributors, initiate or withstand substantial price competition or more readily take advantage of acquisition or other opportunities. Further, many of the large agrichemical companies have a more diversified product offering than we do, which may give these companies an advantage in meeting customers' needs by enabling them to offer a broader range of pest management solutions.

***The market for our bio-based pest management and plant health products is underdeveloped, which may make it difficult to effectively market or price our products.***

The market for bio-based pest management products is underdeveloped when compared with conventional chemical pesticides. Certain of our product lines, such as Zequanox, currently have few or no competitors, making it difficult to determine how we should determine their pricing. We may not be able to charge as much for such products as we currently plan. In addition, customers have historically perceived bio-based pest management products as more expensive and less effective than conventional chemical pesticides. To succeed, we will need to continue to change that perception. To the extent that the market for bio-based pest management products does not further develop or customers elect to continue to purchase and rely on conventional chemical pesticides, our market opportunity will be limited.

***Public perception of consuming food with microbial residues and public perception of releasing microorganisms into the environment could damage our reputation and adversely impact sales of our microbial products.***

We believe maintaining our strong reputation and favorable image with distributors, direct customers and end users will be a key component in our success. Although there has been a long history of safe use of bio-based pest management products based on microorganisms, adverse public reaction to the microbial nature of our products could harm our potential sales. In addition, perceptions that the products we produce and market are not safe could adversely affect us and contribute to the risk we will be subjected to legal action. For example, companies are frequently subject to litigation and negative press related to the release of chemicals into water.

systems, and our Zequanox water treatment product line may be subject to public scrutiny. Public perception that our products are not safe, whether justified or not, could impair our reputation, involve us in litigation, damage our brand names and have a material adverse effect on our business.

***Our product sales are expected to be seasonal and subject to weather conditions and other factors beyond our control, which may cause our operating results to fluctuate significantly quarterly and annually.***

Sales of our individual products are generally expected to be seasonal. Weather conditions and natural disasters affect decisions by our distributors, direct customers and end users about the types and amounts of pest management products to purchase and the timing of use of such products. In addition, disruptions that cause delays by growers in harvesting or planting can result in the movement of orders to a future quarter, which would negatively affect the quarter and cause fluctuations in our operating results. For example, we expect that Regalia, a fungicide, will be sold and applied to crops in greater quantity in the second and fourth quarters. These seasonal variations may be especially pronounced because our principal sources of revenues are our Regalia and Grandevo product lines. These two product lines accounted for 97%, 96%, and 96% of our total revenues for the years ended December 31, 2013, 2012 and 2011, respectively. In addition, sales of products for treatment of invasive mussels are concentrated during periods of increased mussel growth and feeding activity, which occurs from June through September in the eastern United States, Canada and Europe and from April through October in the southwestern United States. However, planting and growing seasons, climatic conditions and other variables on which sales of our products are dependent vary from year to year and quarter to quarter. As a result, we have historically experienced substantial fluctuations in quarterly sales.

The level of seasonality in our business overall is difficult to evaluate, particularly as a result of our relatively early stage of development, our relatively limited number of commercialized products, our expansion into new geographical territories, the introduction of new products and the timing of introductions of new formulations and products. It is possible that our business may be more seasonal, or experience seasonality in different periods, than anticipated. For example, if sales of Zequanox become a more significant component of our revenue, the separate seasonal sales cycles of that product could cause further shifts in our quarterly revenue. Other factors may also contribute to the unpredictability of our operating results, including the size and timing of significant distributor transactions, the delay or deferral of use of our products and the fiscal or quarterly budget cycles of our distributors, direct customers and end users. Customers may purchase large quantities of our products in a particular quarter to store and use over long periods of time or time their purchases to manage their inventories, which may cause significant fluctuations in our operating results for a particular quarter or year. For example, we believe that we experienced higher sales of Regalia in the first quarters of 2012 and 2011 than in the second quarters of those years as a result of distributors ordering in advance of the application season.

Our expense levels are based in part on our expectations regarding future sales. As a result, any shortfall in sales relative to our expectations could cause significant fluctuations in our operating results from quarter to quarter, which could result in uncertainty surrounding our level of earnings and possibly a decrease in our stock price.

***If we are unable to identify new product candidates through our product development process, we may not achieve or maintain profitability.***

Our future success will depend in part on our ability to improve our existing products and to utilize our product development process to identify and commercialize natural compounds with pesticidal activity. As of December 31, 2013, we have screened more than 18,000 microorganisms and 350 plant extracts, and we have identified multiple product candidates that display activity against insects, nematodes, weeds, plant diseases and invasive species such as zebra and quagga mussels, aquatic weeds and algae. Only a small number of these candidates are likely to provide viable commercial candidates and an even more limited number, if any, are likely to be commercialized by us. A failure by us to continue identifying natural compounds with pesticidal or plant health promoting activity could make it difficult to grow our business. In addition, we may continue to expand our product offerings through in-licensing of microorganisms and plant extracts. There is no assurance that these attempts will be successful. Licensing of products requires identification of new products or determination of

new applications for existing products and a willingness on the product owner to license the product. If we are unable to identify or in-license additional microorganisms, natural product compounds or product candidates, we may be unable to develop new products or generate revenues.

***Our results of operations will be affected by the level of royalty payments that we are required to pay to third parties.***

We are a party to license agreements that require us to remit royalty payments related to in-licensed microorganisms and plant extracts for certain of our product lines such as Regalia, Grandevo and Zequanox. The amount of royalties that we could owe under these license agreements ranges from 2% to 5% of net product revenues. We cannot precisely predict the amount, if any, of royalties we will owe in the future, and if our calculations of royalty payments are incorrect, we may owe more royalties, which could negatively affect our results of operations. As our product sales increase, we may, from time-to-time, disagree with our third-party collaborators as to the appropriate royalties owed and the resolution of such disputes may be costly and may consume management's time. Furthermore, we may enter into additional license agreements in the future, which may also include royalty payments.

***We rely on third parties for the production of our products. If these parties do not produce our products at a satisfactory quality, in a timely manner, in sufficient quantities or at an acceptable cost, our development and commercialization efforts could be delayed or otherwise negatively impacted.***

We do not currently produce our microbial and plant extract-based products other than at a small scale using our own facilities. As such, we rely on third parties for the production of our products. While we are developing our own internal commercial-scale manufacturing capacity, we may from time to time utilize third-party manufacturers for supplemental production capacity of our products. Our reliance on third parties to manufacture our products presents significant risks to us, including the following:

- reduced control over delivery schedules, yields and product reliability;
- price increases;
- manufacturing deviations from internal and regulatory specifications;
- the failure of a key manufacturer to perform its obligations to us for technical, market or other reasons;
- challenges presented by introducing our fermentation processes to new manufacturers or deploying them in new facilities;
- difficulties in establishing additional manufacturers if we are presented with the need to transfer our manufacturing process technologies to them;
- misappropriation of our intellectual property; and
- other risks in potentially meeting our product commercialization schedule or satisfying the requirements of our distributors, direct customers and end users.

We have not entered into any long-term manufacturing or supply agreements for any of our products, and we will need to enter into additional agreements for the commercial development, manufacturing and sale of our products. There can be no assurance that we can do so on favorable terms, if at all.

Our products have been produced in quantities sufficient to meet commercial demand. However, our current dependence upon others for the production of our products, and our anticipated future dependence upon others for the production of a portion of our products, may adversely affect our ability to develop and commercialize any products on a timely and competitive basis. If manufacturing capacity is reduced or eliminated at one or more of our third-party manufacturers' facilities, we could have difficulties fulfilling our customer orders, and our net revenues and results of operations could decline.

We must accurately forecast demand for our products to obtain adequate and cost-effective capacity from our third-party manufacturers and to purchase certain of the raw materials used in our products at cost-effective rates. Our third-party manufacturers are not required to supply us products until we place and they accept our purchase orders, which generally occurs approximately one month prior to the anticipated product delivery date based on our own rolling forecasts. Our purchase orders may not be accepted and our third-party manufacturers may not be willing to provide us with additional products on a timely basis if they prioritize orders placed by other companies, many of whom are more established than us and order larger volumes of products. In addition, while raw material orders are generally placed one month in advance, because certain of the raw materials used in our products are in short supply or are subject to capacity demands, we place some raw material orders approximately six months in advance to avoid paying higher prices. Accordingly, if we inaccurately forecast demand for our products, we may be unable to meet our customers' delivery requirements, or we may accumulate excess inventories of products and raw materials.

***We may experience significant delays in financing or completing the repurpose of our commercial manufacturing facility for producing some of our bio-based pest management and plant health products, which could result in harm to our business and prospects.***

We acquired a manufacturing facility in July 2012, and our business plan contemplates completing an initial repurpose and upgrade of this facility to develop significant internal commercial manufacturing capacity. Phase 1 of the project includes installation of the first of three fermentation tanks, and the construction of a dedicated building to house them. In December 2013, we produced the first test batch of Grandevo at this facility and expect to begin full-scale production of our products using our own manufacturing capacity in the first half of 2014. Phase 1 will also include full-scale production of Regalia, which we successfully produced in small-scale in 2013, and Zequanox. Phase 2 will include increasing the capacity of the facility's utilities, installing drying capacity and installing larger fermenters that will accommodate production of multiple products at higher volumes. If we are unable to complete the repurpose, upgrade and expansion of this facility in a timely manner, we will need to otherwise secure access to capacity significantly greater than what we have previously used as we commercialize our products.

In order to bring our facility fully on line, we will need to complete design and other plans needed for the repurpose of the facility and secure the requisite permits, licenses and other governmental approvals, and we may not be successful in doing so. If we encounter significant delays, cost overruns, engineering problems, equipment supply constraints or other serious challenges in bringing the facility online, we may be unable to meet our production goals in the time frame we have planned. We may not be successful in producing the amount and quality of product we anticipate in the facility and our results of operations may suffer as a result. Further, we intend to continue to utilize various third-party contract manufacturers, which will reduce our ability to control product quality and the speed and timing of manufacturing, protect our proprietary position in our products and lower our manufacturing costs.

***Failure to achieve expected manufacturing yields for our products could negatively impact our operating results.***

Low yields may result from product design, development stage or process technology failures. We do not know whether a yield problem exists until our products are manufactured based on our design. When a yield issue is identified, the product is analyzed and tested to determine the cause. As a result, yield deficiencies may not be identified until well into the production process. We are repurposing our manufacturing facility acquired in July 2012 for high volume production and anticipate further expanding capacity at this facility, and we may experience delays or product yield issues as this facility comes online. In the event we continue to rely on third-party manufacturers, resolution of yield problems requires cooperation among, and communication between us and our manufacturers. We have limited experience producing a number of our products at commercial scale, and we will not succeed if we cannot maintain or decrease our production costs and effectively scale our technology and manufacturing processes.

***We rely on a single supplier based in China for a key ingredient of Regalia.***

The active ingredient in our Regalia product line is derived from the giant knotweed plant, which we obtain from China. Our single supplier acquires raw knotweed from numerous regional sources and performs an extraction process on this plant, creating a dried extract that is shipped to our third-party manufacturer in the United States. A disruption at our supplier's manufacturing site or a disruption in trade between the United States and China could negatively impact sales of Regalia. We currently use one supplier and do not have a long-term supply contract with this supplier. Although we have identified additional sources of knotweed, there can be no assurance that we will continue to be able to obtain dried extract from China at a competitive price point.

***We have limited experience in marketing and selling our products and will need to expand our sales and marketing infrastructure.***

We currently have limited sales and marketing experience and capabilities. As of December 31, 2013, we employed 33 full-time equivalent sales and marketing personnel, 24 of which focus on technical support and demonstration and research field trials. We will need to further develop our sales and marketing capabilities in order to successfully commercialize Zequanox, Opportune, Venerate and other products we are developing, which may involve substantial costs. Our internal sales and marketing staff consists primarily of sales and marketing specialists and field development specialists who are trained to educate growers and independent distributors on the uses and benefits of our products. These specialists require a high level of technical expertise and knowledge regarding the capabilities of our products compared with other pest management products and techniques. There can be no assurance that our specialists and other members of our sales and marketing team will successfully compete against the sales and marketing teams of our current and future competitors, many of which may have more established relationships with distributors and growers. Our inability to recruit, train and retain sales and marketing personnel or their inability to effectively market and sell the products we are developing could impair our ability to gain market acceptance of our products and cause our sales to suffer.

***If we are unable to maintain and further establish successful relations with the third-party distributors that are our principal customers, or they do not focus adequate resources on selling our products or are unsuccessful in selling them to end users, sales of our products would decline.***

In the United States, we rely on independent distributors of agrichemicals such as Crop Production Services and Wilbur Ellis to distribute and assist us with the marketing and sale of Regalia, Grandevo and other products we are developing. These distributors are our principal customers, and our future revenues growth will depend in large part on our success in establishing and maintaining this sales and distribution channel. If our distributors are unable to sell our products, or receive negative feedback from end users, they may not continue to purchase or market our products. In addition, our products are often combined with other pesticides. If our products are improperly combined with other pesticides they may damage the treated plants, and, even when properly combined, our products may be blamed for damage caused by these other pesticides. Any such issues could damage our brands or reputation.

In addition, there can be no assurance that our distributors will focus adequate resources on selling our products to end users or will be successful in selling them. Many of our potential distributors are in the business of distributing and sometimes manufacturing other, possibly competing, pest management products. As a result, these distributors may perceive our products as a threat to various product lines currently being distributed or manufactured by them. In addition, these distributors may earn higher margins by selling competing products or combinations of competing products. If we are unable to establish or maintain successful relationships with independent distributors, we will need to further develop our own sales and distribution capabilities, which would be expensive and time-consuming and the success of which would be uncertain.

***We depend on a limited number of distributors, some of whom are related parties.***

Our current revenues are derived from a limited number of key customers, each of which serves as a third-party distributor to our products' end users. For the year ended December 31, 2013, our top two distributors accounted

for 38% of our total revenues, with Crop Production Services and The Tremont Group accounting for 28% and 10% of our total revenues, respectively. The Tremont Group is an affiliate of Les Lyman, who is a member of our board. For the year ended December 31, 2012, our top three distributors accounted for 58% of our total revenues, with Crop Production Services, Engage Agro and Helena Chemical accounting for 33%, 13% and 12% of our total revenues, respectively. We expect a limited number of distributors, some of whom may be related parties, to continue to account for a significant portion of our revenues for the foreseeable future. This customer concentration increases the risk of quarterly fluctuations in our revenues and operating results. The loss or reduction of business from one or a combination of our significant distributors could materially adversely affect our revenues, financial condition and results of operations.

***We rely on the experience and expertise of our senior management team and other key personnel, and if we are unable to recruit or retain qualified personnel, our development and commercialization efforts may be significantly delayed.***

We depend heavily on the principal members of our management, particularly Dr. Pamela G. Marrone, our founder, President and Chief Executive Officer, the loss of whose services might significantly delay or prevent the achievement of our scientific or business objectives. Although we maintain and are the beneficiary of \$15.0 million in key person life insurance policies for the life of Dr. Marrone, we do not believe the proceeds would be adequate to compensate us for her loss.

As we expand our operations, we will need to hire additional qualified research and development and management personnel to succeed. The process of hiring, training and successfully integrating qualified personnel into our operation is a lengthy and expensive one. The market for qualified personnel such as experienced fermentation engineers and formulation chemists is very competitive because of the limited number of people available with the necessary technical skills and understanding of our technology and anticipated products. Our failure to hire and retain qualified personnel could impair our ability to meet our research and development and business objectives and adversely affect our results of operations and financial condition.

We also have relationships with scientific collaborators at academic and other institutions, some of whom conduct research at our request or assist us in formulating our research and development strategy. These scientific collaborators are not our employees and may have commitments to, or consulting or advisory contracts with, other entities that may limit their availability to us. We have limited control over the activities of these scientific collaborators and can generally expect these individuals to devote only limited amounts of time to our activities. The inability of any of these persons to devote sufficient time and resources to our programs could harm our business. In addition, these collaborators may have arrangements with other companies to assist those companies in developing technologies that may compete with our products.

***Our intellectual property is integral to our business. If we are unable to protect our patents and proprietary rights in the United States and foreign countries, our business could be adversely affected.***

Our success depends in part on our ability to obtain and maintain patent and other proprietary rights protection for our technologies and products in the United States and other countries. If we are unable to obtain or maintain these protections, we may not be able to prevent third parties from using our proprietary rights. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. As of December 31, 2013, we had 8 issued U.S. patents and 17 issued foreign patents (of which 5 U.S. patents and 10 foreign patents were in-licensed), 32 pending provisional and non-provisional patent applications (of which 2 were in-licensed), and 246 pending foreign patent applications (of which 6 were in-licensed).

The patent position of biotechnology and biochemical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. As a result, the issuance,

scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued which protect our technology or products, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection. The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and we may encounter significant problems and costs in protecting our proprietary rights in these foreign countries.

Our patents and those patents for which we have license rights may be challenged, narrowed, invalidated or circumvented. In addition, our issued patents may not contain claims sufficiently broad to protect us against third parties with similar technologies or products or provide us with any competitive advantage. We are not certain that our pending patent applications will be issued. Moreover, our competitors could challenge or circumvent our patents or pending patent applications. It is also not possible to patent and protect all knowledge and know-how associated with our products so there may be areas that are not protected such as certain formulations and manufacturing processes. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

For certain of our products, we hold co-exclusive licenses to certain of the intellectual property related to these products. Although our products that are derived from intellectual property licensed to us on a co-exclusive basis also include our own proprietary technology, the third parties with whom we share co-exclusive rights may develop products based on the same underlying intellectual property. This could adversely affect the sale of our products.

***Intellectual property litigation could cause us to spend substantial resources and could distract our personnel from their normal responsibilities.***

Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development, sales, marketing or distribution activities. We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

***If we are unable to protect the confidentiality of our trade secrets, our business and competitive position could be harmed.***

We have taken measures to protect our trade secrets and know-how, including the use of confidentiality agreements with our employees, consultants, advisors and third-party manufacturers. It is possible that these agreements may be breached and that any remedies for a breach will not make us whole. In addition, some courts inside and outside of the United States are less willing or unwilling to protect trade secrets. We generally control and limit access to, and the distribution of, our product documentation and other proprietary information. Despite our efforts to protect these proprietary rights, our trade secret-protected know-how could fall into the public domain, unauthorized parties may copy aspects of our products and obtain and use information that we regard as proprietary. We also cannot guarantee that other parties will not independently develop our knowhow or otherwise obtain access to our technologies.

***Third parties may misappropriate our microbial strains.***

Third parties, including contract manufacturers, often have custody or control of our microbial strains. If our microbial strains were stolen, misappropriated or reverse engineered, they could be used by other parties who may be able to reproduce the microbial strains for their own commercial gain. If this were to occur, it would be difficult for us to challenge and prevent this type of use, especially in countries with limited intellectual property protection.

***Other companies may claim that we infringe their intellectual property or proprietary rights, which could cause us to incur significant expenses or prevent us from selling our products.***

Our success depends in part on our ability to operate without infringing the patents and proprietary rights of third parties. Product development is inherently uncertain in a rapidly evolving technological environment such as ours in which there may be numerous patent applications pending, many of which are confidential when filed, with regard to similar technologies. Patents issued to third parties may contain claims that conflict with our patents and that may place restrictions on the commercial viability of our products and technologies. Third parties could assert infringement claims against us in the future. We may become party to, or threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our products, product candidates and technology. We may not be aware of all such third-party intellectual property rights potentially relevant to our products and product candidates.

Any litigation, adversarial proceeding or proceeding before governmental authorities regarding intellectual property rights, regardless of its outcome, would probably be costly and require significant time and attention of our key management and technical personnel. Litigation, adversarial proceedings or proceedings before governmental authorities could also force us to:

- stop or delay using our proprietary screening technology;
- stop or delay selling, manufacturing or using products that incorporate the challenged intellectual property;
- pay damages; and/or
- enter into licensing or royalty agreements which, if available at all, may only be available on unfavorable terms.

Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business.

***If we fail to maintain and successfully manage our existing, or enter into new, strategic collaborations and other relationships, we may not be able to expand commercial development and sales of many of our products.***

Our ability to enter into, maintain and manage collaborations and other relationships in our markets is fundamental to the success of our business. We currently have entered into various license agreements, research and development agreements, supply agreements and distribution agreements. We currently rely on our third parties for manufacturing and sales or marketing services and intend to continue to do so for the foreseeable future, and we intend to enter into other strategic agreements to produce, market and sell other products we develop. However, we may not be successful in entering into new arrangements with third parties for the production, sale and marketing of other products. Any failure to enter into new strategic arrangements on favorable terms or to maintain or manage our existing strategic arrangements could delay or hinder our ability to develop and commercialize our products and could increase our costs of development and commercialization.



***We expect to derive a portion of our revenues from markets outside the United States, including Europe and Latin America, which will subject us to additional business risks.***

Our success depends in part on our ability to expand internationally as we obtain regulatory approvals to market and sell our products in foreign countries. For the year ended December 31, 2013, 2012 and 2011, international sales comprised 8%, 20% and 7% of total revenues, respectively, and we expect to increase the relative percentage of international sales in the future. We have been conducting field trials in Europe, Latin America, Africa and elsewhere. International expansion of our operations could impose substantial burdens on our resources, divert management's attention from domestic operations and otherwise harm our business. Furthermore, international operations are subject to several inherent risks, especially different regulatory requirements and reduced protection of intellectual property rights that could adversely affect our ability to compete in international markets and have a negative effect on our operating results. Revenues generated outside the United States could also result in increased difficulty in collecting delinquent or unpaid accounts receivables, adverse tax consequences and currency fluctuations.

***Our Zequanox product line requires additional development, and during the initial commercialization of Zequanox, we will be relying on successful bidding for government contracts, which could require a longer sales cycle than the private sector.***

Our Zequanox product line is principally designed to kill invasive mussels that restrict critical water flow in industrial and power facilities and impinge on access to recreational waters. This product requires additional development to improve ease of application, and because this product will be used in open waters, it may also require additional ecological testing. We expect our near-term sales of Zequanox will continue to be to governmental agencies and regulated industries, which typically take longer to negotiate and approve contracts than the private sector. Further, we currently expect that our governmental sales may be subject to bidding procedures as well as uncertainties surrounding these agencies' budget approval processes. Therefore, we anticipate that the sales cycle for Zequanox will continue to be longer than that for our pest management products sold into agricultural markets.

***We may require additional financing in the future and may not be able to obtain such financing on favorable terms, if at all, which could force us to delay, reduce or eliminate our research and development activities.***

We may need to raise more money to continue our operations or to enter into strategic transactions, and we may make significant capital expenditures in connection with scaling up our operations, including, for example, the repurpose of our manufacturing facility. We may seek additional funds from public and private stock offerings, corporate collaborations and licenses, borrowings under lease lines of credit or other sources. Additional capital may not be available on terms acceptable to us, or at all. Any additional equity financing may be dilutive to stockholders, and debt financing, if available, may include restrictive covenants. If we cannot raise more money when needed, we may have to reduce our capital expenditures, scale back our development of new products, reduce our workforce or license to others products that we otherwise would seek to commercialize ourselves. Moreover, our cash used in operations has exceeded cash generated from operations in each period since our inception. We used approximately \$34.0 million, \$22.4 million and \$12.4 million of net cash used in operating activities for the years ended December 31, 2013, 2012 and 2011, respectively. In addition, for the years ended December 31, 2013, 2012 and 2011, we incurred expenses of \$17.8 million, \$12.7 million and \$9.4 million, respectively, for research, development and patent related costs. We expect that our current resources and future operating revenue will be sufficient to fund operations for at least the next 18 months. We may attempt to raise additional capital due to market conditions or strategic considerations even if we have sufficient funds for planned operations.

***We use hazardous materials in our business and are subject to potential liability under environmental laws. Any claims relating to improper handling, storage or disposal of hazardous materials could be time consuming and costly to resolve.***

We are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling, disposal and release of hazardous materials and certain waste products. Our research and development and manufacturing activities involve the controlled use of hazardous materials and biological waste. Some of these materials may be novel, including bacteria with novel properties and bacteria that produce biologically active compounds. We cannot eliminate the risk of accidental contamination or discharge and any injury resulting from these materials. In addition, although we have not currently identified any environmental liabilities, the manufacturing facility we purchased in July 2012 may have existing environmental liabilities associated with it that may also result in successor liabilities for us, and we will be subject to increased exposure to potential environmental liabilities as we manufacture our products on a larger scale. We may also be held liable for hazardous materials brought onto the premises of our manufacturing facility before we acquired title, without regard for fault for, or knowledge of, the presence of such substances, as well as for hazardous materials that may be discovered after we no longer own the property if we sell it in the future. In the event of an accident, or if any hazardous materials are found within our operations or on the premises of our manufacturing facility in violation of the law at any time, we may be liable for all cleanup costs, fines, penalties and other costs. This liability could exceed our resources, and, if significant losses arise from hazardous substance contamination, our financial viability may be substantially and adversely affected.

In addition, we may have to incur significant costs to comply with future environmental laws and regulations. In addition, we cannot predict the impact of new governmental regulations that might have an adverse effect on the research, development, production and marketing of our products. We may be required to incur significant costs to comply with current or future laws or regulations. Our business may be harmed by the cost of compliance.

Our collaborators may use hazardous materials in connection with our collaborative efforts. To our knowledge, their work is performed in accordance with applicable biosafety regulations. In the event of a lawsuit or investigation, however, we could be held responsible for any injury caused to persons or property by exposure to, or release of, hazardous materials used by these parties. Further, we may be required to indemnify our collaborators against all damages and other liabilities arising out of our development activities or products produced in connection with these collaborations.

***Any decline in U.S. agricultural production could have a material adverse effect on the market for pesticides and on our results of operations and financial position.***

Conditions in the U.S. agricultural industry significantly impact our operating results. The U.S. agricultural industry can be affected by a number of factors, including weather patterns and field conditions, current and projected grain inventories and prices, domestic and international demand for U.S. agricultural products and U.S. and foreign policies regarding trade in agricultural products. State and federal governmental policies, including farm subsidies and commodity support programs, as well as the prices of fertilizer products and the prices at which produce may be sold, may also directly or indirectly influence the number of acres planted, the mix of crops planted and the use of pesticides for particular agricultural applications. There are various proposals pending before the U.S. congress to cut or eliminate various agricultural subsidies. If such proposals are implemented, they may adversely impact the U.S. agricultural industry and suppliers to that industry such as us.

***Our headquarters and facility and certain manufacturers and suppliers are located in regions that are subject to natural disasters, as well as in some cases geopolitical risks and social upheaval.***

Our Davis, California headquarters and facility is located near a known earthquake fault. The impact of a major earthquake or other natural disaster, including floods, on our facilities, infrastructure and overall operations is difficult to predict and any natural disaster could seriously disrupt our entire business process. In addition, Regalia is produced by a third-party manufacturer in Florida in a location that could be impacted by hurricane

activity, and certain of our raw materials are sourced in China, which is subject to risks associated with uncertain political, economic and other conditions such as the outbreak of contagious diseases, such as avian flu, swine flu and SARS, and natural disasters. The insurance we maintain may not be adequate to cover our losses resulting from natural disasters or other business interruptions. Although these risks have not materially adversely affected our business, financial condition or results of operations to date, there can be no assurance that such risks will not do so in the future.

***Inability to comply with regulations applicable to our facilities and procedures could delay, limit or prevent our research and development or manufacturing activities.***

Our research and development and manufacturing facilities and procedures are subject to continual review and periodic inspection. We must spend funds, time and effort in the areas of production, safety and quality control and assurance to ensure full technical compliance with the regulations applicable to these facilities and procedures. If the EPA or another regulatory body determines that we are not in compliance with these regulations, regulatory approval of our products could be delayed or we may be required to limit or cease our research and development or manufacturing activities or pay a monetary fine. If we are required to limit or cease our research and development activities, our ability to develop new products would be impaired. In addition, if we are required to limit or cease our manufacturing activities, our ability to produce our products in commercial quantities would be impaired or prohibited, which would harm our business.

***We may be exposed to product liability and remediation claims, which could harm our business.***

The use of certain bio-based pest management and plant health products is regulated by various local, state, federal and foreign environmental and public health agencies. These regulations may include requirements that only certified or professional users apply the product or that certain products be used only on certain types of locations, may require users to post notices on properties to which products have been or will be applied, may require notification to individuals in the vicinity that products will be applied in the future or may ban the use of certain ingredients. Even if we are able to comply with all such regulations and obtain all necessary registrations, we cannot provide assurance that our products will not cause injury to crops, the environment or people under all circumstances. For example, our products may be improperly combined with other pesticides or, even when properly combined, our products may be blamed for damage caused by these other pesticides. The costs of remediation or products liability could materially adversely affect our future quarterly or annual operating results.

We may be held liable for, or incur costs to settle, liability and remediation claims if any products we develop, or any products that use or incorporate any of our technologies, cause injury or are found unsuitable during product testing, manufacturing, marketing, sale or use. These risks exist even with respect to products that have received, or may in the future receive, regulatory approval, registration or clearance for commercial use. We cannot guarantee that we will be able to avoid product liability exposure.

We currently maintain product liability insurance at levels we believe are sufficient and consistent with industry standards for companies at our stage of development. We cannot guarantee that our product liability insurance is adequate and, at any time, it is possible that this insurance coverage may not be available on commercially reasonable terms or at all. A product liability claim could result in liability to us greater than our assets or insurance coverage. Moreover, even if we have adequate insurance coverage, product liability claims or recalls could result in negative publicity or force us to devote significant time and attention to those matters, which could harm our business.

***Our ability to use our net operating loss carry-forwards to offset future taxable income may be subject to certain limitations.***

As of December 31, 2013, we had approximately \$77.7 million of federal and \$73.5 million of state operating loss carry-forwards available to offset future taxable income, which expire in varying amounts beginning in 2026

for federal and 2016 for state purposes if unused. It is possible that we will not generate taxable income in time to use these loss carry-forwards before their expiration.

Section 382 of the Internal Revenue Code imposes restrictions on the use of a corporation's net operating losses, as well as certain recognized built-in losses and other carryforwards, after an "ownership change" occurs. A Section 382 "ownership change" occurs if one or more stockholders or groups of stockholders who own at least 5% of our stock increase their ownership by more than 50 percentage points over their lowest ownership percentage within a rolling three-year period. Future issuances or sales of our stock (including certain transactions involving our stock that are outside of our control) could also result in an ownership change under Section 382. If an "ownership change" occurs, Section 382 would impose an annual limit on the amount of pre-change net operating losses and other losses we can use to reduce our taxable income generally equal to the product of the total value of our outstanding equity immediately prior to the "ownership change" (subject to certain adjustments) and the applicable federal long-term tax-exempt interest rate for the month of the "ownership change." The applicable rate for ownership changes occurring in the month of March 2014 was 3.36%.

Because U.S. federal net operating losses generally may be carried forward for up to 20 years, the annual limitation may effectively provide a cap on the cumulative amount of pre-ownership change losses, including certain recognized built-in losses that may be utilized. Such pre-ownership change losses in excess of the cap may be lost. In addition, if an ownership change were to occur, it is possible that the limitations imposed on our ability to use pre-ownership change losses and certain recognized built-in losses could cause a net increase in our U.S. federal income tax liability and U.S. federal income taxes to be paid earlier than otherwise would be paid if such limitations were not in effect. Further, if the amount or value of these deferred tax assets is reduced, such reduction would have a negative impact on the book value of our common stock.

We completed a Section 382 analysis as of December 31, 2013 and concluded that approximately \$0.5 million in federal net operating losses and approximately \$0.2 million in federal research and development credits are expected to expire prior to utilization as a result of our previous ownership changes and corresponding annual limitations.

***Our business is subject to various governmental regulations, and compliance with these regulations may cause us to incur significant expenses. If we fail to maintain compliance with applicable regulations, we may be forced to recall products and cease their manufacture and distribution, which could subject us to civil or criminal penalties.***

The complex legal and regulatory environment exposes us to compliance and litigation costs and risks that could materially affect our operations and financial results. These laws and regulations may change, sometimes significantly, as a result of political or economic events. They include environmental laws and regulations, tax laws and regulations, import and export laws and regulations, government contracting laws and regulations, labor and employment laws and regulations, securities and exchange laws and regulations, and other laws such as the Foreign Corrupt Practices Act. In addition, proposed laws and regulations in these and other areas could affect the cost of our business operations. We face the risk of changes in both domestic and foreign laws regarding trade, potential loss of proprietary information due to piracy, misappropriation or foreign laws that may be less protective of our intellectual property rights. Violations of any of these laws and regulations could subject us to criminal or civil enforcement actions, any of which could have a material adverse effect on our business, financial condition or results of operations.

#### **Risks Related to Ownership of our Common Stock**

***The concentration of our capital stock ownership with our executive officers and directors, and their respective affiliates, will limit your ability to influence corporate matters.***

As of December 31, 2013, our executive officers and directors and their affiliates beneficially owned or controlled, directly or indirectly, an aggregate of 6.7 million shares, or 34.4%, of our common stock. This

concentrated control will limit the ability for other stockholders to influence some corporate matters and could result in some corporate actions that our other stockholders do not view as beneficial such as failure to approve change of control transactions that could offer holders of our common stock a premium over the market value of our company. As a result, the market price of our common stock could be adversely affected.

***Our common stock may experience extreme price and volume fluctuations, and you may not be able to resell shares of our common stock at or above the price you paid.***

We are an early stage company with a limited operating history and a history of losses. Since shares of our common stock were sold in our initial public offering in August 2013 (the “IPO”) at a price of \$12.00 per share, our stock price has ranged up to \$20.00 through December 31, 2013. The trading price of our common stock will likely continue to be highly volatile and could be subject to wide fluctuations in price in response to various factors, some of which are beyond our control. These factors include:

- our small public float relative to the total number of shares of common stock that are issued and outstanding;
- quarterly variations in our results of operations, those of our competitors or those of our customers;
- announcements of technological innovations, new products or services or new commercial relationships by us or our competitors;
- our ability to develop and market new products on a timely basis;
- disruption to our operations;
- media reports and publications about pest management products;
- announcements concerning our competitors or the pest management industry in general;
- our entry into, modification of or termination of key license, research and development or collaborative agreements;
- new regulatory pronouncements and changes in regulatory guidelines or the status of our regulatory approvals;
- general and industry-specific economic conditions;
- any major change in our board of directors or management;
- commencement of, or our involvement in, litigation;
- changes in financial estimates, including our ability to meet our future net revenues and operating profit or loss projections; and
- changes in earnings estimates or recommendations by securities analysts.

In the past, securities class action litigation has often been brought against companies that experience volatility in the market price of their securities. Whether or not meritorious, litigation brought against us could result in substantial costs, divert management’s attention and resources and harm our business.

***Substantial future sales of our common stock, or the perception in the public markets that these sales may occur, may depress our stock price.***

Sales of substantial amounts of our common stock in the public market, or the perception that such sales could occur, could adversely affect the market price of our common stock. As of March 14, 2014, we had approximately 19.6 million shares of common stock outstanding, of which approximately 12.7 million shares became eligible for sale in the public market after the expiration of lock-up agreements on January 28, 2014, and an additional 0.8 million shares will be eligible for sale in the public market on or after August 1, 2014, after the

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expiration of additional market stand-off agreements entered into with us. Sales of these shares are subject in some cases to volume and manner of sale restriction of Rule 144 of the Securities Act. Sales of a substantial number of such shares after this expiration, or the perception that such sales may occur, could cause our share price to fall. In addition, in September 2013, we filed a Form S-8 under the Securities Act to register 3,987,910 shares of our common stock for issuance under our equity incentive plans. These shares may be sold in the public market upon issuance and once vested.

***Because we have no plans to pay dividends on our common stock, investors must look solely to stock appreciation for a return on their investment in us.***

We have never declared or paid any cash dividends on our capital stock, and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. We currently intend to retain all future earnings to fund the development and growth of our business. Any payment of future dividends will be at the discretion of our board of directors and will depend on, among other things, our earnings, financial condition, capital requirements, level of indebtedness, statutory and contractual restrictions applying to the payment of dividends and other considerations that the board of directors deems relevant. Investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize a return on their investment. Investors seeking cash dividends should not purchase our common stock.

***We are an “emerging growth company” and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors.***

We are an “emerging growth company” as defined in the JOBS Act. For as long as we continue to be an emerging growth company we may choose to take advantage of certain exemptions from various reporting requirements applicable to other public companies but not to emerging public companies, which includes, among other things:

- exemption from the auditor attestation requirements under Section 404 of the Sarbanes-Oxley Act of 2002;
- reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements;
- exemption from the requirements of holding non-binding stockholder votes on executive compensation arrangements; and
- exemption from any rules requiring mandatory audit firm rotation and auditor discussion and analysis and, unless the SEC otherwise determines, any future audit rules that may be adopted by the Public Company Accounting Oversight Board.

We could be an emerging growth company until the last day of the fiscal year following the fifth anniversary after our initial public offering, or until the earliest of (i) the last day of the fiscal year in which we have annual gross revenues of \$1 billion or more; (ii) the date on which we have, during the previous three year period, issued more than \$1 billion in non-convertible debt or (iii) the date on which we are deemed to be a large accelerated filer under the federal securities laws. We will qualify as a large accelerated filer as of the first day of the first fiscal year after we have (i) more than \$700 million in outstanding common equity held by our non-affiliates and (ii) been public for at least 12 months. The value of our outstanding common equity will be measured each year on the last day of our second fiscal quarter.

Under the JOBS Act, emerging growth companies are also permitted to elect to delay adoption of new or revised accounting standards until companies that are not subject to periodic reporting obligations are required to comply, if such accounting standards apply to non-reporting companies. We have made an irrevocable decision to opt out of this extended transition period for complying with new or revised accounting standards.

We cannot predict if investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

***We will continue to incur significant increased costs as a result of operating as a public company, and our management will be required to devote substantial time to comply with the laws and regulations affecting public companies, particularly after we are no longer an “emerging growth company.”***

As a newly public company, particularly after we cease to qualify as an emerging growth company, we will continue to incur significant legal, accounting and other expenses that we did not incur as a private company, including costs associated with public company reporting and corporate governance requirements, in order to comply with the rules and regulations imposed by the Sarbanes-Oxley Act, as well as rules implemented by the SEC and NASDAQ. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives and our legal and accounting compliance costs will increase. We may need to hire additional staff or consultants in the areas of investor relations, legal and accounting to operate as a public company. We also expect that these new rules and regulations may make it more difficult and expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified individuals to serve on our board of directors or as executive officers. We are currently evaluating and monitoring developments with respect to these rules, and we cannot predict or estimate the amount of additional costs we may incur or the timing of such costs.

For example, the Sarbanes-Oxley Act requires, among other things, that we maintain effective internal controls over financial reporting and disclosure controls and procedures. In particular, as a public company, we will be required to perform system and process evaluations and testing of our internal control over financial reporting to allow management and our independent registered public accounting firm to report on the effectiveness of our internal controls over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. As described above, as an emerging growth company, we will not need to comply with the auditor attestation provisions of Section 404 for several years. Our testing, or the subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal control over financial reporting that are deemed to be material weaknesses. Our compliance with Section 404 will require that we incur substantial accounting expense and management time on compliance-related issues. Moreover, if we are not able to comply with the requirements of Section 404 in a timely manner, or if we or our independent registered public accounting firm identify deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, we could lose investor confidence in the accuracy and completeness of our financial reports, which could cause our stock price to decline.

When the available exemptions under the JOBS Act, as described above, cease to apply, we expect to incur additional expenses and devote increased management effort toward ensuring compliance with them. We cannot predict or estimate the amount of additional costs we may incur as a result of becoming a public company or the timing of such costs.

***Provisions in our charter documents and under Delaware law could discourage a takeover that stockholders may consider favorable.***

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

- the right of our board of directors to elect directors to fill a vacancy created by the expansion of our board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- the establishment of a classified board of directors requiring that only a subset of the members of our board of directors be elected at each annual meeting of stockholders;

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- the prohibition of cumulative voting in our election of directors, which would otherwise allow less than a majority of stockholders to elect director candidates;
- the requirement that stockholders provide advance notice to nominate individuals for election to our board of directors or to propose matters that can be acted upon at a stockholders' meeting. These provisions may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company;
- the ability of our board of directors to issue, without stockholder approval, shares of undesignated preferred stock with terms set by the board of directors, which rights could be senior to those of our common stock. The ability to authorize undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us;
- the ability of our board of directors to alter our bylaws without obtaining stockholder approval;
- the inability of our stockholders to call a special meeting of stockholders and to take action by written consent in lieu of a meeting;
- the required approval of the holders of at least two-thirds of the shares entitled to vote at an election of directors to adopt, amend, or repeal our bylaws;
- the required approval of the holders of at least two-thirds of the shares entitled to vote at an election of directors to repeal or adopt any provision of our certificate of incorporation regarding the election of directors;
- the required approval of the holders of at least 80% of such shares to amend or repeal the provisions of our bylaws regarding the election and classification of directors; and
- the required approval of the holders of at least two-thirds of the shares entitled to vote at an election of directors to remove directors without cause.

As a Delaware corporation, we are also subject to certain Delaware anti-takeover provisions. Under Delaware law, a corporation may not engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other things, the board of directors has approved the transaction. Our board of directors could rely on Delaware law to prevent or delay an acquisition of us.

### **ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

### **ITEM 2. PROPERTIES**

Our corporate headquarters are located at 2121 Second St. Suite A-107 in Davis, California, in a facility consisting of approximately 24,500 square feet of office and laboratory space under a lease, as amended, that expires with respect to various portions of the covered premises from time to time between February 2014 and October 2016 and which we intend to continue to rent with respect to all portions on a month to month basis until we move into the new office and laboratory facility. This facility accommodates our research, development, sales, marketing, operations, finance and administrative activities. In September 2013, we entered into a lease agreement for a new 28,700 square foot office and laboratory facility located in Davis, California. The initial term of the lease is for a period of 60 months commencing on the later of the date of substantial completion of initial improvements to the leased property, or May 1, 2014.

We also purchased an 11,400 square-foot manufacturing facility in Bangor, Michigan, in July 2012, which we are repurposing to accommodate large-scale manufacturing of our products. We also lease approximately 3,000 square feet of greenhouse space located at 21538 C.R.99 in Woodland, California. We believe that our leased facilities and our manufacturing facility are adequate to meet our needs.



**ITEM 3. LEGAL PROCEEDINGS**

From time to time we may be involved in litigation that we believe is of the type common to companies engaged in our line of business, including intellectual property and employment issues. As of the date of this filing, we are not involved in any material pending legal proceedings.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

## PART II

### ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

#### Market Information for Common Stock

Our common stock has been listed on the NASDAQ Global Market under the symbol "MBII" since August 2, 2013. Prior to that time, there was no public market for our stock. The following table sets forth for the indicated periods the high and low intra-day sales prices per share for our common stock on the NASDAQ Global Market.

	<u>HIGH</u>	<u>LOW</u>
Third Quarter 2013 (from August 2, 2013)	\$ 18.58	\$ 12.27
Fourth Quarter 2013	\$ 20.00	\$ 13.01

#### Holders of Record

As of December 31, 2013, there were 170 stockholders of record of our common stock, and the closing price of our common stock was \$17.78 per share as reported on the NASDAQ Global Market. Because some of our shares of common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders.

#### Dividend Policy

We have never declared or paid any cash dividend on our common stock. We intend to retain any future earnings and do not expect to pay dividends in the foreseeable future.

#### Equity Compensation Plan Information

Information, as of December 31, 2013, regarding equity compensation plans approved and not approved by stockholders is summarized in the following table (in thousands, except exercise price data):

<u>PLAN CATEGORY</u>	<u>NUMBER OF SECURITIES TO BE ISSUED UPON EXERCISE OF OUTSTANDING OPTIONS, WARRANTS AND RIGHTS (a)</u>	<u>WEIGHTED-AVERAGE EXERCISE PRICE OF OUTSTANDING OPTIONS, WARRANTS AND RIGHTS (b)</u>	<u>NUMBER OF SECURITIES REMAINING AVAILABLE FOR FUTURE ISSUANCE UNDER EQUITY COMPENSATION PLANS (EXCLUDING SECURITIES REFLECTED IN COLUMN (a))(1)</u>
Equity compensation plans approved by security holders	2,608	\$ 8.56	1,194
Equity compensation plans not approved by security holders	—	—	—
<b>Total</b>	<b>2,608</b>	<b>\$ 8.56</b>	<b>1,194</b>

(1) Consists of shares available for issuance under our 2013 Stock Incentive Plan.

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### Stock Performance Graph

*This performance graph shall not be deemed “soliciting material” or to be “filed” with the SEC for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (Exchange Act), or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any filing of Marrone Bio Innovations, Inc. under the Securities Act of 1933, as amended, or the Exchange Act.*

The following graph shows a comparison from August 2, 2013 (the date our common stock commenced trading on the NASDAQ Global Market) through December 31, 2013 of the cumulative total return for our common stock, the Standard & Poor’s 500 Stock Index (S&P 500 Index) and the Nasdaq Composite Index (NASDAQ Composite). The graph assumes that \$100 was invested at the market close on August 2, 2013 in the common stock of Marrone Bio Innovations, Inc., the S&P 500 Index and the NASDAQ Composite and data for the S&P 500 Index and the NASDAQ Composite assumes reinvestments of dividends. The stock price performance of the following graph is not necessarily indicative of future stock price performance.



### ITEM 6. SELECTED FINANCIAL DATA

You should read the following selected consolidated financial data in connection with Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operation,” and our consolidated financial statements and the related notes included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K.

The consolidated statements of operations data for each of the years ended December 31, 2013, 2012 and 2011 and the consolidated balance sheet data as of December 31, 2013 and 2012 are derived from our audited consolidated financial statements included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K. The consolidated statements of operations data for the year ended December 31, 2010 and the consolidated balance sheets data as of December 31, 2011 and 2010 are derived from our audited consolidated financial statements that are not included in this Annual Report on Form 10-K. Our historical results are not necessarily indicative of our results in any future period.

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**Consolidated Statements of Operations Data:**

	YEAR ENDED DECEMBER 31			
	2013	2012	2011	2010
	(In thousands, except per share data)			
Revenues:				
Product	\$ 12,657	\$ 6,777	\$ 5,044	\$ 3,666
License (1)	193	179	57	—
Related party	1,693	184	150	31
Total revenues	14,543	7,140	5,251	3,697
Cost of product revenues, including cost of product revenues to related parties of \$984, \$126, \$50 and \$10 for the years ended December 31, 2013, 2012 and 2011 and 2010, respectively	10,736	4,333	2,172	1,738
Gross profit	3,807	2,807	3,079	1,959
Operating expenses:				
Research, development and patent	17,814	12,741	9,410	5,563
Non-cash charge associated with a convertible note	—	3,610	—	—
Selling, general and administrative	15,018	10,294	6,793	4,353
Total operating expenses	32,832	26,645	16,203	9,916
Loss from operations	(29,025)	(23,838)	(13,124)	(7,957)
Other income (expense):				
Interest income	49	16	22	22
Interest expense	(5,997)	(2,466)	(88)	(102)
Change in estimated fair value of financial instruments (2)	6,717	(12,461)	1	—
Gain on extinguishment of debt	49	—	—	—
Other (expense) income, net	(282)	(45)	9	1
Total other income (expense), net	536	(14,956)	(56)	(79)
Loss before income taxes	(28,489)	(38,794)	(13,180)	(8,036)
Income taxes	—	—	—	—
Net loss	(28,489)	(38,794)	(13,180)	(8,036)
Deemed dividend on convertible notes	(1,378)	(2,039)	—	—
Net loss attributable to common stockholders	<u>\$(29,867)</u>	<u>\$(40,833)</u>	<u>\$(13,180)</u>	<u>\$(8,036)</u>
Net loss per common share(3):				
Basic	<u>\$ (3.42)</u>	<u>\$ (32.48)</u>	<u>\$ (10.64)</u>	<u>\$ (6.58)</u>

Diluted	<u>\$ (3.94)</u>	<u>\$ (32.48)</u>	<u>\$ (10.64)</u>	<u>\$ (6.58)</u>
Weighted-average shares outstanding used in computing net loss per common share (3):				
Basic	<u>8,731</u>	<u>1,257</u>	<u>1,239</u>	<u>1,221</u>
Diluted	<u>8,911</u>	<u>1,257</u>	<u>1,239</u>	<u>1,221</u>

- (1) We receive payments under strategic collaboration and distribution agreements under which we provide third parties with exclusive development, marketing and distribution rights. These payments are initially classified as deferred revenues and are recognized as revenues over the exclusivity period. See Note 2 of our accompanying Notes to Consolidated Financial Statements included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K for an explanation of the method used to calculate license revenues.
- (2) Prior to the completion of the initial public offering, we accounted for the outstanding warrants exercisable into shares of our Series A, Series B and Series C convertible preferred stock and the outstanding warrants

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exercisable into a variable number of shares of common stock as liability instruments, as the Series A, Series B and Series C convertible preferred stock and the common stock into which these warrants were convertible were contingently redeemable upon the occurrence of certain events or transactions. In addition, convertible notes were accounted for at estimated fair value. The warrant instruments and convertible notes were adjusted to fair value at each reporting period with the change in fair value recorded in the consolidated statements of operations. These charges did not continue after the completion of the initial public offering because the preferred stock warrants were exercised and the convertible notes automatically converted into common stock in accordance with their terms upon the completion of the initial public offering. The common stock warrants were, in accordance with their terms upon the completion of the initial public offering, either automatically exercised for shares of common stock or represent the right to purchase a fixed number of shares. See Part II, Item 7, “Management’s Discussion and Analysis of Financial Conditions and Results of Operations—Key Components of Our Results of Operations—Change in Estimated Fair Value of Financial Instruments and Deemed Dividend on Convertible Notes.”

- (3) Includes the effect of a 1-for-3.138458 reverse stock split, effective August 1, 2013.

**Balance Sheet Data:**

	DECEMBER 31			
	2013	2012	2011	2010
	(In thousands)			
Cash and cash equivalents	\$24,455	\$ 10,006	\$ 2,215	\$ 4,287
Short-term investments	13,677	—	2,000	—
Working capital (deficit) (1)	46,915	(11,468)	5,030	4,935
Total assets	68,879	33,778	9,818	7,937
Debt and capital leases (net of unamortized discount)	14,972	16,740	806	1,106
Convertible notes	—	41,860	—	—
Preferred stock warrant liability	—	1,884	27	28
Common stock warrant liability	—	301	—	—
Total liabilities	27,095	68,413	4,306	2,689
Convertible preferred stock	—	39,612	39,612	26,452
Total stockholders’ equity (deficit)	41,784	(74,247)	(34,100)	(21,204)

- (1) Working capital (deficit) is defined as total current assets minus total current liabilities.

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

*You should read the following discussion of our financial condition and results of operations in connection with our consolidated financial statements and the related notes included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K. In addition to our historical consolidated financial information, the following discussion contains forward-looking statements that reflect our plans, estimates, and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in Part I, Item 1A, "Risk Factors."*

### Overview

We make bio-based pest management and plant health products. Bio-based products are comprised of naturally occurring microorganisms such as bacteria and fungi, and plant extracts. We target the major markets that use conventional chemical pesticides, including agricultural and water markets, where our bio-based products are used as substitutes for, or in connection with, conventional chemical pesticides. We also target new markets for which there are no available conventional chemical pesticides, the use of conventional chemical pesticides may not be desirable or permissible because of health and environmental concerns or the development of pest resistance has reduced the efficacy of conventional chemical pesticides. Our current portfolio of EPA-approved and registered "biopesticide" products and our pipeline address the growing global demand for effective, efficient and environmentally responsible products.

Our goal is to provide growers with solutions to a broad range of pest management needs by adding new products to our product portfolio, continuing to broaden the commercial applications of our existing product lines, leveraging relationships with existing distributors and growers' positive experiences with existing product lines, and educating growers with on-farm product demonstrations and controlled product launches with key target customers and other early adopters. We believe this approach enables us to stay ahead of our competition in providing innovative pest management solutions, enhances our sales process at the distributor level and helps us to capture additional value from our products.

The agricultural industry is increasingly dependent on effective and sustainable pest management practices to maximize yields and quality in a world of increased demand for agricultural products, rising consumer awareness of food production processes and finite land and water resources. In addition, our research has shown that the global market for biopesticides is growing substantially faster than the overall market for pesticides. This demand is in part a result of conventional growers acknowledging that there are tangible benefits to adopting bio-based pest management products into integrated pest management (IPM) programs. We believe that our competitive strengths, including our commercially available products, robust pipeline of novel product candidates, proprietary technology and product development process, commercial relationships and industry experience, position us for rapid growth by providing solutions for these global trends.

We currently offer three product lines for commercial sale: Regalia, an initial formulation of which we began selling in the fourth quarter of 2008, Grandevo, an initial formulation of which we began selling in the fourth quarter of 2011, and Zequanox, an initial formulation of which we began selling in the second half of 2012. We have two product candidates, Opportune, an herbicide (for weed control), which received EPA approval in April 2012, and Venerate, an insecticide (for insect and mite control), which received EPA approval in February 2014, that we are in the process of developing for commercial application. In addition, we submitted MBI-011, another herbicide, and MBI-302, a biological nematicide, to the EPA for registration, and we have submitted MBI-505, an anti-transpirant, to applicable state agencies for registration. A large portion of our sales are currently attributable to conventional growers who use our bio-based pest management products either to replace conventional chemical pesticides or enhance the efficacy of their IPM programs. In addition, a portion of our sales are attributable to organic farmers, who cannot use conventional pesticides and have few alternatives for pest management. We intend to continue to develop and commercialize bio-based pest management and plant health products that are allowed for use by organic farmers.

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We sell our crop protection products to leading agrichemical distributors while also working directly with growers to increase existing and generate new product demand. To date, we have marketed our bio-based pest management and plant health products for agricultural applications to U.S. growers, through distributors and our own sales force, and we have focused primarily on high value specialty crops such as grapes, citrus, tomatoes, leafy greens and ornamental plants. As we continue to demonstrate the efficacy of our bio-based pest management and plant health products on new crops or for new applications, we may either continue to sell our product through our in-house sales force or collaborate with third parties for distribution to select markets. For example, we demonstrated that there is a significant opportunity for selling Regalia as a yield enhancer for large-acre row crop markets such as corn, cotton and soybeans, which we began to sell through third-party distributors in the third quarter of 2013.

We have historically sold a significant majority of our products in the United States, although we have strategically launched Regalia in select international markets. For example, we launched Regalia in the United Kingdom in 2009, Turkey in 2010, Mexico in 2011 and Canada in 2012. We are continuing to form strategic collaborations with major agrichemical companies such as FMC (for markets in Latin America) and Syngenta (for markets in Africa, Europe and the Middle East) to accelerate our entry into certain international markets where these distributors are already selling Regalia, as well as in Asia Pacific markets. In addition to engaging these large-scale international distributors, we intend to form new strategic collaborations with other market-leading companies in our target markets and regions to expand the supply of our products globally, particularly in markets for which our products fall under exemptions from registration. In the longer term, when we launch Grandevo and other products internationally, we expect to generate a significant portion of our revenues from international sales of our products.

We currently market our water treatment product, Zequanox, through our sales and technical workforce to hydroelectric power generation companies, combustion power generation companies and industrial facilities at various geographical sites. We are in discussions with several potential leaders in water treatment technology and applications regarding potential arrangements to sell Zequanox in the United States and international markets to supplement the efforts of our sales force. We are also exploring other options for selling Zequanox including entering into distribution arrangements with third parties to market Zequanox internationally. We may enter into similar arrangements for the distribution of Zequanox for use in certain applications such as treatment of lakes, aqueducts and drinking water facilities in the United States. We believe that Zequanox presents a unique opportunity for generating long-term revenue, as there are limited water treatment options available to date, most of which are time-consuming, costly or subject to high levels of regulation. Our ability to generate significant revenues from Zequanox is dependent on our ability to persuade customers to evaluate the costs of our Zequanox products compared to the overall cost of the chlorine treatment process, the primary current alternative to using Zequanox, rather than the cost of purchasing chemicals alone. Sales of Zequanox have also remained lower than our other products due to the length of the treatment cycle, the longer sales cycle (the bidding process with utility companies occurs on a yearly or multi-year basis) and the unique nature of the treatment approach for each customer based on the extent of the infestation and the design of the facility.

Our biopesticide products cannot be sold in the United States except under an EPA-approved use label. As such, we launch early formulations of our products to targeted customers under EPA-approved use labels, which list a limited number of crops and applications, to gather field data, gain product knowledge and get feedback to our research and development team while the EPA reviews new product formulations and expanded use labels for already approved formulations covering additional crops and applications. Based on these initial product launches, sales and demonstrations in additional regions and other tests and trials, we continue to enhance our products and submit product formulations and expanded use labels to the EPA and other regulatory agencies. For example, we began sales of Regalia SC, an earlier formulation of Regalia, in the Florida fresh tomatoes market in 2008, while a more effective formulation of Regalia with an expanded use label, including listing for use in organic farming, was under review by the EPA. When approved, we launched this new formulation into the Southeast United States in 2009 and nationally in 2010. In 2011, we received EPA approval of a newly expanded



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Regalia label covering hundreds of crops and various new uses for applications to soil and through irrigation systems. Likewise, in May 2013, we received approval for an improved Grandevo label, which has been approved by 48 states, with decisions pending in California and Hawaii.

Our total revenues were \$14.5 million, \$7.1 million and \$5.3 million for the years ended December 31, 2013, 2012 and 2011, respectively, and have risen as growers have increasingly adopted our products. In addition, revenue has increased as our products are used on an expanded number of crops. For example, in the third quarter of 2013, we began selling Regalia to distributors in row crop markets. We generate our revenues primarily from product sales, which historically were principally attributable to sales of Regalia and are now increasingly attributable to Grandevo. While the drought in California will affect sales of Regalia in that state, we believe that any loss of sales due to the drought will be made up through the expansion of sales of our products in regions of the United States, such as the Midwest or the Southwest, that are not suffering drought conditions. Since 2011, we have also recognized revenues from our strategic collaboration and distribution agreements, which amounted to \$0.2 million, \$0.2 million and \$0.1 million for the years ended December 31, 2013, 2012 and 2011. For the year ended December 31, 2013, we recognized \$0.1 million of related party revenues under these agreements based on the terms of our commercial agreement with Syngenta, an affiliate of one of our 5% stockholders. There were no related party revenues recognized under these agreements for the years ended December 31, 2012 and 2011.

We currently sell our crop protection products through the same leading agricultural distributors used by the major agrichemical companies. Distributors with 10% or more of our total revenues consist of the following:

	<u>CROP PRODUCTION SERVICES</u>	<u>THE TREMONT GROUP (1)</u>	<u>ENGAGE AGRO</u>	<u>HELENA CHEMICALS</u>	<u>WILBUR ELLIS</u>
For the years ended December 31,					
2013	28%	10%	*	*	*
2012	33%	*	13%	12%	*
2011	39%	*	*	17%	10%

\* Represents less than 10% of total revenues

(1) Represents related party revenues. See Note 18 of our accompanying Notes to Consolidated Financial Statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K for further discussion.

While we expect product sales to a limited number of distributors to continue to be our primary source of revenues, as we continue to develop our pipeline and introduce new products to the marketplace, we anticipate that our revenues stream will be diversified over a broader product portfolio and customer base.

Our cost of product revenues was \$10.7 million, \$4.3 million and \$2.2 million for the years ended December 31, 2013, 2012 and 2011, respectively. Cost of product revenues included \$1.0 million, \$0.1 million and \$0.1 million of cost of product revenues to related parties for the years ended December 31, 2013, 2012 and 2011, respectively. Cost of product revenues consists principally of the cost of raw materials, including inventory costs and third-party services related to procuring, processing, formulating, packaging and shipping our products. We expect our cost of product revenues to increase as we expand sales of Regalia, Grandevo and Zequanox. Our cost of product revenues has increased as a percentage of total revenues primarily due to a change in product mix, with Grandevo representing an increased percentage of total revenues as Grandevo is early in its life cycle. We expect to see a gradual increase in gross margin over the life cycle of each of our products, including Grandevo, as we improve production processes, gain efficiencies and increase product yields.

Our research, development and patent expenses have historically comprised a significant portion of our operating expenses, amounting to \$17.8 million, \$12.7 million and \$9.4 million for the years ended December 31, 2013, 2012 and 2011, respectively. We intend to continue to devote significant resources toward our proprietary technology and adding to our pipeline of bio-based pest management and plant health products using our proprietary discovery process, sourcing and commercialization expertise and rapid and efficient development process.

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Selling, general and administrative expenses incurred to establish and build our market presence and business infrastructure have generally comprised the remainder of our operating expenses, amounting to \$15.0 million, \$10.3 million and \$6.8 million for the years ended December 31, 2013, 2012 and 2011, respectively. We expect that in the future, our selling, general and administrative expenses will increase due to our expanded product portfolio and due to additional costs incurred relating to being a public company.

In addition, for the year ended December 31, 2012, in connection with a convertible note, we incurred a non-recurring, non-cash charge of \$3.6 million as operating expenses. We also recognized a net gain in non-cash charges attributable to the change in estimated fair value of financial instruments of \$6.7 million for the year ended December 31, 2013 and a net loss of \$12.5 million for the year ended December 31, 2012, which were reported in other income (expense).

Historically, we have funded our operations from the issuance of shares of common stock, preferred stock, warrants and convertible notes, the issuance of debt and entry into financing arrangements, product sales, payments under strategic collaboration and distribution agreements and government grants, but we have experienced significant losses as we invested heavily in research and development. We expect to incur additional losses related to our investment in the continued development, expansion and marketing of our product portfolio.

In August 2013, we closed an initial public offering of 5.5 million shares of our common stock (inclusive of 0.7 million shares of common stock sold upon the exercise of the underwriters' option to purchase additional shares) (the "IPO"). The public offering price of the shares sold in the offering was \$12.00 per share. Our total gross proceeds from the offering were \$65.6 million, and after deducting underwriting discounts and commissions and offering expenses payable by us, the aggregate net proceeds that we received totaled approximately \$56.1 million. Upon the closing of the IPO, all shares of our outstanding convertible preferred stock and all of our outstanding convertible notes automatically converted into shares of common stock, and all outstanding warrants to purchase convertible preferred stock and certain warrants to purchase common stock were exercised for shares of common stock. There has been no material change in the planned use of proceeds from our IPO as described in our final prospectus filed with the SEC dated as of August 2, 2013 pursuant to Rule 424(b). We invested a portion of the funds received in FDIC insured money market accounts and time certificates of deposit.

### **Critical Accounting Policies and Estimates**

Our consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K are prepared in accordance with accounting principles generally accepted in the United States. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, net revenue, costs, and expenses, and any related disclosures. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Changes in accounting estimates are reasonably likely to occur from period to period. Accordingly, actual results could differ significantly from the estimates made by our management. We evaluate our estimates and assumptions on an ongoing basis. To the extent that there are material differences between these estimates and our actual results, our future financial statement presentation, financial condition, results of operations and cash flows will be affected.

We believe that the assumptions and estimates associated with revenue recognition, income taxes, inventory valuation, share-based compensation, and financial instruments with characteristics of both liabilities and equity have the greatest potential impact on our consolidated financial statements. Therefore, we consider these to be our critical accounting policies and estimates. For further information on all of our significant accounting policies, see Note 2 of our accompanying Notes to Consolidated Financial Statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K.

### **Key Components of Our Results of Operations**

#### ***Product Revenues***

Product revenues consist of revenues generated primarily from sales to distributors, net of rebates and cash discounts. Our product revenues through 2012 were primarily derived from sales of Regalia, but now are

increasingly impacted by new products such as Grandevo. We elected to discontinue marketing GreenMatch, our first product, an organic herbicide in 2011 to focus on more attractive opportunities and products. We sold our remaining inventory of GreenMatch to a limited number of existing customers and terminated such sales upon the exhaustion of product inventory in July 2012. Product revenues, not including related party revenues, constituted 87%, 95% and 96% of our total revenues for the years ended December, 2013, 2012 and 2011, respectively. Product revenues in the United States, not including related party revenues, constituted 79%, 78% and 90% of our total revenues for the years ended December 31, 2013, 2012 and 2011, respectively.

In 2013, we began to extend term periods in excess of those historically offered to our customers. We believe our competitors and other vendors in the pest management and plant health industry also offer extended payment terms and, in the aggregate, we believe that by expanding the use of extended payment terms, we have provided a competitive response to the market. When we offer terms that are considered to be extended in comparison to our historical terms, we defer recognizing revenue until payment is due. As of December 31, 2013, we recorded current deferred product revenues of \$1.0 million. As of December 31, 2012, we had no deferred product revenues.

#### ***License Revenues***

License revenues generally consist of revenues recognized under our strategic collaboration and distribution agreements for exclusive distribution rights, either for Regalia or for our broader pipeline of products, for certain geographic markets or for market segments that we are not addressing directly through our internal sales force. Our strategic collaboration and distribution agreements generally outline overall business plans and include payments we receive at signing and for the achievement of testing validation, regulatory progress and commercialization events. As these activities and payments are associated with exclusive rights that we provide over the term of the strategic collaboration and distribution agreements, revenues related to the payments received are deferred and recognized as revenues over the term of the exclusive period of the respective agreements, which we estimate to be between 5 and 17 years based on the terms of the contract and the covered products and regions. For the years ended December 31, 2013, 2012 and 2011, license revenues constituted 1%, 2%, and 1% of total revenues, respectively. As of December 31, 2013, not including agreements with related parties discussed below, we had received an aggregate of \$1.4 million in payments under these agreements, and there are up to \$1.9 million in payments under these agreements that we could potentially receive if the testing validation, regulatory progress and commercialization events occur.

#### ***Related Party Revenues***

Related party revenues consist of both product revenues and license revenues. Les Lyman, a member of our board of directors, is the chairman and significant indirect shareholder of The Tremont Group, Inc., which purchases our products for further distribution and resale. In addition, in December 2012, we issued a convertible note to Syngenta Ventures Pte. LTD. (Syngenta), an affiliate of one of our distributors with whom we entered into a commercial agreement with and sell our products to for further distribution and resale. For the years ended December 31, 2013, 2012 and 2011, related party revenues constituted 12%, 3%, and 3% of total revenues, respectively. As of December 31, 2013, we had received an aggregate of \$1.0 million in payments under our strategic collaboration and distribution agreements with related parties, and there are up to \$3.0 million in payments under these agreements that we could potentially receive if the testing validation, regulatory progress and commercialization events occur.

#### ***Cost of Product Revenues and Gross Profit***

Cost of product revenues consists principally of the cost of raw materials, including inventory costs and third-party services related to procuring, processing, formulating, packaging and shipping our products. Cost of product revenues also may include charges due to inventory adjustments. Gross profit is the difference between total revenues and the cost of product revenues. Gross margin is the gross profit as expressed as a percentage of total revenues.

We have entered into in-license technology agreements with respect to the use and commercialization of our three commercially available product lines, including Regalia, Grandevo and Zequanox, and certain products under development. Under these licensing arrangements, we typically make royalty payments based on net product revenues, with royalty rates varying by product and ranging between 2% and 5% of net sales, subject in certain cases to aggregate dollar caps. These royalty payments are included in cost of product revenues, but they have historically not been significant. In addition, costs associated with license revenues have been included in cost of product revenues, as they have not been significant. The exclusivity and royalty provisions of these agreements are generally tied to the expiration of underlying patents. The patents for Regalia and Zequanox will expire in 2017 and the in-licensed U.S. patent for Grandevo is expected to expire in 2024. There is, however, a pending in-licensed patent application relating to Grandevo, which could expire later than 2024 if issued. After the termination of these provisions, we may continue to produce and sell these products. While third parties thereafter may develop products using the technology under expired patents, we do not believe that they can produce competitive products without infringing other aspects of our proprietary technology, including pending patent applications related to Regalia, Zequanox and Grandevo, and we therefore do not expect the expiration of the patents or the related exclusivity obligations to have a significant adverse financial or operational impact on our business.

We expect to see increases in gross profit over the life cycle of each of our products because gross margins are expected to be increased over time as production processes improve and as we gain efficiencies and increase product yields. While we expect margins to improve on a product-by-product basis, our overall gross margins may vary as we introduce new products. In particular, we are experiencing and expect further near-term downward pressure on overall gross margins as we expand sales of Grandevo and Zequanox and when we introduce Opportune, our EPA-approved bioherbicide. Gross profit has been and will continue to be affected by a variety of factors, including product manufacturing yields, changes in product production processes, new product introductions, product mix and average selling prices.

To date, we have relied on third parties for the production of our products. However, we believe reliance on third parties has resulted in lower gross margins for Grandevo, a fermentation-based product. Accordingly, in July 2012, we acquired a manufacturing facility, which we are repurposing for manufacturing operations, and we continue to further expand capacity at this facility. As production shifts from third parties to our own facility, we expect gross margins to improve.

### ***Research, Development and Patent Expenses***

Research, development and patent expenses principally consist of personnel costs, including salaries, wages, benefits and share-based compensation, related to our research, development and patent staff in support of product discovery and development activities. Research, development and patent expenses also include costs incurred for laboratory supplies, field trials and toxicology tests, quality control assessment, consultants and facility and related overhead costs. We have received grants and funding for our research from federal governmental entities. We recognize amounts under these grants as an offset to our overall research, development and patent expenses as services under the grant are performed. These grant offsets totaled \$0.2 million in each of the years ended December 31, 2012 and 2011, and there were no grants for the year ended December 31, 2013.

We expect to increase our investments in research and development by hiring additional research and development staff, increasing the number of third-party field trials and toxicology tests for developing additional products and expanding uses for existing products. As a result, we expect that our research, development and patent expenses will increase in absolute dollars for the foreseeable future. As our sales increase, we expect our research, development and patent expenses to decrease as a percentage of total revenues, although, we could experience quarterly fluctuations.

### ***Non-Cash Charge Associated with a Convertible Note***

In December 2012, we issued a \$12.5 million convertible note to Syngenta, an affiliate of one of our distributors, and incurred charges of \$3.9 million representing the excess of the estimated fair value of the convertible note on the date of issuance compared to the cash received. Because the holder of this convertible note is an affiliate of one of our distributors, we recorded \$0.3 million of the charges as a reduction of revenues recognized under our agreements with the affiliated distributor through the date of issuance of the convertible note in December 2012. We recorded the remaining \$3.6 million of the charges in operating expenses as a non-recurring non-cash charge associated with a convertible note (See Note 9 in the consolidated financial statements included in Part II, Item 8, “Financial Statements and Supplementary Data” in this Annual Report on Form 10-K for further discussion).

### ***Selling, General and Administrative Expenses***

Selling, general and administrative expenses consist primarily of personnel costs, including salaries, wages, benefits and share-based compensation, related to our executive, sales, marketing, finance and human resources personnel, as well as professional fees, including legal and accounting fees, and other selling costs incurred related to business development and to building product and brand awareness. We create brand awareness through programs such as speaking at industry events, trade show displays and hosting local-level grower and distributor meetings. In addition, we dedicate significant resources to technical marketing literature, targeted advertising in print and online media, webinars and radio advertising. Costs related to these activities, including travel, are included in selling expenses. Our administrative expenses have increased in recent periods primarily as a result of becoming a public company.

We expect our selling expenses to increase in the near term, both in absolute dollars and as a percent of total revenues, particularly as we market and sell new products or product formulations to the marketplace. In the long term, we expect our selling, general and administrative expenses to decline as a percent of total revenues. We expect our overall selling, general and administrative expenses to increase in absolute dollars in order to drive product sales, and we will incur additional expenses associated with operating as a public company. Such increases may include increased insurance premiums, investor relations expenses, legal and accounting fees associated with the expansion of our business and corporate governance, financial reporting expenses, expenses related to Sarbanes-Oxley and other regulatory compliance obligations. We expect to hire additional personnel, particularly in the area of general and administrative activities to support the growth of the business.

### ***Interest Expense***

We recognize interest expense on notes payable, convertible notes and other debt obligations. During 2012, we entered into a \$0.5 million term loan, issued \$24.1 million in convertible notes and \$17.5 million in promissory notes, including a \$10.0 million promissory note paid off prior to its maturity date. In October 2012, we issued a \$2.5 million convertible note, and we incurred \$0.2 million of interest expense for the year ended December 31, 2012 as a result of the excess in the \$2.7 million estimated fair value of the convertible note on the date of issuance compared to the cash received. During 2013, we issued \$6.5 million in convertible notes and \$4.95 million in promissory notes, including the partial conversion of \$1.25 million of a convertible note into a promissory note. Accordingly, our interest expense increased both in absolute terms and as a percentage of total revenues. In May 2013, we issued a \$3.0 million convertible note, and we incurred \$1.2 million of interest expense for the year ended December 31, 2013 as a result of the excess in the \$4.2 million estimated fair value of the convertible note on the date of issuance compared to the cash received. Immediately following the completion of the IPO in August 2013, the convertible notes converted into shares of our common stock. Accordingly, we will cease to incur the interest expense associated with these convertible notes. In addition, in connection with the repayment of the April 2012 Senior Secured Promissory Note, we wrote-off the unamortized debt discount totaling \$0.8 million and incurred an early termination fee of \$0.3 million, which were recorded to interest expense during the year ended December 31, 2013.

We have also acquired equipment under capital leases which results in interest expense over the lease term. We increased our capital lease obligations to \$2.5 million as of December 31, 2013 from \$0.4 million as of December 31, 2012.

### ***Interest Income***

Interest income consists primarily of interest earned on investments and cash balances. Our interest income will vary each reporting period depending on our average investment and cash balances during the period and market interest rates.

### ***Change in Estimated Fair Value of Financial Instruments and Deemed Dividend on Convertible Notes***

Until the effective date of the IPO, we accounted for the outstanding warrants exercisable into shares of our Series A, Series B and Series C convertible preferred stock as liability instruments, as the Series A, Series B and Series C convertible preferred stock into which these warrants were contingently convertible upon the occurrence of certain events or transactions. We also accounted for the outstanding warrants exercisable into a variable number of common shares at a fixed monetary amount as liability instruments. Our convertible notes were recorded at estimated fair value on a recurring basis as the predominant settlement feature of the convertible notes was to settle a fixed monetary amount in a variable number of shares. We adjusted the warrants and the convertible notes to fair value at each reporting period and on the effective date of the IPO with the change in estimated fair value recorded in the consolidated statements of operations.

Based on our operating performance (including the closing of several debt financings and the IPO) and changes in the probability and timing of, and estimated proceeds from, the completion of a Qualified IPO or an Acquisition between reporting dates or the issuance dates of the warrants, we recognized a net gain due to the change in the estimated fair value of financial instruments related to the warrants of \$0.4 million for the year ended December 31, 2013 and a net loss of \$1.6 million for the year ended December 31, 2012.

We issued \$24.1 million in convertible notes during the year ended December 31, 2012. During the year ended December 31, 2013, we issued \$6.5 million in convertible notes and converted \$1.25 million of a convertible note into a promissory note. Based on our operating performance and changes in the probability and timing of, and estimated proceeds from, the completion of a Qualified IPO or an Acquisition between the reporting dates, or the issuance dates of these notes, we recognized a net gain due to the change in estimated fair value of financial instruments of \$6.3 million for the year ended December 31, 2013 and a net loss of \$10.9 million for the year ended December 31, 2012, relating to convertible notes. In addition to the ongoing adjustments to the estimated fair value of our convertible notes, we also recognized a one-time deemed dividend in connection with the issuance of certain convertible notes to preferred stockholders because we estimated the fair value of the convertible notes as of the issuance dates to be greater than the cash proceeds received. Accordingly, we determined that the excess of the estimated fair value of the convertible notes on the dates of issuance over cash proceeds to us represents a deemed dividend to preferred stockholders, and \$1.4 million and \$2.0 million was reflected in the net loss attributable to common stockholders for the years ended December 31, 2013 and 2012, respectively.

As a result of the automatic exercise of all Series A and Series B convertible preferred stock warrants and certain common stock warrants for shares of common stock, the automatic conversion of all convertible notes into common stock in accordance with their terms, and the exercise of all Series C convertible preferred stock warrants for shares of common stock in connection with our IPO in August 2013, there will not be any further adjustments to these warrants and convertible notes. In addition, upon completion of the IPO, the exercise price and number of shares to be issued upon exercise of the remaining outstanding common stock warrants became known. Accordingly, after the IPO, the fair value of the outstanding common stock warrant liability on the date of the IPO was reclassified to equity and will no longer be adjusted to its estimated fair value on each reporting date.

***Income Tax Provision***

Since our inception, we have been subject to income taxes principally in the United States. We anticipate that as we further expand our sales into foreign countries, we will become subject to taxation based on the foreign statutory rates and our effective tax rate could fluctuate accordingly.

Income taxes are computed using the asset and liability method, under which deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized. As of December 31, 2013, based on the available information, it is more likely than not that our deferred tax assets will not be realized, and accordingly we have taken a full valuation allowance against all of our United States deferred tax assets.

As of December 31, 2013, we had net operating loss carry-forwards for federal income tax reporting purposes of \$77.7 million, which begin to expire in 2026, and state net operating loss carry-forwards of \$73.5 million, which begin to expire in 2016. Additionally, as of December 31, 2013, we had federal research and development tax credit carry-forwards of \$1.4 million, which begin to expire in 2026, and state research and development tax credit carry-forwards of \$1.3 million, which have no expiration date.

Federal and state laws impose substantial restrictions on the utilization of net operating loss and tax credit carry-forwards in the event of an “ownership change,” as defined in Section 382 of the U.S. Internal Revenue Code of 1986, as amended. We completed a Section 382 analysis as of December 31, 2013 and concluded that approximately \$0.5 million in federal net operating losses and approximately \$0.2 million in federal research and development credits are expected to expire prior to utilization as a result of our previous ownership changes and corresponding annual limitations. Our inability to use these net operating loss carry-forwards as a result of the Section 382 limitations could harm our financial condition.

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**Results of Operations**

The following table sets forth certain statements of operations data as a percentage of total revenues:

	YEAR ENDED DECEMBER 31,		
	2013	2012	2011
Revenues:			
Product	87%	95%	96%
License	1	2	1
Related party	12	3	3
Total revenues	100	100	100
Cost of product revenues (1)	74	61	41
Gross profit	26	39	59
Operating expenses:			
Research, development and patent	122	178	179
Non-cash charge associated with a convertible note	—	51	—
Selling, general and administrative	103	144	129
Total operating expenses	225	373	308
Loss from operations	(199)	(334)	(249)
Other income (expense):			
Interest income	—	—	—
Interest expense	(40)	(34)	(2)
Change in estimated fair value of financial instruments	46	(175)	—
Gain on extinguishment of debt	—	—	—
Other (expense) income, net	(2)	—	—
Total other income (expense), net	4	(209)	(2)
Income taxes	—	—	—
Net loss	(195)%	(543)%	(251)%

(1) Includes 7%, 2% and 1% in cost of product revenues to related parties for the years ended December 31, 2013, 2012 and 2011, respectively. See Note 18 of our accompanying Notes to Consolidated Financial Statements included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K for further discussion.

**Comparison of the Years Ended December 31, 2013, 2012 and 2011**
**Product Revenues**

	YEAR ENDED DECEMBER 31,		
	2013	2012	2011
	(Dollars in thousands)		
Product revenues	\$ 12,657	\$ 6,777	\$ 5,044



% of total revenues

87%

95%

96%

Product revenues increased by approximately \$5.9 million, or 87%, in 2013 compared to 2012 and \$1.7 million, or 34%, in 2012 compared to 2011. Product revenues increased in 2013 compared to 2012 due to increased acceptance of our products, with Grandevo representing an increased percentage of total sales as we launched the most popular formulation of Grandevo in the summer of 2012. In addition, revenue has increased as our products are used on an expanded number of crops, such as row crops.

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Product revenues increased in 2012 compared to 2011 as a result of a \$1.8 million increase in Regalia and Grandevo sales, including \$0.9 million related to an increase in international sales. Grandevo was introduced in 2011, and the year ended December 31, 2012 represented the first full year of sales of this product. The increased revenues due to sales of Regalia and Grandevo were partially offset by a \$0.1 million decrease in sales of our GreenMatch product, which we elected to discontinue marketing in mid-2011 to focus on more attractive opportunities and products.

### *License Revenues*

	YEAR ENDED DECEMBER 31,		
	2013	2012	2011
	(Dollars in thousands)		
License revenues	\$ 193	\$ 179	\$ 57
% of total revenues	1%	2%	1%

License revenues related to certain strategic collaboration and distribution agreements increased by 8% in 2013 compared to 2012 and 214% in 2012 compared to 2011 but do not comprise a significant portion of our total revenues.

### *Related Party Revenues*

	YEAR ENDED DECEMBER 31,		
	2013	2012	2011
	(Dollars in thousands)		
Product revenues	\$ 1,693	\$ 184	\$ 150
% of total revenues	12%	3%	3%

Related party revenues increased by approximately \$1.5 million, or 820%, in 2013 compared to 2012 and \$0.1 million, or 23%, in 2012 compared to 2011. Related party revenues increased in 2013 compared to 2012 and in 2012 compared to 2011 due to increased product sales to The Tremont Group, Inc. as they increased sales of our product to a larger number of end users as a result of increased acceptance of our products.

### *Cost of Product Revenues and Gross Profit*

	YEAR ENDED DECEMBER 31,		
	2013	2012	2011
	(Dollars in thousands)		
Costs of product revenues	\$ 10,736	\$ 4,333	\$ 2,172
% of total revenues	74%	61%	41%
Gross profit	\$ 3,807	\$ 2,807	\$ 3,079
% of total revenues (gross margin)	26%	39%	59%

Our cost of product revenues increased by \$6.4 million, or 148%, in 2013 compared to 2012 and \$2.2 million, or 99%, in 2012 as compared to 2011. Our gross margins decreased from 39% to 26% in 2013 compared to 2012 and from 59% to 39% in 2012 compared to 2011. Cost of product revenues increased and gross margin decreased in 2013 compared to 2012, in each case, primarily due to a change in product mix, with Grandevo representing an increased percentage of total sales as we launched the most popular formulation of Grandevo in the summer of 2012 along with increased product acceptance leading to an overall increase in sales and cost of product revenues. Since Grandevo is early in its life cycle, our gross margins have been negatively affected. However, we expect to see a gradual increase in gross margin over the life cycle of each of our products, including Grandevo, as we improve production processes, gain efficiencies and increase product yields. Cost of product revenues and gross margin were also negatively impacted by a \$0.2 million write-down of the carrying value of Zequanox inventory.

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to net realizable value, a \$0.2 million write-off of inventory primarily due to abnormal scrap and the identification of inventory that was not suitable for sale, a \$0.2 million write-down of the carrying value of deferred cost of product revenues to net realizable value and an increase in the discounts offered on product sales.

Cost of product revenues increased in 2012 compared to 2011 due to a \$0.9 million charge in 2012 due to an inventory write-off of an early formulation of our Zequanox line of products that was not suitable for sale, and a \$1.4 million increase in product costs consisting of \$0.4 million and \$0.6 million associated with higher revenues from Regalia and Grandevo, respectively, \$0.3 million associated with increased royalties and purchase incentives and \$0.1 million of other product costs, primarily associated with Zequanox. These higher costs were offset by a \$0.1 million decrease in GreenMatch product costs.

#### Research, Development and Patent Expenses

	YEAR ENDED DECEMBER 31,		
	2013	2012	2011
	(Dollars in thousands)		
Research, development and patent expenses	\$17,814	\$12,741	\$ 9,410
% of total revenues	122%	178%	179%

Research, development and patent expense increased by \$5.1 million, or 40%, in 2013 compared to 2012 and \$3.3 million, or 35%, in 2012 compared to 2011. Research, development and patent expense increased in 2013 compared to 2012 primarily due to an increase of \$2.4 million in employee-related expenses, which consisted primarily of salaries, wages and share-based compensation, \$1.5 million in direct testing costs, \$0.4 million in outside services, \$0.3 million in depreciation, a reduction of \$0.2 million in grants received, and \$0.3 million in travel and general costs.

Research, development and patent expense increased in 2012 compared to 2011 due to an increase of approximately \$1.3 million in direct testing costs, \$1.1 million in employee-related expenses driven by increased headcount, \$0.2 million in supplies and materials, \$0.2 million in fixed expenses primarily related to rent and depreciation, \$0.2 million in outside consulting services and \$0.3 million in travel expenses and general costs. Our direct testing costs in fiscal year 2012 were primarily driven by testing of Regalia and Zequanox for foreign markets.

#### Non-Cash Charge Associated with a Convertible Note

	YEAR ENDED DECEMBER 31,		
	2013	2012	2011
	(Dollars in thousands)		
Non-cash charge associated with a convertible note	\$ —	\$ 3,610	\$ —
% of total revenues	— %	51%	— %

This charge was associated with the issuance of a convertible note during 2012 for which the estimated fair value at the date of issuance was greater than the proceeds received from the convertible note. Because the holder of this convertible note was one of our preferred stockholders and was an affiliate of one of our distributors as of the date of issuance, we recorded \$0.3 million of the expense as a reduction to the revenues associated with the affiliated distributor from inception through the date of issuance, and the remaining \$3.6 million was recorded in operating expenses as a non-recurring non-cash charge associated with a convertible note.

#### Selling, General and Administrative Expenses

	YEAR ENDED DECEMBER 31,		
	2013	2012	2011
	(Dollars in thousands)		
Selling, general and administrative expenses	\$15,018	\$10,294	\$ 6,793
% of total revenues	103%	144%	129%

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Selling, general and administrative expense increased by \$4.7 million, or 46%, in 2013 compared to 2012 and \$3.5 million, or 52%, in 2012 compared to 2011. Selling, general and administrative expense increased in 2013 compared to 2012 primarily due to an increase of \$2.3 million in employee-related expenses, driven by increased headcount, which primarily related to salaries, wages and share-based compensation and \$0.4 million relating to a transition agreement with our Chief Financial Officer, \$1.4 million was attributable to outside services such as consulting, audit and tax fees, as well as other professional services, \$0.2 million in travel expenses and \$0.4 million in other costs including rent, depreciation, supplies and materials.

Of the increase in 2012 compared to 2011, \$2.0 million was employee-related driven by increased headcount, \$1.1 million was attributable to marketing and professional services and overhead costs and \$0.4 million was travel-related.

### *Other Income (Expense), Net*

	YEAR ENDED DECEMBER 31,		
	2013	2012	2011
	(Dollars in thousands)		
Interest income	\$ 49	\$ 16	\$ 22
Interest expense	(5,997)	(2,466)	(88)
Change in estimated fair value of financial instruments	6,717	(12,461)	1
Gain on extinguishment of debt	49	—	—
Other (expense) income, net	(282)	(45)	9
Total other income (expense), net	<u>\$ 536</u>	<u>\$ (14,956)</u>	<u>\$ (56)</u>

Interest income, consisting primarily of interest on cash and short-term investments, was largely unchanged. In regards to the increase in interest expense, in May 2013, we issued a \$3.0 million convertible note, and we incurred \$1.2 million of interest expense for the year ended December 31, 2013 as a result of the excess in the \$4.2 million estimated fair value of the convertible note on the date of issuance compared to the cash received. Immediately following the completion of the IPO in August 2013, the convertible notes converted into shares of our common stock. Accordingly, we will cease to incur the interest expense associated with these convertible notes. In addition, in connection with the repayment of the April 2012 Senior Secured Promissory Note, we wrote-off the unamortized debt discount totaling \$0.8 million and incurred an early termination fee of \$0.3 million, which were recorded to interest expense during the year ended December 31, 2013. The remainder of the change in interest expense was due to increased borrowings under notes payable, convertible notes and capital lease agreements.

The change in the estimated fair value of financial instruments was associated with outstanding warrants and convertible notes issued in 2012 and 2013. We issued \$30.6 million in convertible notes, warrants to purchase 0.2 million shares of Series C convertible preferred stock and warrants for the issuance of a variable number of shares of common stock based on a fixed monetary amount during that time. This was offset by the decrease in convertible notes of \$1.25 million in May 2013 in connection with the conversion of a portion of a convertible note in exchange for a promissory note. Upon the closing of the IPO, all shares of our outstanding convertible preferred stock and convertible notes automatically converted into shares of common stock and outstanding warrants to purchase convertible preferred stock and certain warrants to purchase common stock were exercised for shares of common stock. Accordingly, we will cease to incur the interest expense and change in estimated fair value of financial instruments associated with the convertible preferred stock and convertible notes. See the Notes to Consolidated Financial Statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K for further discussion.

Other expense for the year ended December 31, 2013 primarily reflects a loss on disposal of fixed assets in the amount of \$0.2 million. The remainder of other expense related to foreign currency transaction expenses incurred during the year.

## Seasonality and Quarterly Results

Our sales of individual products are generally expected to be seasonal. For example, we expect that Regalia, a fungicide, will be sold and applied to crops in greater quantity in the second and fourth quarters. These seasonal variations may be especially pronounced because sales have been primarily limited to our Regalia and Grandevo product lines. As we expand the registration and commercialization of Regalia into the southern hemisphere, where seasonality of sales should be counter cyclical to the northern hemisphere, we expect Regalia's worldwide sales volatility to decrease over time. In addition, we expect that our sales of Zequanox will be seasonal. Invasive zebra and quagga mussels typically feed and reproduce at water temperatures above 59°F. Treatments to kill these mussels are therefore most effective from June through September in the eastern United States, Canada and Europe and from April through October in the southwestern United States along the mussel-infested lower Colorado River. We expect that until we initiate sales of Zequanox in the southern hemisphere, sales of Zequanox will not be significant during the months of November through March.

Planting and growing seasons, climatic conditions and other variables on which sales of our products are dependent vary from year to year and quarter to quarter. As a result, we have historically experienced substantial fluctuations in quarterly sales. In particular, weather conditions and natural disasters such as heavy rains, hurricanes, hail, floods, tornadoes, freezing conditions, drought or fire, affect decisions by our distributors, direct customers and end users about the types and amounts of pest management products to purchase and the timing of use of such products. For example, in 2013 and 2012, the United States experienced nationwide abnormally low rainfall or drought, reducing the incidence of fungal diseases such as mildews, and these conditions have been present in some of our key markets in 2013 as well. We believe these conditions have reduced industry-wide sales of fungicides in 2013 and 2012 relative to prior years, inhibiting growth in sales of Regalia, a biofungicide. On the other hand, drought may increase the incidence of pest insect infestations, and therefore we believe sales of insecticides, including Grandevo, which we introduced in 2012, are likely to increase if these current drought conditions persist. In addition, disruptions that cause delays by growers in harvesting or planting can result in the movement of orders to a future quarter, which would negatively affect the quarter and cause fluctuations in our operating results.

The level of seasonality in our business overall is difficult to evaluate as a result of our relatively early stage of development, our relatively limited number of commercialized products, our expansion into new geographical territories, the introduction of new products and the timing of introductions of new formulations and products. It is possible that our business may be more seasonal, or experience seasonality in different periods, than anticipated. For example, if sales of Zequanox become a more significant component of our revenue, the separate seasonal sales cycles could cause further shifts in our quarterly revenue. Other factors may also contribute to the unpredictability of our operating results, including the size and timing of significant distributor transactions, the delay or deferral of use of our products and the fiscal or quarterly budget cycles of our distributors, direct customers and end users. Customers may purchase large quantities of our products in a particular quarter to store and use over long periods of time or time their purchases to manage their inventories, which may cause significant fluctuations in our operating results for a particular quarter or year.

The following tables set forth our unaudited quarterly consolidated statements of operations data in dollars and as a percentage of total revenues for each of the four quarters covering fiscal years 2013, 2012 and 2011. We have prepared the quarterly consolidated statements of operations data on a basis consistent with the audited consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" in this Annual Report on Form 10-K. In the opinion of management, the financial information reflects all adjustments, consisting only of normal recurring adjustments, which we consider necessary for a fair presentation of this data. This information should be read in connection with the audited consolidated financial statements and related notes included in Part II, Item 8, "Financial Statements and Supplementary Data" in this Annual Report on Form 10-K. The results of historical periods are not necessarily indicative of the results of operations for any future period.

**Fiscal Year 2012:**

	MARCH 31, 2012	JUNE 30, 2012	SEPTEMBER 30, 2012	DECEMBER 31, 2012
	(In thousands) (Unaudited)			
Revenues:				
Product	\$ 1,808	\$ 1,385	\$ 662	\$ 2,922
License	43	44	43	49
Related party	148	80	33	(77)
Total revenues	1,999	1,509	738	2,894
Cost of product revenues (1)	860	684	521	2,268
Gross profit	1,139	825	217	626
Operating expenses:				
Research, development and patent	2,733	2,415	3,350	4,243
Non-cash charge associated with a convertible note	—	—	—	3,610
Selling, general and administrative	2,322	2,166	2,617	3,189
Total operating expenses	5,055	4,581	5,967	11,042
Loss from operations	(3,916)	(3,756)	(5,750)	(10,416)
Other income (expense):				
Interest income	2	4	10	—
Interest expense	(56)	(601)	(593)	(1,216)
Change in estimated fair value of financial instruments	(15)	435	(7,473)	(5,408)
Other (expense) income, net	1	6	4	(56)
Total other expense, net	(68)	(156)	(8,052)	(6,680)
Income taxes	—	—	—	—
Net loss	\$ (3,984)	\$ (3,912)	\$ (13,802)	\$ (17,096)

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	MARCH 31, 2012	JUNE 30, 2012	SEPTEMBER 30, 2012	DECEMBER 31, 2012
	(Unaudited)			
Revenues:				
Product	91%	92%	90%	101%
License	2	3	6	2
Related party	7	5	4	(3)
Total revenues	100	100	100	100
Cost of product revenues (2)	43	45	71	78
Gross profit	57	55	29	22
Operating expenses:				
Research, development and patent	137	160	454	147
Non-cash charge associated with a convertible note	—	—	—	125
Selling, general and administrative	116	143	355	110
Total operating expenses	253	303	809	382
Loss from operations	(196)	(248)	(780)	(360)
Other income (expense):				
Interest income	—	—	1	—
Interest expense	(3)	(40)	(80)	(42)
Change in estimated fair value of financial instruments	—	29	(1,013)	(187)
Other (expense) income, net	—	—	1	(2)
Total other expense, net	(3)	(11)	(1,091)	(231)
Income taxes	—	—	—	—
Net loss	(199)%	(259)%	(1,871)%	(591)%

- (1) Includes less than \$0.1 million in cost of product revenues to related parties for each of the quarters ended March 31, 2012, June 30, 2012 and December 31, 2012. See Note 18 of our accompanying Notes to Consolidated Financial Statements included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K for further discussion.
- (2) Includes 4%, 1% and 2% in cost of product revenues to related parties for the quarters ended March 31, 2012, June 30, 2012 and December 31, 2012, respectively. See Note 18 of our accompanying Notes to Consolidated Financial Statements included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K for further discussion.

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**Fiscal Year 2013:**

	MARCH 31, 2013	JUNE 30, 2013	SEPTEMBER 30, 2013	DECEMBER 31, 2013
	(In thousands) (Unaudited)			
Revenues:				
Product	\$ 2,373	\$ 4,152	\$ 1,149	\$ 4,983
License	48	48	48	49
Related party	309	300	149	935
Total revenues	2,730	4,500	1,346	5,967
Cost of product revenues (1)	1,795	3,398	1,077	4,466
Gross profit	935	1,102	269	1,501
Operating expenses:				
Research, development and patent	3,283	3,941	4,454	6,136
Selling, general and administrative	2,847	3,107	4,493	4,571
Total operating expenses	6,130	7,048	8,947	10,707
Loss from operations	(5,195)	(5,946)	(8,678)	(9,206)
Other income (expense):				
Interest income	1	—	24	24
Interest expense	(1,985)	(2,285)	(1,119)	(608)
Change in estimated fair value of financial instruments	(3,563)	6,550	3,730	—
Gain on extinguishment of debt	—	49	—	—
Other (expense) income, net	(7)	(7)	(67)	(201)
Total other income (expense), net	(5,554)	4,307	2,568	(785)
Income taxes	—	—	—	—
Net loss	\$ (10,749)	\$ (1,639)	\$ (6,110)	\$ (9,991)



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	MARCH 31, 2013	JUNE 30, 2013	SEPTEMBER 30, 2013	DECEMBER 31, 2013
	(Unaudited)			
Revenues:				
Product	87%	92%	85%	84%
License	2	1	4	1
Related party	11	7	11	15
Total revenues	100	100	100	100
Cost of product revenues (2)	66	76	80	75
Gross profit	34	24	20	25
Operating expenses:				
Research, development and patent	120	87	331	103
Selling, general and administrative	104	69	334	77
Total operating expenses	224	156	665	180
Loss from operations	(190)	(132)	(645)	(155)
Other income (expense):				
Interest income	—	—	2	—
Interest expense	(73)	(50)	(83)	(10)
Change in estimated fair value of financial instruments	(131)	145	277	—
Gain on extinguishment of debt	—	1	—	—
Other (expense) income, net	—	—	(5)	(3)
Total other income (expense), net	(204)	96	191	(13)
Income taxes	—	—	—	—
Net loss	(394)%	(36)%	(454)%	(168)%

- (1) Includes \$0.2 million, \$0.2 million, \$0.1 million and \$0.6 million in cost of product revenues to related parties for the quarters ended March 31, 2013, June 30, 2013, September 30, 2013 and December 31, 2013, respectively. See Note 18 of our accompanying Notes to Consolidated Financial Statements included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K for further discussion.
- (2) Includes 7%, 4%, 4% and 10% in cost of product revenues to related parties for the quarters ended March 31, 2013, June 30, 2013, September 30, 2013 and December 31, 2013, respectively. See Note 18 of our accompanying Notes to Consolidated Financial Statements included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K for further discussion.

### Liquidity and Capital Resources

From our inception until the IPO in August 2013, our operations have been financed primarily by net proceeds from the private placements of convertible preferred stock, convertible notes, promissory notes, term loans, as well as proceeds from the sale of our products and payments under strategic collaboration and distribution agreements and government grants.

In August 2013, we closed an initial public offering of 5.5 million shares of our common stock (inclusive of 0.7 million shares of common stock sold upon the exercise of the underwriters’ option to purchase additional shares). The public offering price of the shares sold in the offering was \$12.00 per share. The total gross proceeds from the offering to us were \$65.6 million, and after deducting underwriting discounts and commissions and offering expenses payable by us, the aggregate net proceeds received totaled approximately \$56.1 million.



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As of December 31, 2013, our cash and cash equivalents totaled \$24.5 million and short-term investments totaled \$13.7 million. We believe our current cash and cash equivalents and short-term investments, along with cash from revenues, will be sufficient to satisfy our liquidity requirements for the next 18 months. However, we may seek additional funding through debt or equity financings that may be used, among other things, to expand our product development and marketing efforts, to accelerate the completion of our manufacturing facility, to complete strategic transactions and/or for working capital. Adequate funds for this and the other purposes may not be available to us when needed or on acceptable terms, and we may need to raise capital that may not be available on favorable or acceptable terms, if at all. If we cannot raise money when needed, we may have to reduce or slow product development activities or reduce capital investment.

Since our inception, we have incurred significant net losses, and, as of December 31, 2013, we had an accumulated deficit of \$105.4 million, and we expect to incur additional losses related to the continued development and expansion of our business. Our liquidity may be negatively impacted as a result of slower than expected adoption of our products and higher than anticipated costs incurred in connection with repurposing our manufacturing facility acquired in July 2012. We have certain strategic collaboration and distribution agreements under which we receive payments for the achievement of testing validation, regulatory progress and commercialization events. As of December 31, 2013, we had received an aggregate of \$2.4 million in payments under these agreements, of which \$1.0 million were received from a related party, and there are up to \$4.9 million in payments under these agreements that we could potentially receive if the testing validation, regulatory progress and commercialization events occur, of which \$3.0 million could potentially be received from a related party.

For the years ended December 31, 2013, 2012 and 2011, we used \$4.0 million, \$2.8 million and \$0.4 million, respectively, in cash to fund capital expenditures. In July 2012, we acquired a manufacturing facility, including associated land, property and equipment, located in Bangor, Michigan, for approximately \$1.5 million. Our business plan contemplates developing significant internal commercial manufacturing capacity using this facility. Repurposing and expansion of the facility will be completed in multiple phases with an anticipated total capital expenditure of \$32.0 million. Phase 1 of the project includes installation of the first of three fermentation tanks, and the construction of a dedicated building to house them. In December 2013, we produced the first test batch of Grandevo at this facility and expect to begin full-scale production of our products using our own manufacturing capacity in 2014. Future phases will include production of our Regalia biofungicide and Zequanox, as well as increasing the capacity of the facility's utilities, installing drying capacity and installing larger fermenters that will accommodate production of multiple products at higher volumes.

We had the following debt arrangements in place as of December 31, 2013, in each case as discussed below (dollars in thousands):

<u>DESCRIPTION</u>	<u>STATED ANNUAL INTEREST RATE</u>	<u>PRINCIPAL AMOUNT BALANCE (INCLUDING ACCRUED INTEREST)</u>	<u>PAYMENT/MATURITY</u>
Promissory Note (1)	7.00%	\$ 125	Monthly/November 2014
Term Loan (1)	7.00%	\$ 309	Monthly/April 2016
Promissory Notes (2)	12.00%	\$ 12,450	Monthly (4)/October 2015
Credit Facility (3)	10.00%	\$ —	June 2014

(1) See "—Five Star Bank."

(2) See "—October 2012 and April 2013 Junior Secured Promissory Notes."

(3) See "—June 2013 Credit Facility."

(4) Monthly payments are interest only until maturity.

### ***Five Star Bank***

We have entered into two promissory notes with Five Star Bank. In May 2008, we entered into a promissory note that we fully repaid in May 2013, and in March 2009, we entered into a promissory note that we repay at a rate of approximately \$13,000 per month through maturity in November 2014. In addition, in March 2012, we entered into a term loan agreement with Five Star Bank, which replaced our existing revolving line of credit with the bank. Under the term loan agreement, we are obligated to repay the loan at a rate of approximately \$12,000 per month through maturity.

Under the terms of the promissory notes and the term loan agreement, all of our outstanding debt to Five Star Bank is secured by all of our inventory, chattel paper, accounts receivable, equipment and general intangibles (excluding certain financed equipment and any intellectual property). Among other things, a payment default with respect to each of the promissory notes and the term loan, as well as other events such as a default under other loans or agreements that would materially affect us, constitute events of default. Upon an event of default, Five Star Bank may declare the entire unpaid principal and interest immediately due and payable.

### ***October 2012 and April 2013 Junior Secured Promissory Notes***

In October 2012, we completed the sale of promissory notes in the aggregate principal amount of \$7.5 million to 12 lenders in a private placement. In addition, in April 2013, we completed the sale of an additional \$4.95 million of promissory notes to 10 investors in a private placement under an amendment to the note purchase agreement in exchange for \$3.7 million in cash and \$1.25 million in cancellation of indebtedness under the October 2012 Subordinated Convertible Note, an outstanding convertible note. Maturity, currently October 2015, may be extended in one year increments for a period of no more than two years. In the event the maturity date is extended, the interest rate increases to 13% in the first year of the extension and the note matures in October 2016, and if extended for an additional year thereafter, the interest rate increases to 14% in the second year of extension and the note matures in October 2017. These promissory notes are secured by a security interest in all of our present and future accounts receivable, chattel paper, commercial tort claims, goods, inventory, equipment, personal property, instruments, investment properties, documents, letter of credit rights, deposit accounts, general intangibles, records, real property, appurtenances and fixtures, tenant improvements and intellectual property, which consists in part of our patents, copyrights and other intangibles.

### ***June 2013 Credit Facility***

On June 14, 2013, we entered into a credit facility agreement with a group of lenders. Under the credit agreement, the lenders have committed to permit us to draw an aggregate of up to \$5.0 million, and, subject to our obtaining additional commitments from lenders, such amount may be increased to up to \$7.0 million. The credit facility expires on June 30, 2014. During the term of the credit facility, we may request from the lenders up to four advances, with each advance equal to one-quarter of each lender's aggregate commitment amount. We would issue promissory notes in the principal amount of each such advance that would accrue interest at a rate of 10% per annum. We are not obligated to pay principal or interest on the promissory notes until their maturity on June 30, 2014, at which point all principal and unpaid interest would become due. In addition, we may not prepay any of such promissory notes prior to their maturity date without consent of at least a majority in interest of the aggregate principal amount of the promissory notes then outstanding under the credit facility. In addition, in connection with our entry into the credit facility agreement, we agreed to pay each lender a fee of 2% of such lender's commitment amount, and we issued to each lender a warrant to purchase a variable number of common shares, with warrant coverage equal to a number of shares determined by multiplying such lender's commitment amount by 10% and dividing such product by 70% of the initial public offering price per share, and with the exercise price for the warrants equal to 70% of the initial public offering price per share.

As of December 31, 2013, we have not drawn on the credit facility, and accordingly have issued no promissory notes and have no outstanding indebtedness thereunder. In August 2013, the board of directors resolved not to call for any advances under the credit facility.

### ***Factoring and Security Agreement***

On June 13, 2013, we entered into a factoring and security agreement with a third-party that enables us to sell the entire interest in certain accounts receivable up to \$5.0 million. Under the agreement, 15% of the sales proceeds will be held back by the purchaser until the collection of such receivables. Upon the sale of the receivable, we will not maintain servicing, but the purchaser may require us to repurchase accounts receivable if (i) the payment is disputed by the account debtor, with the purchaser being under no obligation to determine the bona fides of such dispute; (ii) the account debtor has become insolvent or (iii) upon the effective date of the termination of the agreement. The agreement is secured by all of our personal property and fixtures, and proceeds thereof, including accounts receivable, inventory, equipment and general intangibles other than intellectual property, and the purchaser will retain its security interest in any accounts repurchased by us. Upon sale of the receivable, we may have the right to elect to set up a reserve where upon the cash for the sale remains with the third-party and then we can draw on the available amount on the reserve account at any time. We have elected to utilize the reserve account. On November 11, 2013, we terminated the Factoring and Security Agreement effective January 10, 2014.

As of December 31, 2013, we had \$0.5 million included in accounts receivable that were transferred under this arrangement. As of December 31, 2013, we did not have excess funds available on the reserve account and did not have secured borrowings outstanding under the arrangement.

The following table sets forth a summary of our cash flows for the periods indicated:

	YEAR ENDED DECEMBER 31,		
	2013	2012	2011
	(In thousands)		
Net cash used in operating activities	\$ (34,005)	\$ (22,425)	\$ (12,425)
Net cash used in investing activities	(17,679)	(757)	(2,423)
Net cash provided by financing activities	66,133	30,973	12,776
Net increase (decrease) in cash and cash equivalents	<u>\$ 14,449</u>	<u>\$ 7,791</u>	<u>\$ (2,072)</u>

### ***Cash Flows from Operating Activities***

Net cash used in operating activities of \$34.0 million during the twelve months ended December 31, 2013 primarily resulted from our net loss of \$28.5 million, which included a gain of \$6.7 million in connection with a change in the fair value of financial instruments and \$4.3 million in non-cash interest expense, \$2.3 million in share-based compensation expense, \$1.0 million in depreciation and amortization expense and \$0.2 million in loss on disposal of equipment. In addition, net cash used in operating activities resulted from increases in accounts receivable of \$3.4 million, accounts receivable due from related parties of \$0.8 million, inventory of \$6.8 million and a decrease in deferred revenue from related parties of \$0.1 million. This was offset by a decrease in prepaid expenses and other assets of \$1.0 million, an increase of \$1.7 million in accounts payable, \$1.0 million in accrued and other liabilities, and \$0.8 million in deferred revenue.

Net cash used in operating activities of \$22.4 million during the twelve months ended December 31, 2012 primarily resulted from our net loss of \$38.8 million, which included non-cash charges of \$12.5 million in connection with a change in fair value of financial instruments, \$3.9 million in connection with the issuance of a convertible note, \$1.2 million of non-cash interest expense, \$0.7 million in share-based compensation and \$0.6 million in depreciation and amortization. In addition, net cash used in operating activities resulted from net changes in operating assets and liabilities of \$2.5 million, primarily due to increases in inventory of \$1.6 million, \$2.5 million in accounts receivable, \$0.1 million in accounts receivable from related parties and \$2.1 million in prepaid expenses and other assets, offset by an increase of \$0.3 million in deferred revenue, \$0.9 million in deferred revenue from related parties and \$2.6 million in accounts payable, accrued liabilities and other liabilities.

Net cash used in operating activities of \$12.4 million during the twelve months ended December 31, 2011 primarily resulted from our net loss of \$13.2 million, an increase in inventory of \$1.7 million, an increase in accounts receivable from related parties of \$0.1 and net increases in prepaid expenses and other assets of \$0.6 million. This

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was offset by \$0.5 million in depreciation and amortization expense, \$0.3 million in share-based compensation expense, an increase of \$0.8 million in deferred revenue, an increase of \$0.8 million in accrued and other liabilities, an increase of \$0.4 million in accounts payable and a decrease \$0.4 million in accounts receivable.

### ***Cash Flows from Investing Activities***

Net cash used in investing activities of \$17.7 million during the twelve months ended December 31, 2013 primarily resulted from \$4.0 million used for the purchase of property, plant and equipment, primarily associated with a manufacturing plant and its subsequent improvement and \$17.5 million in cash for the purchase of short-term investments, offset by \$3.8 million in cash provided by maturities of short-term investments.

Net cash used in investing activities was \$0.8 million during the twelve months ended December 31, 2012, consisting of approximately \$2.8 million used for purchase of property, plant and equipment, primarily associated with a manufacturing plant and its subsequent improvement, offset by \$2.0 million provided from the maturity of a short-term investment.

Net cash used in investing activities was \$2.4 million during the twelve months ended December 31, 2011. Of these amounts, we used \$0.4 million for the purchase of property and equipment to support growth in our operations and \$2.0 million in cash for the purchase of short-term investments.

### ***Cash Flows from Financing Activities***

Net cash provided by financing activities of \$66.1 million during the twelve months ended December 31, 2013 consisted primarily of \$56.1 million in proceeds from the initial public offering, net of offering costs and underwriter commissions, \$6.5 million from the issuance of convertible notes, \$3.7 million from the issuance of debt, net of financing costs, \$9.1 million from the release of restricted cash, \$2.9 million in proceeds from secured borrowing and \$0.3 million in proceeds from the exercise of stock options. This was offset by \$9.6 million in payments on our debt and capital leases and \$2.9 million in reductions of secured borrowing.

Net cash provided by financing activities of \$31.0 million during the twelve months ended December 31, 2012 consisted primarily of \$24.1 million from the issuance of convertible notes, \$17.4 million from the issuance of debt, net of financing costs and \$0.5 million in draws on our line of credit, partially offset by \$9.1 million transferred from cash to restricted cash as part of our obligations under a debt agreement to repay a then-outstanding note payable and \$1.9 million in payments on our line of credit, debt and capital lease obligations.

Net cash provided by financing activities of \$12.8 million during the twelve months ended December 31, 2011 consisted primarily of \$13.2 million from the issuance of preferred stock and \$0.5 million in draws on our line of credit, partially offset by \$0.9 million in payments on our line of credit, debt and capital lease obligations.

### ***Contractual Obligations***

The following is a summary of our contractual obligations as of December 31, 2013:

	<b>TOTAL</b>	<b>2014</b>	<b>2015-2016</b>	<b>2017-2018</b>	<b>2019 AND BEYOND</b>
	<b>(In thousands)</b>				
Operating lease obligations	\$ 3,812	\$ 965	\$ 1,419	\$ 1,221	\$ 207
Debt and capital leases	15,419	1,652	13,767	—	—
Interest payments relating to debt and capital leases	2,841	1,655	1,186	—	—
Total	<u>\$22,072</u>	<u>\$4,272</u>	<u>\$ 16,372</u>	<u>\$ 1,221</u>	<u>\$ 207</u>

Operating leases consist of contractual obligations from agreements for non-cancelable office space and leases used to finance the acquisition of equipment. Debt and capital equipment leases and the interest payments relating thereto include promissory notes and capital lease obligations.

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On September 9, 2013, we entered into a lease agreement for a new 28,700 square foot office and laboratory facility located in Davis, California. The initial term of the lease is for a period of 60 months commencing on the later of the date of substantial completion of initial improvements to the leased property, or May 1, 2014. The monthly base rent is \$46,000 for the first 12 months with a 3% increase each year thereafter. We will have the option to extend the lease term twice for a period of five years each. Upon moving into the new office facility, we will vacate the office facility that we currently occupy. The lease expires between February 2014 and October 2016 with respect to various portions of the premises of the 24,500 square foot office facility that we currently occupy. The cost per square foot of the lease agreement for the new office facility is less than the cost per square foot of the lease for the current office facility. We expect to enter into agreements to sublease the portions of the current office facility that remain under the lease agreement at the time that we vacate the premises. We believe that the expenses associated with the lease for the new office facility will be lower than if we had remained in the current office facility. Since December 31, 2013, we have not added any additional leases that would qualify as operating leases, and there have been no material changes to our contractual obligations.

### ***Inflation***

We believe that inflation has not had a material impact on our results of operations for the years ended December 31, 2013, 2012 and 2011.

### ***Off-Balance Sheet Arrangements***

We have not been involved in any material off-balance sheet arrangements.

### ***Recently Issued Accounting Pronouncements***

There have been no new accounting pronouncements issued during the year ended December 31, 2013 that are of significance, or potential significance, to us. Any recent accounting pronouncements that are of significance, or potential significance, to us are included in the notes to our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data".

### ***Critical Accounting Policies and Estimates***

#### ***Inventories***

Inventories are stated at the lower of cost or market (net of realizable value or replacement cost) and include the cost of material and external labor and manufacturing costs. Cost is determined on the first-in, first-out basis. We provide for inventory reserves when conditions indicate that the selling price may be less than cost due to physical deterioration, obsolescence, changes in price levels, or other factors. Additionally, we provide reserves for excess and slow-moving inventory to its estimated net realizable value. The reserves are based upon estimates about future demand from our customers and distributors and market conditions.

#### ***Fair Value of Financial Instruments***

Fair value is defined as an exit price that would be received from the sale of an asset or paid to transfer a liability in an orderly transaction between market participants on the measurement date. A three-tier fair value hierarchy has been established, which prioritizes the inputs used in measuring fair value as follows: Level 1, observable inputs such as quoted prices in active markets; Level 2, inputs other than the quoted prices in active markets that are observable either directly or indirectly; and Level 3, unobservable inputs in which there is little or no market data, which requires that we develop our own assumptions. This hierarchy requires the use of observable data, when available, and minimizes the use of unobservable inputs when determining fair value.

Until the effective date of the IPO, we accounted for the outstanding warrants exercisable into shares of our Series A, Series B and Series C convertible preferred stock as liability instruments, as these warrants were

convertible into Series A, Series B and Series C convertible preferred stock upon the occurrence of certain events or transactions. We also accounted for the outstanding warrants exercisable into a variable number of shares of common stock at a fixed monetary amount as liability instruments. Our convertible notes were recorded at estimated fair value on a recurring basis as the predominant settlement feature of the convertible notes was to settle a fixed monetary amount in a variable number of shares. We adjusted the warrants and the convertible notes to estimated fair value at each reporting period and on the effective date of the IPO with the change in estimated fair value recorded in the consolidated statements of operations.

For the year ended December 31, 2011, we estimated the fair value of our financial instruments, including outstanding warrants, utilizing the option pricing method, which we refer to as the “option method.” The option method treats each class of equity securities as if it were an option to purchase common stock, with an exercise price based on the value of the enterprise and based further on the liquidation preference and rights of the relevant class of equity. While this method relies on certain key assumptions, it is best used when the range of possible future outcomes and the corresponding time frames are highly uncertain.

Starting with fiscal year 2012, due to our closing several debt financings and an initial public offering becoming more probable as we began investing significant time and resources into the initial public offering process, we changed our valuation methodology to estimate the fair value of our financial instruments, including our outstanding warrants and convertible notes, from the option method to the probability weighted expected return method, which we refer to as the “expected return method.” The expected return method analyzes the returns afforded to common equity holders under multiple possible future scenarios. Under the expected return method, share value is based upon the probability-weighted present value of expected future net cash flows (distributions to shareholders) under each of the possible scenarios, giving consideration to the rights and preferences of each share class. This method is most appropriate when the long-term outlook for an enterprise is largely known and multiple possible future scenarios can be reasonably estimated. As the expected return method estimated the fair value of our warrants and convertible notes using unobservable inputs, they were both considered to be Level 3 fair value measurements. Changes in the probability weights and discount rates used in the expected return method valuation model and the estimated time to a liquidity event may have a significant impact on the estimated fair value of the preferred and common stock warrant liabilities and the convertible notes.

As a result of the automatic exercise of all Series A and Series B convertible preferred stock warrants and certain common stock warrants for shares of common stock, the automatic conversion of all convertible notes into common stock in accordance with their terms, and the exercise of all Series C convertible preferred stock warrants for shares of common stock in connection with our IPO in August 2013, there will not be any further adjustments to these warrants and convertible notes. In addition, upon completion of the IPO, the exercise price and number of shares to be issued upon exercise of the remaining outstanding common stock warrants became known. Accordingly, after the IPO, the fair value of the common stock warrant liability on the date of the IPO was reclassified to equity and will no longer be adjusted to its estimated fair value on each reporting date.

### ***Revenue Recognition***

We recognize revenues when persuasive evidence of an arrangement exists, delivery and transfer of title has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured, unless contractual obligations, acceptance provisions or other contingencies exist. If such obligations or provisions exist, revenue is recognized after such obligations or provisions are fulfilled or expire.

Product revenues consist of revenues generated from sales to distributors and from sales of our products to direct customers, net of rebates and cash discounts. For sales of products made to distributors, we consider a number of factors in determining whether revenue is recognized upon transfer of title to the distributor, or when payment is received. These factors include, but are not limited to, whether the payment terms offered to the distributor in comparison to our historical terms are considered to be longer than normal payment terms, the distributor history of adhering to the terms of its contractual arrangements with us, whether we have a pattern of granting



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concessions for the benefit of the distributor, and whether there are other conditions that may indicate that the sale to the distributor is not substantive. When we offer payment terms that are considered to be extended in comparison to our historical terms, we consider the arrangement not to be fixed or determinable, and accordingly, revenue is deferred until payment is due. The costs associated with such deferral are also deferred and classified in prepaid expenses and other current assets in the consolidated balance sheet. We currently recognize revenue primarily on the sell-in method with its distributors. Distributors do not have price protection or return rights.

We offer certain product rebates, which are recorded as reductions to product revenues. An accrued liability for these product rebates is recorded at the time the revenues are recorded.

We recognize license revenues pursuant to strategic collaboration and distribution agreements under which we receive fees for the achievement of testing validation, regulatory progress and commercialization events. As these activities and payments are associated with exclusive rights that we provide in connection with strategic collaboration and distribution agreements over the term of the agreements, revenues related to the payments received are deferred and recognized as revenues over the term of the exclusive period of the respective agreement. For the years ended December 31, 2012 and 2011, we received payments under these agreements totaling \$1.5 million and \$0.8 million, respectively. For the year ended December 31, 2012, \$1.0 million of the payments received under these agreements were from a related party. No payments were received under these agreements during the year ended December 31, 2013. For the years ended December 31, 2013, 2012 and 2011, we recognized \$0.2 million, \$0.2 million and \$0.1 million, respectively, as license revenues, excluding related party revenues, in the accompanying consolidated statements of operations. For the year ended December 31, 2013, we recognized \$0.1 million of related party license revenues based on the terms of our commercial agreement with Syngenta, an affiliate of one of our 5% stockholders. There were no related party license revenues recognized for the years ended December 31, 2012 and 2011. At December 31, 2013, we recorded current and non-current deferred revenues of \$0.3 million and \$1.4 million, respectively, related to payments received under these agreements, of which \$0.1 million and \$0.6 million, respectively, related to deferred revenues from related parties based on the terms of our commercial agreement with Syngenta. At December 31, 2012, we recorded current and non-current deferred revenues of \$0.3 million and \$1.7 million respectively, related to payments received under these agreements, of which \$0.1 million and \$0.8 million, respectively, related to deferred revenues from related parties based on the terms of our commercial agreement with Syngenta.

### ***Share-Based Compensation***

We recognize share-based compensation expense for all stock options made to employees and directors based on estimated fair values.

We estimate the fair value of stock options on the date of grant using an option-pricing model. The value of the portion of the stock options that is ultimately expected to vest is recognized as expense over the requisite service periods using the straight-line method. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

The estimated fair value of options vested during the years ended December 31, 2013, 2012 and 2011 was \$1.3 million, \$0.5 million and \$0.2 million, respectively. The weighted-average estimated fair value of options granted during the years ended December 31, 2013, 2012 and 2011 was \$10.35 per share, \$4.24 per share and \$0.78 per share, respectively. During the years ended December 31, 2013, 2012 and 2011, we recorded share-based compensation expense of \$2.3 million, \$0.7 million and \$0.3 million, respectively. As of December 31, 2013, with the exception of unvested options granted to Donald Glidewell for which the vesting will be accelerated through his transition date (see below), the total share-based compensation expense related to unvested stock options granted to employees under our share-based compensation plans but not yet recognized was \$10.5 million. These costs will be amortized to expense on a straight-line basis over a weighted-average remaining term of 3.3 years.

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In connection with the decision of our Chief Financial Officer, Mr. Glidewell, to retire, we entered into a transition agreement with Mr. Glidewell which provides, among other things, for the vesting of his outstanding equity awards through the transition date. For the year ended December 31, 2013, we recorded share-based compensation expense of \$0.3 million relating to the acceleration of vesting of Mr. Glidewell's option awards. The total share-based compensation expense related to unvested options granted to Mr. Glidewell under our share-based compensation plans but not yet recognized was \$0.4 million. These costs will be amortized to expense on a straight-line basis over a weighted-average remaining term of 0.3 years. Refer to Note 6 in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K for further discussion regarding Mr. Glidewell's transition agreement.

For purposes of determining our historical share-based compensation expense, we used the Black-Scholes-Merton ("BSM") option-pricing model to calculate the estimated fair value of stock options on the measurement date (generally, the grant date). This model requires inputs for the expected life of the stock option, estimated volatility factor, risk-free interest rate and expected dividend yield. Our estimates of forfeiture rates also affect the amount of aggregate compensation expense. Prior to our initial public offering, our board of directors considered numerous objective and subjective factors to determine the fair value of our common stock at each meeting at which stock options were granted and approved. These inputs are subjective and generally require significant judgment. For the years ended December 31, 2013, 2012 and 2011, we calculated the fair value of stock options granted using the following assumptions:

	YEAR ENDED DECEMBER 31		
	2013	2012	2011
Expected life (years)	5.29-7.71	5.00-6.08	5.00-6.28
Estimated volatility factor	0.70-0.75	0.72-0.76	0.70
Risk-free interest rate	1.27%-2.11%	0.74%-1.16%	0.86%-2.40%
Expected dividend yield	—	—	—

**Expected Life**—Our expected life represents the period that our share-based payment awards are expected to be outstanding. We use the "simplified method" in accordance with Staff Accounting Bulletin (SAB) No. 107, *Share-Based Payment*, and SAB No. 110, *Simplified Method for Plain Vanilla Share Options*, to develop the expected term of options determined to be "plain vanilla." Under this approach, the expected term is presumed to be the midpoint between the vesting date and the contractual end of the option grant. For stock options granted with an exercise price not equal to the determined fair market value, we estimate the expected life based on historical data and management's expectations about exercises and post-vesting termination behavior.

**Estimated Volatility Factor**—We calculate volatility based upon the trading history and calculated volatility of the common stock of comparable agricultural biotechnology companies in determining an estimated volatility factor.

**Risk-Free Interest Rate**—We base the risk-free interest rate on the implied yield currently available on U.S. Treasury constant-maturity securities with the same or substantially equivalent remaining term.

**Expected Dividend Yield**—We have not declared dividends nor do we expect to in the foreseeable future. Therefore, a zero value was assumed for the expected dividend yield.

**Estimated Forfeitures**—When estimating forfeitures, we consider voluntary and involuntary termination behavior and actual option forfeitures.

If in the future we determine that other methods are more reasonable, or other methods for calculating these assumptions are prescribed by authoritative guidance, the fair value calculated for our stock options could change significantly. Higher volatility and longer expected lives result in an increase to share-based compensation expense determined at the grant date. Share-based compensation expense affects our research, development and patent expense and selling, general and administrative expense.

The BSM option-pricing model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable, characteristics not present in our stock options. Existing valuation models, including the BSM option-pricing model, may not provide reliable measures of the fair values of our stock options. Consequently, there is a risk that our estimates of the fair values of the stock options on the grant dates may bear little resemblance to the actual values realized upon exercise. Stock options may expire or otherwise result in zero intrinsic value as compared to the fair values originally estimated on the grant date and reported in the consolidated financial statements. Alternatively, value may be realized from these instruments that is significantly higher than the fair values originally estimated on the grant date and reported in the consolidated financial statements.

### ***Income Taxes***

We use the asset and liability method of accounting for income taxes. Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. To the extent deferred tax assets cannot be recognized under the preceding criteria, we establish valuation allowances as necessary to reduce deferred tax assets to the amounts expected to be realized. As of December 31, 2013 and 2012, all deferred tax assets were fully offset by a valuation allowance. Realization of deferred tax assets is dependent upon future federal, state and foreign taxable income. Our judgments regarding deferred tax assets may change as we expand into international jurisdictions, due to future market conditions, changes in U.S. or international tax laws and other factors. These changes, if any, may require possible material adjustments to these deferred tax assets, resulting in a reduction in net income or an increase in net loss in the period when such determinations are made.

We recognize liabilities for uncertain tax positions based upon a two-step process. To the extent a tax position does not meet a more-likely-than-not level of certainty; no benefit is recognized in the consolidated financial statements. If a position meets the more-likely-than-not level of certainty, it is recognized in the consolidated financial statements at the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. Our policy is to analyze our tax positions taken with respect to all applicable income tax issues for all open tax years (in each respective jurisdiction). As of December 31, 2013 and 2012, we have concluded that no uncertain tax positions were required to be recognized in our consolidated financial statements. It is our practice to recognize interest and penalties related to income tax matters in income tax expense. No amounts were recognized for interest and penalties during the years ended December 31, 2013, 2012 and 2011.

## **ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

We currently have minimal exposure to the effect of interest rate changes, foreign currency fluctuations and changes in commodity prices. We are exposed to changes in the general economic conditions in the countries where we conduct business, which currently is substantially all in the United States. Our current investment strategy is to invest in financial instruments that are highly liquid, readily convertible into cash and which mature within six months from the date of purchase. To date, we have not used derivative financial instruments to manage any of our market risks or entered into transactions using derivative financial instruments for trading purposes.

We do not believe our cash equivalents and short-term investments have significant risk of default or illiquidity. While we believe our cash equivalents and short-term investments do not contain excessive risk, we cannot provide absolute assurance that in the future our investments will not be subject to adverse changes in market value.

### ***Interest Rate Risk***

We had cash and cash equivalents of \$24.5 million at December 31, 2013, which was held for working capital purposes. We had short-term investment securities of \$13.7 million at December 31, 2013. We do not enter into investments for trading or speculative purposes. We do not have any variable-rate debt and a 10% change in market interest rates will not have a significant impact on our future interest expense.

### ***Foreign Currency Risk***

Revenue and expenses have been primarily denominated in U.S. dollars and foreign currency fluctuations have not had a significant impact on our historical results of operations. In addition, our strategic collaboration and distribution agreements for current products provide for payments in U.S. dollars. As we market new products internationally, our product revenues and expenses may be in currencies other than U.S. dollars, and accordingly, foreign currency fluctuations may have a greater impact on our financial position and operating results.

### ***Commodity Risk***

Our exposure to market risk for changes in commodity prices currently is minimal. As our commercial operations grow, our exposure will relate mostly to the demand side as our end users are exposed to fluctuations in prices of agricultural commodities.

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**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

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**Report of Independent Registered Public Accounting Firm**

The Board of Directors and Shareholders of  
Marrone Bio Innovations, Inc.

We have audited the accompanying consolidated balance sheets of Marrone Bio Innovations, Inc. ("the Company") as of December 31, 2013 and 2012, and the related consolidated statements of operations, comprehensive loss, convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the three years in the period ended December 31, 2013. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Marrone Bio Innovations, Inc. at December 31, 2013 and 2012, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2013, in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

Sacramento, California  
March 25, 2014

**MARRONE BIO INNOVATIONS, INC.**  
**Consolidated Balance Sheets**  
(In Thousands, Except Par Value)

	<b>DECEMBER 31</b>	
	<b>2013</b>	<b>2012</b>
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 24,455	\$ 10,006
Restricted cash	—	9,139
Short-term investments	13,677	—
Accounts receivable	6,215	2,834
Accounts receivable from related parties	903	136
Inventories, net	11,666	4,872
Prepaid expenses and other current assets	1,737	478
Total current assets	58,653	27,465
Property, plant and equipment, net	9,420	3,528
Other assets	806	2,785
Total assets	<u>68,879</u>	<u>\$ 33,778</u>
<b>Liabilities, convertible preferred stock and stockholders' equity (deficit)</b>		
Current liabilities:		
Accounts payable	\$ 4,460	\$ 2,104
Accrued liabilities	4,380	3,023
Deferred revenue, current portion	1,209	193
Deferred revenue from related parties, current portion	131	131
Capital lease obligations, current portion	1,401	207
Debt, current portion	157	8,572
Preferred stock warrant liability	—	1,884
Common stock warrant liability	—	301
Convertible notes payable, current portion	—	22,518
Total current liabilities	11,738	38,933
Deferred revenue, less current portion	744	937
Deferred revenue from related parties, less current portion	628	759
Capital lease obligations, less current portion	1,134	195
Debt, less current portion	12,280	7,766

Convertible notes payable, less current portion	—	19,342
Other liabilities	<u>571</u>	<u>481</u>
Total liabilities	27,095	68,413
Commitments and contingencies (Note 15)		
Preferred stock: \$0.00001 par value; 20,000 shares authorized, no shares issued or outstanding at December 31, 2013; no shares authorized, issued or outstanding at December 31, 2012	—	—
Convertible preferred stock—Series A: \$0.00001 par value; no shares authorized, issued or outstanding at December 31, 2013; 1,489 shares authorized and 1,484 shares issued and outstanding at December 31, 2012	—	3,747
Convertible preferred stock—Series B: \$0.00001 par value; no shares authorized, issued or outstanding at December 31, 2013; 2,252 shares authorized and 2,242 shares issued and outstanding at December 31, 2012	—	10,758
Convertible preferred stock—Series C: \$0.00001 par value; no shares authorized, issued or outstanding at December 31, 2013; 5,082 shares authorized and 4,778 shares issued and outstanding at December 31, 2012	—	25,107
Stockholders' equity (deficit):		
Common stock: \$0.00001 par value; 250,000 shares authorized and 19,323 shares issued and outstanding at December 31, 2013; 12,936 shares authorized and 1,267 shares issued and outstanding at December 31, 2012	—	—
Additional paid in capital	147,220	1,322
Accumulated deficit	<u>(105,436)</u>	<u>(75,569)</u>
Total stockholders' equity (deficit)	<u>41,784</u>	<u>(74,247)</u>
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	<u>\$ 68,879</u>	<u>\$ 33,778</u>

See accompanying notes.



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**MARRONE BIO INNOVATIONS, INC.**  
**Consolidated Statements of Operations**  
(In Thousands, Except Per Share Data)

	<b>YEAR ENDED DECEMBER 31</b>		
	<b>2013</b>	<b>2012</b>	<b>2011</b>
Revenues:			
Product	\$ 12,657	\$ 6,777	\$ 5,044
License	193	179	57
Related party	1,693	184	150
Total revenues	14,543	7,140	5,251
Cost of product revenues, including cost of product revenues to related parties of \$984, \$126 and \$50 for the years ended December 31, 2013, 2012 and 2011, respectively	10,736	4,333	2,172
Gross profit	3,807	2,807	3,079
Operating expenses:			
Research, development and patent	17,814	12,741	9,410
Non-cash charge associated with a convertible note	—	3,610	—
Selling, general and administrative	15,018	10,294	6,793
Total operating expenses	32,832	26,645	16,203
Loss from operations	(29,025)	(23,838)	(13,124)
Other income (expense):			
Interest income	49	16	22
Interest expense	(5,997)	(2,466)	(88)
Change in estimated fair value of financial instruments	6,717	(12,461)	1
Cain on extinguishment of debt	49	—	—
Other (expense) income, net	(282)	(45)	9
Total other income (expense), net	536	(14,956)	(56)
Loss before income taxes	(28,489)	(38,794)	(13,180)
Income taxes	—	—	—
Net loss	(28,489)	(38,794)	(13,180)
Deemed dividend on convertible notes	(1,378)	(2,039)	—
Net loss attributable to common stockholders	<u>\$ (29,867)</u>	<u>\$ (40,833)</u>	<u>\$ (13,180)</u>
Net loss per common share:			
Basic	\$ (3.42)	\$ (32.48)	\$ (10.64)

Diluted	<u>\$ (3.94)</u>	<u>\$ (32.48)</u>	<u>\$ (10.64)</u>
Weighted-average shares outstanding used in computing net loss per common share:			
Basic	<u>8,731</u>	<u>1,257</u>	<u>1,239</u>
Diluted	<u>8,911</u>	<u>1,257</u>	<u>1,239</u>

See accompanying notes.

**MARRONE BIO INNOVATIONS, INC.**  
**Consolidated Statements of Comprehensive Loss**  
(In Thousands)

	YEAR ENDED DECEMBER 31		
	2013	2012	2011
Net loss	\$ (28,489)	\$ (38,794)	\$ (13,180)
Other comprehensive loss	—	—	—
Comprehensive loss	<u>\$ (28,489)</u>	<u>\$ (38,794)</u>	<u>\$ (13,180)</u>

See accompanying notes.

**MARRONE BIO INNOVATIONS, INC.**  
**Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)**  
(In Thousands)

	CONVERTIBLE PREFERRED STOCK							
	SERIES A		SERIES B		SERIES C		TOTAL	
	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT
Balance at December 31, 2010	1,484	\$ 3,747	2,242	\$ 10,758	2,286	\$ 11,947	6,012	\$ 26,452
Net loss	—	—	—	—	—	—	—	—
Exercise of stock options	—	—	—	—	—	—	—	—
Share-based compensation	—	—	—	—	—	—	—	—
Issuance of Series C convertible preferred stock, net of issuance costs of \$91	—	—	—	—	2,492	13,160	2,492	13,160
Balance at December 31, 2011	1,484	3,747	2,242	10,758	4,778	25,107	8,504	39,612
Net loss	—	—	—	—	—	—	—	—
Exercise of stock options	—	—	—	—	—	—	—	—
Share-based compensation	—	—	—	—	—	—	—	—
Deemed dividend, convertible notes	—	—	—	—	—	—	—	—
Balance at December 31, 2012	1,484	3,747	2,242	10,758	4,778	25,107	8,504	39,612
Net loss	—	—	—	—	—	—	—	—
Exercise of stock options	—	—	—	—	—	—	—	—
Share-based compensation	—	—	—	—	—	—	—	—
Deemed dividend, convertible notes	—	—	—	—	—	—	—	—
Cash exercise of preferred stock warrants	—	—	10	47	—	—	10	47
Net exercise of preferred stock warrants	—	—	—	—	—	—	—	—
Conversion of preferred stock into common stock	(1,484)	(3,747)	(2,252)	(10,805)	(4,778)	(25,107)	(8,514)	(39,659)
Convertible notes converted into common stock	—	—	—	—	—	—	—	—
Cash exercise of common stock warrants	—	—	—	—	—	—	—	—
Net exercise of common stock warrants	—	—	—	—	—	—	—	—
Reclassification of warrants from liability to equity	—	—	—	—	—	—	—	—
Issuance of common stock upon initial public offering, net of offering costs and underwriter commission	—	—	—	—	—	—	—	—
Balance at December 31, 2013	—	\$ —	—	\$ —	—	\$ —	—	\$ —

**MARRONE BIO INNOVATIONS, INC.**  
**Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit) – Continued**

	<b>COMMON STOCK</b>		<b>ADDITIONAL PAID IN CAPITAL</b>	<b>ACCUMULATED DEFICIT</b>	<b>TOTAL STOCKHOLDERS' EQUITY (DEFICIT)</b>
	<b>SHARES</b>	<b>AMOUNT</b>			
Balance at December 31, 2010	1,234	\$ —	\$ 352	\$ (21,556)	\$ (21,204)
Net loss	—	—	—	(13,180)	(13,180)
Exercise of stock options	13	—	13	—	13
Share-based compensation	—	—	271	—	271
Issuance of Series C convertible preferred stock, net of issuance costs of \$91	—	—	—	—	—
Balance at December 31, 2011	1,247	—	636	(34,736)	(34,100)
Net loss	—	—	—	(38,794)	(38,794)
Exercise of stock options	20	—	24	—	24
Share-based compensation	—	—	662	—	662
Deemed dividend, convertible notes	—	—	—	(2,039)	(2,039)
Balance at December 31, 2012	1,267	—	1,322	(75,569)	(74,247)
Net loss	—	—	—	(28,489)	(28,489)
Exercise of stock options	217	—	250	—	250
Share-based compensation	—	—	2,300	—	2,300
Deemed dividend, convertible notes	—	—	—	(1,378)	(1,378)
Cash exercise of preferred stock warrants	—	—	—	—	—
Net exercise of preferred stock warrants	71	—	—	—	—
Conversion of preferred stock into common stock	8,514	—	39,659	—	39,659
Convertible notes converted into common stock	3,741	—	44,890	—	44,890
Cash exercise of common stock warrants	3	—	25	—	25
Net exercise of common stock warrants	47	—	—	—	—
Reclassification of warrants from liability to equity	—	—	2,669	—	2,669
Issuance of common stock upon initial public offering, net of offering costs and underwriter commission	5,463	—	56,105	—	56,105
Balance at December 31, 2013	<u>19,323</u>	<u>\$ —</u>	<u>\$ 147,220</u>	<u>\$ (105,436)</u>	<u>\$ 41,784</u>

See accompanying notes.



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**MARRONE BIO INNOVATIONS, INC.**  
**Consolidated Statements of Cash Flows**  
(In Thousands)

	<b>YEAR ENDED DECEMBER 31</b>		
	<b>2013</b>	<b>2012</b>	<b>2011</b>
Cash flows from operating activities			
Net loss	\$(28,489)	\$(38,794)	\$(13,180)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	976	613	499
Loss on disposal of equipment	231	—	—
Share-based compensation	2,300	662	271
Non-cash interest expense	4,315	1,224	4
Reduction of revenue associated with a convertible note <i>(Note 9)</i>	—	245	—
Non-cash charge associated with a convertible note <i>(Note 9)</i>	—	3,610	—
Change in estimated fair value of financial instruments	(6,717)	12,461	(1)
Gain on equipment sale leaseback	—	—	(6)
Gain on extinguishment of debt	(49)	—	—
Amortization of investment securities premiums/discounts, net	18	—	—
Net changes in operating assets and liabilities:			
Accounts receivable	(3,381)	(2,464)	484
Accounts receivable from related parties	(767)	(59)	(54)
Inventories	(6,794)	(1,625)	(1,703)
Prepaid expenses and other assets	991	(2,097)	(663)
Accounts payable	1,682	1,174	438
Accrued and other liabilities	987	1,381	710
Deferred revenue	823	354	776
Deferred revenue from related parties	(131)	890	—
Net cash used in operating activities	(34,005)	(22,425)	(12,425)
Cash flows from investing activities			
Purchases of property, plant and equipment	(4,025)	(2,757)	(423)
Proceeds from sale of equipment	41	—	—
Purchase of short-term investments	(17,477)	—	(2,000)
Maturities of short-term investments	3,782	2,000	—
Net cash used in investing activities	(17,679)	(757)	(2,423)
Cash flows from financing activities			
Proceeds from initial public offering, net of offering costs and underwriter commissions	56,105	—	—
Proceeds from issuance of convertible preferred stock, net of issuance costs	—	—	13,160
Proceeds from issuance of convertible notes payable	6,529	24,076	—
Proceeds from issuance of debt, net of financing costs	3,700	17,375	—
Proceeds from line of credit	—	500	500

Repayment of line of credit	—	(500)	(500)
Repayment of debt	(9,433)	(1,154)	(206)
Repayment of capital leases	(229)	(209)	(191)
Proceeds from secured borrowing	2,880	—	—
Reductions in secured borrowing	(2,880)	—	—
Change in restricted cash	9,139	(9,139)	—
Proceeds from exercise of stock options	250	24	13
Proceeds from exercise of preferred stock warrants	47	—	—
Proceeds from exercise of common stock warrants	25	—	—
Net cash provided by financing activities	66,133	30,973	12,776
Net increase (decrease) in cash and cash equivalents	14,449	7,791	(2,072)
Cash and cash equivalents, beginning of year	10,006	2,215	4,287
Cash and cash equivalents, end of year	<u>\$ 24,455</u>	<u>\$ 10,006</u>	<u>\$ 2,215</u>
Supplemental disclosure of cash flow information			
Cash paid for interest, net of capitalized interest of \$695, \$106 and \$0 for the years ended December 31, 2013, 2012 and 2011, respectively	<u>\$ 1,682</u>	<u>\$ 1,136</u>	<u>\$ 84</u>
Supplemental disclosure of non-cash investing and financing activities			
Property, plant and equipment included in accounts payable and accrued liabilities	<u>\$ 1,009</u>	<u>\$ —</u>	<u>\$ —</u>
Equipment acquired under capital leases	<u>\$ 2,106</u>	<u>\$ 317</u>	<u>\$ 93</u>
Interest added to the principal of convertible notes	<u>\$ 1,623</u>	<u>\$ 837</u>	<u>\$ —</u>
Reclassification of warrants from liabilities to equity	<u>\$ 2,669</u>	<u>\$ —</u>	<u>\$ —</u>
Conversion of convertible notes to common stock	<u>\$ 44,890</u>	<u>\$ —</u>	<u>\$ —</u>
Conversion of preferred stock to common stock	<u>\$ 39,659</u>	<u>\$ —</u>	<u>\$ —</u>

See accompanying notes.



**MARRONE BIO INNOVATIONS, INC.**  
**Notes to Consolidated Financial Statements**  
December 31, 2013

**1. Summary of Business**

Marrone Bio Innovations, Inc. (Company), formerly Marrone Organic Innovations, Inc., was incorporated under the laws of the State of Delaware on June 15, 2006, and is located in Davis, California. In July 2012, the Company formed a wholly-owned subsidiary, Marrone Michigan Manufacturing LLC (MMM LLC), which holds the assets of a manufacturing plant the Company purchased in July 2012 as discussed in Note 3. The Company makes bio-based pest management and plant health products. The Company targets the major markets that use conventional chemical pesticides, including certain agricultural and water markets where its bio-based products are used as substitutes for, or in connection with, conventional chemical pesticides. The Company also targets new markets for which there are no available conventional chemical pesticides, the use of conventional chemical pesticides may not be desirable or permissible, or the development of pest resistance has reduced the efficacy of conventional chemical pesticides. The Company delivers EPA-approved and registered biopesticide products and other bio-based products that address the global demand for effective, safe and environmentally responsible products.

In August 2013, the Company closed its initial public offering of 5,462,500 shares of its common stock (inclusive of 712,500 shares of common stock sold upon the exercise of the underwriters' option to purchase additional shares) (IPO). The public offering price of the shares sold in the offering was \$12.00 per share. The total gross proceeds from the offering to the Company were \$65,550,000, and after deducting underwriting discounts and commissions and offering expenses payable by the Company, the aggregate net proceeds received by the Company totaled approximately \$56,105,000. Upon the closing of the IPO, all shares of the Company's outstanding convertible preferred stock and convertible notes automatically converted into shares of common stock and outstanding warrants to purchase convertible preferred stock and certain warrants to purchase common stock were exercised for shares of common stock (See Note 20).

The Company is an early stage company with a limited operating history and has only recently begun commercializing its products. As of December 31, 2013, the Company had an accumulated deficit of \$105,436,000 and expects to continue to incur losses for the foreseeable future. Until the IPO in August 2013, the Company had funded operations primarily with the net proceeds from the private placements of convertible preferred stock, convertible notes, promissory notes, term loans, as well as proceeds from the sale of its products and payments under strategic collaboration agreements and government grants. The Company will need to generate significant revenue to achieve and maintain profitability. As of December 31, 2013, the Company had working capital of \$46,915,000, cash and cash equivalents of \$24,455,000, and short-term investments of \$13,677,000.

On August 1, 2013, the Company amended and restated its certificate of incorporation to effect a reverse split of shares of its common stock at a 1-for-3.138458 ratio (See Note 19).

The Company participates in a heavily regulated and highly competitive crop protection industry and believes that adverse changes in any of the following areas could have a material effect on the Company's future financial position, results of operations, or cash flows: inability to obtain regulatory approvals, increased competition in the pesticide market, market acceptance of the Company's products, weather and other seasonal factors beyond the Company's control, litigation or claims against the Company based on intellectual property, patent, product, regulatory or other factors, and the Company's ability to support increased growth.

**2. Significant Accounting Policies**

***Basis of Presentation***

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary. All significant intercompany balances and transactions have been eliminated in consolidation.

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### *Use of Estimates*

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

### *Cash and Cash Equivalents*

The Company considers all highly liquid financial instruments purchased with a maturity of three months or less to be cash equivalents. Cash and cash equivalents consist of cash on deposit, money market funds and certificates of deposit accounts (CDs) with U.S. financial institutions. The Company is exposed to credit risk in the event of default by financial institutions to the extent that cash and cash equivalents balances with financial institutions are in excess of amounts that are insured by the Federal Deposit Insurance Corporation. The Company has not experienced any losses on these deposits.

### *Restricted Cash*

The Company's restricted cash consisted of cash that the Company was contractually obligated as of December 31, 2012 to use to pay off the entire indebtedness of the promissory note entered into in April 2012 with an original principal balance of \$10,000,000. The Company paid the outstanding balance of the promissory note in January 2013, and as of December 31, 2013, had no remaining contractual obligations which restricted the use of cash. See Note 8 for further discussion.

### *Short-Term Investments*

The Company's short-term investments consist of certificates of deposit with original maturities less than one year but greater than three months which are classified as held-to-maturity. Certificates of deposit are stated at their amortized cost with realized gains or losses, if any, reported as other income or expenses in the consolidated statements of operations. The Company routinely evaluates the realizability of its short-term investments and recognizes an impairment charge when a decline in the estimated fair value of a short-term investment is below the amortized cost and determined to be other-than-temporary. The Company considers various factors in determining whether to recognize an impairment charge, including the duration of time and the severity to which the fair value has been less than amortized cost, any adverse changes in the investee's financial condition, and the Company's intent and ability to hold the short-term investment for a period of time sufficient to allow for any anticipated recovery in market value. To date, the Company has not recognized any losses on its short-term investments.

The amortized cost and estimated fair values of short-term investments are summarized in the following table (in thousands):

	DECEMBER 31, 2013			
	AMORTIZED COST	GROSS UNREALIZED GAINS	GROSS UNREALIZED LOSSES	ESTIMATED FAIR VALUE
<u>Securities Held-to-Maturity</u>				
Certificates of deposit, with maturities less than 1 year	\$ 13,677	\$ —	\$ (4)	\$ 13,673

The short-term investments at December 31, 2013 were in inactive markets and, therefore, the estimated fair value is measured based on the Level 2 valuation hierarchy. The Company did not have any investments in securities as of December 31, 2012.

### Fair Value of Financial Instruments

ASC 820, *Fair Value Measurements* (ASC 820), clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability.

ASC 820 requires that the valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. ASC 820 establishes a three tier value hierarchy, which prioritizes inputs that may be used to measure fair value as follows:

- Level 1—Quoted prices in active markets for identical assets or liabilities.
- Level 2—Observable inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3—Inputs that are generally unobservable and typically reflect management’s estimate of assumptions that market participants would use in pricing the asset or liability.

The following table presents the Company’s financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2013 and 2012 (in thousands):

	DECEMBER 31, 2013			
	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3
Assets				
Money market funds	\$16,268	\$ 16,268	\$ —	\$ —
	DECEMBER 31, 2012			
	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3
Assets				
Money market funds	\$ 7,668	\$ 7,668	\$ —	\$ —
Liabilities				
Common stock warrant liability	\$ 301	\$ —	\$ —	\$ 301
Preferred stock warrant liability	1,884	—	—	1,884
Convertible notes payable	41,860	—	—	41,860
Total liabilities at fair value	\$44,045	\$ —	\$ —	\$ 44,045

The money market funds held as of December 31, 2013 and 2012 were in active markets and, therefore, are measured based on the Level 1 valuation hierarchy.

The Company estimated the fair value of the common and preferred stock warrant liabilities as of December 31, 2012 using the Probability Weighted Expected Return Method (PWERM), which analyzes the returns afforded to common equity holders under multiple future scenarios. Under the PWERM, share value is based upon the probability-weighted present value of expected future net cash flows (distributions to stockholders), considering each of the possible future events and giving consideration to the rights and preferences of each share class. This method is most appropriate when the long-term outlook for an enterprise is largely known and multiple future scenarios can be reasonably estimated.

The common and preferred stock warrant liabilities were valued by a PWERM valuation using six scenarios, which included three initial public offering scenarios, two merger scenarios and a sale of the Company’s intellectual property. An annual discount rate of 35% was applied to the PWERM valuations as of December 31,

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2012. The common stock warrant liability valuation also included an 18% discount for lack of marketability as of December 31, 2012. As the PWERM estimates the fair value of the common and preferred stock warrant liabilities using unobservable inputs, it is considered to be a Level 3 fair value measurement.

Effective on the date of the IPO, under ASC 815-40-15, *Contracts in Entity's Own Equity* (ASC 815-40-15), the common and preferred stock warrant liabilities were considered to be indexed to the Company's stock, and accordingly, the total warrants liability of \$2,669,000 was reclassified and included in stockholders' equity (deficit) as of December 31, 2013. The Company revalued the warrants immediately prior to the IPO. The fair value of the warrants which would have expired on the date of the IPO unless exercised was determined using the intrinsic method based on the IPO price of \$12.00 per share, which is deemed a Level 2 fair value measurement. The fair value of the warrants that would not have expired on the date of the IPO regardless of whether or not they were exercised was determined using the Black-Scholes-Merton option-pricing model, which is deemed a Level 3 fair value measurement.

As a result of the change in estimated fair value between December 31, 2012 or the issuance dates of the warrants issued during the year ended December 31, 2013 and the closing of the IPO, the Company recognized a net gain from the total change in estimated fair value of the common and preferred stock warrant liabilities as shown in the tables below.

The following table provides a reconciliation of the beginning and ending balances for the common and preferred stock warrant liabilities measured at fair value using significant unobservable inputs (Level 3). The amounts included in the "Transfers out of Level 3" represent the beginning balance in the interim quarter during which it was transferred (in thousands):

	<b>COMMON STOCK WARRANT LIABILITY</b>
Fair value at December 31, 2012	\$ 301
Warrants issued	900
Change in fair value recorded in change in fair value of financial instruments	377
Transfers out of Level 3	(434)
Reclassified to stockholders' equity (deficit)	(1,144)
Fair value at December 31, 2013	\$ —
	<b>PREFERRED STOCK WARRANT LIABILITY</b>
Fair value at December 31, 2012	\$ 1,884
Change in fair value recorded in change in fair value of financial instruments	(823)
Transfers out of Level 3	(140)
Reclassified to stockholders' equity (deficit)	(921)
Fair value at December 31, 2013	\$ —

Effective on the date of the IPO, all of the Company's convertible notes were converted into shares of common stock. Prior to the IPO, convertible notes were valued by a PWERM valuation utilizing inputs similar to those used for estimating fair values of the common and preferred stock warrant liabilities described above. A discount rate of 25% was used for valuing the March and October 2012 Convertible Notes, defined in Note 9, as of December 31, 2012. A discount rate of 18% was used for valuing the October 2012 Subordinated Convertible Notes and the December 2012 Convertible Note, both defined in Note 9, as of December 31, 2012. These annual discount rates were applied in the PWERM valuation as of December 31, 2012. The Company revalued the

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convertible notes immediately prior to the IPO. As a result of the IPO, the number of shares to be issued became known and the Company estimated the fair value of the convertible notes using the intrinsic method based on the IPO price of \$12.00 per share, which is deemed a Level 2 fair value measurement. Due to the change in estimated fair values between December 31, 2012 or the issuance dates of the convertible notes issued during the year ended December 31, 2013 and the closing of the IPO, the Company recognized a gain from the change in estimated fair value of the convertible notes as shown in the table below.

The following table provides a reconciliation of the beginning and ending balances for the convertible notes measured at fair value using significant unobservable inputs (Level 3). The amounts included in the "Transfers out of Level 3" represent the beginning balance in the interim quarter during which it was transferred (in thousands):

Fair value at December 31, 2012	\$ 41,860
Convertible notes issued	9,069
Convertible notes cancelled	(1,360)
Accrued interest	1,299
Change in fair value recorded in change in fair value of financial instruments	(2,634)
Transfers out of Level 3	(48,234)
Fair value at December 31, 2013	\$ —

During the year ended December 31, 2013, as noted above, there were \$574,000 of preferred and common stock warrants and \$48,234,000 of convertible notes transferred from the Level 3 to Level 2 category. There were no such transfers from the Level 3 to Level 2 category during the year ended December 31, 2012. Further, there were no transfers from the Level 2 to Level 1 category during the years ended December 31, 2013 or 2012.

### ***Concentration of Credit Risk***

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash, cash equivalents, short-term investments, accounts receivable and debt. The Company deposits its cash, cash equivalents and short-term investments with high credit quality domestic financial institutions with locations in the U.S. Such deposits may exceed federal deposit insurance limits. The Company believes the financial risks associated with these financial instruments are minimal.

The Company's customer base is dispersed across many different geographic areas, and currently most customers are pest management distributors in the U.S. Generally, receivables are due up to 120 days from the invoice date and are considered past due after this date, although the Company may offer extended terms from time to time.

During the years ended December 31, 2013, 2012 and 2011, 8%, 20% and 7%, respectively, of the Company's revenues were generated from international customers.

From inception through December 31, 2012, the Company's principal source of revenues was its Regalia product line. During the year ended December 31, 2013, Grandevo and Regalia were the principal sources of the Company's total revenues. During the years ended December 31, 2013, 2012 and 2011, these two product lines accounted for 97%, 96% and 96%, respectively, of the Company's total revenues.

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Customers with 10% or more of the Company's total revenues consist of the following:

	CUSTOMER A	CUSTOMER B (1)	CUSTOMER C	CUSTOMER D	CUSTOMER E
For the years ended December 31,					
2013	28%	10%	*	*	*
2012	33%	*	13%	12%	*
2011	39%	*	*	17%	10%

\* Represents less than 10% of total revenues

(1) Represents related party revenues. See Note 18 for further discussion.

Customers with 10% or more of the Company's outstanding accounts receivable consist of the following:

	CUSTOMER A	CUSTOMER B (1)	CUSTOMER C	CUSTOMER D	CUSTOMER E	CUSTOMER F	CUSTOMER G
December 31, 2013	19%	13%	12%	11%	*	*	*
December 31, 2012	*	*	*	33%	17%	11%	11%

\* Represents less than 10% of accounts receivable.

(1) Represents accounts receivable from related parties. See Note 18 for further discussion.

### ***Concentrations of Supplier Dependence***

The active ingredient in the Company's Regalia product line is derived from the giant knotweed plant, which the Company obtains from China. The Company's single supplier acquires raw knotweed from numerous regional sources and performs an extraction process on this plant, creating a dried extract that is shipped to the Company's third-party manufacturer in the U.S. A disruption at this supplier's manufacturing site or a disruption in trade between the U.S. and China could negatively impact sales of Regalia. The Company currently uses one supplier and does not have a long-term supply contract with this supplier. Although the Company has identified additional sources of knotweed, there can be no assurance that the Company will continue to be able to obtain dried extract from China at a competitive price.

### ***Accounts Receivable***

The carrying value of the Company's receivables represents their estimated net realizable values. The Company generally does not require collateral and estimates any required allowance for doubtful accounts based on historical collection trends, the age of outstanding receivables, and existing economic conditions. If events or changes in circumstances indicate that specific receivable balances may be impaired, further consideration is given to the collectibility of those balances and the allowance is recorded accordingly. Past-due receivable balances are written-off when the Company's internal collection efforts have been unsuccessful in collecting the amount due. During the years ended December 31, 2013 and 2012, no receivable balances were written-off. As of December 31, 2013 and 2012, the Company had no allowance for doubtful accounts.

### ***Inventories***

Inventories are stated at the lower of cost or market value (net realizable value or replacement cost) and include the cost of material and external labor and manufacturing costs. Cost is determined on the first-in, first-out basis. The Company provides for inventory reserves when conditions indicate that the selling price may be less than cost due to physical deterioration, obsolescence, changes in price levels, or other factors. Additionally, the Company provides reserves for excess and slow-moving inventory on hand that is not expected to be sold to reduce the carrying amount of excess slow-moving inventory to its estimated net realizable value. The reserves

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are based upon estimates about future demand from the Company's customers and distributors and market conditions. As of December 31, 2013, the Company had \$45,000 in reserves against its inventories. As of December 31, 2012, the Company had no reserves against its inventories. During the year ended December 31, 2013, the Company recorded, as a component of cost of product revenues, an inventory write-off of \$205,000 primarily due to abnormal scrap and the identification of inventory that was not suitable for sale and an adjustment of \$194,000 to write-down its Zequanox inventory to net realizable value. During the year ended December 31, 2012, the Company recorded, as a component of cost of product revenues, an inventory write-off of \$913,000 primarily due to an early formulation of the Zequanox line of products that was not suitable for sale.

Inventories, net consist of the following (in thousands):

	DECEMBER 31	
	2013	2012
Raw materials	\$ 5,355	\$ 3,204
Work in progress	2,917	607
Finished goods	3,394	1,061
	<u>\$ 11,666</u>	<u>\$ 4,872</u>

### ***Deferred Cost of Product Revenues***

Deferred cost of product revenues are stated at the lower of cost or net realizable value and include product sold where title has transferred but the criteria for revenue recognition have not been met. As of December 31, 2013, the Company recorded current deferred cost of product revenues of \$418,000 which is included in prepaid expenses and other current assets in the consolidated balance sheets. As of December 31, 2012, the Company had no deferred cost of product revenues. During the year ended December 31, 2013, the Company recorded an adjustment of \$174,000 to write down the carrying value of deferred cost of product revenues to net realizable value.

### ***Property, Plant and Equipment***

Property, plant and equipment are recorded at cost and are depreciated using the straight-line method over their estimated useful lives. The Company generally uses the following estimated useful lives for each asset category:

ASSET CATEGORY	ESTIMATED USEFUL LIFE
Building	30 years
Computer equipment	2-3 years
Machinery and equipment	3-20 years
Office equipment	3-5 years
Furniture	3-5 years
Leasehold improvements	Shorter of lease term or useful life
Software	3 years

Amortization of assets under capital leases is included in depreciation expense. Maintenance, repairs and minor renewals are expensed as incurred. Expenditures that substantially increase an asset's useful life are capitalized.

### ***Deferred Financing Costs***

Deferred financing costs, net include fees and costs incurred to obtain long-term financing. The costs are being amortized over the terms of the respective loans on a basis that approximates level yield. Unamortized deferred financing fees are written-off when debt is retired before the maturity date. Upon the amendment or termination

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of debt, unamortized deferred financing fees are accounted for in accordance with ASC 470-50-40, *Debt Modifications and Extinguishments* (ASC 470-50-40). As of December 31, 2013, \$458,000 and \$148,000 of the deferred financing costs were recorded as a component of current and non-current other assets, respectively, and are being amortized to interest expense. As of December 31, 2012, \$145,000 and \$261,000 of the deferred financing costs were recorded as a component of current and non-current other assets, respectively, and are being amortized to interest expense.

### ***Impairment of Long-Lived Assets***

Impairment losses related to long-lived assets are recognized in the event the net carrying value of such assets is not recoverable and exceeds fair value. The Company evaluates the recoverability of its long-lived assets whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. The carrying amount of a long-lived asset (asset group) is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset (asset group). If an asset is considered is not recoverable, the impairment loss is measured as the amount by which the carrying value of the asset group exceeds its estimated fair value. To date, the Company has not recognized any such impairment loss associated with its long-lived assets.

### ***Preferred Stock Warrant Liability***

The Company accounted for outstanding warrants exercisable into shares of its preferred stock as liability instruments as the preferred stock into which these warrants were convertible were contingently redeemable upon the occurrence of certain events or transactions. The Company adjusted the warrant instruments to fair value at each reporting period with the change in fair value recorded as a component of change in estimated fair value of financial instruments in the consolidated statements of operations. Effective on the date of the IPO, under ASC 815-40-15, the preferred stock warrant liabilities were considered to be indexed to the Company's stock, and accordingly, the total warrants liability was reclassified and included in stockholders' equity (deficit) as of December 31, 2013.

### ***Common Stock Warrant Liability***

The Company issued detachable common stock warrants in connection with the October 2012 and April 2013 Junior Secured Promissory Notes as defined and discussed in Note 8 to purchase a variable number of the Company's shares of common stock based on a fixed monetary amount. As the predominant settlement feature of these common stock warrants was to settle a fixed monetary amount in a variable number of shares, these common stock warrants fell within the scope of ASC 480, *Distinguishing Liabilities from Equity* (ASC 480). Accordingly, these common stock warrants were recorded at estimated fair value on their issuance date and were adjusted to their estimated fair value as of each reporting date with the change in estimated fair value recorded as a component of change in estimated fair value of financial instruments in the accompanying consolidated statements of operations. Effective on the date of the IPO, under ASC 815-40-15, the common stock warrant liabilities were considered to be indexed to the Company's stock, and accordingly, the total warrants liability was reclassified and included in stockholders' equity (deficit) as of December 31, 2013.

### ***Revenue Recognition***

The Company recognizes revenues when persuasive evidence of an arrangement exists, delivery and transfer of title has occurred or services have been rendered, the price is fixed or determinable, and collectability is reasonably assured, unless contractual obligations, acceptance provisions or other contingencies exist. If such obligations or provisions exist, revenue is recognized after such obligations or provisions are fulfilled or expire.

Product revenues consist of revenues generated from sales to distributors and from sales of the Company's products to direct customers, net of rebates and cash discounts. For sales of products made to distributors, the Company considers a number of factors in determining whether revenue is recognized upon transfer of title to the



distributor, or when payment is received. These factors include, but are not limited to, whether the payment terms offered to the distributor in comparison to the Company's historical terms are considered to be longer than normal payment terms, the distributor history of adhering to the terms of its contractual arrangements with the Company, whether the Company has a pattern of granting concessions for the benefit of the distributor, and whether there are other conditions that may indicate that the sale to the distributor is not substantive. When the Company offers payment terms that are considered to be extended in comparison to the Company's historical terms, the Company considers the arrangement not to be fixed or determinable, and accordingly, revenue is deferred until payment is due. The costs associated with such deferral are also deferred and classified in prepaid expenses and other current assets in the consolidated balance sheets. The Company currently recognizes revenue primarily on the sell-in method with its distributors. Distributors do not have price protection or return rights.

As of December 31, 2013, the Company recorded current deferred product revenues of \$1,016,000. As of December 31, 2012, the Company had no deferred product revenues.

From time to time, the Company offers certain product rebates, which are recorded as reductions to product revenues. An accrued liability for these product rebates is recorded at the time the revenues are recorded.

The Company recognizes license revenues pursuant to strategic collaboration and distribution agreements under which the Company receives payments for the achievement of testing validation, regulatory progress and commercialization events. As these activities and payments are associated with exclusive rights that the Company provides in connection with strategic collaboration and distribution agreements over the term of the agreements, revenues related to the payments received are deferred and recognized over the term of the exclusive distribution period of the respective agreement. For the years ended December 31, 2012 and 2011, the Company received payments totaling \$1,533,000 and \$833,000, respectively, of which \$1,000,000 was received from a related party for the year ended December 31, 2012. No payments were received under these agreements during the year ended December 31, 2013. For the years ended December 31, 2013, 2012 and 2011, the Company recognized \$193,000, \$179,000 and \$57,000, respectively, as license revenues, excluding related party revenues, in the accompanying consolidated statements of operations.

For the year ended December 31, 2013, the Company recognized \$131,000 of related party revenues under these agreements based on the terms of the Company's commercial agreement with Syngenta, an affiliate of one of our 5% stockholders. In addition, in connection with the December 2012 Convertible Note issued to a related party in December 2012, which is described in Note 9, the Company recorded a reduction of license revenues included in related party revenues of \$110,000 for the year ended December 31, 2012. There were no related party license revenues recognized for the years ended December 31, 2012 and 2011.

At December 31, 2013, the Company recorded current and non-current deferred revenues of \$324,000 and \$1,372,000, respectively, related to payments received under these agreements, of which \$131,000 and \$628,000, respectively, related to deferred revenues from related parties based on the terms of the Company's commercial agreement with Syngenta. At December 31, 2012, the Company recorded current and non-current deferred revenues of \$324,000 and \$1,696,000, respectively, related to payments received under these agreements, of which \$131,000 and \$759,000, respectively, related to deferred revenues from related parties based on the terms of the Company's commercial agreement with Syngenta.

#### ***Research, Development and Patent Expenses***

Research and development expenditures, which primarily consist of payroll-related expenses, toxicology costs, regulatory costs, consulting costs and lab costs, and patent expenses, which primarily consist of legal costs relating to the patents and patent filing costs, are expensed to operations as incurred. For the years ended December 31, 2013, 2012 and 2011, research and development expenses totaled \$16,827,000, \$12,140,000 and \$9,133,000, respectively, and patent expenses totaled \$987,000, \$601,000 and \$277,000, respectively. Grants received from third parties for research and development activities are recorded as reductions of expense over the term of the agreement as the related activities are conducted. For the years ended December 31, 2012 and 2011, the Company received payments under grants totaling \$140,000 and \$164,000, respectively. There were no grants received for the year ended December 31, 2013. Of these amounts, \$31,000 was recorded in accrued liabilities as accrued grant proceeds for which the underlying grant services had not been provided as of

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December 31, 2011. There were no accrued grant proceeds for the years ended December 31, 2013 and 2012. For the years ended December 31, 2012 and 2011, the Company reduced research and development expenses by \$171,000 and \$195,000, respectively, as services were performed under the grants. There was no reduction to research and development expenses for services performed under grants for the year ended December 31, 2013.

### ***Shipping and Handling Costs***

Amounts billed for shipping and handling are included as a component of product revenues. Related costs for shipping and handling have been included as a component of cost of product revenues.

### ***Advertising***

The Company expenses advertising costs as incurred. Advertising costs for the years ended December 31, 2013, 2012 and 2011, were \$760,000, \$609,000 and \$286,000, respectively.

### ***Share-Based Compensation***

The Company recognizes share-based compensation expense for all stock options made to employees and directors based on estimated fair values.

The Company estimates the fair value of stock options on the date of grant using an option-pricing model. The value of the portion of the stock options that is ultimately expected to vest is recognized as expense over the requisite service periods using the straight-line method. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

For purposes of determining the Company's historical share-based compensation expense, it used the Black-Scholes-Merton (BSM) option-pricing model to calculate the estimated fair value of stock options on the measurement date (generally, the grant date). This model requires inputs for the expected life of the stock options, estimated volatility factor, risk-free interest rate, and expected dividend yield. The Company's estimates of forfeiture rates also affect the amount of aggregate compensation expense. These inputs are subjective and generally require significant judgment. For the years ended December 31, 2013, 2012 and 2011, the Company calculated the fair value of stock options granted using the following assumptions:

	YEAR ENDED DECEMBER 31		
	2013	2012	2011
Expected life (years)	5.29-7.71	5.00-6.08	5.00-6.28
Estimated volatility factor	0.70-0.75	0.72-0.76	0.70
Risk-free interest rate	1.27%-2.11%	0.74%-1.16%	0.86%-2.40%
Expected dividend yield	—	—	—

**Expected Life**—The Company's expected life represents the period that its share-based payment awards are expected to be outstanding. The Company uses the "simplified method" in accordance with Staff Accounting Bulletin (SAB) No. 107, *Share-Based Payment*, and SAB No. 110, *Simplified Method for Plain Vanilla Share Options*, to develop the expected term of options determined to be "plain vanilla." Under this approach, the expected term is presumed to be the midpoint between the vesting date and the contractual end of the option grant. For stock options granted with an exercise price not equal to the determined fair market value, the Company estimates the expected life based on historical data and management's expectations about exercises and post-vesting termination behavior.

**Estimated Volatility Factor**—The Company uses the calculated volatility based upon the trading history and calculated volatility of the common stock of comparable agricultural biotechnology companies in determining an estimated volatility factor.

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**Risk-Free Interest Rate**—The Company bases the risk-free interest rate on the implied yield currently available on U.S. Treasury constant-maturity securities with the same or substantially equivalent remaining term.

**Expected Dividend Yield**—The Company has not declared dividends nor does it expect to in the foreseeable future. Therefore, a zero value was assumed for the expected dividend yield.

**Estimated Forfeitures**—When estimating forfeitures, the Company considers voluntary and involuntary termination behavior and actual option forfeitures.

If in the future the Company determines that other methods are more reasonable, or other methods for calculating these assumptions are prescribed by authoritative guidance, the fair value calculated for the Company's stock options could change significantly. Higher volatility and longer expected lives result in an increase to share-based compensation expense determined at the grant date. Share-based compensation expense affects the Company's research, development and patent expense and selling, general and administrative expense.

### ***Other Income (Expense), Net***

Other income (expense), net included net losses resulting from foreign currency transactions in the amount of \$53,000 and \$54,000 for the years ended December 31, 2013 and 2012, respectively. There were no losses from foreign currency transactions for the year ended December 31, 2011. In addition, in 2013, other income (expense), net included a loss on disposal of fixed assets totaling \$231,000. There were no losses on disposals of fixed assets during the years ended December 31, 2012 and 2011.

### ***Income Taxes***

The Company uses the asset and liability method of accounting for income taxes. Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. To the extent deferred tax assets cannot be recognized under the preceding criteria, the Company establishes valuation allowances as necessary to reduce deferred tax assets to the amounts expected to be realized. As of December 31, 2013 and 2012, all deferred tax assets were fully offset by a valuation allowance. Realization of deferred tax assets is dependent upon future federal, state, and foreign taxable income. The Company's judgments regarding deferred tax assets may change as the Company expands into international jurisdictions, due to future market conditions, changes in U.S. or international tax laws, and other factors. These changes, if any, may require possible material adjustments to these deferred tax assets, resulting in a reduction in net income or an increase in net loss in the period when such determinations are made.

The Company recognizes liabilities for uncertain tax positions based upon a two-step process. To the extent a tax position does not meet a more-likely-than-not level of certainty; no benefit is recognized in the consolidated financial statements. If a position meets the more-likely-than-not level of certainty, it is recognized in the consolidated financial statements at the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The Company's policy is to analyze the Company's tax positions taken with respect to all applicable income tax issues for all open tax years (in each respective jurisdiction). As of December 31, 2013 and 2012, the Company has concluded that no uncertain tax positions were required to be recognized in its consolidated financial statements. It is the Company's practice to recognize interest and penalties related to income tax matters in income tax expense. No amounts were recognized for interest and penalties during the years ended December 31, 2013, 2012 and 2011.

### **Comprehensive Loss**

Comprehensive loss represents the net loss for the period plus the results of certain changes to stockholders' equity (deficit) that are not reflected in the consolidated statements of operations, if applicable. The only component of the Company's comprehensive loss for the periods presented is net loss.

### **Net Loss Per Share**

Basic net loss per share, which excludes dilution, is computed by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share reflects the potential dilution that could occur if securities or other contracts to issue common stock, such as stock options, convertible notes, convertible preferred stock and warrants, result in the issuance of common stock which share in the losses of the Company. Certain potential shares of common stock have been excluded from the computation of diluted net loss per share for certain periods as their effect would be anti-dilutive. Such potentially dilutive shares are excluded when the effect would be to reduce the loss per share. The treasury stock method has been applied to determine the dilutive effect of warrants. See Note 4 for further discussion.

### **Segment Information**

The Company is organized as a single operating segment, whereby its chief operating decision maker assesses the performance of and allocates resources to the business as a whole.

### **Recently Issued Accounting Pronouncements**

There have been no new accounting pronouncements issued during the year ended December 31, 2013 that are of significance, or potential significance, to the Company.

### **Reclassifications**

Certain amounts in 2012 and 2011 have been reclassified to conform with the 2013 financial statement presentations. These reclassifications have no effect on previously reported net income.

### **3. Property, Plant and Equipment**

Property, plant and equipment consist of the following (in thousands):

	DECEMBER 31	
	2013	2012
Land	\$ 1	\$ 1
Buildings	—	—
Computer equipment and software	459	355
Furniture, fixtures and office equipment	293	192
Machinery and equipment	4,624	2,446
Leasehold improvements	497	472
Construction in progress	6,503	2,103
	12,377	5,569
Less accumulated depreciation	(2,957)	(2,041)
	<u>\$ 9,420</u>	<u>\$ 3,528</u>

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The Company has granted to third parties interests in specific property and equipment as part of certain financing arrangements (see Note 8).

Depreciation and amortization expense for the years ended December 31, 2013, 2012 and 2011, was \$976,000, \$613,000 and \$499,000, respectively, which included amortization expense related to capital leases for those periods (see Note 14).

On July 19, 2012 (Acquisition Date), the Company purchased land, building and equipment (Manufacturing Plant) for \$1,459,000, including \$341,000 of transaction costs. The Manufacturing Plant is located in Bangor, Michigan. Prior to the acquisition, the Manufacturing Plant was owned by a bank and sold in a foreclosure auction. Accordingly, the purchase price for the Manufacturing Plant was less than the estimated fair value of the assets acquired by \$257,000. The excess of fair value of the assets acquired over the purchase price was allocated on a relative fair value basis to all assets acquired. The acquisition of the Manufacturing Plant will allow the Company to manufacture certain products internally and improve the overall operating efficiencies and margins of the business as the production of these products historically has been outsourced.

The acquisition was accounted for as an asset acquisition in accordance with ASC 805, *Business Combinations* (ASC 805). The assets acquired under the Manufacturing Plant acquisition have been included in the Company's consolidated financial statements from the Acquisition Date. The purchase price was allocated to assets acquired as of the Acquisition Date.

Prior to the allocation of the excess of fair value of the assets acquired over the purchase price, the assets acquired are first measured at their fair values. The Company engaged a third-party valuation firm to assist with its estimated fair value of the assets acquired. The following methods and assumptions are used to estimate the fair value of each class of asset acquired:

**Land**—Market approach based on similar, but not identical, transactions in the market. Adjustments to comparable sales are based on both the quantitative and qualitative data.

**Building**—The cost approach, market approach and income approach were used to assess fair value. Cost approach is based on replacement cost new less depreciation adjusted for physical deterioration, functional obsolescence and external/economic obsolescence, as applicable. The market approach is based on similar, but not identical, transactions in the market using both quantitative and qualitative data. The income approach is based on the direct capitalization method using similar but not identical lease rates and making an assessment of net operating income.

**Equipment**—Both the cost approach and the market approach were used to assess fair value. Cost approach is based on replacement cost new less depreciation adjusted for physical deterioration, functional obsolescence and external/economic obsolescence, as applicable. The market approach is based on similar, but not identical, transactions in the market using both quantitative and qualitative data.

The following table summarizes the estimated fair value of the assets acquired as of the Acquisition Date, which were determined using Level 2 and 3 inputs as described above (in thousands):

	<b>JULY 19, 2012</b>
Land	\$ 1
Building	314
Equipment	<u>1,144</u>
Assets acquired	<u>\$ 1,459</u>

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As the Manufacturing Plant had not yet been placed in service as of December 31, 2013, the assets acquired, except the land, were recorded as construction in progress as a component of property, plant and equipment in the accompanying consolidated balance sheets as of December 31, 2013 and 2012. In addition, interest expense in the amount of \$801,000 and \$106,000 was recorded in construction in progress as of December 31, 2013 and 2012, respectively.

### 4. Net Loss Per Share

Basic net loss per share, which excludes dilution, is computed by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share reflects the potential dilution that could occur if securities or other contracts to issue common stock, such as stock options, convertible notes, convertible preferred stock and warrants, result in the issuance of common stock which share in the losses of the Company.

The following table sets forth the potential shares of common stock that are not included in the calculation of diluted net loss per share because to do so would be anti-dilutive as of the end of each period presented (in thousands). Such potentially dilutive shares are excluded when the effect would be to reduce the loss per share. The treasury stock method has been applied to determine the dilutive effect of warrants.

	DECEMBER 31		
	2013	2012	2011
Convertible preferred stock	—	8,504	8,504
Convertible notes (1)	—	—	—
Stock options outstanding	2,608	2,067	1,384
Warrants to purchase convertible preferred stock	—	207	36
Warrants to purchase common stock (2)	151	—	5

- (1) As of December 31, 2012, the Company had approximately \$41,860,000, in contingently convertible notes payable and related accrued interest for which the contingencies related to conversion had not been met as of December 31, 2012. Therefore, it would have no dilutive or anti-dilutive impact until the contingency had been met effective upon the IPO in August 2013. All convertible notes converted to common stock in connection with the IPO. See Note 9 for further discussion.
- (2) In October 2012 and April 2013, the Company issued warrants to purchase a number of shares of common stock equal to 15% of the funded principal amount of the October 2012 and April 2013 Junior Secured Promissory Notes as defined in Note 8, divided by 70% of the value of common stock in a sale of the Company or a qualified initial public offering (Qualified IPO), with an exercise price of 70% of the value of common stock in a sale of the Company or a Qualified IPO. In June 2013, the Company issued warrants to purchase a number of shares of common stock equal to 10% of the total committed amount of the June 2013 Credit Facility as defined in Note 8, divided by 70% of the value of common stock in a sale of the Company or a Qualified IPO, with an exercise price of 70% of the value of common stock in a sale of the Company or a Qualified IPO. These warrants were contingently exercisable for which the contingencies related to exercise had not been met until the IPO in August 2013. Therefore, they would have no dilutive or anti-dilutive impact until the contingency had been met in August 2013. See Note 8 for further discussion.

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The numbers of shares of common stock issuable upon the exercise of warrants to purchase convertible preferred stock and upon the conversion of convertible preferred stock were at a ratio of one-to-one.

	YEAR ENDED DECEMBER 31		
	2013	2012	2011
	(In thousands, except per share data)		
Numerator:			
Net loss	\$ (28,489)	\$ (38,794)	\$ (13,180)
Deemed dividend on convertible notes	(1,378)	(2,039)	—
Net loss attributable to common stockholders	<u>\$ (29,867)</u>	<u>\$ (40,833)</u>	<u>\$ (13,180)</u>
Effect of potentially dilutive securities:			
Convertible notes	(4,392)	—	—
Warrants to purchase preferred stock	(840)	—	—
Net loss for diluted net loss per share	<u>\$ (35,099)</u>	<u>\$ (40,833)</u>	<u>\$ (13,180)</u>
Denominator			
Weighted average shares used for basic net loss per share	<u>8,731</u>	<u>1,257</u>	<u>1,239</u>
Effect of potentially dilutive securities:			
Convertible notes	127	—	—
Warrants to purchase preferred stock	53	—	—
Weighted average shares outstanding for diluted net loss per share	<u>8,911</u>	<u>1,257</u>	<u>1,239</u>
Basic net loss per share:	<u>\$ (3.42)</u>	<u>\$ (32.48)</u>	<u>\$ (10.64)</u>
Diluted net loss per share:	\$ (3.94)	\$ (32.48)	\$ (10.64)

## 5. Other Assets

Other assets consist of the following (in thousands):

	DECEMBER 31	
	2013	2012
Prepaid initial public offering costs	\$—	\$ 2,257
Prepaid distribution fees	125	134
Deferred financing costs, less current portion	148	261
Deposits for equipment	256	—
Deposits on equipment leases	177	43
Other assets	100	90
	<u>\$ 806</u>	<u>\$ 2,785</u>

## 6. Accrued Liabilities

Accrued liabilities consist of the following (in thousands):

	DECEMBER 31	
	2013	2012
Accrued compensation	\$ 2,040	\$ 1,342
Accrued severance	100	—
Accrued expenses	1,630	1,295
Accrued inventory costs	610	—
Accrued product rebates	—	386
	<u>\$ 4,380</u>	<u>\$ 3,023</u>

On November 7, 2013, the Company announced that its Chief Financial Officer, Donald Glidewell, had decided to retire from the Company. To facilitate the transition, Mr. Glidewell agreed to remain as the Company's Chief Financial Officer for up to five months while the Company searched for a successor Chief Financial Officer, and the Company entered into a transition agreement with Mr. Glidewell that provides, among other things, for continued vesting of his outstanding equity awards through his retirement date and that upon his separation from the Company, Mr. Glidewell is eligible to receive:

- an amount equal to six months of his then-current annual base salary payable monthly for a period of six months from his retirement date in the form of salary continuation;
- medical and dental coverage, plus disability and life insurance premiums, for a period of six months following his retirement; and
- full acceleration of vesting of his outstanding equity awards that are unvested as of his retirement date.

The Company recorded accrued severance expenses in the amount of \$100,000 based on the terms of the transition agreement for salary, COBRA, and transition service related costs. See Note 13 for further discussion regarding the acceleration of vesting of Mr. Glidewell's outstanding equity awards.

## 7. Factoring and Security Agreement

On June 13, 2013, the Company entered into a factoring and security agreement (Factoring and Security Agreement) with a third-party that would enable the Company to sell the entire interest in certain accounts receivable up to \$5,000,000. Under the Factoring and Security Agreement, 15% of the sales proceeds will be held back by the purchaser until collection of such receivables. Such holdbacks are not considered legal securities, nor are they certificated. Upon the sale of the receivable, the Company will not maintain servicing. The purchaser may require the Company to repurchase accounts receivable if (i) the payment is disputed by the account debtor, with the purchaser being under no obligation to determine the bona fides of such dispute; (ii) the account debtor has become insolvent or (iii) upon the effective date of the termination of the Factoring and Security Agreement. The purchaser will retain its security interest in any accounts repurchased by the Company. The Factoring and Security Agreement is secured by all of the Company's personal property and fixtures, and proceeds thereof, including accounts receivable, inventory, equipment and general intangibles other than intellectual property. Upon sale of the receivable, the Company may elect to set up a reserve where upon the cash for the sale remains with the third-party and the Company can draw on the available amount on the reserve account at any time. The Company elected to utilize the reserve account. On November 11, 2013, the Company terminated the Factoring and Security Agreement effective January 10, 2014.

The Company accounted for sales of accounts receivable under the Factoring and Security Agreement as a secured borrowing in accordance with ASC 860, *Transfers and Servicing* (ASC 860). As of December 31, 2013, the Company had \$479,000 included in accounts receivable that were transferred under this arrangement. As of December 31, 2013, the Company did not have excess funds available on the reserve account and did not have secured borrowings outstanding under the arrangement.



## 8. Debt

Debt consists of the following (in thousands):

	DECEMBER 31	
	2013	2012
Promissory note bearing interest at 6.25% per annum, which is payable monthly through May 2013, collateralized by all of the Company's inventories, chattel paper, accounts receivable, equipment and general intangibles (excluding certain financed equipment and intellectual property). The Promissory Note was repaid in May 2013 (1)	\$ —	\$ 35
Term Loan (Term Loan) bearing interest at 7.00% per annum which is payable monthly through April 2016. The Term Loan is collateralized by all of the Company's inventories, chattel paper, accounts receivable, equipment and general intangibles (excluding certain financed equipment and intellectual property) pledged as collateral under the Term Loan, subordinated (1)	309	426
Promissory note bearing interest at 7.00% per annum which is payable monthly through November 2014, collateralized by all of the Company's inventories, chattel paper, accounts receivable, equipment and general intangibles (excluding certain financed equipment and intellectual property), net of unamortized debt discount at December 31, 2013 of \$2, subordinated (1)	123	261
Senior secured promissory note (April 2012 Senior Secured Promissory Note) bearing interest at 15.00% per annum which is payable monthly through April 2017, collateralized by substantially all of the Company's assets. The April 2012 Senior Secured Promissory Note was repaid in January 2013	—	8,374
Junior secured promissory notes (October 2012 and April 2013 Junior Secured Promissory Notes) bearing interest at 12.00% per annum which are payable monthly through October 2015, collateralized by substantially all of the Company's assets, net of unamortized debt discount at December 31, 2013 of \$445 (1)	12,005	7,242
Debt	12,437	16,338
Less current portion	(157)	(8,572)
	<u>\$12,280</u>	<u>\$ 7,766</u>

(1) The lender's security interest was subordinate to the holders of the April 2012 Senior Secured Promissory Note with the exception of its interest in equipment.

As of December 31, 2013, aggregate contractual future principal payments on the Company's debt, by year, are due as follows (in thousands):

Years ending December 31:	
2014	\$ 251
2015	12,585
2016	48
Total future principal payments	<u>\$ 12,884</u>

The fair value of the Company's outstanding debt obligations was \$13,950,000 as of December 31, 2013, which was estimated based on a discounted cash flow model using an estimated market rate of interest of 7.0% and is classified as Level 3 within the fair value hierarchy. The Company believes the carrying values of its debt approximate their fair values at December 31, 2012 based on the interest rates as of those dates compared to similar debt instruments.

***Promissory Notes, Term Loan, Revolving Line of Credit and Credit Facility***

In May 2008, the Company borrowed \$400,000 pursuant to a promissory note with a bank which had an interest rate of 6.25% per annum and was payable in 60 equal monthly installments of \$7,785 commencing June 1, 2008. This promissory note was repaid in May 2013.

In March 2009, October 2010 and October 2011, the Company and the bank agreed to modify the terms of its existing revolving line of credit (Revolver). Under the modified terms of the Revolver, the Company's borrowings under the Revolver were limited to 75% of qualifying accounts receivable with a maximum borrowing limit of \$500,000. In March 2012, the Company entered into a change in terms agreement with the bank under which the existing Revolver was replaced by the Term Loan in the amount of \$500,000 with a rate of 7.00% per annum, maturing April 1, 2016. The Company's inventories, chattel paper, accounts receivable, equipment and general intangibles (excluding certain financed equipment and intellectual property) have been pledged as collateral under the Term Loan. The Revolver was terminated in March 2012.

In March 2009, the Company borrowed \$650,000 pursuant to a promissory note with the bank which bears interest at the rate of 7.00% per annum and is repayable in six monthly interest only payments starting May 1, 2009, followed by 60 equal monthly installments of \$13,000 commencing November 1, 2009, with the final payment due on November 1, 2014. All of the Company's inventories, chattel paper, accounts receivable, equipment and general intangibles (excluding certain financed equipment and any intellectual property) have been pledged as collateral for the promissory notes.

On April 13, 2012, the Company borrowed \$10,000,000 pursuant to a senior secured promissory note (April 2012 Senior Secured Promissory Note) which had an interest rate of 15.00% per annum and required the Company to pay the lender non-refundable loan fees of \$625,000. The April 2012 Senior Secured Promissory Note was payable in 59 monthly installments of \$238,000 beginning in May 2012 with all unpaid principal and interest due in April 2017. The April 2012 Senior Secured Promissory Note was secured by a first priority security interest in substantially all of the Company's present and future assets. The Company also issued a warrant (Series C Warrant) to the lender to purchase 191,000 shares of the Company's Series C convertible preferred stock with an exercise price of \$7.846 per share. Under its terms, the Series C Warrant would expire, unless exercised, on the earlier to occur of April 2022 or one year after the Company successfully completes a Qualified IPO, however the Series C Warrant was exercised effective upon the completion of the IPO (See Note 20). Until the effective date of the IPO, the Company estimated the fair value of the Series C Warrant using a PWERM valuation based on unobservable inputs and, therefore, the Series C Warrant was considered to be a Level 3 liability.

The loan fees and the fair value of the Series C Warrant at the date of issuance of \$625,000 and \$306,000, respectively, were recorded as a debt discount to the April 2012 Senior Secured Promissory Note and were being amortized to interest expense over the term of the arrangement.

Under the terms of the April 2012 Senior Secured Promissory Note, the Company could have elected to prepay the entire outstanding principal balance upon thirty days written notice to the lender. In the event the Company decided to prepay the entire loan balance, the Company would incur a termination fee that would be calculated based on the April 2012 Senior Secured Promissory Note's outstanding principal balance as of the effective date of termination notice. The termination fee is 0% to 3% of the April 2012 Senior Secured Promissory Note's outstanding balance as of the effective date of the termination notice, depending on the timing of the termination.

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Under the terms of the December 2012 Convertible Note issued in December 2012 (Note 9), the Company was required to use the proceeds from this convertible note to repay all outstanding balance of the April 2012 Senior Secured Promissory Note within 35 days of closing. The Company repaid the outstanding balance of the April 2012 Senior Secured Promissory Note in January 2013 and classified the outstanding balance of the April 2012 Senior Secured Promissory Note as of December 31, 2012 as a current liability. The total amount of the payout was \$9,451,000 which consisted of \$9,139,000 in principal, \$34,000 in accrued interest, and an early termination fee of \$278,000. The termination fee was recorded as incremental interest expense in the accompanying consolidated statements of operations for the year ended December 31, 2013.

Activity related to the April 2012 Senior Secured Promissory Note from December 31, 2012 through December 31, 2013 consisted of the following (in thousands):

	DECEMBER 31, 2012	AMORTIZATION OF DEBT DISCOUNT	PRINCIPAL PAYMENTS	DECEMBER 31, 2013
Principal	\$ 9,139	\$ —	\$ (9,139)	\$ —
Discount related to Series C Warrant (1)	(251)	251	—	—
Discount related to financing costs (1)	(514)	514	—	—
	<u>\$ 8,374</u>	<u>\$ 765</u>	<u>\$ (9,139)</u>	<u>\$ —</u>

- (1) The amortization of this account is included in interest expense in the consolidated statements of operations and non-cash interest expense in the consolidated statements of cash flows.

On October 2, 2012, the Company borrowed \$7,500,000 pursuant to senior notes (October 2012 Junior Secured Promissory Notes) with a group of lenders. The October 2012 Junior Secured Promissory Notes have an initial term of three years and can be extended for an additional two years in one year increments. During the initial three-year term, the October 2012 Junior Secured Promissory Notes bear interest at 12% per annum. If the term of the October 2012 Junior Secured Promissory Notes is extended an additional year, the interest rate increases to 13% during the fourth year. If the term of the October 2012 Junior Secured Promissory Notes is extended for an additional two years, the interest rate is 14% during the fifth year. Interest on the October 2012 Junior Secured Promissory Notes is payable monthly through the initial maturity date of the loan which is October 2, 2015 or through any extension period. The principal and all unpaid interest are due on the maturity date, as may be extended.

As part of the terms of the October 2012 Junior Secured Promissory Notes, the Company is required to pay a fee of 5% of the funded principal amount to the agent that facilitated the borrowing and provides management of the relationship with the group of lenders (Agent Fee). This Agent Fee is payable within 30 days after all interest and principal have been paid. For each year the Company extends the maturity date of the October 2012 Junior Secured Promissory Notes beyond the initial term, the agent will receive an additional 1% fee based on the funded principal amount. The present value of the unpaid Agent Fee, based on 5% of the funded principal amount, or \$261,000, as of the closing date of the October 2012 Junior Secured Promissory Notes was recorded as both deferred financing costs as a component of current and non-current other assets and non-current other liabilities. The amortization of the deferred financing costs and the accretion of the Agent Fee are recorded to interest expense over the term of the arrangement. As of December 31, 2013 and 2012, \$502,000 and \$270,000, respectively, of the Agent Fee, including the amounts relating to the additional funds received from the issuance of the April 2013 Junior Secured Promissory Notes discussed below, was recorded under non-current other liabilities. In addition, the Company incurred an additional \$66,000 in financing-related costs, primarily legal fees. These costs were recorded as deferred financing costs as a component of current and non-current other assets and are being amortized to interest expense over the term of the arrangement.

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The October 2012 Junior Secured Promissory Notes are secured by the Company's ownership interest in MMM LLC, a security interest in the assets of the Manufacturing Plant, and all of the Company's other assets, subject to certain permitted liens. This security interest was subordinate to the security interest held by the holders of the April 2012 Senior Secured Promissory Note as described above, which also had a security interest in MMM LLC.

The Company also issued warrants (Common Stock Warrants) to the group of lenders to purchase a number of shares of common stock equal to 15% of the funded principal amount of the October 2012 Junior Secured Promissory Notes divided by 70% of the value of common stock in a sale of the Company or a Qualified IPO, with such Common Stock Warrants having an exercise price of 70% of the value of common stock in a sale of the Company or a Qualified IPO. The Common Stock Warrants would be automatically exercised immediately prior to expiration on the earlier to occur of a Qualified IPO or a sale of the Company or the maturity of the October 2012 Junior Secured Promissory Notes. The October 2012 Junior Secured Promissory Notes could be prepaid six months after the initial funding date or earlier if a Qualified IPO or a sale of the Company occurs. As the predominant settlement feature of the Common Stock Warrants is to settle a fixed monetary amount in a variable number of shares, the Common Stock Warrants were accounted for under ASC 480. Accordingly, the Common Stock Warrants were recorded at estimated fair value on their issuance date and were adjusted to their estimated fair value as of each reporting date with the change in estimated fair value recorded as a component of change in estimated fair value of financial instruments in the Company's consolidated statements of operations. The fair value of the Common Stock Warrants at the date of issuance of \$282,000 was recorded as a discount to the October 2012 Junior Secured Promissory Notes and is being amortized to interest expense over the term of the arrangement. Until the effective date of the IPO, the Company estimated the fair value of the Common Stock Warrants using a PWERM valuation based on unobservable inputs, and, therefore, the Common Stock Warrants were considered to be Level 3 liabilities. Upon closing of the IPO, the exercise price of the Common Stock Warrants was determined to be \$8.40 per share and the number of shares to be issued upon exercise of the warrants was no longer variable. As a result of the IPO, the Common Stock Warrants were considered to be indexed to the Company's stock, and accordingly, the common stock warrants liability was reclassified and included in stockholders' equity (deficit) during the year ended December 31, 2013.

The October 2012 Junior Secured Promissory Notes contain certain covenant requirements which include a requirement to maintain a minimum cash balance of the lesser of the April 2012 Senior Secured Promissory Note indebtedness described above or \$5,000,000. As discussed above, the April 2012 Senior Secured Promissory Note was fully paid off in January 2013. The Company is also precluded from adding additional debt without lender approval unless such debt is subordinated to the October 2012 Junior Secured Promissory Notes and not more than \$2,000,000. In the event of default on the October 2012 Junior Secured Promissory Notes, the lenders may declare the entire unpaid principal and interest immediately due and payable.

On April 10, 2013 (Conversion Date), the Company entered an amendment to increase, by up to \$5,000,000, the amount available under the terms of the loan agreement with respect to the October 2012 Junior Secured Promissory Notes. Under this amendment, an additional \$4,950,000 was issued in partial consideration for \$3,700,000 in cash received and in partial conversion for the cancellation of \$1,250,000 of the total principal balance of the October 2012 Subordinated Convertible Note described below (collectively, April 2013 Junior Secured Promissory Notes). The total amount borrowed under the amended loan agreement for the October 2012 Junior Secured Promissory Notes and the April 2013 Junior Secured Promissory Notes increased from \$7,500,000 to \$12,450,000 as of the Conversion Date. The accrued interest of \$74,000 for the partially converted October 2012 Subordinated Convertible Note as of the Conversion Date shall be repaid or converted on the applicable maturity date of the October 2012 Subordinated Convertible Note.

In connection with the issuance of the April 2013 Junior Secured Promissory Notes, the Company issued additional warrants (Additional Common Stock Warrants) to purchase a number of shares of common stock equal to 20% of the funded principal amount of the April 2013 Junior Secured Promissory Notes divided by 70% of the value of common stock in a sale of the Company or a Qualified IPO, with such Additional Common Stock Warrants to have an exercise price of 70% of the value of common stock in a sale of the Company or a Qualified

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IPO. As the predominant settlement feature of the Additional Common Stock Warrants was to settle a fixed monetary amount in a variable number of shares, the Common Stock Warrants were accounted for under ASC 480. Accordingly, the Additional Common Stock Warrants were recorded at estimated fair value on their issuance date and were adjusted to their estimated fair value as of each reporting date with the change in estimated fair value recorded as a component of change in estimated fair value of financial instruments in the Company's consolidated statements of operations. The fair value of the Additional Common Stock Warrants at the date of issuance was estimated to be \$465,000. The Company estimated the fair value of the Additional Common Stock Warrants using a PWERM valuation based on unobservable inputs and, therefore, the Additional Common Stock Warrants were considered to be Level 3 liabilities. Upon closing of the IPO, the exercise price of the Common Stock Warrants was determined to be \$8.40 per share and the number of shares to be issued upon exercise of the warrants was no longer variable. As a result of the IPO, the Common Stock Warrants were considered to be indexed to the Company's stock, and accordingly, the common stock warrants liability was reclassified and included in stockholders' equity (deficit) during the year ended December 31, 2013.

The debt holder who converted \$1,250,000 principal balance of the October 2012 Subordinated Convertible Note (with a fair value of \$1,360,000 on the date of conversion) also loaned an additional \$2,500,000 in cash as part of the April 2013 Junior Secured Promissory Notes (collectively, the \$3,750,000 Notes). The Company accounted for the conversion as an extinguishment of debt in accordance with ASC 470-50-40. The \$1,360,000 fair value of the partially converted October 2012 Subordinated Convertible Note on the Conversion Date was derecognized and the fair value of the \$3,750,000 Notes with the portion of the fair value of the Additional Common Stock Warrants issued to this debt holder on the date of issuance was recorded. The Company recorded the \$49,000 excess of the total fair value of the \$3,750,000 Notes and the related Additional Common Stock Warrants on the issuance date over total consideration received as a gain on extinguishment of debt in the accompanying consolidated statements of operations for the year ended December 31, 2013.

The following table shows the consideration received, fair values of the notes and common stock warrants issued and calculation of the gain on extinguishment of debt for the \$3,750,000 Notes (in thousands):

<b>Consideration received</b>	
Fair Value of October 2012 Subordinated Convertible Note	\$1,360
Cash	<u>2,500</u>
Total Consideration Received (a)	\$3,860
<b>Notes and Warrants Issued</b>	
Principal Balance of Notes Issued	\$3,750
Debt Discount (1)	<u>(291)</u>
Fair Value of Notes Issued	3,459
Fair Value of Additional Common Stock Warrants Issued	<u>352</u>
Total Fair Value of Notes and Warrants Issued (b)	\$3,811
Gain on Extinguishment of Debt (a—b)	<u>\$ 49</u>

(1) The amortization of this account is being recorded in interest expense in the consolidated statements of operations over the term of the arrangement.

The remaining fair value to the Additional Common Stock Warrants of \$113,000, net of the fair value of the Additional Common Stock Warrants issued of \$352,000 related to the \$3,750,000 Notes discussed above, was recorded as a debt discount to the April 2013 Junior Secured Promissory Notes and is being amortized to interest expense over the term of the arrangement.

As a result of the amendment described above, the Company is also required to pay the Agent Fee, 5% of the \$3,700,000 in cash received from the April 2013 Junior Secured Promissory Notes, under the same terms as the October 2012 Junior Secured Promissory Notes. In addition, the portion of the Agent Fee relating to the

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converted October 2012 Subordinated Convertible Note that would be due under the terms of the October 2012 Subordinated Convertible Note will be paid under the terms of the October 2012 and April 2013 Junior Secured Promissory Notes. The present value of the unpaid Agent Fee of \$172,000, based on 5% of the funded principal amount of \$4,950,000, as of the closing date of the April 2013 Junior Secured Promissory Notes was recorded as both deferred financing costs as a component of current and non-current other assets and non-current other liabilities. The amortization of the deferred financing costs and the accretion of the Agent Fee are being amortized to interest expense over the term of the arrangement.

In addition, the Company incurred an additional \$24,000 in financing-related costs, primarily legal fees. These costs were recorded as deferred financing costs as a component of current and non-current other assets and are being amortized to interest expense over the term of the arrangement.

The amendment to the loan agreement also amended the interest provision applicable to the October 2012 and April 2013 Junior Secured Promissory Notes to allow any holder of the October 2012 and April 2013 Junior Secured Promissory Notes to request the Company to defer all interest due monthly to the applicable maturity date, and the optional prepayment provision applicable to the October 2012 and April 2013 Junior Secured Promissory Notes to allow the Company to repay the outstanding amount of the October 2012 and April 2013 Junior Secured Promissory Notes, either (i) with the written consent of the lender or the agent on such lenders' behalf or (ii) without such consent provided that the Company pays the interest that would have been due from the prepayment date to the initial maturity date.

Activity related to the October 2012 and April 2013 Junior Secured Promissory Notes from December 31, 2012 through December 31, 2013 consisted of the following (in thousands):

	DECEMBER 31, 2012	ADDITIONS	AMORTIZATION OF DEBT DISCOUNT	PRINCIPAL PAYMENTS	DECEMBER 31, 2013
Principal	\$ 7,500	\$ 4,950	\$ —	\$ —	\$ 12,450
Debt discount related to issuance of common stock warrants (1)	(258)	(113)	130	—	(241)
Discount related to the \$3,750,000 Notes (1)	—	(291)	87	—	(204)
	<u>\$ 7,242</u>	<u>\$ 4,546</u>	<u>\$ 217</u>	<u>\$ —</u>	<u>\$ 12,005</u>

(1) The amortization of this account is included in interest expense in the consolidated statements of operations and as non-cash interest expense in the consolidated statements of cash flows.

On June 14, 2013, the Company entered into a credit facility agreement (June 2013 Credit Facility) with a group of lenders that are, or that are affiliated with, existing investors in the Company. Under the June 2013 Credit Facility, the lenders have committed to permit the Company to draw an aggregate of up to \$5,000,000, and, subject to the Company's obtaining additional commitments from lenders, such amount may be increased to up to \$7,000,000. The June 2013 Credit Facility expires on June 30, 2014. During the term of the June 2013 Credit Facility, the Company may request from the lenders up to four advances, with each advance equal to one-quarter of each lender's aggregate commitment amount. The Company will issue a promissory note in the principal amount of each such advance that will accrue interest at a rate of 10% per annum. The principal and all unpaid interest under the promissory notes are due on the maturity date, and the Company may not prepay the promissory notes prior to the maturity date without consent of at least a majority in interest of the aggregate principal amount of the promissory notes then outstanding under the credit facility. In connection with the June 2013 Credit Facility, the Company agreed to pay a fee of 2% of the total commitment amount to the lenders. In addition, the Company incurred an additional \$10,000 in financing-related costs, primarily legal fees. These costs were recorded as deferred financing costs as a component of current other assets and are being amortized to interest expense over the term of the arrangement.

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In connection with the June 2013 Credit Facility, the Company issued warrants (June 2013 Warrants) to purchase a number of shares of common stock equal to 10% of the total committed amount of the June 2013 Credit Facility divided by 70% of the value of common stock in a sale of the Company or a Qualified IPO, with such June 2013 Warrants to have an exercise price of 70% of the value of common stock in a sale of the Company or a Qualified IPO. The June 2013 Warrants expire upon the earlier of June 14, 2023 or the sale of the Company. As the predominant settlement feature of the June 2013 Warrants was to settle a fixed monetary amount in a variable number of shares, the June 2013 Warrants were accounted for under ASC 480. Accordingly, the June 2013 Warrants were recorded at estimated fair value on their issuance date and were adjusted to their estimated fair value as of each reporting date with the change in estimated fair value recorded as a component of change in estimated fair value of financial instruments in the Company's consolidated statements of operations. The fair value of the June 2013 Warrants at the date of issuance of \$435,000 was recorded as a deferred financing cost as a current other asset and is being amortized to interest expense over the term of the arrangement. Until the effective date of the IPO, the Company estimated the fair value of the June 2013 Warrants using a PWERM valuation based on unobservable inputs and, therefore, the June 2013 Warrants were considered to be Level 3 liabilities. Upon closing of the IPO, the exercise price of the June 2013 Warrants was determined to be \$8.40 per share and the number of shares to be issued upon exercise of the warrants was no longer variable. As a result of the IPO, the June 2013 Warrants were considered to be indexed to the Company's stock, and accordingly, the common stock warrants liability was reclassified and included in stockholders' equity (deficit) during the year ended December 31, 2013.

During the year ended and as of December 31, 2013, there were no amounts outstanding under the June 2013 Credit Facility.

The Company is also required to comply with certain affirmative and negative covenants under the debt agreements discussed above. In the event of default on the debt, the lender(s) may declare the entire unpaid principal and interest immediately due and payable. As of December 31, 2013, the Company was in compliance with all of the affirmative and negative covenants, and there were no events of default, as defined in the agreements, related to the debt.

## 9. Convertible Notes Payable

Convertible notes payable consists of the following (in thousands):

	MATURITY DATE	DECEMBER 31	
		2013	2012
Convertible notes (March 2012 Convertible Notes) bearing interest at 10.00% per annum issued in March and April 2012. The convertible notes were converted to common stock in August 2013.	September 2013	\$ —	\$ 20,204
Convertible note (October 2012 Convertible Note) bearing interest at 10.00% per annum issued in October 2012. The convertible note was converted to common stock in August 2013	September 2013	—	2,314
Convertible notes payable, current portion		—	22,518
Convertible note (October 2012 Subordinated Convertible Note) bearing interest at 12.00% per annum issued in October 2012. The convertible note was converted to common stock in August 2013	October 2015	—	2,797
Convertible note (December 2012 Convertible Note) bearing interest at 10.00% per annum issued in December 2012. The convertible note was converted to common stock in August 2013	October 2015	—	16,545
Convertible notes (First May 2013 Convertible Notes) bearing interest at 10.00% per annum issued in May 2013. The convertible notes were converted to common stock in August 2013	May 2016	—	—
Convertible note (Second May 2013 Convertible Note) bearing interest at 10.00% per annum issued in May 2013. The convertible note was converted to common stock in August 2013	May 2016	—	—
Total convertible notes payable		\$ —	\$ 41,860

***March 2012 and October 2012 Convertible Notes***

During March 2012 through April 2012, the Company issued and sold in a series of closings \$8,076,000 of convertible notes (March 2012 Convertible Notes) to existing preferred stockholders. During October 2012, the Company issued an additional \$1,000,000 convertible note (October 2012 Convertible Note) to another existing preferred stockholder. Collectively, the March 2012 Convertible Notes and the October 2012 Convertible Note are referred to as the “March and October 2012 Convertible Notes,” and they accrued interest at 10% per annum. The principal and accrued interest then outstanding under the March and October 2012 Convertible Notes (Outstanding Balance) would mature on September 30, 2013 (Maturity Date) or earlier, at which time all such Outstanding Balance would automatically convert into a new series of preferred stock to be authorized immediately prior to the Maturity Date.

Under the terms of the notes, if the Company closed an initial public offering in which the Company received gross cash proceeds, before underwriting discounts, commissions and fees, of at least \$30,000,000 (a Qualified IPO) or a sale of substantially all of the Company’s assets or a series of transactions that result in the transfer of more than 50% of the Company’s outstanding voting power (an Acquisition), the Outstanding Balance of the March 2012 Convertible Notes would automatically convert into shares of the Company’s common stock at a rate of 70% of the per share price of the Company’s common stock sold in the Qualified IPO or the Acquisition. In the event of a Qualified IPO or Acquisition, the Outstanding Balance of the October 2012 Convertible Note would automatically convert into shares of the Company’s common stock at a rate of 80% of the per share price of the Company’s common stock sold in the Qualified IPO or the Acquisition. Upon the closing of the IPO on August 7, 2013, all outstanding principal and accrued interest of the March and October 2012 Convertible Notes converted into shares of the Company’s common stock at a rate of 70% and 80% of the per share price, respectively (See Note 20).

Alternatively, the Outstanding Balance would have been automatically converted into other new securities, as follows, if prior to closing the Qualified IPO or the Acquisition, the Company had closed an equity financing for an aggregate consideration of at least \$5,000,000 (a Qualified Equity Financing). If prior to closing the Qualified IPO or the Acquisition, the Company had closed a Qualified Equity Financing, the Outstanding Balance of the March 2012 Convertible Notes would have converted into the equity securities issued in the equity financing at 80% of the purchase price of such securities. In the event of a Qualified Equity Financing, the Outstanding Balance of the October 2012 Convertible Note would have converted into the equity securities issued in the equity financing at 85% of the purchase price of such securities.

On the issuance date and at each reporting date prior to the conversion, the Company assessed the probability of the potential conversion scenarios under the terms of the March and October 2012 Convertible Notes and determined that the predominant settlement feature of the March and October 2012 Convertible Notes would have been the conversion of the March and October 2012 Convertible Notes into shares of the Company’s common stock issuable at a 30% or 20% discount to the per share price payable in connection with the completion of the Qualified IPO or Acquisition during the term of the arrangement. As the predominant settlement feature of the March and October 2012 Convertible Notes was to settle a fixed monetary amount in a variable number of shares, the March and October 2012 Convertible Notes fell within the scope of ASC 480. Accordingly, the March and October 2012 Convertible Notes were recorded at estimated fair value on their respective issuance dates and were adjusted to their estimated fair value as of each reporting date with the change in estimated fair value recorded as a component of change in estimated fair value of financial instruments in the Company’s consolidated statements of operations. As a result of the IPO, the number of shares to be issued became known and the Company estimated the fair value of the convertible notes immediately prior to the conversion using the intrinsic method based on the IPO price of \$12.00 per share.

The Company estimated the fair value of the March and October 2012 Convertible Notes as of the issuance dates to be \$9,343,000 and \$1,772,000, respectively. As the Company received total cash proceeds of \$9,076,000 through the issuance of the March and October 2012 Convertible Notes, the Company determined that \$2,039,000 of the excess of the estimated fair value of the March and October 2012 Convertible Notes on the



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issuance dates over cash proceeds to the Company represented a deemed dividend to preferred stockholders, and this amount was reflected in the net loss attributable to common stockholders for the year ended December 31, 2012 in the Company's consolidated statements of operations.

As of December 31, 2012 and immediately prior to the closing of the IPO on August 7, 2013, the estimated fair value of the March and October 2012 Convertible Notes was \$22,518,000 and \$14,599,000, respectively. Between December 31, 2012 and August 7, 2013, the estimated fair value of the March and October 2012 Convertible Notes decreased by \$8,516,000, which was recognized as additional income in change in estimated fair value of financial instruments in the Company's consolidated statements of operations for the year ended December 31, 2013.

For the year ended December 31, 2012, due to changes in the probability and timing of the completion of a Qualified IPO or an Acquisition between the dates of issuance and December 31, 2012, the estimated fair value of the March and October 2012 Convertible Notes increased by \$10,721,000, which was recognized as additional expense in change in estimated fair value of financial instruments in the Company's consolidated statements of operations for the year ended December 31, 2012.

As discussed above, the Company was not required to pay interest on the March and October 2012 Convertible Notes, but interest accrued as part of the principal balance under the March and October 2012 Convertible Notes and was converted, along with the initial principal, into common stock upon closing of the IPO in August 2013.

### ***October 2012 Subordinated Convertible Note***

On October 16, 2012, the Company borrowed \$2,500,000 pursuant to a convertible note (October 2012 Subordinated Convertible Note) from a lender. The October 2012 Subordinated Convertible Note had an initial term of three years. During the initial three-year term, the October 2012 Subordinated Convertible Note accrued interest at 12% per annum.

In April 2013, the Company entered an amendment to convert \$1,250,000 of the outstanding principal balance of the October 2012 Subordinated Convertible Note to the April 2013 Junior Secured Promissory Notes, as defined and further discussed in Note 8. The accrued interest of \$74,000 for the partially converted October 2012 Subordinated Convertible Note as of the Conversion Date was to be repaid or converted on the applicable maturity date of the October 2012 Subordinated Convertible Note. The Company accounted for the conversion as an extinguishment of debt in accordance with ASC 470-50-40 and derecognized the \$1,360,000 fair value of the October 2012 Subordinated Convertible Note and recorded a \$49,000 gain on extinguishment of debt which was reflected in the Company's consolidated statements of operations. In addition, the portion of the Agent Fee relating to the converted October 2012 Subordinated Convertible Note that would be due under the terms of the October 2012 Subordinated Convertible Note will be paid under the terms of the October 2012 and April 2013 Junior Secured Promissory Notes. The amount of the unamortized converted Agent Fee on the date of conversion recorded under non-current other liabilities of \$48,000 and the amount recorded as a component of current and non-current other assets of \$39,000 was written-off and recorded as an adjustment to interest expense (See Note 8).

As part of the terms of the October 2012 Subordinated Convertible Note, the Company was required to pay the Agent Fee of 5% of the funded principal amount to the agent that facilitated the borrowing and provided management of the relationship with the lender and who also facilitated the October 2012 Junior Secured Promissory Notes discussed in Note 8 above. This Agent Fee was payable within 30 days after all interest and principal had been paid. For each year the Company extended the maturity date of the October 2012 Subordinated Convertible Note beyond the initial term, the agent would have received an additional 1% fee based on the funded principal amount. The present value of the unpaid Agent Fee, based on 5% of the funded principal amount, or \$87,000, as of the closing date of the October 2012 Subordinated Convertible Note was recorded as both deferred financing costs as a component of current and non-current other assets and non-current other liabilities. The amortization of the deferred financing costs and the accretion of the Agent Fee were being amortized to interest expense over the term of the arrangement. As of December 31, 2013, the Agent Fee was

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fully amortized and paid. As of December 31, 2012, \$89,000 of the Agent Fee, including the effect of the amendment of the October 2012 Subordinated Convertible Note discussed above, was recorded in current and non-current other liabilities, respectively. In addition, the Company incurred an additional \$22,000 in financing-related costs, primarily legal fees. These costs were recorded as deferred financing costs as a component of current and non-current other assets and were amortized to interest expense over the term of the arrangement. As of December 31, 2013, these deferred financing costs were fully amortized.

Under the terms of the note, if the Company closed a Qualified IPO or an Acquisition, the October 2012 Subordinated Convertible Note and any accrued interest would automatically convert into shares of the Company's common stock at a rate of 85% of the purchase price of common stock sold, provided the closing occurred on or prior to eighteen months from the issuance date of the October 2012 Subordinated Convertible Note. The conversion rate would have adjusted to 80% of the purchase price of such securities, if the closing had occurred on or after eighteen months from the issuance date of the October 2012 Subordinated Convertible Note through the date of maturity. Upon the closing of the IPO in August 2013, all outstanding principal and accrued interest of the October 2012 Subordinated Convertible Note were converted into shares of the Company's common stock at a rate of 85% of the per share price (See Note 20).

On the issuance date and at each reporting date prior to the conversion, the Company assessed the probability of potential conversion under its terms of the October 2012 Subordinated Convertible Note and determined that the predominate settlement feature of the October 2012 Subordinated Convertible Note would have been the conversion of the October 2012 Subordinated Convertible Note into shares of the Company's common stock issuable at a 15% or 20% discount to the per share price payable upon the completion of a Qualified IPO, an Acquisition, or Qualified Equity Financing. As the predominant settlement feature of the October 2012 Subordinated Convertible Note was to settle a fixed monetary amount into a variable number of shares, the October 2012 Subordinated Convertible Note fell within the scope of ASC 480. Accordingly, the October 2012 Subordinated Convertible Note was recorded at estimated fair value on its issuance date and was adjusted to its estimated fair value as of each reporting date with the change in estimated fair value recorded as a component of change in estimated fair value of financial instruments in the Company's consolidated statements of operations. As a result of the IPO, the number of shares to be issued became known and the Company estimated the fair value of the convertible notes immediately prior to the conversion using the intrinsic method based on the IPO price of \$12.00 per share.

The Company estimated the fair value of the October 2012 Subordinated Convertible Note as of the issuance date to be \$2,662,000. As the Company received cash proceeds of \$2,500,000 through the issuance of the October 2012 Subordinated Convertible Note, \$162,000 of the excess of the estimated fair value of the October 2012 Subordinated Convertible Note on the issuance date over cash proceeds was recorded as additional interest expense for the year ended December 31, 2012 in the Company's consolidated statements of operations.

As of December 31, 2012, the principal balance and the estimated fair value of the October 2012 Subordinated Convertible Note was \$2,500,000 and \$2,797,000, respectively. Immediately prior to the closing of the IPO in August 2013, the principal balance and the estimated fair value of the October 2012 Subordinated Convertible Note was \$1,250,000 and \$1,703,000, respectively. Between December 31, 2012 and August 7, 2013, the estimated fair value of the October 2012 Subordinated Convertible Note increased by \$133,000, which was recognized as additional expense in change in estimated fair value of financial instruments in the Company's consolidated statements of operations for the year ended December 31, 2013.

### ***December 2012 Convertible Note***

On December 6, 2012, the Company borrowed \$12,500,000 pursuant to a convertible note (December 2012 Convertible Note) from an existing preferred stockholder that also is an affiliate of one of the Company's distributors. The December 2012 Convertible Note had an initial maturity date of October 16, 2015. During the initial approximately three-year (two-year and ten-month) term, the December 2012 Convertible Note accrued interest at 10% per annum.

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Under the terms of the note, the December 2012 Convertible Note could not have been pre-paid unless such prepayment was mandated by a sale event. A sale event as defined in the agreement was the transfer of substantially all of the Company's assets, a transaction or series of transactions that result in the transfer of more than 50% voting power of the Company, or transactions that result in gross proceeds of at least \$120,000,000 (Sale Event). In the case of a Sale Event, the holder could have elected to either convert all outstanding principal and accrued interest into shares of common stock in accordance with the conversion terms of this agreement or receive cash equal to the principal and accrued interest then outstanding multiplied by 133.33% if the Sale Event occurred prior to or as of June 30, 2013 or multiplied by 142.86% if the Sale Event occurred after June 30, 2013.

Under the terms of the note, a Qualified Financing meant an equity financing for which the gross proceeds were at least \$20,000,000 and at least 50% of the amount invested comes from sources other than holders of the Company's equity, strategic investors, or affiliates (Qualified Financing). In the event of a Qualified Financing, all outstanding principal and unpaid interest on the December 2012 Convertible Note would automatically convert into new securities issued and sold in such qualified financing at a rate of 75% of the purchase price of such new securities provided the closing occurred on or prior to June 30, 2013. The conversion rate would adjust to 70% of the purchase price of such new securities, if the closing occurred after June 30, 2013. Upon the closing of the IPO on August 7, 2013, all outstanding principal and accrued interest of the December 2012 Convertible Note was converted into shares of the Company's common stock at a rate of 70% of the per share price (See Note 20).

In the event of a non-qualified financing (Non-Qualified Financing) or the Sale Event, the holder of the December 2012 Convertible Note would have had the right, but not the obligation, to convert all or a part of the outstanding principal and unpaid interest on the December 2012 Convertible Note into the same type of securities issued in the Non-Qualified Financing. A Non-Qualified Financing included either a convertible note financing or an equity transaction that did not qualify as a Qualified Financing.

If the Non-Qualified Financing related to an equity financing or Sale Event, the number of shares of common stock or common stock equivalents to be received by the holder of the December 2012 Convertible Note would have been calculated by dividing the principal and unpaid accrued interest elected to be converted by the holder by a price per share equal to the price per share paid in the Non-Qualified Financing multiplied by a conversion discount.

If the Non-Qualified Financing related to a debt financing, the December 2012 Convertible Note holder would have received new convertible notes convertible into shares of common stock or common stock equivalents at a per share price equal to the conversion price per share applicable to the other convertible debt issued in the Non-Qualified Financing multiplied by a conversion discount. In each case, if the Non-Qualified Financing had occurred on or before June 30, 2013, the conversion rate would have been equal to 75%, and thereafter the conversion rate would have been equal to 70%.

On the issuance date and at each reporting date prior to the conversion, the Company assessed the probability of the potential conversion scenarios under the terms of the December 2012 Convertible Note and determined that the predominant settlement feature of the December 2012 Convertible Note was the conversion of the December 2012 Convertible Note into shares of the Company's common stock issuable at a 25% or 30% discount to the per share price payable in connection with the completion of a Qualified Financing or a Sale Event during the term of the arrangement. As the predominant settlement feature of the December 2012 Convertible Note was to settle a fixed monetary amount into a variable number of shares, the December 2012 Convertible Note fell within the scope of ASC 480. Accordingly, the Company determined that the December 2012 Convertible Note should be recorded at estimated fair value on its issuance date and adjusted to its estimated fair value as of each reporting date with the change in estimated fair value recorded as a component of change in estimated fair value of financial instruments in the Company's consolidated statements of operations. As a result of the IPO, the number of shares to be issued became known and the Company estimated the fair value of the convertible notes immediately prior to the conversion using the intrinsic method based on the IPO price of \$12.00 per share.

Following the issuance of the December 2012 Convertible Note, the Company estimated the fair value of the December 2012 Convertible Note as of the issuance date using a PWERM valuation consisting of six scenarios. This valuation included three initial public offering scenarios, two merger scenarios and a sale of the Company's intellectual property along with the applicable conversion ratios based on the estimated timing of each scenario. Based on this valuation, the Company estimated the fair value of the December 2012 Convertible Note to be \$16,355,000 as of the issuance date. As the holder of the December 2012 Convertible Note was an affiliate of one of the Company's distributors, the \$3,855,000 excess of the estimated fair value of the December 2012 Convertible Note on the date of issuance over gross cash proceeds was recorded as a reduction of related party revenues to the extent of revenue recognized from the distributor totaling \$245,000 (\$110,000 related to license revenues and \$135,000 related to product revenues), and the remaining excess of \$3,610,000 was recorded separately to an operating expense in accordance with ASC 605-50, *Customer Payments and Incentives* (ASC 605-50), in the Company's consolidated statements of operations for the year ended December 31, 2012.

As of December 31, 2012 and immediately prior to conversion on August 7, 2013, the estimated fair value of the December 2012 Convertible Note was \$16,545,000 and \$19,072,000, respectively. Between December 31, 2012 and August 7, 2013, the estimated fair value of the December 2012 Convertible Note increased by \$1,767,000, which was recognized as additional expense in change in estimated fair value of financial instruments in the Company's consolidated statements of operations for the year ended December 31, 2013.

For the year ended December 31, 2012, due to changes in the probability and timing of the completion of a Qualified IPO or an Acquisition between the dates of issuance and December 31, 2012, the estimated fair value of the December 2012 Convertible Note increased by \$100,000, which was recognized as additional expense in change in estimated fair value of financial instruments in the Company's consolidated statements of operations for the year ended December 31, 2012.

The December 2012 Convertible Note purchase agreement also required the Company to use the proceeds from this note to repay all outstanding obligations under the April 2012 Senior Secured Promissory Note within 35 days of closing as discussed in Note 8.

#### ***First and Second May 2013 Convertible Notes***

On May 22, 2013, the Company completed the sale of convertible notes under a convertible note purchase agreement in the amount of \$3,529,000 in a private placement to 22 investors (First May 2013 Convertible Notes). The First May 2013 Convertible Notes accrued interest at a rate of 10% per annum and would have matured on May 22, 2016.

In addition, on May 28, 2013, the Company completed the sale of a convertible note under a separate convertible note purchase agreement in the amount of \$3,000,000 in a private placement (Second May 2013 Convertible Note). The Second May 2013 Convertible Note accrued interest at a rate of 10% per annum and would have matured on May 30, 2016.

Under the terms of the notes, no payments were due under the First and Second May 2013 Convertible Notes until maturity. In an event of a Qualified Financing, all outstanding principal and accrued interest due under the First and Second May 2013 Convertible Notes would automatically convert into the number of shares of the Company's common stock determined by dividing such unpaid amounts by 70% of the per share price of the Company's common stock sold in such qualified financing. Upon the closing of the IPO in August 2013, all outstanding principal and accrued interest of the First and Second May 2013 Convertible Notes were converted into shares of the Company's common stock at a rate of 70% of the per share price (See Note 20).

Alternatively, in the earlier event of a Non-Qualified Financing of equity or debt securities, the First and Second May 2013 Convertible Notes could have been converted, at the option of the holder, into the same type of securities issued in such financing, and in the earlier of a Sale Event, the First and Second May 2013 Convertible

Notes would have been either, at the option of the holder, repaid in the amount of the principal and accrued interest then outstanding multiplied by 142.86% or converted at a discount into shares of the Company's common stock.

If the Qualified Financing, Non-Qualified Financing, or Sale Event had not occurred from the date of issuance of the convertible note through January 14, 2014, the holder of the Second May 2013 Convertible Note would have been able to elect to convert all outstanding principal and accrued interest into a number of shares of common stock determined by dividing this amount by the greater of (i) the per share price into which the Outstanding Balance under the Second May Convertible Note would be converted at their maturity in the event a Qualified Financing had not occurred as of September 30, 2013 or (ii) the purchase price paid per share for the most recent Non-Qualified Financing that occurred prior to a Sale Event, provided such Non-Qualified Financing would have been at least \$2,000,000 and at least 50% of the proceeds of such Non-Qualified Financing would have been from persons or entities who were not common stockholders, or common share equivalents or affiliates of the Company.

On the issuance date and at each reporting date prior to the conversion, the Company assessed the probability of potential conversion under its terms of the First and Second May 2013 Convertible Notes and determined that the predominate settlement feature of the First and Second May 2013 Convertible Notes was the conversion of the First and Second May 2013 Convertible Notes into shares of the Company's common stock issuable at a 30% discount to the per share price payable upon the completion of a Qualified IPO, an Acquisition, or Qualified Equity Financing. As the predominant settlement feature of the First and Second May 2013 Convertible Notes was to settle a fixed monetary amount in a variable number of shares, the First and Second May 2013 Convertible Notes fell within the scope of ASC 480. Accordingly, the First and Second May 2013 Convertible Notes were recorded at estimated fair value on their issuance dates and were adjusted to estimated fair value as of each reporting date with the change in estimated fair value recorded as a component of change in estimated fair value of financial instruments in the Company's consolidated statements of operations. As a result of the IPO, the number of shares to be issued became known and the Company estimated the fair value of the convertible notes immediately prior to the conversion using the intrinsic method based on the IPO price of \$12.00 per share.

The Company estimated the fair value of the First May 2013 Convertible Notes as of the issuance date to be \$4,907,000. As the Company received cash proceeds of \$3,529,000 through the issuance of the First May 2013 Convertible Notes, the Company determined that \$1,378,000 of the excess of the estimated fair value of the First May 2013 Convertible Notes on the issuance date over cash proceeds to the Company represented a deemed dividend to preferred stockholders, and this amount was reflected in the net loss attributable to common stockholders for the year ended December 31, 2013 in the Company's consolidated statements of operations.

Immediately prior to conversion in connection with the closing of the IPO on August 7, 2013, the estimated fair value of the First May 2013 Convertible Notes was \$5,147,000. The estimated fair value of the First May 2013 Convertible Notes increased by \$166,000 from the issuance date, which was recognized as additional expense in change in estimated fair value of financial instruments in the Company's consolidated statements of operations for the year ended December 31, 2013.

The Company estimated the fair value of the Second May 2013 Convertible Note as of the issuance date to be \$4,162,000. As the Company received cash proceeds of \$3,000,000 through the issuance of the Second May 2013 Convertible Note, \$1,162,000 of the excess of the estimated fair value of the Second May 2013 Convertible Note on the issuance date over cash proceeds to the Company was recorded as additional interest expense for the year ended December 31, 2013 in the Company's consolidated statements of operations.

Immediately prior to conversion in connection with the closing of the IPO on August 7, 2013, the estimated fair value of the Second May 2013 Convertible Note was \$4,369,000. The estimated fair value of the Second May 2013 Convertible Note increased by \$149,000 from the issuance date, which was recognized as additional expense in change in estimated fair value of financial instruments in the Company's consolidated statements of operations for the year ended December, 2013.

## 10. Preferred Stock

The Company sold 1,484,000 shares of its Series A convertible preferred stock in private placements in April 2007 for \$2.608 per share, including conversion of certain convertible notes payable, 2,242,000 shares of its Series B convertible preferred stock in August 2008 for \$4.849 per share, including conversion of convertible notes payable, and 4,778,000 shares of its Series C convertible preferred stock from March 2010 to June 2011 for \$5.317 per share, including conversion of the \$514,000 of convertible notes payable plus accrued interest of \$5,000. The Company recorded the issuance of its Series A, B, and C convertible preferred stock, net of issuance costs.

In May 2012, in connection with the issuance of the Series C Warrant, the Company amended certificate of incorporation to increase the number of shares of common stock the Company is authorized to issue from 12,745,000 shares to 12,936,000 shares and to increase the number of shares of convertible preferred stock the Company is authorized to issue from 8,632,000 shares to 8,823,000, of which 1,489,000 shares were designated as Series A convertible preferred stock, 2,252,000 shares were designated as Series B convertible preferred stock, and 5,082,000 shares were designated as Series C convertible preferred stock.

Upon the closing of the IPO, all shares of the Company's outstanding convertible preferred stock automatically converted into shares of common stock. Further, in August 2013, the Company amended and restated its certificate of incorporation to effect the conversion of its outstanding convertible preferred stock into common stock on a 1-for-1 basis. The amendment also increased the number of shares of preferred stock authorized for issuance to 20,000,000.

Investors in the Company's Series C convertible preferred stock were entitled to receive noncumulative dividends, before and in preference to any amounts paid to Series A and Series B convertible preferred stockholders and common stockholders, and investors in the Company's Series A and B convertible preferred stock were entitled to receive noncumulative dividends, on a pari passu basis, before and in preference to any amounts paid to common stockholders. Dividends would be paid only when and if declared by the board of directors. In addition, these investors were entitled to voting rights equal to the number of shares of the Company's common stock into which the Series A, B and C convertible preferred stock were convertible as of the close of business on the record date fixed for each stockholder's meeting. No dividends were declared during the years ended December 31, 2013 and 2012.

As the Company's Series A, B and C convertible preferred stock contained redemption features that were outside of the Company's control, all shares of Series A, B and C convertible preferred stock were presented outside of permanent equity as of December 31, 2012.

## 11. Warrants

The following table summarizes information about the Company's common stock warrants outstanding as of December 31, 2013 (in thousands, except exercise price data):

<u>DESCRIPTION</u>	<u>ISSUE DATE</u>	<u>EXPIRATION DATE (1)</u>	<u>NUMBER OF SHARES SUBJECT TO WARRANTS ISSUED</u>	<u>EXERCISE PRICE</u>
In connection with April 2013 Junior Secured Promissory Note (Additional Common Stock Warrants)	April 2013	October 2015	118	\$ 8.40
In connection with June 2013 Credit Facility (June 2013 Warrants)	June 2013	June 2023	33	\$ 8.40
			<u>151</u>	

(1)

Both the common stock warrants expire upon the earlier to occur of (i) the date listed above; (ii) the acquisition of the Company by another entity by means of any transaction or series of related transactions (including, without limitation, any transfer of more than 50% of the voting power of the Company,

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reorganization, merger or consolidation, but excluding any merger effected exclusively for the purpose of changing the domicile of the Company) or (iii) a sale of all or substantially all of the assets of the Company; unless the Company's stockholders of record as constituted immediately prior to such acquisition or sale will, immediately after such acquisition or sale (by virtue of securities issued as consideration for the Company's acquisition or sale or otherwise) hold at least fifty percent (50%) of the voting power of the surviving or acquiring entity.

The Additional Common Stock Warrants are exercisable 18 months after the consummation of the IPO and the June 2013 Warrants became exercisable on the date of the IPO.

The following table summarizes information about the Company's convertible preferred stock and common stock warrants outstanding as of December 31, 2012 (in thousands, except exercise price data):

DESCRIPTION	ISSUE DATE	EXPIRATION DATE	NUMBER OF SHARES SUBJECT TO WARRANTS ISSUED	EXERCISE PRICE	ESTIMATED FAIR VALUE AS OF DECEMBER 31, 2012 (2)
In connection with loan agreement (Series A convertible preferred stock)	April 2007	April 2014	6	\$ 2.608	\$ 68
In connection with promissory note and revolving line of credit (Series B convertible preferred stock)	August 2008	May 2013	3	\$ 4.849	34
In connection with promissory note (Series B convertible preferred stock)	March 2009	March 2014	7	\$ 4.849	72
In connection with April 2012 Senior Secured Promissory Note (Series C convertible preferred stock)	April 2012	April 2022	191	\$ 7.846	1,710
In connection with October 2012 Junior Secured Promissory Note (Common stock) (1)	October 2012	October 2015	—	\$ —	301
			<u>207</u>		<u>\$ 2,185</u>

- (1) As of December 31, 2012, the Company had issued warrants to purchase shares of common stock equal to 15% of the funded principal amount of the October 2012 Junior Secured Promissory Notes (See Note 8) divided by 70% of the value of common stock in a sale of the Company or an IPO, with an exercise price of 70% of the value of common stock in a sale of the Company or IPO. These warrants were contingently exercisable for which the contingencies related to exercise had not been met as of December 31, 2012.
- (2) See Note 2 for discussion of the methods used to determine the estimated fair values of the preferred stock warrants and common stock warrants.

All of the preferred stock warrants and the common stock warrants issued in connection with the October 2012 Junior Secured Promissory Notes were exercised in 2013 in connection with the IPO. In addition, a portion of the warrants issued in connection with the June 2013 Warrants were exercised in 2013 in connection with the IPO (See Note 20).

## 12. Common Stock

In August 2013, the Company amended and restated its certificate of incorporation to increase the number of shares of common stock authorized for issuance to 250,000,000 shares with \$0.00001 par value. As of December 31, 2013, the Company had reserved shares of common stock for future issuances as follows (in thousands):

	<u>SHARES</u>
Stock options available for future grant	1,194
Stock options outstanding	2,608
Warrants to purchase common stock	151
	<u>3,953</u>

## 13. Stock Option Plans

In July 2006, the Company authorized the 2006 Equity Incentive Plan, as amended, (2006 Plan). The 2006 Plan provided for the issuance of up to 1,434,000 shares of common stock underlying awards. The 2006 Plan was terminated in December 2011. As of December 31, 2013 and 2012, there were no shares available to be granted under the 2006 Equity Incentive Plan.

The 2006 Plan allowed holders to exercise stock options prior to their vesting. The common stock received by the employee is restricted and follows the same vesting schedule as the originally granted option. In the event the employee terminates employment from the Company (whether voluntary or involuntary), the Company retains a right to repurchase the unvested common stock at the original option exercise price. As of December 31, 2013 and 2012, no options had been exercised that would be subject to repurchase.

As of December 31, 2013, options to purchase 705,000 shares of the Company's common stock at a weighted-average exercise price of \$1.04 per share were outstanding under the 2006 Plan, of which 624,000 were vested at December 31, 2013. During the year ended December 31, 2013, 204,000 and 116,000 options were exercised and canceled, respectively, under the 2006 Plan.

In July 2011 and as amended in September 2012, the Company authorized the 2011 Stock Plan (2011 Plan). The 2011 Plan provided for the issuance of up to 1,167,000 shares of common stock underlying awards, plus any shares of common stock underlying awards previously issued under the 2006 Plan that terminate or expire after the date of authorization of the 2011 Plan, subject to certain adjustments. In addition, the 2011 Plan provided that the Company not deliver more than 2,446,000 shares upon the exercise of incentive stock options issued under both the 2006 Plan and 2011 Plan. The 2011 Plan was terminated in August 2013 and no new stock awards may be granted under the 2011 Plan. As of December 31, 2013, there were no shares available to be granted under the 2011 Plan.

As of December 31, 2013, options to purchase 1,131,000 shares of the Company's common stock at a weighted-average exercise price of \$7.67 per share were outstanding under the 2011 Plan, of which 420,000 were vested at December 31, 2013. During the year ended December 31, 2013, 13,000 and 120,000 options were exercised and canceled, respectively, under the 2011 Plan.

In August 2013, the Company's Board of Directors adopted the 2013 Stock Incentive Plan (2013 Plan) covering officers, employees, directors of, and consultants to, the Company. The 2013 Plan allows for the granting of the following types of "stock awards": incentive stock options, non-qualified stock options, stock appreciation rights, restricted stock, restricted stock units and dividend equivalent rights. At the time the 2013 Plan was established, the maximum aggregate number of shares of the Company's common stock that could be issued pursuant to the 2013 Plan was 1,600,000 plus the number of shares of common stock reserved for issuance pursuant to future grants under the 2011 Plan. The number of shares authorized for issuance pursuant to the 2013 Plan is



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automatically increased by any additional shares that would have otherwise returned to the 2011 Plan as a result of the forfeiture, termination or expiration of awards previously granted under the 2011 Plan. In addition, the number of shares authorized for issuance pursuant to the 2013 Plan will increase by a number equal to the least of (i) 3.5% of the number of shares of the Company's common stock outstanding on the last day of the immediately preceding fiscal year or (ii) a lesser number of shares determined by the administrator.

As of December 31, 2013, options to purchase 772,000 shares of the Company's common stock at a weighted-average exercise price of \$16.74 per share were outstanding under the 2013 Plan, of which 11,000 were vested at December 31, 2013. During the year ended December 31, 2013, no options were exercised and 42,000 options were canceled under the 2013 Plan.

Generally, options vest 25% on the first anniversary from the date of grant and 1/48 per month thereafter; however, options may be granted with different vesting terms as determined by the Company's Board of Directors.

The following table summarizes the activity under the Company's stock option plans for the year ended December 31, 2013 (in thousands, except exercise price and remaining contractual life data):

	SHARES AVAILABLE FOR GRANT	SHARES OUTSTANDING	WEIGHTED- AVERAGE EXERCISE PRICE	WEIGHTED- AVERAGE REMAINING CONTRACTUAL LIFE (IN YEARS)	AGGREGATE INTRINSIC VALUE
Balances at December 31, 2012	352	2,067	\$ 3.86	7.7	\$ 14,380
Options authorized	1,600	—			
Options granted	(1,036)	1,036	\$ 15.76		
Options exercised	—	(217)	\$ 1.18		
Options canceled	278	(278)	\$ 6.24		
Balances at December 31, 2013	<u>1,194</u>	<u>2,608</u>	\$ 8.56	8.1	\$ 24,158
Vested and expected to vest at December 31, 2013		<u>2,409</u>	\$ 8.25	8.0	\$ 23,061
Exercisable at December 31, 2013		<u>1,054</u>	\$ 2.97	6.5	\$ 15,610

The total intrinsic value of options exercised for the years ended December 31, 2013, 2012 and 2011 were \$2,801,000, \$93,000 and \$7,000, respectively.

The estimated fair value of options vested during the years ended December 31, 2013, 2012 and 2011, was \$1,314,000, \$489,000 and \$228,000, respectively. The weighted-average estimated fair value of options granted during the years ended December 31, 2013, 2012 and 2011 was \$10.35 per share, \$4.24 per share and \$0.78 per share, respectively.

During the years ended December 31, 2013, 2012 and 2011, the Company recorded share-based compensation expense of \$2,300,000, \$662,000 and \$271,000, respectively. For the years ended December 31, 2013, 2012 and 2011, the Company did not realize any tax benefit associated with its share-based compensation expense. No tax benefit was recognized because a portion of the option grants were ISOs for which stock-based compensation expense is not deductible and also due to the full valuation allowance on the Company's deferred tax asset that is further discussed in Note 16.

As of December 31, 2013, with the exception of unvested options granted to Donald Glidewell for which the vesting will be accelerated through his retirement date of March 31, 2013 (see below), the total share-based compensation expense related to unvested options granted to employees under the Company's stock option plans but not yet recognized was \$10,454,000. These costs will be amortized to expense on a straight-line basis over a weighted-average remaining term of 3.3 years.

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In connection with Mr. Glidewell's retirement, the Company entered into a transition agreement with Mr. Glidewell (See Note 6) which provides, among other things, for the vesting of his outstanding equity awards through the retirement date. For the year ended December 31, 2013, the Company recorded share-based compensation expense of \$266,000 relating to the acceleration of vesting of Mr. Glidewell's option awards. The total share-based compensation expense related to unvested options granted to Mr. Glidewell under the Company's stock option plans but not yet recognized was \$444,000. These costs will be amortized to expense on a straight-line basis over a weighted-average remaining term of 0.3 years.

#### 14. Capital Leases

The Company accounts for certain equipment acquired under financing arrangements as capital leases. This equipment is included in property, plant and equipment and related amortization is included in depreciation expense.

As of December 31, 2013 and 2012, the cost of this equipment was \$3,046,000 and \$939,000, respectively, and the related accumulated amortization was \$935,000 and \$465,000, respectively.

Amortization of capital leases for the years ended December 31, 2013, 2012 and 2011 was \$470,000, \$175,000 and \$143,000, respectively.

As of December 31, 2013, aggregate contractual future minimum lease payments on the capital leases are due as follows (in thousands):

	<b>CAPITAL LEASES</b>
Years ending December 31:	
2014	\$ 1,520
2015	1,120
2016	54
Total minimum payments required	2,694
Less: amount representing interest	(159)
Present value of future payments	2,535
Less: current portion	(1,401)
	<u>\$ 1,134</u>

#### 15. Commitments and Contingencies

##### *Operating Leases*

The Company has a non-cancelable lease for an aggregate of approximately 24,500 square feet of non-contiguous office space in an office complex in Davis, California under which a portion of the covered space terminates between February 2014 and October 2016. A portion of the lease that terminates in February 2015 provides for an option to extend the term for five years at the then prevailing market rent. The lease includes negotiated annual increases in the monthly rental payments.

On September 9, 2013, the Company entered into a lease agreement for a new 28,700 square foot office and laboratory facility located in Davis, California. The initial term of the lease is for a period of 60 months commencing on the later of the date of substantial completion of initial improvements to the leased property, or May 1, 2014. The monthly base rent is \$46,000 for the first 12 months with a 3% increase each year thereafter. The Company will have the option to extend the lease term twice for a period of five years each.

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The Company recognizes expense under its leases on a straight-line basis over the lease terms. At December 31, 2013, the Company's aggregate commitment under non-cancelable lease agreements is as follows (in thousands):

	<b>OPERATING LEASES</b>
Years ending December 31:	
2014	\$ 965
2015	753
2016	666
2017	606
2018 and beyond	822
Total minimum payments required	<u>\$ 3,812</u>

Rental expense charged to operations for all operating leases was \$691,000, \$484,000 and \$412,000 for the years ended December 31, 2013, 2012 and 2011, respectively.

**Contingencies**

The Company is subject to legal proceedings and claims that arise in the normal course of business. As of December 31, 2013, there were no current proceedings or litigation involving the Company that management believes would have a material adverse impact on its business, financial position, results of operations or cash flows.

**16. Income Taxes**

As of December 31, 2013, the Company had net operating loss carry-forwards for federal income tax reporting purposes of \$77,682,000, which begin to expire in 2026, and California and various other state net operating loss carry-forwards of \$59,829,000 and \$13,656,000, respectively, which begin to expire in 2016 and 2031, respectively. Additionally, as of December 31, 2013, the Company had federal research and development tax credit carry-forwards of \$1,414,000, which begin to expire in 2026, and state research and development tax credit carry-forwards of \$1,274,000, which have no expiration date.

As of December 31, 2013, deferred tax assets of \$34,250,000, arising principally as a result of the Company's net operating loss carry-forwards, tax credits, and certain costs capitalized for tax purposes during the Company's development stage, were fully offset by a valuation allowance. The valuation allowance increased by \$11,850,000, \$8,134,000 and \$5,211,000 for the years ended December 31, 2013, 2012 and 2011, respectively.

Federal and state laws impose substantial restrictions on the utilization of net operating loss and tax credit carry-forwards in the event of an "ownership change," as defined in Section 382 of the U.S. Internal Revenue Code of 1986, as amended. The Company completed a Section 382 analysis as of December 31, 2013 and concluded that \$493,000 in federal net operating losses and \$151,000 in federal research and development credits are expected to expire prior to utilization as a result of the Company's previous ownership changes and corresponding annual limitations.

The temporary timing differences that give rise to the deferred tax assets are as follows (in thousands):

	<b>DECEMBER 31</b>	
	<b>2013</b>	<b>2012</b>
Components of deferred taxes:		
Net operating loss carryforwards	\$ 30,258	\$ 19,966
Research and development tax credit	1,577	1,002
Other, net	<u>2,415</u>	<u>1,432</u>
Net deferred tax assets	34,250	22,400
Less: valuation allowance	<u>(34,250)</u>	<u>(22,400)</u>
Net deferred tax assets	<u>\$ —</u>	<u>\$ —</u>

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The Company had no deferred tax liabilities at December 31, 2013 and 2012.

The Company recognized no income tax expense, and did not receive a benefit from income taxes for the years ended December 31, 2013, 2012 and 2011.

The provision for income taxes is different than the amount computed using the applicable statutory federal income tax rate with the difference for each year summarized below:

	<b>DECEMBER 31</b>	
	<b>2013</b>	<b>2012</b>
Federal tax benefit at statutory rate	34%	34%
State tax benefit, net of federal benefit	5	5
Interest expense	(5)	—
Mark-to-market accounting	9	(12)
Deemed dividend	(2)	(6)
Share-based compensation expense	(2)	—
Other	1	(1)
Adjustment due to change in valuation allowance	(40)	(20)
Provision for income taxes	<u>— %</u>	<u>— %</u>

As of December 31, 2013, the Company had unrecognized tax benefits of \$525,000. The unrecognized tax benefits, if recognized, would not impact the Company's effective tax rate as the recognition of these tax benefits would be offset by changes in the Company's valuation allowance. The Company does not believe there will be any material changes in its unrecognized tax position over the next twelve months.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

	<b>2013</b>	<b>2012</b>
Balance at January 1	\$340	\$305
Increase related to prior year tax positions	79	—
Increase related to current year tax positions	<u>106</u>	<u>35</u>
Balance at December 31	<u>\$525</u>	<u>\$340</u>

The Company files income tax returns in the U.S. federal jurisdiction and various state jurisdictions. The Company is subject to U.S. federal and state income tax examination for 2006 through 2013 due to unutilized net operating losses and research credits.

### 17. Employee Benefit Plan

The Company has a defined contribution plan offered to all eligible employees, which is qualified under Section 401(k) of the Internal Revenue Code. The Company currently provides a matching contribution. Matching contributions are based on a formula which provides for a dollar-for-dollar matching contribution of the employee's 401(k) contribution up to 3% of eligible pay plus a 50% matching contribution on the employee's 401(k) contribution between 3% and 5% of eligible pay. Each participant is 100% vested in elective contributions and the Company's matching contribution. The Company provided 401(k) matching contributions for the years ended December 31, 2013, 2012 and 2011 were \$294,000, \$229,000 and \$190,000, respectively.

### 18. Related Party Transactions

Les Lyman, a member of the Company's board of directors, is the chairman and significant indirect shareholder of The Tremont Group, Inc. During the year ended December 31, 2013, The Tremont Group, Inc. purchased \$1,446,000 of the Company's products for further distribution and resale. As of December 31, 2013, the

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Company had outstanding accounts receivable due from The Tremont Group, Inc. of \$903,000, all of which are due in April 2014. Although the Company anticipates sales of its products to The Tremont Group, Inc. to continue through 2014, the Company cannot estimate the amount of those sales.

In December 2012, the Company issued a \$12,500,000 convertible note to Syngenta Ventures Pte. LTD. (Syngenta), an affiliate of one of the Company's distributors (See Note 9), for which there was no outstanding balance as of December 31, 2013 as the convertible note converted into shares of the Company's common stock immediately following the completion of the IPO in August 2013. During the year ended December 31, 2013, the Company recorded revenue of \$116,000 relating to sales of product to Syngenta and \$131,000 relating to license revenue recognized based on the terms of the Company's commercial agreement with Syngenta. As of December 31, 2013, the Company had no outstanding accounts receivable due from Syngenta.

### **19. Reverse Stock Split**

On August 1, 2013, the Company amended and restated its certificate of incorporation to effect the conversion of its outstanding convertible preferred stock into common stock on a 1-for-1 basis followed immediately by a reverse split of shares of its common stock (including the common stock issued upon conversion of the convertible preferred stock) at a 1-for-3.138458 ratio (the "Reverse Stock Split"). The amendment also increased the number of shares of common stock authorized for issuance to 250,000,000 shares and the number of shares of preferred stock authorized for issuance to 20,000,000. The par value of the common stock and preferred stock was not adjusted as a result of the Reverse Stock Split.

All issued and outstanding common stock, preferred stock, and warrants for common stock or preferred stock, and the related per share amounts contained in the consolidated financial statements, have been retroactively adjusted to give effect to this Reverse Stock Split for all periods presented.

### **20. Initial Public Offering**

In August 2013, the Company closed its initial public offering of 5,462,500 shares of its common stock (inclusive of 712,500 shares of common stock sold upon the exercise of the underwriters' option to purchase additional shares). The public offering price of the shares sold in the offering was \$12.00 per share. The total gross proceeds from the offering to the Company were \$65,550,000, and after deducting underwriting discounts and commissions and offering expenses payable by the Company, the aggregate net proceeds received by the Company totaled approximately \$56,105,000. In connection with the IPO:

- all outstanding shares of convertible preferred stock were converted into 8,514,000 shares of common stock, including 10,000 shares issued upon the cash exercise of Series B convertible preferred stock warrants;
- all outstanding principal and accrued interest of the convertible notes were converted into 3,741,000 shares of common stock;
- 47,000 shares of common stock were issued upon the net exercise of common stock warrants;
- 3,000 shares of common stock were issued upon the cash exercise of common stock warrants; and
- the Series A and Series C convertible preferred stock warrants were net exercised for 71,000 shares of common stock.

After the closing of the IPO, the Company had 19,133,000 shares of common stock and 151,000 warrants to purchase common stock outstanding and there were no shares of convertible preferred stock, preferred stock warrants or balances related to convertible notes outstanding.

**21. Quarterly Financial Information (Unaudited)**

	<u>MARCH 31</u>	<u>JUNE 30</u>	<u>SEPTEMBER 30</u>	<u>DECEMBER 31</u>
	(In thousands, except per share data)			
<b>2013</b>				
Total revenues	\$ 2,730	\$ 4,500	\$ 1,346	\$ 5,967
Gross profit	935	1,102	269	1,501
Net loss	(10,749)	(1,639)	(6,110)	(9,991)
Deemed dividend on convertible notes	—	(1,378)	—	—
Net loss attributable to common stockholders	(10,749)	(3,017)	(6,110)	(9,991)
Net loss per common share:				
Basic	(8.48)	(2.36)	(0.47)	(0.52)
Diluted	(8.48)	(2.67)	(0.80)	(0.52)
<b>2012</b>				
Total revenues	\$ 1,999	\$ 1,509	\$ 738	\$ 2,894
Gross profit	1,139	825	217	626
Net loss	(3,984)	(3,912)	(13,802)	(17,096)
Deemed dividend on convertible notes	(1,253)	—	—	(786)
Net loss attributable to common stockholders	(5,237)	(3,912)	(13,802)	(17,882)
Net loss per common share:				
Basic	(4.20)	(3.13)	(10.94)	(14.11)
Diluted	(4.20)	(3.13)	(10.94)	(14.11)

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In connection with the preparation of the consolidated financial statements for the year ended December 31, 2013, errors in the computation and disclosure of diluted net loss per share were identified for the three and nine months ended September 30, 2013 and for the three months ended June 30, 2013. This resulted from errors in the computation of how adjustments to the net loss attributable to common stockholders from the potentially dilutive securities were reflected in the diluted net loss per share computations and when identifying which potentially dilutive securities were determined to be dilutive or anti-dilutive. The errors affected both the net loss used in the numerator and the weighted average shares outstanding used in the denominator for diluted net loss per share. The Company evaluated the materiality of these errors in accordance with SEC Staff Accounting Bulletin No. 99, *Materiality*, and SEC Staff Accounting Bulletin No. 108, *Considering the Effects of Prior Year Misstatements When Quantifying Misstatements in Current Year Financial Statements*, and concluded that these errors, individually and in the aggregate, were immaterial to all prior periods impacted. While the adjustments were immaterial, the Company has elected to revise its previously reported diluted earnings per share as shown in the following table:

	THREE MONTHS ENDED JUNE 30, 2013		THREE MONTHS ENDED SEPTEMBER 30, 2013		NINE MONTHS ENDED SEPTEMBER 30, 2013	
	AS REPORTED	AS REVISED	AS REPORTED	AS REVISED	AS REPORTED	AS REVISED
(In thousands, except per share data)						
<b>Numerator:</b>						
Net loss	\$ (1,639)	\$ (1,639)	\$ (6,110)	\$ (6,110)	\$ (18,498)	\$ (18,498)
Deemed dividend on convertible notes	(1,378)	(1,378)	—	—	(1,378)	(1,378)
Net loss attributable to common stockholders	\$ (3,017)	\$ (3,017)	\$ (6,110)	\$ (6,110)	\$ (19,876)	\$ (19,876)
Effect of potentially dilutive securities:						
Convertible notes	—	—	(1,089)	(4,392)	(118)	(4,392)
Warrants to purchase convertible preferred stock	—	(575)	—	(264)	—	(841)
Warrants to purchase common stock	—	—	(201)	—	(201)	—
Net loss for diluted net loss per share	\$ (3,017)	\$ (3,592)	\$ (7,400)	\$ (10,766)	\$ (20,195)	\$ (25,109)
<b>Denominator:</b>						
Shares used for basic net loss per share	1,277	1,277	12,888	12,888	5,187	5,187
Effect of potentially dilutive securities:						
Convertible notes	—	—	1,043	503	20	169
Warrants to purchase convertible preferred stock	—	70	—	31	—	61
Warrants to purchase common stock	—	—	86	—	22	—
Weighted average shares outstanding for diluted net loss per share	1,277	1,347	14,017	13,422	5,229	5,417
<b>Diluted net loss per share:</b>	\$ (2.36)	\$ (2.67)	\$ (0.53)	\$ (0.80)	\$ (3.86)	\$ (4.63)

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The corrections have no impact on the Company's consolidated balance sheets, net loss, net loss attributable to common stockholders, basic net loss per share, or the consolidated statements of comprehensive loss, convertible preferred stock and stockholders' equity (deficit), and cash flows for any of the above mentioned periods.

**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 chief executive officer (CEO) and chief financial officer, Mr. Glidewell (CFO), has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a- 15(e) and 15d- 15(e) under the Securities Exchange Act of 1934, as amended (Exchange Act)), as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, our CEO and CFO have concluded that as of December 31, 2013, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission (SEC), and that such information is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure.

*Changes in Internal Control*

There were no changes in our internal control over financial reporting identified in management's evaluation pursuant to Rules 13a-15(d) or 15d-15(d) of the Exchange Act during the period covered by this Annual Report on Form 10-K that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

*Management's Report on Internal Control over Financial Reporting*

The Annual Report on Form 10-K does not include a report of management's assessment regarding internal control over financial reporting or an attestation report of our independent registered public accounting firm due to a transition period established by the rules of the SEC for newly public companies.

*Limitations on Effectiveness of Controls and Procedures*

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

**ITEM 9B. OTHER INFORMATION**

On February 13, 2014, our board of directors appointed James B. Boyd as our Vice President and Chief Financial Officer effective February 26, 2014. He will serve in that role jointly with Donald Glidewell, our current chief financial officer, until the end of the term of Mr. Glidewell's transition agreement with us, which will expire no later than March 31, 2014.



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Under the terms of our offer letter with Mr. Boyd, he is entitled to receive a base salary of \$240,000. Mr. Boyd will also be eligible to participate in our 2014 non-equity bonus plan. Any award for 2014 will be prorated based on the time that he has worked for us during 2014. His target bonus under the 2014 plan will be equal to 30% of his base salary. Mr. Boyd will also receive an option to purchase 190,000 shares of our common stock under the terms of our 2013 Stock Incentive Plan with an exercise price equal to the closing price of our common stock as reported on the NASDAQ Global Market on his start date. The option vests with respect to one-quarter of the total shares subject to the option one year from his start date, and with respect to 1/48th of the total shares subject to the option monthly thereafter for 36 months, such that all the shares will be fully vested upon the fourth anniversary of the option's vesting commencement date. Mr. Boyd will also receive a one-time signing bonus equal to \$10,000, reimbursement for actual relocation expenses up to \$20,000 and three months temporary housing. If Mr. Boyd fails to complete twelve months of service with us, he has agreed to repay a pro rata portion of his signing bonus and the relocation expenses that we paid on his behalf. In the event that we actually or constructively terminated Mr. Boyd's employment without cause, we have agreed to continue to pay his base salary and provide life, medical, dental and disability coverage for a period of six months following such termination.

On March 4, 2014, our compensation committee established a bonus plan for 2014 available to all of our employees, executive officers and other key employees. The 2014 bonus plan provides for a target cash award of up to 30% of the named executive officer's salary, with 75% of the target award based upon the achievement of company-wide goals, and 25% of the target award based upon the achievement of individual goals. Each company-wide goal and individual goal is weighted, such that employees, including our executive officers, would receive a portion of the target non-equity incentive award for each goal achieved. The company-wide goals are based on our forecasts and plans for fiscal year 2014 and take into account factors, including net revenues, gross margin goals for new and existing products, product launches, product development goals, international distribution arrangements and further development of our manufacturing facility. Our compensation committee also established certain individual goals for our chief executive to achieve her individual target component of the 2014 bonus plan that includes goals related to company, personal, financial results, expansion of our customers and product development.

### PART III

## ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

### Executive Officers and Directors

The following table sets forth certain information about our executive officers, directors and key employees as of February 28, 2014:

NAME	AGE	POSITION
<b>Board of Directors:</b>		
Pamela G. Marrone, Ph.D.	57	President, Chief Executive Officer and Director
Elin Miller (3)	54	Chair of the Board
Ranjeet Bhatia (1),(2)	42	Director
Pamela Contag, Ph.D. (1)	56	Director
Timothy Fogarty (2)	53	Director
Lawrence A. Hough (1),(2)	69	Director
Joseph Hudson (1)	42	Director
Les Lyman (3)	67	Director
Richard Rominger (1),(3)	86	Director
Shaugn Stanley (2),(3)	54	Director
<b>Other Executive Officers and Key Employees:</b>		
James B. Boyd (4)	61	Vice President, Chief Financial Officer and Assistant Secretary
Donald J. Glidewell (4)	57	Chief Financial Officer and Secretary
Hector Absi	45	Chief Operating Officer
Phyllis Himmel, Ph.D.	62	Vice President of Corporate Development
Keith Pitts	50	Vice President of Regulatory and Government Affairs
Alison Stewart, Ph.D.	56	Chief Technology Officer and Senior Vice President of Research & Development

(1) Member of the Compensation Committee.

(2) Member of the Audit Committee.

(3) Member of the Nominating and Corporate Governance Committee.

(4) On February 13, 2014, our board of directors appointed James B. Boyd as our Vice President and Chief Financial Officer effective February 26, 2014. He will serve in that role jointly with Donald Glidewell, our current Chief Financial Officer, until the end of the term of Mr. Glidewell's transition agreement with us, which will expire no later than March 31, 2014.

### Board of Directors

Pamela G. Marrone, Ph.D. is our founder and has served as our President and Chief Executive Officer and has been a member of our board of directors since our inception in 2006. Prior to founding the Company, in 1995 Dr. Marrone founded AgraQuest, Inc. (acquired by Bayer), where she served as Chief Executive Officer until May 2004 and as President or Chairman from such time until March 2006, and where she led teams that discovered and commercialized several bio-based pest management products. She served as founding President and business unit head for Entotech, Inc., a biopesticide subsidiary of Denmark-based Novo Nordisk A/S (acquired by Abbott Laboratories), from 1990 to 1995, and held various positions at the Monsanto Company from 1983 until 1990, where she led the Insect Biology Group, which was involved in pioneering projects in transgenic crops, natural products and microbial pesticides. Dr. Marrone is an author of over a dozen invited publications, is in demand as a speaker and has served on the boards and advisory councils of numerous professional and academic organizations. In 2013, Dr. Marrone was named the Sacramento region's "Executive of the Year" by the Sacramento Business Journal and "Cleantech Innovator of the Year" by the Sacramento Area Regional Technology Alliance. Dr. Marrone earned a B.S. in Entomology from Cornell University and a Ph.D. in Entomology from North Carolina State University. We believe Dr. Marrone's qualifications to sit on our board of directors include the fact that, as our founder, Dr. Marrone is uniquely familiar with the business, structure,

culture and history of our company and that she also brings to the board of directors considerable expertise based on her management and technical and commercialization experience in the biopesticide industry.

*Elin D. Miller* has served on our board of directors since 2011 and was appointed the Chair of our board in 2013. Ms. Miller is the Principal of Elin Miller Consulting, LLC and she also currently serves on the board of directors of Vestaron Corporation, a venture-backed agricultural biotechnology firm. Appointed by the President of the United States, Ms. Miller assumed regional management of the U.S. Environmental Protection Agency (EPA) in the Pacific Northwest from 2006 to 2009. Prior to serving at the EPA, Ms. Miller led Arysta Lifescience Corporation as President and Chief Executive Officer of North America and Australasia from 2004 to 2006. Ms. Miller also served in various positions at Dow Agrosciences/Dow Chemical from 1996 to 2004, including Vice President of Pest Management, Vice President of Asia Pacific, and Global Vice President of Public Affairs. Ms. Miller's career also includes directing the California Department of Conservation and serving as Chief Deputy Director of the Department of Pesticide Regulation at the California Environmental Protection Agency. Ms. Miller earned a B.S. in Agronomy and Plant Protection from the University of Arizona and is a graduate of INSEAD's Advanced Management Program. We believe Ms. Miller's qualifications to sit on our board of directors include her years of regulatory experience and her perspective gained in management of companies in the life sciences, pesticide and agricultural industries.

*Ranjeet Bhatia* has served on our board of directors since 2007. He is the Managing Director of Saffron Hill Ventures, which he co-founded in 2000. He is currently on the boards of Agilyx, Coyuchi, Image Metrics, Faceware Technologies and Optasia Medical. Prior to founding Saffron Hill Ventures, from 1999 to 2000, Mr. Bhatia served as Advisor to the Chairman of Loot Ltd, a media company, where he advised on strategy and investment. Mr. Bhatia has also worked in the environment and energy consulting groups at Booz-Allen & Hamilton, a consulting firm, and Dyncorp-Meridian, a consulting firm. Mr. Bhatia earned an M.B.A. from UCLA's Anderson School of Business, an M.A. in International Relations and Economics from the Johns Hopkins University School of Advanced International Studies and a B.A. in Environmental Science from Occidental College. We believe Mr. Bhatia's qualifications to sit on our board of directors include his extensive experience in investment management and his perspective gained as a board member of various early-stage companies.

*Pamela Contag, Ph.D.* has served on our board of directors since October 2013. Dr. Contag has served as the Chief Executive Officer of Cygnet Bio Inc., a private company active in the discovery and adaptation of natural products to applications in healthcare, energy, and food, since its founding in 2009. From 1995 to 2006 she was Founder, President and Chief Executive Officer of Xenogen, which she took public. Dr. Contag also founded Cobalt Technologies in 2006, where she served as Chief Executive Officer until 2009. Dr. Contag has been named one of the "Top 25 Women in Small Business" by Fortune magazine, and in 2010, she was honored with Astia's "Cleantech Innovator of the Year" award for her contributions at Cygnet. Dr. Contag has held board positions in the public, private, and not-for-profit sectors and also consults in biotechnology for academics and industry. She is widely published in the field of microbiology and optical imaging, and has over 35 patents in biotechnology. Dr. Contag received her Ph.D. in Microbiology and Immunology at the University of Minnesota Medical School and completed postdoctoral work at Stanford University School of Medicine, specializing in Host-Pathogen Interactions. We believe Dr. Contag's qualifications to sit on our board of directors include her experience as a biotechnology entrepreneur, her experience as a chief executive officer in taking a company public and her keen understanding of new technology.

*Timothy Fogarty* has served on our board of directors since 2010. As the Chief Financial Officer and a Partner of The Contrarian Group, Inc., a private equity fund where he has worked since May 2006, Mr. Fogarty is also currently on the boards of TeachTown, Amanzi and Bellwether Marine Acquisition Corporation. From December 2003 to March 2006, Mr. Fogarty worked for Cypress Reinsurance, a startup Bermuda reinsurer, as President and Chief Operating Officer. Mr. Fogarty is a Certified Public Accountant in good standing in California and earned a B.S. in Accounting from California State Polytechnic University, Pomona. We believe Mr. Fogarty's qualifications to sit on our board of directors include his extensive experience in investment management and accounting and his perspective gained as a board member of various early-stage companies.

*Lawrence A. Hough* has served on our board of directors since 2008. Mr. Hough is a Managing Director of Stuart Mill Venture Partners and Chairman of Stuart Mill Capital, Inc., a management firm he founded in 1998. Mr. Hough is also currently on the boards of Digital Globe Inc., Appistry, Inc. and Confenna Ltd. Mr. Hough is a trustee for the Shakespeare Theatre Company and the Levine School of Music. Prior to founding Stuart Mill Capital, Mr. Hough worked with Sallie Mae for 25 years, where he served as President and Chief Executive Officer from 1990 to 1997. Mr. Hough earned a B.S. in Engineering from Stanford University and a S.M. in Management from Massachusetts Institute of Technology. We believe Mr. Hough's qualifications to sit on our board of directors include his experience in investment management, his experience as an executive of a multi-billion dollar public company and his perspective gained as a board member of various public and technology orientated companies.

*Joseph Hudson* has served on our board of directors since 2007. Mr. Hudson has primarily worked as a strategic consultant in the financial, wireless and environmental industries, and his clients have included Barclays Global Investors, Sprint and the Walton Foundation, as well as dozens of smaller companies across six continents. Mr. Hudson is a Principal of One Earth Capital, which focuses on sustainable technology in agriculture, water and energy sectors, where he has worked since 2007. Mr. Hudson is also currently on the board of PureSense. Prior to joining One Earth Capital, Mr. Hudson worked with and consulted for many companies, including Wells Fargo Bank, Environmental Defense Fund and the Bureau of Reclamation. Mr. Hudson graduated valedictorian from Maryland's Public Honors College. We believe Mr. Hudson's qualifications to sit on our board of directors include his extensive experience in investment management in and consulting for companies in the agricultural, water and environmental sectors and his perspective gained as a board member of various for profit and non-profit companies.

*Les Lyman* has served on our board of directors since October 2013. Mr. Lyman is the Chairman of each of The Lyman Group, Inc. and The Tremont Group, Inc., independent agricultural retail companies with 15 locations in northern California. Under his leadership, the organizations have grown to become among the largest independent agricultural retailers in the nation. The organizations were honored with the Agricultural Retailers Associations' 2011 Retailer of the Year Award and were awarded the Environmental Respect Award in 1996 and 2010 for excellence in environmental stewardship. Mr. Lyman has also directed the founding of Blue Creek Sustainable LLC, MVP Consolidated, FS3, Inland Terminal, and Mar Vista Resources. He is currently Chairman of the Board of Integrated Agribusiness Professionals, and a past board member of the Western Agricultural Chemicals Association, California Fertilizer Association, and the Agricultural Retailers Association. Mr. Lyman holds a degree in Agricultural Business Management from California Polytechnic State University, San Luis Obispo. We believe Mr. Lyman's qualifications to sit on our board of directors include his experience with acquisitions, his extensive experience in building and leading agricultural retail businesses and his overall understanding of the agricultural market, competitors in the market and growers' needs.

*Richard Rominger* has served on our board since our inception in 2006 and was Chair of our board from 2008 to 2013. Mr. Rominger is a fourth generation Yolo County, California farmer and is active in farm organizations and cooperatives. Mr. Rominger served as Director (Secretary) of the California Department of Food and Agriculture from 1977 to 1982 and was the Deputy Secretary at the U. S. Department of Agriculture in Washington, DC from 1993 to 2001. Mr. Rominger has served as a production agriculture advisor at University of California, Davis, University of California, Riverside, California State University, Fresno and California Polytechnic State University, San Luis Obispo. He continues to serve on the advisory committee of the Agricultural Sustainability Institute at University of California, Davis and as a special advisor to the Chancellor at University of California, Davis. He is a member of the University of California President's Advisory Commission on Agriculture and Natural Resources and the California Roundtable on Agriculture and the Environment and serves on the board of directors of Oryzatech, Inc., a plant based building material company. Mr. Rominger earned a B.S. in Plant Science from University of California, Davis and graduated *summa cum laude*. We believe Mr. Rominger's qualifications to sit on our board of directors include his years of government experience and his perspective gained as a leader in keeping American agriculture healthy and sustainable.

*Shaugh Stanley* has served on our board of directors since 2012. Mr. Stanley currently serves as Senior Managing Director at Stifel Financial Inc., which in 2010 purchased Thomas Weisel Partners, an investment firm that Mr. Stanley co-founded in 1998 and at which Mr. Stanley served in a number of senior positions, including Chief Financial Officer, Chief Administrative Officer and Director of Private Client Services. Prior to that, from 1997 to 1998, Mr. Stanley served as Chief Financial Officer for Montgomery Securities and in various executive financial roles at Fidelity Investments Brokerage Group from 1991 to 1997. Mr. Stanley earned a B.B.A. in Accounting from Stephen F. Austin State University and is a Certified Public Accountant. We believe Mr. Stanley's qualifications to sit on our board of directors include his extensive experience in financial services and his expertise and experience in corporate accounting and financial reporting processes.

#### ***Executive Officers and Key Employees***

*James B. Boyd* was appointed as our Vice President and Chief Financial Officer effective February 26, 2014, and Assistant Secretary effective March 5, 2014. He will serve in that role jointly with Mr. Glidewell, our current Chief Financial Officer, until the end of the term of Mr. Glidewell's transition agreement with us, which will expire no later than March 31, 2014. Mr. Boyd previously served as Chief Financial Officer of Quantenna Communications from September 2012 through September 2013. From December 2010 to September 2012 he served as Chief Financial Officer for Link-A-Media Devices and from June 2007 to November 2010 he served as Chief Financial Officer and Senior Vice President of Silicon Storage Technology. From July 2000 to June 2007, Mr. Boyd served as Chief Financial Officer and Senior Vice President of ESS Technology. Mr. Boyd earned a M.B.A. in Finance from the University of Wisconsin and a J.D. from Golden Gate University.

*Donald J. Glidewell* has served as our Chief Financial Officer since April 2011 and as Secretary since September 2012. Previously, from July 2007 to March 2011, he served as Director of Finance and Senior Director of Finance at Valent USA Inc., a subsidiary of Sumitomo Chemical Co. Ltd., where he oversaw financial analysis for strategic acquisitions and divestitures and oversaw significant reductions in financial reporting time and costs. From 2000 to 2006, he served as Chief Financial Officer of AgraQuest, Inc. (acquired by Bayer), where he was responsible for the negotiation, purchase and operational startup of that company's fermentation facility and oversaw its venture and debt financings. From 1994 to 2000, he served as the Chief Financial Officer of Bio-Trends International, Inc., a global companion animal vaccine research and development and manufacturing company, until its sale to Intervet Inc. (acquired by Merck Animal Health). Mr. Glidewell holds a Certified Public Accountant license in California and a B.S. in Business Administration/Accounting from Arizona State University. On November 7, 2013, we announced that Mr. Glidewell, had decided to retire as our Chief Financial Officer. To facilitate the transition, Mr. Glidewell will continue to serve jointly as Chief Financial Officer with Mr. Boyd until the end of the term of Mr. Glidewell's transition agreement with us, which will expire no later than March 31, 2014.

*Hector Absi* has served as our Chief Operating Officer since January 2014. He previously served as our Senior Vice President of Commercial Operations from October 2012 to January 2014. From 2005 to 2012, Mr. Absi served as Vice President of Global Sales and Director of Sales and Marketing for Suterra, a leading provider of environmentally friendly products for agricultural crop protection and commercial pest control, where he was responsible for leading Suterra's global and U.S. sales organizations. Prior to his position at Suterra, from 1993 to 2005, Mr. Absi served in various sales executive roles at Monsanto. Mr. Absi holds a B.S. in Mechanical Engineering from Valparaiso University and a M.B.A. from Washington University.

*Phyllis Himmel, Ph.D.* has served as our Vice President of Corporate Development since January 2014. She previously served as our Vice President of Research and Development from May 2012 to December 2013 and as our Vice President of Biological Research from September 2010 to April 2012. From 1991 to 2010, Dr. Himmel served as Director of Research Pathology at Monsanto Vegetable Seeds, ultimately leading a global team of 64 scientists and staff. From 1989 to 1991, Dr. Himmel specialized in disease resistance to soil-borne wheat mosaic virus in soft red winter wheat during a three year U.S. Department of Agriculture post-doctoral study based at the University of Illinois. Dr. Himmel started her agricultural career as a scientist at Asgrow Seed Company

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(currently Monsanto Vegetable Seeds), developing and running programs to identify viral disease resistance in vegetables. Dr. Himmel earned a B.S. in Biology, a M.S. in Plant Pathology and a Ph.D. in Plant Pathology all from the University of Arizona.

*Keith Pitts* has served as our Vice President of Regulatory and Government Affairs since July 2008. Previously, from January 2001 to June 2007, Mr. Pitts served as Director of Public Policy at the Pew Initiative on Food and Biotechnology, a non-partisan research and policy organization based in Washington, D.C. From 1986 to 2001, Mr. Pitts worked in senior legislative, administrative, regulatory and public policy roles in both the U.S. Department of Agriculture and the House Committee on Agriculture. Mr. Pitts earned a B.A. in Chemistry from the University of North Carolina.

*Alison Stewart, Ph.D.*, and Professor Emeritus of Lincoln University, New Zealand, has served as our Senior Vice President of Research & Development and Chief Technology Officer since January 2014. She previously served as our Chief Science Officer from April 2013 to January 2014. From 2012 to 2013, Dr. Stewart served as a Distinguished Professor of Plant Pathology in the Bio-Protection Research Centre of Lincoln University, New Zealand, where her work concentrated on beneficial strains of *Trichoderma* that resulted in four commercial products. In addition, for eight years, Dr. Stewart served as the Director of the Centre, assisting scientists in moving technology discovered in New Zealand out into commercial enterprises to enhance New Zealand agriculture and farmers' livelihoods. Dr. Stewart is an author of approximately 200 peer-reviewed journal publications and a contributor to more than 300 other client reports, conference presentations, industry workshops and other significant research outputs. In addition, Dr. Stewart has served as Deputy Chair of the Board of Plant & Food Research in New Zealand, a board member of the Waite Research Institute in Adelaide, Australia, Vice President of the Australasian Plant Pathology Society and of the New Zealand Plant Protection Society, a senior editor of *Australasian Plant Pathology* and an editor of *Phytopathologia Mediterranea*.

### ***Board of Directors***

Our board of directors currently consists of ten members.

In accordance with our amended and restated certificate of incorporation and amended and restated bylaws, our board of directors has been divided into three classes with staggered three-year terms. At each annual general meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors have been divided among the three classes as follows:

- The Class I directors are Ranjeet Bhatia, Lawrence Hough and Joseph Hudson and their terms will expire at the annual general meeting of stockholders to be held in 2014;
- The Class II directors are Timothy Fogarty, Les Lyman, Richard Rominger and Shaugn Stanley and their terms will expire at the annual general meeting of stockholders to be held in 2015; and
- The Class III directors are Dr. Pamela Contag, Elin Miller and Dr. Pamela G. Marrone and their terms will expire at the annual general meeting of stockholders to be held in 2016.

### ***Director Independence***

The rules of NASDAQ generally require that a majority of the members of a listed company's board of directors be independent. In addition, the listing rules generally require that, subject to specified exceptions, each member of a listed company's audit, compensation, and governance committees be independent. Audit committee members must also satisfy the independence criteria set forth in Rule 10A-3 under the Securities Exchange Act of 1934, as amended (Exchange Act). In order to be considered independent for purposes of Rule 10A-3, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee: accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries; or be an affiliated person of the listed company or any of its subsidiaries.

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Our board of directors has undertaken a review of its composition, the composition of its committees and the independence of each director and considered whether any director has a material relationship with us that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. Our board of directors has also reviewed whether the directors that comprise our audit committee and compensation committee satisfy the independence standards for those committees established by the applicable SEC rules and NASDAQ rules. In making this determination, our board of directors has considered the relationships that each of these non-employee directors has with our company and all other facts and circumstances our board of directors deem relevant in determining their independence, including the beneficial ownership of our capital stock held by each non-employee director. Based on this determination, the board of directors determined that each of its non-employee members was independent except for Les Lyman.

### ***Board Committees***

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee, each of which have the composition and responsibilities described below.

#### *Audit Committee*

Our audit committee is comprised of Mr. Bhatia, Mr. Fogarty, Mr. Hough and Mr. Stanley, each of whom is a non-employee member of our board of directors. Mr. Stanley is our audit committee chair and is our audit committee financial expert, as currently defined under the SEC rules. Our board of directors has determined that each of Mr. Bhatia, Mr. Fogarty, Mr. Hough and Mr. Stanley is independent within the meaning of the applicable SEC rules and the listing standards of NASDAQ.

Our audit committee oversees our corporate accounting and financial reporting process. Among other matters, the audit committee evaluates the independent registered public accounting firm's qualifications, independence and performance; determines the engagement of the independent registered public accounting firm; reviews and approves the scope of the annual audit and the audit fee; discusses with management and the independent registered public accounting firm the results of the annual audit and the review of our quarterly consolidated financial statements; approves the retention of the independent registered public accounting firm to perform any proposed permissible non-audit services; monitors the rotation of partners of the independent registered public accounting firm on our engagement team as required by law; reviews our critical accounting policies and estimates; and will annually review the audit committee charter and the committee's performance. The audit committee operates under a written charter adopted by the board that satisfies the applicable standards of NASDAQ.

#### *Compensation Committee*

Our compensation committee is comprised of Mr. Bhatia, Ms. Contag, Mr. Hough, Mr. Hudson and Mr. Rominger, each of whom is a non-employee member of our board of directors. Mr. Bhatia is our compensation committee chair. Our board of directors has determined that each of Mr. Bhatia, Ms. Contag, Mr. Hough, Mr. Hudson and Mr. Rominger is independent within the meaning of the applicable SEC rules and the listing standards of NASDAQ.

Our compensation committee reviews and recommends policies relating to the compensation and benefits of our officers and employees. The compensation committee reviews and approves corporate goals and objectives relevant to the compensation of our chief executive officer and other executive officers, evaluates the performance of these officers in light of those goals and objectives and sets the compensation of these officers based on such evaluations. The compensation committee will administer the issuance of stock options and other awards under our stock plans. The compensation committee will review and evaluate, at least annually, the performance of the compensation committee and its members. The compensation committee operates under a written charter adopted by the board that satisfies the applicable standards of NASDAQ.

### *Nominating and Corporate Governance Committee*

Our nominating and corporate governance committee is comprised of Mr. Lyman, Ms. Miller, Mr. Rominger and Mr. Stanley, each of whom is a non-employee member of our board of directors. Ms. Miller is our nominating and corporate governance committee chair. Our board of directors has determined that each of Ms. Miller, Mr. Rominger and Mr. Stanley is independent within the meaning of the applicable SEC rules and the listing standards of NASDAQ. The board determined that Mr. Lyman should serve on the nominating and corporate governance committee for up to two years as permitted under NASDAQ listing standards due to exceptional circumstances.

Our nominating and corporate governance committee is responsible for making recommendations regarding candidates for directorships and the size and the composition of our board of directors. In addition, the nominating and corporate governance committee is responsible for overseeing our corporate governance principles and making recommendations concerning governance matters. The nominating and corporate governance committee operates under a written charter adopted by the board that satisfies the applicable standards of NASDAQ.

### *Compensation Committee Interlocks and Insider Participation*

None of our executive officers currently serves, or in the past year has served, as a member of the board of directors or compensation committee of any other entity that has one or more executive officers serving on our board of directors.

### *Director Compensation*

Directors who are employees of ours do not receive any compensation for their service on our board of directors. Our board of directors has adopted the following compensation policy that is applicable to all of our non-employee directors:

- Initial Equity Grants. Each non-employee director who joins the board will receive an option to purchase 16,000 shares of our common stock.
- Annual Retainers. Each non-employee director will receive an annual retainer for service on the board valued at \$50,000, consisting, at each director's option, of up to \$25,000 in cash and the remainder in options, in addition to annual retainers for service as chair of our board of directors, or committees of our board of directors, valued as follows, consisting in each case, at each director's option, of up to 50% in cash and the remainder in options. Each director who is an affiliate of an investor holding more than 5% of our outstanding shares of common stock will receive the entire value of their eligible retainers in options.

Annual retainer fee for services on the board of directors	\$ 50,000
Additional annual retainer fees for service as chair of:	
Board of Directors	\$ 15,000
Audit Committee	\$ 10,000
Compensation Committee	\$ 7,500
Nominating and Corporate Governance Committee	\$ 7,500



**Director Compensation Table**

<u>NAME</u>	<u>FEES EARNED OR PAID IN CASH (S)</u>	<u>OPTION AWARDS (S) (1),(2)</u>	<u>TOTAL (S)</u>
Elin Miller	37,188	69,327(3)	106,515
Ranjeet Bhatia	—	60,757(4)	60,757
Pamela Contag, Ph.D.	14,500	205,807(5)	220,307
Timothy Fogarty	—	60,757(6)	60,757
Lawrence A. Hough	—	69,871(7)	69,871
Joseph Hudson	—	60,757(8)	60,757
Les Lyman	14,500	205,807(9)	220,307
Richard Rominger	18,750	55,657(10)	74,407
Shaughn Stanley	22,500	61,733(11)	84,233

- (1) This column reflects the aggregate grant date fair value of option awards granted to our directors estimated pursuant to FASB ASC 718, *Compensation – Share based compensation* (ASC 718). Valuation assumptions are described under Note 2 of our accompanying Notes to Consolidated Financial Statements included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K.
- (2) The following table sets forth the aggregate number of option awards held by each non-employee director as of December 31, 2013:

<u>NAME</u>	<u>AGGREGATE NUMBER OF OPTION AWARDS</u>
Elin Miller	21,397
Ranjeet Bhatia	7,520
Pamela Contag, Ph.D.	18,480
Timothy Fogarty	7,520
Lawrence A. Hough	8,648
Joseph Hudson	7,520
Les Lyman	18,480
Richard Rominger	23,542
Shaughn Stanley	20,457

- (3) On August 1, 2013, we granted Ms. Miller an option to purchase 3,200 shares of our common stock with a per share exercise price of \$12.00. One-quarter of the total shares subject to her option vest one year from her vesting commencement date of August 1, 2013, and 1/48th of the total shares subject to her option vest monthly thereafter for 36 months, such that all of the shares subject to the option will be fully vested upon the fourth anniversary of her vesting commencement date. On August 28, 2013, we granted Ms. Miller an option to purchase 5,452 shares of our common stock with a per share exercise price of \$13.01 as she elected to receive 50% of her annual retainer fee in stock options. All of the shares subject to the option will fully vest upon the date of the 2014 annual meeting of the stockholders.
- (4) On August 28, 2013, we granted Mr. Bhatia an option to purchase 7,520 shares of our common stock with a per share exercise price of \$13.01 as he received 100% of his annual retainer fee in stock options. All of the shares subject to the option will fully vest upon the date of the 2014 annual meeting of the stockholders.
- (5) On October 16, 2013, we granted Ms. Contag an option to purchase 16,000 shares of our common stock with a per share exercise price of \$17.76 upon joining the board. One-third of the total shares subject to her option vest on the date of each of the 2014, 2015 and 2016 annual meetings of the stockholders, such that all of the shares subject to the option will be fully vested upon the date of the 2016 annual meeting of the stockholders. On October 16, 2013, we also granted Ms. Contag an option to purchase 2,480 shares of our common stock with a per share exercise price of \$17.76 as she elected to receive 50% of her annual retainer fee in stock options. All of the shares subject to the option will fully vest upon the date of the 2014 annual meeting of the stockholders.

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- (6) On August 28, 2013, we granted Mr. Fogarty an option to purchase 7,520 shares of our common stock with a per share exercise price of \$13.01 as he received 100% of his annual retainer fee in stock options. All of the shares subject to the option will fully vest upon the date of the 2014 annual meeting of the stockholders.
- (7) On August 28, 2013, we granted Mr. Hough an option to purchase 8,648 shares of our common stock with a per share exercise price of \$13.01 as he received 100% of his annual retainer fee in stock options. All of the shares subject to the option will fully vest upon the date of the 2014 annual meeting of the stockholders.
- (8) On August 28, 2013, we granted Mr. Hudson an option to purchase 7,520 shares of our common stock with a per share exercise price of \$13.01 as he received 100% of his annual retainer fee in stock options. All of the shares subject to the option will fully vest upon the date of the 2014 annual meeting of the stockholders.
- (9) On October 16, 2013, we granted Mr. Lyman an option to purchase 16,000 shares of our common stock with a per share exercise price of \$17.76 upon joining the board. One-third of the total shares subject to his option vest on the date of each of the 2014, 2015 and 2016 annual meetings of the stockholders, such that all of the shares subject to the option will be fully vested upon the date of the 2016 annual meeting of the stockholders. On October 16, 2013, we also granted Mr. Lyman an option to purchase 2,480 shares of our common stock with a per share exercise price of \$17.76 as he elected to receive 50% of his annual retainer fee in stock options. All of the shares subject to the option will fully vest upon the date of the 2014 annual meeting of the stockholders.
- (10) On August 1, 2013, we granted Mr. Rominger an option to purchase 3,200 shares of our common stock with a per share exercise price of \$12.00. One-quarter of the total shares subject to his option vest one year from his vesting commencement date of August 1, 2013, and 1/48th of the total shares subject to his option vest monthly thereafter for 36 months, such that all of the shares subject to the option will be fully vested upon the fourth anniversary of his vesting commencement date. On August 28, 2013, we granted Mr. Rominger an option to purchase 3,760 shares of our common stock with a per share exercise price of \$13.01 as he elected to receive 50% of his annual retainer fee in stock options. All of the shares subject to the option will fully vest upon the date of the 2014 annual meeting of the stockholders.
- (11) On August 1, 2013, we granted Mr. Stanley an option to purchase 3,200 shares of our common stock with a per share exercise price of \$12.00. One-quarter of the total shares subject to his option vest one year from his vesting commencement date of August 1, 2013, and 1/48th of the total shares subject to his option vest monthly thereafter for 36 months, such that all of the shares subject to the option will be fully vested upon the fourth anniversary of his vesting commencement date. On August 28, 2013, we granted Mr. Stanley an option to purchase 4,512 shares of our common stock with a per share exercise price of \$13.01 as he elected to receive 50% of his annual retainer fee in stock options. All of the shares subject to the option will fully vest upon the date of the 2014 annual meeting of the stockholders.

### ***Consideration and Determination of Executive and Director Compensation***

Because compensation decisions for executive officers are made by our entire board of directors, Dr. Pamela G. Marrone, our President and Chief Executive Officer, participates in the determination of compensation policy, including by making recommendations and participating in the voting with respect to the compensation of executive officers, other than with respect to her own compensation.

### ***Code of Ethics***

We have adopted a Code of Business Conduct and Ethics applicable to all officers, directors and employees, which is available on our website ([investors.marronebio.com](http://investors.marronebio.com)) under "Corporate Governance." We intend to satisfy the disclosure requirement under Item 5.05 of Form 8-K regarding amendment to, or waiver from, a provision of our Code of Business Conduct and Ethics by posting such information on our website at the address and location specified above.

# ITEM 11. EXECUTIVE COMPENSATION

We refer to our chief executive officer and our two other most highly compensated executive officers discussed below as our “named executive officers.” Our named executive officers for fiscal year 2013 were as follows:

- Pamela G. Marrone, Ph. D., President and Chief Executive Officer (Principal Executive Officer)
- Donald J. Glidewell, Chief Financial Officer (Principal Financial Officer)
- Hector Absi, Senior Vice President of Commercial Operations

## Summary Compensation Table

The following table presents information regarding compensation earned by or awards to our named executive officers during fiscal years 2013, 2012 and 2011.

NAME	YEAR	SALARY (\$)	BONUS (\$)	OPTION AWARDS (\$) <sup>(1)</sup>	NON-EQUITY INCENTIVE PLAN COMPENSATION (\$)	ALL OTHER COMPENSATION (\$) <sup>(2)</sup>	TOTAL (\$)
Pamela G. Marrone, Ph.D	2013	250,000	25,835(4)	1,014,461	60,023	11,206	1,361,525
	2012	250,000	—	452,144	75,375	11,804	789,323
	2011	220,833	—	66,146	34,642(3)	10,307	331,928
Donald J. Glidewell	2013	209,583	—	5,032	50,320	8,086	273,021
	2012	175,000	—	335,067	38,763	7,320	556,150
	2011	116,641	—	87,155	14,930	2,856	221,582
Hector Absi	2013	213,542	25,000(4)	395,739	49,668	29,006	712,955
	2012	52,038	10,000(5)	323,750	11,527	7,458	404,773

(1) This column reflects the aggregate grant date fair value of option awards granted to our named executive officers estimated pursuant to FASB ASC 718, *Compensation – Share based compensation* (ASC 718). Valuation assumptions are described in Note 2 of our accompanying Notes to Consolidated Financial Statements included in Part II, Item 8, “Financial Statements and Supplementary Data” of this Annual Report on Form 10-K.

(2) This column includes our 401(k) retirement savings plan matching, payment of life insurance premiums, long-term disability and other insurance-related reimbursements. In addition, Mr. Absi’s other compensation includes the rent for his primary residence paid by the Company.

(3) Dr. Marrone elected to defer \$4,167 of her non-equity incentive plan compensation related to 2011.

(4) Represents a discretionary bonus.

(5) Represents a signing bonus.

## Non-Equity Incentive Awards

We structure our annual non-equity incentive awards to reward named executive officers for the successful performance of our company as a whole and of each participating named executive officer as an individual. For the 2013 fiscal year, our compensation committee established a bonus plan available to all of our executive officers and other key employees. The bonus plan provides for a target cash award of up to 30% of the named executive officer’s salary, with 75% of the target award based upon the achievement of company-wide goals, and 25% of the target award based upon the achievement of individual goals. The progress of the goals is tracked by the compensation committee on a quarterly basis. Each company-wide goal and individual goal received a weighting, such that a named executive officer would receive a portion of the target non-equity incentive award for each goal achieved. The company-wide goals were based on our forecasts and plans for fiscal year 2013 and took into account factors, including net revenues objectives, based on anticipated timing and volume of new customer activity, and product development events such as completion of development work and EPA submissions for new products, processing international registrations and introduction of products into new markets. Based upon these factors, the compensation committee determined that 73% of the company-wide goals were achieved in 2013. Therefore, the executive officers were entitled to 55% of their target bonuses based on upon the company-wide goals component.

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In addition to the company-wide goals, 25% of each named executive officer's 2013 bonus target was comprised of achievement of individual goals. The 2013 individual goals for each named executive officer were based on the following factors:

### *Pamela G. Marrone, Ph.D., President and Chief Executive Officer*

Dr. Marrone was evaluated on the basis of the overall performance of our company, including the success of the IPO and the extent to which we were successful in achieving net revenues goals, developing strategic collaborations, product development, commercialization targets, geographical expansion, organizational development and growth. The board determined that Dr. Marrone achieved 100% of her individual goals (representing 25% of her aggregate bonus target) for an aggregate non-equity incentive award equal to 80% of her bonus target (with 55% of this award based on the achievement of 73% of the company-wide goals).

### *Donald J. Glidewell, Chief Financial Officer*

Under the terms of the transition agreement with Mr. Glidewell, Mr. Glidewell was entitled to receive 100% of his individual goals (representing 25% of his aggregate bonus target) for an aggregate non-equity incentive award equal to 80% of his bonus target (with 55% of this award based on the achievement of 73% of the company-wide goals).

### *Hector Absi, Senior Vice President of Commercial Operations*

Mr. Absi was evaluated on the achievement of certain revenues and business development goals. He was determined to have achieved 90% of his individual goals (representing 23% of his aggregate bonus target) for an aggregate non-equity incentive award equal to 78% of his bonus target (with 55% of this award based on the achievement of 73% of the company-wide goals).

The non-equity incentive award can either be paid out or deferred to a future payout time at the discretion of the board of directors. Payments are not guaranteed and are subject to approval by the board of directors. In addition, the determination of goal achievement (full or partial) is made by the compensation committee and approved by the board of directors.

### ***Outstanding Equity Awards at the End of Fiscal Year 2013***

The following table provides information regarding unexercised stock options held by each of the named executive officers as of the end of fiscal year 2013.

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NAME	GRANT DATE	SECURITIES UNDERLYING UNEXERCISED OPTIONS EXERCISABLE (#) <sup>(1)</sup>	SECURITIES UNDERLYING UNEXERCISED OPTIONS UNEXERCISABLE (#)	OPTION EXERCISE PRICE (\$)	OPTION EXPIRATION DATE
Pamela G. Marrone, Ph.D.	5/1/2007	53,378(2)	—	0.47	5/1/2017
	10/22/2008	47,794(3)	—	1.19	10/22/2018
	1/28/2009	9,559(4)	—	1.19	1/28/2019
	1/11/2010	4,779(5)	—	1.19	1/11/2020
	1/24/2011	19,092(6)	—	1.19	1/24/2021
	1/24/2011	31,863(7)	—	1.19	1/24/2021
	12/15/2011	13,276(8)	18,587	1.41	12/15/2021
	2/20/2012	15,390(9)	—	3.11	2/20/2022
	10/29/2012	18,587(10)	45,138	12.08	10/29/2022
	8/1/2013	— (11)	1,911	12.00	8/1/2023
	9/27/2013	— (12)	84,000	18.01	9/27/2023
	11/6/2013	— (13)	482	16.77	11/6/2023
Donald J. Glidewell	4/27/2011	95,588(14)	—	1.19	4/27/2021
	12/15/2011	6,638(8)	9,293	1.41	12/15/2021
	2/20/2012	10,706(9)	—	3.11	2/20/2022
	5/11/2012	20,582(15)	11,281	6.28	5/11/2022
	10/29/2012	9,294(10)	22,569	12.08	10/18/2022
	8/1/2013	— (11)	637	12.00	8/1/2023
Hector Absi	9/28/2012	24,894(16)	54,763	6.28	9/28/2022
	8/1/2013	— (11)	159	12.00	8/1/2023
	9/27/2013	— (12)	33,333	18.01	9/27/2023

- (1) Options granted under the Marrone Bio Innovations, Inc. Stock Option Plan, which we refer to as the 2006 Plan, are immediately exercisable in full, regardless of vesting. Any unvested shares issued upon the exercise of these options are subject to a right of repurchase.
- (2) The option vested with respect to one-quarter of the total shares subject to the option on the first anniversary of the vesting commencement date of May 1, 2007, and with respect to 1/48th of the total shares subject to the option monthly thereafter for 36 months, such that all the shares were fully vested upon the fourth anniversary of the option's vesting commencement date.
- (3) The option vested with respect to one-quarter of the total shares subject to the option on the first anniversary of the vesting commencement date of November 1, 2008, and with respect to 1/48th of the total shares subject to the option monthly thereafter for 36 months, such that all the shares were fully vested upon the fourth anniversary of the option's vesting commencement date.
- (4) The option vested with respect to one-quarter of the total shares subject to the option on the first anniversary of the vesting commencement date of January 1, 2009, and with respect to 1/48th of the total shares subject to the option monthly thereafter for 36 months, such that all the shares were fully vested upon the fourth anniversary of the option's vesting commencement date.
- (5) The option vested with respect to 100% of the total shares subject to the option on the vesting commencement date of January 1, 2010.
- (6) The options vested with respect to 100% of the total shares subject to the option on the vesting commencement date of January 1, 2011.
- (7) Includes 8,625 shares underlying exercisable options that are unvested. The options vest with respect to one-quarter of the total shares subject to the option on the first anniversary of the vesting commencement date of January 1, 2011, and with respect to 1/48th of the total shares subject to the options monthly thereafter for 36 months, such that all the shares will be fully vested upon the fourth anniversary of the options' vesting commencement date.
- (8) The options vest with respect to 1/60th of the total shares subject to the options one month after the vesting commencement date of November 1, 2011, and with respect to 1/60th of the total shares subject to the

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- options monthly thereafter for 59 months, such that all the shares will be fully vested upon the fifth anniversary of the options' vesting commencement date.
- (9) The options vested with respect to 100% of the total shares subject to the options on the vesting commencement date of February 20, 2012.
  - (10) The options vest with respect to one-quarter of the total shares subject to the options on October 18, 2013, and with respect to 1/48th of the total shares subject to the options monthly thereafter for 36 months, such that all the shares will be fully vested upon the fourth anniversary of the options' vesting commencement date.
  - (11) The options vest with respect to one-quarter of the total shares subject to the options on August 1, 2014, and with respect to 1/48th of the total shares subject to the options monthly thereafter for 36 months, such that all the shares will be fully vested upon the fourth anniversary of the options' vesting commencement date.
  - (12) The options vest with respect to one-quarter of the total shares subject to the options on September 27, 2014, and with respect to 1/48th of the total shares subject to the options monthly thereafter for 36 months, such that all the shares will be fully vested upon the fourth anniversary of the options' vesting commencement date.
  - (13) The option vests with respect to one-quarter of the total shares subject to the option on October 1, 2014, and with respect to 1/48th of the total shares subject to the option monthly thereafter for 36 months, such that all the shares will be fully vested upon the fourth anniversary of the option's vesting commencement date.
  - (14) Includes 33,842 shares underlying exercisable options that are unvested. The option vests with respect to one-quarter of the total shares subject to the option on the first anniversary of the vesting commencement date of May 1, 2011, and with respect to 1/48th of the total shares subject to the option monthly thereafter for 36 months, such that all the shares will be fully vested upon the fourth anniversary of the option's vesting commencement date.
  - (15) The option vests with respect to one-quarter of the total shares subject to the option on May 1, 2013, and with respect to 1/48th of the total shares subject to the option monthly thereafter for 36 months, such that all the shares will be fully vested upon the fourth anniversary of the option's vesting commencement date.
  - (16) The option vests with respect to one-quarter of the total shares subject to the option on September 28, 2013, and with respect to 1/48th of the total shares subject to the option monthly thereafter for 36 months, such that all the shares will be fully vested upon the fourth anniversary of the option's vesting commencement date.

### ***Option Exercises and Stock Vested***

No options were exercised by named executive officers in fiscal year 2013.

### ***Employment Agreements***

We have entered into employment offer letters with each of our named executive officers described below, and employee proprietary information and inventions assignment agreements, under which each of our named executive officers has agreed not to disclose our confidential information or induce us to use proprietary information or trade secrets of others at any time.

#### *Pamela G. Marrone, Ph.D.*

Effective as of June 29, 2006, we entered into an offer letter with Dr. Pamela G. Marrone, our President and Chief Executive Officer. Under the offer letter, Dr. Marrone is entitled to an annual base salary, which was \$250,000, for 2013, and was increased to \$300,000 for 2014 in connection with our initial public offering. Dr. Marrone is eligible for our benefit programs on the same terms as our other executives. In addition, in accordance with the terms of the offer letter, our board of directors granted Dr. Marrone a restricted stock award of 97,424 shares, which completely vested on June 29, 2010, and an option to purchase 53,378 shares of our common stock on May 1, 2007, which completely vested on May 1, 2011.

The letter agreement provides that either party may terminate the employment arrangement for any reason or no reason, but four weeks' notice is requested if the agreement is terminated by Dr. Marrone. In addition, the

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agreement provides that if we actively or constructively terminate Dr. Marrone's employment without cause (whether or not in connection with a change of control), Dr. Marrone will be eligible to receive:

- an amount equal to twelve months of her then-current annual base salary payable in the form of salary continuation; and
- medical and dental coverage, plus disability and life insurance premiums, for a period of twelve months following her termination.

### *James B. Boyd*

Effective as of February 26, 2014, we entered into an offer letter with James B. Boyd, our successor Vice President and Chief Financial Officer. Under the offer letter, Mr. Boyd is entitled to an annual base salary of \$240,000, and is eligible for our benefit programs, vacation benefits, medical benefits and 401(k) plan participation. In addition, in satisfaction of obligations to Mr. Boyd in the offer letter with respect to option awards, our board of directors granted Mr. Boyd an option to purchase 190,000 shares of our common stock on February 13, 2014, which vests, subject to continued employment on each vesting date, with respect to one-quarter of the total shares subject to the option on the first anniversary of the option's vesting commencement date of February 26, 2014 and with respect to 1/48th of the total shares subject to the option monthly thereafter for 36 months, such that all shares subject to the option will be fully vested on the fourth anniversary of such option's vesting commencement date.

The offer letter also provided for a \$10,000 signing bonus upon Mr. Boyd's acceptance, relocation expenses of \$20,000 and three months temporary housing. If Mr. Boyd fails to complete 12 months of service with us, he has agreed to repay a pro rata portion of his signing bonus and the relocation expenses that we paid on his behalf. The letter agreement provides that either party may terminate the employment arrangement for any reason or no reason, but four weeks' notice is requested if Mr. Boyd terminates his employment. In addition, the agreement provides that if we actively or constructively terminate Mr. Boyd's employment without cause (whether or not in connection with a change of control), Mr. Boyd will be eligible to receive:

- an amount equal to six months of his then-current annual base salary payable in the form of salary continuation; and
- medical and dental coverage, plus disability and life insurance premiums, for a period of six months following his termination.

### *Donald J. Glidewell*

On November 7, 2013, we announced that Mr. Glidewell had decided to retire from the Company. To facilitate the transition, Mr. Glidewell agreed to remain as our Chief Financial Officer for up to five months while we searched for a successor Chief Financial Officer, and we entered into a transition agreement with Mr. Glidewell that provides, among other things, for continued vesting of his outstanding equity awards through his retirement date and that upon his separation from the Company, Mr. Glidewell is eligible to receive:

- an amount equal to six months of his then-current annual base salary payable monthly for a period of six months from his retirement date in the form of salary continuation;
- medical and dental coverage, plus disability and life insurance premiums, for a period of six months following his retirement; and
- full acceleration of vesting of his outstanding equity awards that are unvested as of his retirement date.

### *Hector Absi*

Effective as of August 7, 2012, we entered into an offer letter with Hector Absi, our Chief Operating Officer. Under the offer letter, Mr. Absi is entitled to an annual base salary, which was \$225,000 for 2013, and was increased to \$235,000 for 2014 in connection with Mr. Absi's promotion to Chief Operating Officer. Mr. Absi is eligible for our benefit programs, including our non-equity incentive program, vacation benefits, medical benefits

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and 401(k) plan participation, and was granted an option for the right to purchase 79,657 shares of our common stock on September 28, 2012, each of which vests, subject to continued employment on each vesting date, with respect to one-quarter of the total shares subject to the option on the first anniversary of the option's vesting commencement date of September 28, 2012 and with respect to 1/48th of the total shares subject to the option monthly thereafter for 36 months, such that all shares subject to the option will be fully vested on the fourth anniversary of such option's vesting commencement date.

The letter agreement provides that either party may terminate the employment arrangement for any reason or no reason, but four weeks' notice is requested if Mr. Absi terminates his employment. The offer letter also provided for a \$10,000 signing bonus upon Mr. Absi's acceptance and relocation expenses of \$2,000 per month for a period of 24 months starting in September 2012. Both the signing bonus and the relocation expenses are recoupable in part if Mr. Absi terminates his employment prior to the second anniversary of his commencement of employment with us.

### ***Compensation Risk Management***

We have considered the risks associated with our compensation policies and practices for all employees, and we believe we have designed our compensation policies and practices in a manner that does not create incentives that could lead to excessive risk taking that would have a material adverse effect on our Company.

### ***Employee Benefit and Stock Plans***

#### ***Marrone Bio Innovations, Inc. Stock Option Plan***

We established the Marrone Bio Innovations, Inc. Stock Option Plan, which we refer to as the 2006 Plan, effective as of July 26, 2006. We ceased granting options under our 2006 Plan after, and the 2006 Plan terminated upon, the adoption of our 2011 Plan on July 19, 2011. Our 2006 Plan provided for the grant of incentive stock options, within the meaning of Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"), to our employees and any parent and subsidiary corporations' employees, and for the grant of non-qualified stock options to our employees, outside directors and consultants and our parent and subsidiary corporations' employees and consultants.

**Administration:** Our board of directors administered our 2006 Plan. The administrator's powers include the power to: determine the fair market value of our common stock; select the individuals to whom options may be granted; determine the number of shares of stock covered by each option; approve forms of award agreement; determine the terms and conditions of options granted to employees and consultants (e.g., the exercise price, the times when options may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, and any restriction or limitation regarding any option or the underlying shares of stock); reduce the exercise price of any option granted to employees and consultants to the then current fair market value of our common stock if such fair market value has declined since the date of grant; prescribe, amend and rescind rules and regulations relating to our 2006 Plan; modify or amend each option; institute an option exchange program; and make all other determinations deemed necessary or advisable for administering our 2006 Plan.

**Transferability of Options:** Our 2006 Plan allows for the transfer of options only (i) by will; and (ii) by the laws of descent and distribution. Only the recipient of an option may exercise such option during his or her lifetime.

**Certain Adjustments:** In the event of certain changes in our capitalization our board of directors will make adjustments to one or more of (i) the number of shares that are covered by outstanding options; (ii) the exercise price of outstanding options, and (iii) the numerical share limits contained in our 2006 Plan. In the event of our complete liquidation or dissolution, recipients must be notified at least ten (10) days prior to the proposed transaction and may exercise all vested and unvested options until ten (10) days prior to such transaction; all outstanding options will terminate immediately prior to the consummation of such transaction.



**Corporate Transactions:** Our 2006 Plan provides that in the event of a corporate transaction, as defined in our 2006 Plan, each outstanding option will become immediately vested. In the event of a corporate transaction involving a merger or sale of assets, options will be exercisable for a period of fifteen (15) days from the date that notice of the transaction is provided; the option will then terminate upon the expiration of that period.

#### *2011 Stock Plan*

We established our 2011 Stock Plan, which we refer to as the 2011 Plan, effective as of July 19, 2011. Our 2011 Plan provided for the grant of incentive stock options, within the meaning of Section 422 of the Code, to our employees and any parent and subsidiary corporations' employees, and for the grant of non-qualified stock options and stock purchase rights to our employees, directors and consultants and any parent and subsidiary corporations' employees, directors and consultants. We ceased granting options under our 2011 Plan after, and the 2011 Plan terminated upon, the adoption of our 2013 Plan on August 1, 2013.

**Administration:** Our board of directors administered our 2011 Plan. The administrator's powers include the power to: determine the persons to whom, and the times at which, awards shall be granted and the number of shares of our common stock subject to each award; determine the fair market value of our common stock; determine the terms, conditions and restrictions applicable to each award (e.g. the exercise price, the method of payment, the method for satisfaction of any tax withholding obligation, the timing, terms and conditions of the exercisability and vesting of the award, the time of the expiration of the award, and the effect of the recipient's termination of service); approve forms of award agreement; amend, modify, extend, cancel or renew any award or waive any restrictions or conditions applicable to any award; accelerate, continue, extend or defer the exercisability of any award; prescribe, amend or rescind rules guidelines and policies relating to the 2011 Plan; and make all other determinations and take such other actions with respect to the 2011 Plan or any award as it deems advisable and that is consistent with applicable law, regulations and rules.

**Stock Options:** Our 2011 Plan allowed for the grant of incentive stock options that qualify under Section 422 of the Code only to our employees and employees of any parent or subsidiary of ours. Non-qualified stock options could be granted to our employees, directors, and consultants and those of any parent or subsidiary of ours. The exercise price of all options granted under our 2011 Plan was required to be at least equal to the fair market value of our common stock on the date of grant. The term of an option may not exceed ten (10) years, except that with respect to any employee who owns more than ten percent (10%) of the voting power of all classes of our outstanding stock or the outstanding stock of any parent or subsidiary corporation as of the grant date (i) the term of an incentive stock option must not exceed five (5) years; and (ii) the exercise price of an incentive stock option must equal at least one hundred ten percent (110%) of the fair market value of our common stock on the grant date.

After the continuous service of an employee, director or consultant terminates, he or she may exercise his or her option, to the extent vested, for the period of time specified in the award agreement. If his or her continuous service terminates for cause, however, the option shall immediately terminate. An option may not be exercised later than the expiration of its term.

**Stock Purchase Rights:** Our 2011 Plan allowed for the grant of stock purchase rights. Stock purchase rights are rights to purchase our common stock for at least one hundred percent (100%) of the fair market value of our common stock and which are exercisable for thirty (30) days from the date of grant. The purchase price of a stock purchase right may be paid in cash or in the form of services rendered. The board of directors may subject a stock purchase right to vesting conditions.

**Transferability of Awards:** Our 2011 Plan allowed for the transfer of awards only (i) by will; (ii) by the laws of descent and distribution and (iii) for non-qualified stock options, to the extent authorized by the board of directors. Only the recipient of an award may exercise such award during his or her lifetime except that non-qualified stock options may be transferred to certain trusts and certain family members.

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**Certain Adjustments:** In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under the 2011 Plan, the board of directors will make adjustments to one or more of (i) the number and class of shares subject to the 2011 Plan and that are covered by outstanding awards; (ii) the exercise price of outstanding awards and (iii) the incentive stock option share limit contained in the 2011 Plan.

**Changes in Control:** Our 2011 Plan provides that in the event of a change in control, as defined in the 2011 Plan, the board of directors, in its discretion may provide that (i) the vesting and exercisability of any outstanding awards shall accelerate; or (ii) that each outstanding award (including, at the board of directors' discretion, unvested awards) shall be cashed out; payment due with respect to unvested awards would then be payable in accordance with the existing vesting schedule. Further, the successor corporation may assume or substitute an equivalent award for each outstanding award; if the successor corporation does not do so, awards held by recipients who have not terminated employment with us will vest in full as of the change in control.

### *2013 Stock Incentive Plan*

In August 2013, our board of directors adopted the 2013 Stock Incentive Plan (2013 Plan). The 2013 Plan serves as the successor to our 2011 Plan. Our 2013 Plan provides for the grant of incentive stock options, within the meaning of Section 422 of the Code, to our employees and any parent and subsidiary corporations' employees, and for the grant of non-qualified stock options, stock appreciation rights, restricted stock, restricted stock units and dividend equivalent rights to our employees, directors and consultants and our parent and subsidiary corporations' employees, directors and consultants.

**Shares:** We initially authorized a total of 1,600,000 shares of our common stock for issuance pursuant to the 2013 Plan, plus the number of shares of common stock reserved for issuance pursuant to future grants under the 2011 Plan upon the adoption of the 2013 Plan. In addition, the number of shares authorized for issuance pursuant to the 2013 Plan will be increased by any additional shares that would otherwise return to the 2011 Plan after the date of adoption of the 2013 Plan as a result of the forfeiture, termination or expiration of awards previously granted under the 2011 Plan. Further, our 2013 Plan provides for annual increases in the number of shares available for issuance thereunder equal to the least of (i) 3.5% of the number of shares of the Company's common stock outstanding on the last day of the immediately preceding fiscal year or (ii) a lesser number of shares determined by the administrator. Based on and subject to the foregoing, as of January 1, 2014, including such annual increase, 2,685,817 shares of our common stock, plus any additional shares which are subject to options granted under our 2006 Plan or 2011 Plan but are forfeited or otherwise terminate or expire subsequent to January 1, 2014, were authorized for issuance pursuant to the 2013 Plan. In addition, as of January 1, 2014, under the 2013 Plan, 814,175 shares of common stock were issuable upon the exercise of outstanding options granted and 1,871,642 additional shares of common stock were reserved for issuance pursuant to future grants.

**Administration:** Our board of directors or a committee of our board of directors administers our 2013 Plan. In the case of awards intended to qualify as "performance based compensation" within the meaning of Section 162(m) of the Code, the committee consists of two (2) or more "outside directors" within the meaning of Section 162(m) of the Code. The administrator has the power to determine and interpret the terms and conditions of the awards, including the employees, directors and consultants who will receive awards, the exercise price, the number of shares subject to each such award, the vesting schedule and exercisability of the awards, the restrictions on transferability of awards and the form of consideration payable upon exercise. The administrator also has the authority to institute an exchange program whereby the exercise prices of outstanding awards may be reduced or outstanding awards may be surrendered or cancelled in exchange for other awards of the same type (which may have higher or lower exercise prices) or awards of a different type.

**Stock Options:** Our 2013 Plan allows for the grant of incentive stock options that qualify under Section 422 of the Code only to our employees and employees of any parent or subsidiary of ours. Non-qualified stock options may be granted to our employees, directors and consultants and those of any parent or subsidiary of ours. The exercise price of all options granted under our 2013 Plan must at least be equal to the fair market value of our common stock on the date of grant. The term of an incentive stock option may not exceed ten (10) years, except that with respect to any employee who owns more than ten percent (10%) of the voting power of all classes of

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our outstanding stock or any parent or subsidiary corporation as of the grant date, the term must not exceed five (5) years and the exercise price must equal at least one hundred ten percent (110%) of the fair market value on the grant date.

After the continuous service of an employee, director or consultant terminates, he or she may exercise his or her option, to the extent vested, for the period of time specified in the option agreement. However, an option may not be exercised later than the expiration of its term.

**Stock Appreciation Rights:** Our 2013 Plan allows for the grant of stock appreciation rights. Stock appreciation rights allow the recipient to receive the appreciation in the fair market value of our common stock between the date of grant and the exercise date. The administrator will determine the terms of stock appreciation rights, including when such rights become exercisable and whether to pay the increased appreciation in cash or with shares of our common stock, or a combination thereof, except that the base appreciation amount for the cash or shares to be issued pursuant to the exercise of a stock appreciation right will be no less than one hundred percent (100%) of the fair market value per share on the date of grant. After the continuous service of an employee, director or consultant terminates, he or she may exercise his or her stock appreciation right, to the extent vested, only to the extent provided in the stock appreciation right agreement.

**Restricted Stock Awards:** Our 2013 Plan allows for the grant of restricted stock. Restricted stock awards are shares of our common stock that vest in accordance with terms and conditions established by the administrator. The administrator will determine the number of shares of restricted stock granted to any employee, director or consultant. The administrator may impose whatever conditions on vesting it determines to be appropriate. For example, the administrator may set restrictions based on the achievement of specific performance goals. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture.

**Restricted Stock Units:** Our 2013 Plan allows for the grant of restricted stock units. Restricted stock units are awards that will result in payment to a recipient at the end of a specified period only if the vesting criteria established by the administrator are achieved or the award otherwise vests. The administrator may impose whatever conditions to vesting, restrictions and conditions to payment it determines to be appropriate. The administrator may set restrictions based on the achievement of specific performance goals or on the continuation of service or employment. Payments of earned restricted stock units may be made, in the administrator's discretion, in cash, with shares of our common stock or other securities, or a combination thereof.

**Dividend Equivalent Rights:** Our 2013 Plan allows for the grant of dividend equivalent rights. Dividend equivalent rights are awards that entitle the recipients to compensation measured by the dividends we pay with respect to our common stock.

**Transferability of Awards:** Our 2013 Plan allows for the transfer of awards under the 2013 Plan only (i) by will; (ii) by the laws of descent and distribution and (iii) for awards other than incentive stock options, to the extent authorized by the administrator. Only the recipient of an incentive stock option may exercise such award during his or her lifetime.

**Certain Adjustments:** In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under the 2013 Plan, the administrator will make adjustments to one or more of the number or class of shares that are covered by outstanding awards, the exercise or purchase price of outstanding awards, the numerical share limits contained in the 2013 Plan and any other terms that the administrator determines require adjustment. In the event of our complete liquidation or dissolution, all outstanding awards will terminate immediately upon the consummation of such transaction.

**Corporate Transactions and Changes in Control:** Our 2013 Plan provides that in the event of a corporate transaction, as defined in the 2013 Plan, each outstanding award will terminate upon the consummation of the corporate transaction to the extent that such awards are not assumed by the acquiring or succeeding corporation. Prior to or upon the consummation of a corporate transaction or a change in control, as defined in the 2013 Plan,

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an outstanding award may vest, in whole or in part, to the extent provided in the award agreement or as determined by the administrator in its discretion. The administrator may condition the vesting of an award upon the subsequent termination of the recipient's service or employment within a specified period of time following the consummation of a corporate transaction or change in control. The administrator will not be required to treat all awards similarly in the event of a corporate transaction or change in control.

**Plan Amendments and Termination:** Our 2013 Plan will automatically terminate ten (10) years following the date it becomes effective, unless we terminate it sooner. In addition, our board of directors has the authority to amend, suspend or terminate the 2013 Plan provided such action does not impair the rights under any outstanding award unless mutually agreed to in writing by the recipient and us.

### *401(k) Plan*

We maintain a 401(k) retirement savings plan. Each participant who is a U.S. employee may contribute to the 401(k) plan, through payroll deductions, up to a statutorily prescribed annual limit imposed by the Internal Revenue Service (which limit was \$17,500 in 2013). All amounts contributed by employee participants and earnings on these contributions are fully vested at all times and are not taxable to participants until withdrawn. Employee participants may elect to invest their contributions in various established funds. We may make contributions to the accounts of plan participants.

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

The following table sets forth certain information with respect to the beneficial ownership of our common stock as of December 31, 2013, for:

- each person or group of affiliated persons known by us to be the beneficial owner of more than 5% of our common stock;
- each of our named executive officers;
- each of our directors; and
- all current executive officers and directors as a group.

We have determined beneficial ownership in accordance with SEC rules. The information does not necessarily indicate beneficial ownership for any other purpose. Under these rules, the number of shares of common stock deemed outstanding includes shares issuable upon exercise of options held by the respective person or group that may be exercised within 60 days after December 31, 2013. For purposes of calculating each person's or group's percentage ownership, stock options and warrants exercisable within 60 days after December 31, 2013 are included for that person or group but not the stock options of any other person or group.

Applicable percentage ownership is based on 19,322,607 shares of common stock outstanding at December 31, 2013. In computing the number of shares of common stock beneficially owned by a person and the percentage ownership of that person, we deemed to be outstanding all shares of common stock subject to options and warrants exercisable within 60 days of December 31, 2013. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person.

Unless otherwise indicated and subject to applicable community property laws, to our knowledge, each stockholder named in the following table possesses sole voting and investment power over the shares listed. Unless otherwise noted below, the address of each person listed in the table is c/o Marrone Bio Innovations, Inc., 2121 Second St. Suite A-107, Davis, CA 95618.

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NAME AND ADDRESS OF BENEFICIAL OWNER	SHARES BENEFICIALLY OWNED	
	SHARES (#)	SHARES (%)
<b>5% Stockholders:</b>		
Syngenta Ventures Pte. LTD. (1)  1, Harbourfront Avenue  098632 Singapore	2,221,904	11.5
One Earth Capital, LLC (2)  201 Entrada Drive  Santa Monica, CA 90402	1,429,189	7.4
Stuart Mill Venture Partners, L.P. (3)  252 North Washington Street  Falls Church, VA 22046	1,347,317	7.0
Entities affiliated with Saffron Hill Ventures (4)  130 Wood Street  London EC2V 6DL  United Kingdom	1,287,983	6.7
CGI Opportunity Fund II, L.P. (5)  5 San Joaquin Plaza, Suite 330  Newport Beach, CA 92660	1,272,466	6.6
Gilder, Gagnon, Howe & Co. LLC (6)  3 Columbus Circle, 26th Floor  New York, NY 10019	1,059,408	5.5
Entities affiliated with Waddell & Reed Financial, Inc. (7)  6300 Lamar Avenue  Overland Park, KS 66202	1,029,000	5.3
Entities affiliated with CPV Partners GP, LLC (8)  Two Transamerica Center  505 Sansome, Suite 1200  San Francisco, CA 94111	966,346	5.0
<b>Directors and Named Executive Officers:</b>		
Pamela G. Marrone, Ph.D. (9)	988,418	5.1

Elin Miller (10)	8,497	*
Ranjeet Bhatia (11)	20,502	*
Pamela Contag, Ph.D. (12)	—	*
Timothy Fogarty (13)	1,190	*
Lawrence A. Hough (14)	1,905	*
Joseph Hudson (15)	—	*
Les Lyman (16)	1,000	*
Richard Rominger (17)	112,705	*
Shaugn Stanley (18)	5,842	*
Donald J. Glidewell (19)	146,924	*
Hector Absi (20)	28,215	*
<b>All current directors and executive officers as a group (12 persons) (21)</b>	<b>1,315,198</b>	<b>6.8</b>

\* Represents beneficial ownership of less than 1% of our outstanding common stock.

(1) Syngenta AG, the ultimate parent of Syngenta Ventures Pte. LTD., is a public company traded on both the SIX Swiss Exchange and the NYSE.

(2) Includes warrants to purchase 8,929 shares of common stock held by One Earth Capital, LLC. David H. Jacobs, Jr., the sole member and the sole manager of Henry Street LLC, the sole managing member of One Earth Capital, LLC, and therefore may be deemed to have sole voting control and investment power over the securities held by of One Earth Capital, LLC. See also Note 15 to this section.

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- (3) Includes warrants to purchase 8,929 shares of common stock held by Stuart Mill Venture Partners, L.P. Walter Lubsen Jr., Jeffrey Salinger and Jana Hernandes are the Managing Partners and Lawrence Hough is the Managing Director of Stuart Mill Partners, LLC, the general partner of Stuart Mill Venture Partners, L.P., and therefore may be deemed to share voting control and investment power over the securities held by Stuart Mill Venture Partners, L.P. See also Note 14 to this section.
- (4) Includes 191,782 shares of common stock held by Saffron Hill Ventures L.P., 1,096,201 shares of common stock held by Saffron Hill Ventures 2, L.P. Shawn Luetchens and Ranjeet Bhatia are Directors of Saffron Hill MGP Ltd and Saffron Hill MGP2 Ltd, the General Partners of Saffron Hill Ventures L.P. and Saffron Hill Ventures 2, L.P., respectively, and therefore may be deemed to share voting control and investment power over the securities held by Saffron Hill Ventures L.P. and Saffron Hill Ventures 2, L.P. See also Note 11 to this section.
- (5) Includes warrants to purchase 2,381 shares of common stock held by Peter V. Ueberroth and Virginia M. Ueberroth, Trustees of Ueberroth Family Trust. Peter V. Ueberroth and Joseph Ueberroth are Partners of CGI Opportunity Gen Par II, LLC, the sole General Partner of CGI Opportunity Fund II, L.P. and therefore may be deemed to share voting control and investment power over the securities held by CGI Opportunity Fund II, L.P. See also Note 13 to this section.
- (6) As reported in the Schedule 13G filed February 12, 2014, the securities reported on herein include 908,924 shares held in customer accounts over which partners and/or employees of Gilder, Gagnon, Howe & Co. LLC (“Gilder”) have discretionary authority to dispose of or direct the disposition of the shares, 39,725 shares held in the account of the profit sharing plan of Gilder, and 110,759 shares held in accounts owned by the partners of Gilder and their families.
- (7) As reported in the Schedule 13G filed February 7, 2014, the securities reported on herein are beneficially owned by one or more open-end investment companies or other managed accounts which are advised or sub-advised by Ivy Investment Management Company (“IICO”), the direct holder of 475,300 shares and an investment advisory subsidiary of Waddell & Reed Financial, Inc. (“WDR”) or Waddell & Reed Investment Management Company (“WRIMCO”), the direct holder of 553,700 shares and an investment advisory subsidiary of Waddell & Reed, Inc. (“WRI”). WRI is a broker-dealer and underwriting subsidiary of Waddell & Reed Financial Services, Inc., a parent holding company (“WRFSI”). In turn, WRFSI is a subsidiary of WDR, a publicly traded company. The investment advisory contracts grant IICO and WRIMCO all investment and/or voting power over securities owned by such advisory clients. The investment sub-advisory contracts grant IICO and WRIMCO investment power over securities owned by such sub-advisory clients and, in most cases, voting power. Any investment restriction of a sub-advisory contract does not restrict investment discretion or power in a material manner. Therefore, IICO and/or WRIMCO may be deemed the beneficial owner of the securities covered by this statement under Rule 13d-3 of the Securities Exchange Act of 1934.
- (8) Includes 191,782 shares of common stock held by CPV Partners Pledge Fund, L.P. Series (A-2), 185,623 shares of common stock held by CPV Partners Pledge Fund, L.P. Series (A-5), 169,280 shares of common stock held by CPV Partners Pledge Fund, L.P. Series (A-8), 311,831 shares of common stock held by CPV Partners Pledge Fund, LP Series (A-15) and 107,830 shares held by CPV Partners Pledge Fund, L.P. (A-21) (such stockholders together, the “CVP Affiliates”). Jeff Barnes, Dave Herron and Sean Schickedanz are managing members of CPV Partners GP, LLC, the sole General Partner of each of the CVP Affiliates, and therefore may be deemed to share voting control and investment power over the securities held by the CVP Affiliates.
- (9) Includes 710,875 shares of common stock held by Dr. Marrone, 217,967 shares of common stock issuable to Dr. Marrone upon the exercise of outstanding options exercisable within 60 days, 6,442 shares of common stock held by Florence H. Marrone TOD Pamela G. Marrone and 53,134 shares of common stock held by Dr. Marrone and Michael Rogers. Does not include 145,869 shares of common stock issuable to Dr. Marrone upon the exercise of outstanding options not exercisable within 60 days.
- (10) Includes 8,947 shares of common stock issuable upon the exercise of outstanding options exercisable within 60 days. Does not include 12,900 shares of common stock issuable upon the exercise of outstanding options not exercisable within 60 days.

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- (11) Ranjeet Bhatia is a Director of Saffron Hill MGP Ltd and Saffron Hill MGP2 Ltd, the General Partners of Saffron Hill Ventures L.P. and Saffron Hill Ventures 2, L.P., respectively, and therefore may be deemed to share voting control and investment power over the securities held by Saffron Hill Ventures L.P. and Saffron Hill Ventures 2, L.P. Does not include 7,520 shares of common stock issuable to Mr. Bhatia upon the exercise of outstanding options not exercisable within 60 days. See also Note 4 to this section.
- (12) Does not include 18,480 shares of common stock issuable upon the exercise of outstanding options not exercisable within 60 days.
- (13) Includes warrants to purchase 1,190 shares of common stock held by Timothy and Patricia Fogarty 2011 Trust, Dated August 1, 2011. Timothy Fogarty is a Partner of the Contrarian Group, an affiliate of CGI Opportunity Fund II, L.P. but does not hold voting control or investment power over the securities held by CGI Opportunity Fund II, L.P. Does not include 7,520 shares of common stock issuable upon the exercise of outstanding options not exercisable within 60 days. See also Note 5 to this section.
- (14) Includes warrants to purchase 1,905 shares of common stock held by Lawrence Hough. Lawrence Hough is the Managing Director of Stuart Mill Partners, LLC, the general partner of Stuart Mill Venture Partners, L.P., but does not hold voting control or investment power over the securities held by Stuart Mill Venture Partners, L.P. Does not include 8,648 shares of common stock issuable upon the exercise of outstanding options not exercisable within 60 days. See also Note 3 to this section.
- (15) Joseph Hudson is a member of One Earth Capital, LLC, but does not hold voting control or investment power over the securities held by One Earth Capital, LLC. Does not include 7,520 shares of common stock issuable upon the exercise of outstanding options not exercisable within 60 days. See also Note 2 to this section.
- (16) Includes 1,000 shares of common stock held by Leslie F. Lyman as custodian for Jackson WH Lyman UCAUTMA. Does not include 18,480 shares of common stock issuable upon the exercise of outstanding options not exercisable within 60 days.
- (17) Includes 99,522 shares of common stock held by The Richard and Mary Rominger Community Trust and 13,183 shares of common stock usable to Mr. Rominger upon the exercise of outstanding options exercisable within 60 days. Does not include 10,359 shares of common stock issuable upon the exercise of outstanding options not exercisable within 60 days.
- (18) Includes 5,842 shares of common stock issuable upon the exercise of outstanding options exercisable within 60 days. Does not include 14,615 shares of common stock issuable upon the exercise of outstanding options not exercisable within 60 days.
- (19) Includes 146,924 shares of common stock issuable upon the exercise of outstanding options exercisable within 60 days. Does not include 39,664 shares of common stock issuable upon the exercise of outstanding options not exercisable within 60 days.
- (20) Includes 28,215 shares of common stock issuable upon the exercise of outstanding options exercisable within 60 days. Does not include 84,934 shares of common stock issuable upon the exercise of outstanding options not exercisable within 60 days.
- (21) Includes 891,475 shares of common stock, 420,628 shares of common stock issuable upon the exercise of outstanding options held by current directors and executive officers exercisable within 60 days and warrants to purchase 3,095 shares of common stock. Does not include 376,509 shares of common stock issuable upon the exercise of outstanding options held by current directors and executive officers not exercisable within 60 days. See also Notes 2, 3, 4 and 5 to this section.



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

We describe below the transactions and series of similar transactions, since December 31, 2012, to which we were a participant or will be a participant, in which:

- the amounts involved exceeded or will exceed \$120,000; and
- any of our directors, executive officers, holders of more than 5% of our capital stock (which we refer to as 5% stockholders) or any member of their immediate family had or will have a direct or indirect material interest, other than compensation arrangements with directors and executive officers, which are described where required under Part III, Item 11, “Executive Compensation.”

***June 2013 Credit Facility***

In June 2013, we entered into a credit facility agreement with a group of lenders under which such lenders have committed to permit us to draw, in exchange for promissory notes that accrue interest at a rate of 10% per annum, an aggregate of up to \$5,000,000. In addition, in connection with our entry into the credit facility agreement, we have agreed to pay each lender a fee of 2% of such lender’s commitment amount, and we issued warrants to purchase a variable number of shares of common stock to the lenders, which represent the right to purchase an aggregate of up to 59,521 shares of common stock with an exercise price of \$8.40 per share, 70% of the initial public offering price of \$12.00 per share. See Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations—June 2013 Credit Facility.”

The table below sets forth, for each lender under the credit facility agreement that is a director, executive officer or 5% stockholder, and their respective affiliates, the aggregate principal amount committed under the credit facility agreement, the fee paid to such lender in respect of such commitment, and the number of shares of common stock into which the warrants issuable to such lender are convertible.

<u>NAME</u>	<u>AGGREGATE COMMITMENT AMOUNT (\$)</u>	<u>CREDIT FEE (\$)</u>	<u>WARRANT SHARES ISSUABLE</u>
One Earth Capital, LLC (1)	750,000	15,000	8,929
Saffron Hill Ventures 2, L.P. (2)	2,000,000	40,000	23,809
Stuart Mill Venture Partners, L.P. (3)	750,000	15,000	8,929
Timothy and Patricia Fogarty 2011 Trust, Dated August 1, 2011 (4)	100,000	2,000	1,190
Lawrence Hough (5)	160,000	3,200	1,905

- (1) One Earth Capital, LLC is a 5% stockholder whose representative, Joseph Hudson, is a member of our board of directors.
- (2) Saffron Hill Ventures 2, L.P., is a 5% stockholder whose representative, Ranjeet Bhatia, is a member of our board of directors.
- (3) Stuart Mill Venture Partners, L.P., is a 5% stockholder whose representative, Lawrence Hough, is a member of our board of directors. See also Note 5 to this section.
- (4) Timothy Fogarty was elected to our board of directors as a representative of CGI Opportunity Fund II, L.P., and its related affiliates.
- (5) Lawrence Hough was elected to our board of directors as a representative of Stuart Mill Venture Partners, L.P. See also Note 3 to this section.

### ***Executive Compensation and Employment Arrangements***

Please see “Executive Compensation” for information on compensation arrangements with our executive officers and agreements with, and offer letters to, our executive officers containing compensation and termination provisions, among others.

### ***Syngenta Commercial Agreement***

In February 2011, we entered into an agreement with Syngenta Crop Protection AG, an affiliate of a 5% stockholder, whereby we have designated Syngenta as our exclusive distributor for Regalia in specialty crop markets in Europe, Africa and the Middle East. During the year ended December 31, 2013, we recorded revenue of \$116,000 relating to sales of product to Syngenta and \$131,000 relating to license revenue recognized based on the terms of our commercial agreement with Syngenta. As of December 31, 2013, we had no outstanding accounts receivable due from Syngenta. For a description of the agreement, see Part 1, Item 1, “Business—Strategic Collaborations and Relationships.”

### ***The Lyman/Tremont Groups***

Les Lyman, a member of our board of directors, is the chairman and significant indirect shareholder of The Tremont Group, Inc. During the year ended December 31, 2013, The Tremont Group, Inc. purchased \$1,446,000 of our products for further distribution and resale. As of December 31, 2013, we had outstanding accounts receivable due from The Tremont Group, Inc. of \$903,000, all of which are due in April 2014. Although we anticipate sales of our products to The Tremont Group, Inc. to continue through 2014, we cannot estimate the amount of those sales.

### ***Director and Officer Indemnification and Insurance***

We have adopted provisions in our certificate of incorporation that limit or eliminate the liability of our directors for monetary damages for breach of their fiduciary duties, except for liability that cannot be eliminated under the Delaware General Corporation Law. Accordingly, our directors will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except with respect to of the following:

- any breach of their duty of loyalty to us or our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which the director derived an improper personal benefit.

This limitation of liability does not apply to liabilities arising under the federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission. If Delaware law is amended to authorize the further elimination or limiting of director liability, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law as so amended.

Our certificate of incorporation and our bylaws also provide that we shall indemnify our directors and executive officers and shall indemnify our other officers and employees and other agents to the fullest extent permitted by law. We believe that indemnification under our bylaws covers at least negligence and gross negligence on the part of indemnified parties. Our bylaws, as currently in effect, also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in this capacity, regardless of whether our bylaws would permit indemnification.

We have entered and intend to continue to enter into separate indemnification agreements with certain of our directors and executive officers that are, in some cases, broader than the specific indemnification provisions provided by Delaware law and our charter documents, and may provide additional procedural protection. These agreements will require us, among other things, to:

- indemnify officers and directors against certain liabilities that may arise because of their status as officers and directors;
- advance expenses, as incurred, to officers and directors in connection with a legal proceeding subject to limited exceptions; and
- cover officers and directors under any general or directors' and officers' liability insurance policy maintained by us.

We believe that these provisions and agreements are necessary to attract and retain qualified persons as directors and executive officers. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling our company pursuant to the foregoing provisions, the opinion of the Securities and Exchange Commission is that such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

In addition, we maintain standard policies of insurance under which coverage is provided to our directors and officers against loss arising from claims made by reason of breach of duty or other wrongful act, and to us with respect to payments which may be made by us to such directors and officers pursuant to the above indemnification provisions or otherwise as a matter of law. We also make available standard life insurance and accidental death and disability insurance policies to our employees.

#### ***Policies and Procedures Regarding Related Party Transactions***

Our board of directors reviews related party transactions for potential conflict of interest issues. Our board of directors has adopted a written related person transaction policy to set forth the policies and procedures for the review and approval or ratification of related person transactions. This policy covers any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships in which we were or are to be a participant, the amount involved exceeds \$120,000 and a related person had or will have a direct or indirect material interest, including, without limitation, purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness, guarantees of indebtedness or employment by us or a related person.

#### ***Director Independence***

For a discussion of the independence of our directors, please see Part III, Item 10, "Directors, Executive Officers and Corporate Governance—Director Independence" above.

**ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES**

The following table summarizes the fees of Ernst & Young LLP, our independent registered public accounting firm, for each of the last two fiscal years.

<u>FEE CATEGORY</u>	<u>FISCAL 2013</u>	<u>FISCAL 2012</u>
Audit fees (1)	\$ 1,133,000	\$ 885,000
Audit-related fees (2)	50,000	20,000
Tax fees (3)	32,000	83,000
Total fees	<u>\$ 1,215,000</u>	<u>\$ 988,000</u>

- (1) Audit fees consist of professional services rendered in connection with the audit of our consolidated financial statements and review of our quarterly consolidated financial statements. Audit fees for fiscal 2013 and 2012 also include fees associated with our initial public offering of common stock completed in August 2013, which included a review of our quarterly consolidated financial statements included in our registration statement on Form S-1 filed with the SEC, as well as the delivery of comfort letters, consents and reviews of documents filed with the SEC.
- (2) Audit-related fees consist of professional services for assurance and related services that are reasonably related to the performance of the audit or review of our consolidated financial statements and are not reported under “Audit Fees.” These services include accounting consultations concerning financial accounting and reporting standards.
- (3) Tax fees consist of fees for professional services rendered for tax compliance, tax planning and tax advice.

The Audit Committee pre-approves all audit and non-audit services to be, and has approved all of the foregoing audit and non-audit services, performed by the independent registered public accounting firm in accordance with the Audit Committee Charter.

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**PART IV**

**ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES**

We have filed the following documents as part of this Form 10-K:

1. Consolidated financial statements:

	<u>Page</u>
<a href="#">Report of Independent Registered Public Accounting Firm</a>	82
<a href="#">Consolidated Balance Sheets as of December 31, 2013 and 2012</a>	83
<a href="#">Consolidated Statements of Operations for the years ended December 31, 2013, 2012 and 2011</a>	84
<a href="#">Consolidated Statements of Comprehensive Loss for the years ended December 31, 2013, 2012 and 2011</a>	85
<a href="#">Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit) for the years ended December 31, 2013, 2012 and 2011</a>	86
<a href="#">Consolidated Statements of Cash Flows for the years ended December 31, 2013, 2012 and 2011</a>	88
<a href="#">Notes to Consolidated Financial Statements</a>	89

2. Financial Statement Schedules

All schedules have been omitted because they are not required, not applicable, not present in amounts sufficient to require submission of the schedule, or the required information is otherwise included.

3. Exhibits

See the Exhibit Index immediately following the signature page of this Annual Report on Form 10-K, which is incorporated by reference here.

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Davis, State of California, on March 25, 2014.

MARRONE BIO INNOVATIONS, INC.

/s/ PAMELA G. MARRONE  
**Pamela G. Marrone**  
**President and Chief Executive Officer**

**POWER OF ATTORNEY**

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Pamela G. Marrone her or his true and lawful attorney-in-fact and agent, with full power of substitution and, for her or him and in her or his name, place and stead, in any and all capacities to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent 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 she or he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ Pamela G. Marrone</u> Pamela G. Marrone	President and Chief Executive Officer (Principal Executive Officer)	March 25, 2014
<u>/s/ Donald J. Glidewell</u> Donald J. Glidewell	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 25, 2014
<u>/s/ Elin Miller</u> Elin Miller	Chair of the Board	March 25, 2014
<u>/s/ Ranjeet Bhatia</u> Ranjeet Bhatia	Director	March 25, 2014
<u>/s/ Pamela Contag</u> Pamela Contag	Director	March 25, 2014
<u>/s/ Tim Fogarty</u> Tim Fogarty	Director	March 25, 2014
<u>/s/ Lawrence Hough</u> Lawrence Hough	Director	March 25, 2014

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<div>/s/ Joseph Hudson</div> <div>Joseph Hudson</div>	Director	March 25, 2014
<div>/s/ Les Lyman</div> <div>Les Lyman</div>	Director	March 25, 2014
<div>/s/ Richard Rominger</div> <div>Richard Rominger</div>	Director	March 25, 2014
<div>/s/ Shaun Stanley</div> <div>Shaun Stanley</div>	Director	March 25, 2014

# INDEX TO EXHIBITS

EXHIBIT NUMBER	EXHIBIT DESCRIPTION	INCORPORATED BY REFERENCE				FILED HEREWITH
		FORM	FILE NO.	EXHIBIT NUMBER	FILING DATE	
3.1	Fourth Amended and Restated Certificate of Incorporation of Marrone Bio Innovations, Inc.					X
3.2	Amended and Restated Bylaws of Marrone Bio Innovations, Inc.					X
4.1	Form of Marrone Bio Innovations, Inc.'s common stock certificate.	S-1/A	333-189753	10.4	July 22, 2013	
4.2	Form of promissory note warrants.					X
4.3	Form of credit facility warrants.					X
10.1†	Marrone Bio Innovations, Inc. Stock Option Plan and related documents.	S-1	333-189753	10.1	July 1, 2013	
10.2†	Marrone Bio Innovations, Inc. 2011 Stock Plan and related documents.	S-1	333-189753	10.2	July 1, 2013	
10.3†	Marrone Bio Innovations, Inc. 2013 Stock Incentive Plan and related documents.	S-1/A	333-189753	10.3	July 22, 2013	
10.4†	Indemnification Agreement by and between Marrone Bio Innovations, Inc. and each of its directors and executive officers.	S-1/A	333-189753	10.4	July 22, 2013	
10.5†	Offer letter, dated June 29, 2006, between Marrone Organic Innovations, Inc. and Dr. Pamela G. Marrone.	S-1	333-189753	10.5	July 1, 2013	
10.6†	Offer letter, dated March 16, 2011, between Marrone Bio Innovations, Inc. and Donald J. Glidewell.	S-1	333-189753	10.6	July 1, 2013	
10.7†	Offer letter, dated August 7, 2012, between Marrone Bio Innovations, Inc. and Hector Absi.	S-1	333-189753	10.7	July 1, 2013	
10.8†	Offer letter, dated February 10, 2014, between Marrone Bio Innovations, Inc. and James B. Boyd.					X
10.9†	Transition agreement, dated November 7, 2013, between Marrone Bio Innovations, Inc. and Donald J. Glidewell.					X
10.10	Standard Multi-Tenant Office Lease, dated August 3, 2007, by and between Davis Commerce Center, LLC and Marrone Organic Innovations, Inc.	S-1	333-189753	10.8	July 1, 2013	



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EXHIBIT NUMBER	EXHIBIT DESCRIPTION	INCORPORATED BY REFERENCE				FILED HEREWITH
		FORM	FILE NO.	EXHIBIT NUMBER	FILING DATE	
10.11	First Amendment to Lease, dated January 1, 2008, by and between Davis Commerce Center, LLC and Marrone Organic Innovations, Inc.	S-1	333-189753	10.9	July 1, 2013	
10.12	Second Amendment to Lease, dated November 13, 2008, by and between 2121 Second Street Investors, LLC and Marrone Organic Innovations, Inc.	S-1	333-189753	10.10	July 1, 2013	
10.13	Third Amendment to Lease, dated September 20, 2010, by and between 2121 Second Street Investors, LLC and Marrone Bio Innovations, Inc.	S-1	333-189753	10.11	July 1, 2013	
10.14	Fourth Amendment to Lease, dated March 14, 2012, by and between 2121 Second Street Investors, LLC and Marrone Bio Innovations, Inc.	S-1	333-189753	10.12	July 1, 2013	
10.15	Fifth Amendment to Lease, dated March 14, 2012, by and between 2121 Second Street Investors, LLC and Marrone Bio Innovations, Inc.	S-1	333-189753	10.13	July 1, 2013	
10.16	Sixth Amendment to Lease, dated December 21, 2012, by and between 2121 Second Street Investors, LLC and Marrone Bio Innovations, Inc.	S-1	333-189753	10.14	July 1, 2013	
10.17	Lease Agreement with Six Davis, LLC.	10-Q	001-36030	10.1	September 13, 2013	
10.18	Convertible Note Purchase Agreement, dated March 15, 2012, by and among Marrone Bio Innovations, Inc. and the Investors party thereto, including form of convertible promissory note.	S-1	333-189753	10.15	July 1, 2013	
10.19	Amendment and Consent, dated August 30, 2012, by and among Marrone Bio Innovations, Inc. and the Investors party thereto, including form of convertible promissory note.	S-1	333-189753	10.16	July 1, 2013	

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<u>EXHIBIT NUMBER</u>	<u>EXHIBIT DESCRIPTION</u>	<u>INCORPORATED BY REFERENCE</u>				<u>FILED HEREWITH</u>
		<u>FORM</u>	<u>FILE NO.</u>	<u>EXHIBIT NUMBER</u>	<u>FILING DATE</u>	
10.20	Loan Agreement, dated October 2, 2012, by and among Marrone Bio Innovations, Inc., the Investors party thereto and the administrative and collateral agent, including form of promissory note and warrant.	S-1	333-189753	10.17	July 1, 2013	
10.21	Security Agreement, dated October 2, 2012, by and among Marrone Bio Innovations, Inc. and the administrative and collateral agent.	S-1	333-189753	10.18	July 1, 2013	
10.22	Loan Agreement, dated October 16, 2012, by and among Marrone Bio Innovations, Inc., the Investor party thereto and the administrative and collateral agent, including form of convertible promissory note.	S-1	333-189753	10.19	July 1, 2013	
10.23	Security Agreement, dated October 16, 2012, by and among Marrone Bio Innovations, Inc. and the administrative and collateral agent.	S-1	333-189753	10.20	July 1, 2013	
10.24	Note Purchase Agreement, dated December 6, 2012, by and between Marrone Bio Innovations, Inc. and Syngenta Ventures Pte. Ltd., including convertible promissory note.	S-1	333-189753	10.21	July 1, 2013	
10.25	Intercreditor Agreement, dated December 6, 2012, by and among Marrone Bio Innovations, Inc., Syngenta Ventures Pte. Ltd. and the administrative agent and collateral agent.	S-1	333-189753	10.22	July 1, 2013	
10.26	Amendment and Consent, dated April 10, 2013, by and among Marrone Bio Innovations, Inc. and the administrative agent party thereto.	S-1	333-189753	10.23	July 1, 2013	
10.27	Convertible Note Purchase Agreement, dated May 22, 2013, by and between Marrone Bio Innovations, Inc. and the Investors party thereto, including form of convertible promissory note.	S-1	333-189753	10.31	July 1, 2013	

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EXHIBIT NUMBER	EXHIBIT DESCRIPTION	INCORPORATED BY REFERENCE				FILED HEREWITH
		FORM	FILE NO.	EXHIBIT NUMBER	FILING DATE	
10.28	Convertible Note Purchase Agreement, dated May 30, 2012, by and among Marrone Bio Innovations, Inc. and DSM Venturing BV, including form of convertible promissory note.	S-1	333-189753	10.32	July 1, 2013	
10.29	Loan Agreement, dated October 2, 2012, by and among Marrone Bio Innovations, Inc., the Investors party thereto and the administrative and collateral agent, including form of promissory note and warrant	S-1	333-189753	10.17	July 1, 2013	
10.30	Security Agreement, dated October 2, 2012, by and among Marrone Bio Innovations, Inc. and the administrative and collateral agent	S-1	333-189753	10.18	July 1, 2013	
10.31	Amendment and Consent, dated April 10, 2013, by and among Marrone Bio Innovations, Inc. and the administrative agent party thereto.	S-1	333-189753	10.23	July 1, 2013	
10.32	Credit Facility Agreement, dated June 14, 2013, by and among Marrone Bio Innovations, Inc. and the Investors party thereto, including form of promissory note and warrant.	S-1	333-189753	10.33	July 1, 2013	
10.33††	License Agreement, dated May 22, 2007, between the KHH Biosci, Inc. and Marrone Organic Innovations, Inc.	S-1/A	333-189753	10.24	July 31, 2013	
10.34††	License Agreement, dated November 13, 2007, between the U.S. Government, as represented by the U.S. Department of Agriculture, Agricultural Research Service, and Marrone Organic Innovations, Inc.	S-1	333-189753	10.25	July 1, 2013	
10.35††	License Agreement, dated December 28, 2009, between the University of the State of New York and Marrone Bio Innovations, Inc.	S-1/A	333-189753	10.26	July 31, 2013	

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EXHIBIT NUMBER	EXHIBIT DESCRIPTION	INCORPORATED BY REFERENCE				FILED HEREWITH
		FORM	FILE NO.	EXHIBIT NUMBER	FILING DATE	
10.36††	Commercial Agreement, dated February 1, 2011, between Syngenta Crop Protection AG and Marrone Bio Innovations, Inc.	S-1/A	333-189753	10.27	July 31, 2013	
10.37††	Commercial Agreement, dated August 26, 2011, between FMC Corporation and Marrone Bio Innovations, Inc.	S-1/A	333-189753	10.28	July 31, 2013	
10.38††	Technology Evaluation and Master Development Agreement, dated September 13, 2011, between The Scotts Company LLC and Marrone Bio Innovations, Inc.	S-1/A	333-189753	10.29	July 31, 2013	
10.39	Asset Purchase Agreement, dated May 25, 2012, between Bankruptcy Trustee for Michigan BioDiesel, LLC and Marrone Bio Innovations, Inc.	S-1	333-189753	10.30	July 1, 2013	
21.1	Subsidiary List of Marrone Bio Innovations, Inc.	S-1/A	333-189753	21.1	July 22, 2013	
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.					X
24.1	Power of Attorney (included on signature page).					X
31.1	Certification of Principal Executive Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.					X
31.2	Certification of Principal Financial Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.					X
32.1	Certification of Principal Executive Officer and Principal Financial Officer Required Under Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. § 1350					X

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EXHIBIT NUMBER	EXHIBIT DESCRIPTION	INCORPORATED BY REFERENCE				
		FORM	FILE NO.	EXHIBIT NUMBER	FILING DATE	FILED HEREWITH
101*	Interactive Data Files Pursuant to Rule 405 of Regulation S-T: (i) Consolidated Balance Sheets as of December 31, 2013 and 2012; (ii) Consolidated Statements of Operations for the Years ended December 31, 2013, 2012 and 2011; (iii) Consolidated Statements of Comprehensive Loss for the Years ended December 31, 2013, 2012 and 2011; (iv) Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit) as of December 31, 2013, 2012 and 2011; (v) Consolidated Statements of Cash Flows for the Years ended December 31, 2013, 2012 and 2011 and (vi) Notes to Consolidated Financial Statements					X

† Indicates a management contract or compensatory plan or arrangement.

†† Confidential portions of this document have been redacted and filed separately with the Securities and Exchange Commission.

\* In accordance with Rule 406T of Regulation S-T, the information in these exhibits is furnished and deemed not filed or part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of section 18 of the Exchange Act of 1934, and otherwise is not subject to liability under these sections.

**FOURTH AMENDED AND RESTATED  
CERTIFICATE OF INCORPORATION  
OF  
MARRONE BIO INNOVATIONS, INC.**

**Marrone Bio Innovations, Inc.**, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the “**Corporation**”), DOES HEREBY CERTIFY:

1. The name of the Corporation is Marrone Bio Innovations, Inc. The Corporation was originally incorporated under the name of Marrone Organic Innovations, Inc., and the original Certificate of Incorporation of the Corporation (the “**Original Certificate**”) was filed with the Secretary of State of the State of Delaware on June 15, 2006.

2. The Original Certificate was amended and restated by the filing of the Amended and Restated Certificate of Incorporation (the “**First Restated Certificate**”) on April 20, 2007. The First Restated Certificate was amended and restated by the filing of the Second Amended and Restated Certificate of Incorporation (the “**Second Restated Certificate**”) on August 4, 2008. The Second Amended and Restated Certificate was amended by the filing of the Certificate of Amendment to the Certificate of Incorporation on May 14, 2009. The Second Restated Certificate was amended and restated by the filing of the Third Amended and Restated Certificate of Incorporation (the “**Third Restated Certificate**”) on March 3, 2010. The Third Amended and Restated Certificate was amended by the filing of the Certificate of Amendment to the Certificate of Incorporation on April 28, 2011. The Third Amended and Restated Certificate was further amended by the filing of a second Certificate of Amendment to the Certificate of Incorporation on May 4, 2012.

3. Pursuant to Sections 242 and 245 of the General Corporation Law of the State of Delaware, and with the approval of the corporation’s stockholders having been given by written consent without a meeting in accordance with Section 228 thereof, this Fourth Amended and Restated Certificate of Incorporation restates, integrates and further amends the provisions of the Third Restated Certificate as heretofore amended and supplemented.

The text of this Fourth Amended and Restated Certificate of Incorporation shall read in its entirety as follows:

**ARTICLE I**

The name of the corporation is Marrone Bio Innovations, Inc. (the “**Corporation**”).

**ARTICLE II**

The address of the Corporation’s registered office in the State of Delaware is 3500 South Dupont Highway, in the City of Dover, County of Kent. The name of the Corporation’s registered agent at such address is Incorporating Services, Ltd.

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### ARTICLE III

The nature of the business of the Corporation and the objects or purposes to be transacted, promoted or carried on by it are as follows: To engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware (the “**DGCL**”).

### ARTICLE IV

A. The total number of shares of all classes of stock shares which the Corporation is authorized to issue is Two Hundred Seventy Million, consisting of:  
Two Hundred Fifty Million (250,000,000) shares of Common Stock, with a par value of \$0.00001 per share (the “**Common Stock**”); and  
Twenty Million (20,000,000) shares of Preferred Stock, with a par value of \$0.00001 per share (the “**Preferred Stock**”).

B. At the effective time (the “**Effective Time**”) of this Fourth Amended and Restated Certificate of Incorporation (the “**Certificate of Incorporation**”), each one (1) share of Series A Preferred (as defined in the Third Restated Certificate) shall, automatically and without further action by any stockholder, be converted into one (1) share of Common Stock; each one (1) share of Series B Preferred (as defined in the Third Restated Certificate) shall, automatically and without further action by any stockholder, be converted into one (1) share of Common Stock; and each one (1) share of Series C Preferred (as defined in the Third Restated Certificate) shall, automatically and without further action by any stockholder, be converted into one (1) share of Common Stock.

C. Immediately after giving effect to paragraph (B) of this Article IV, each outstanding 3.138458 shares of Common Stock of the Corporation shall be combined and converted into one (1) share of Common Stock. No fractional shares shall be recorded in the stock ledger of the Corporation as a result of the stock split provided for above. Any fractional share (a “Fractional Interest”) that would otherwise be issuable to a holder of Common Stock (a “Fractional Share Holder”) shall be treated as described in the following sentence: The Fractional Interest shall be cancelled and the Fractional Share Holder shall be entitled to receive an amount in cash equal to the product of the Fractional Interest to which such Fractional Share Holder would otherwise have been entitled, multiplied by the fair market value of one share of Common Stock immediately following the effectiveness of the stock split provided for above, as determined by the Board of Directors. Whether or not a Fractional Interest is to be recorded as a result of the stock split provided for above shall be determined on the basis of the total number of shares of Common Stock held by the record holder at the time the stock split occurs.

D. The Board of Directors is authorized, subject to any limitations prescribed by law, to provide for the issuance of shares of Preferred Stock in series, and by filing a certificate pursuant to the applicable law of the State of Delaware (such certificate being hereinafter referred to as a “**Preferred Stock Designation**”), to establish from time to time the number of shares to be included in each such series, and to fix the designations, preferences and relative,

participating, optional or other special rights, and qualifications, limitations or restrictions thereof, including, without limitation, the authority to fix or alter the dividend rights, dividend rates, conversion rights, exchange rights, voting rights, rights and terms of redemption (including sinking and purchase fund provisions), the redemption price or prices, the dissolution preferences and the rights in respect to any distribution of assets of any wholly unissued series of Preferred Stock and the number of shares constituting any such series, and the designation thereof, or any of them and to increase or decrease the number of shares of any series so created, subsequent to the issue of that series but not below the number of shares of such series then outstanding. In case the number of shares of any series shall be so decreased, the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of such series. There shall be no limitation or restriction on any variation between any of the different series of Preferred Stock as to the designations, preferences and relative, participating, optional or other special rights, and the qualifications, limitations or restrictions thereof; and the several series of Preferred Stock may, except as hereinafter in this Article IV otherwise expressly provided, vary in any and all respects as fixed and determined by the resolution or resolutions of the Board of Directors or by a committee of the Board of Directors, providing for the issuance of the various series; *provided, however*, that all shares of any one series of Preferred Stock shall have the same designation, preferences and relative, participating, optional or other special rights and qualifications, limitations and restrictions.

E. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the voting power of all of the outstanding shares of stock of the Corporation entitled to vote thereon, without a vote of the holders of the Preferred Stock, or of any series thereof, unless a vote of any such holders is required pursuant to the terms of any Preferred Stock Designation.

F. Except as otherwise required by law, or as otherwise fixed by resolution or resolutions of the Board of Directors with respect to one or more series of Preferred Stock, the entire voting power and all voting rights shall be vested exclusively in the Common Stock, and each stockholder of the Corporation who at the time possesses voting power for any purpose shall be entitled to one (1) vote for each share of such stock standing in his name on the books of the Corporation.

## ARTICLE V

A. Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, the total number of authorized directors constituting the Board of Directors (the “**Board of Directors**”) shall be at least two (2) and shall be fixed from time to time exclusively by the Board of Directors pursuant to a resolution adopted by a majority of the Board of Directors.

B. From and after the Effective Time, the directors, other than any who may be elected by the holders of any series of Preferred Stock under specified circumstances, shall be divided into three (3) classes as nearly equal in size as is practicable, hereby designated Class I, Class II and Class III. The Board of Directors may assign members of the Board of Directors



already in office to such classes at the time such classification becomes effective. The term of office of the initial Class I directors shall expire at the first regularly-scheduled annual meeting of the stockholders following the Effective Time, the term of office of the initial Class II directors shall expire at the second annual meeting of the stockholders following the Effective Time, and the term of office of the initial Class III directors shall expire at the third annual meeting of the stockholders following the Effective Time. At each annual meeting of stockholders, commencing with the first regularly scheduled annual meeting of stockholders following the Effective Time, each of the successors elected to replace the directors of a Class whose term shall have expired at such annual meeting shall be elected to hold office until the third annual meeting next succeeding his or her election and until his or her respective successor shall have been duly elected and qualified. Notwithstanding the foregoing provisions of this Article, each director shall serve until his or her successor is duly elected and qualified or until his or her death, resignation, or removal. If the number of directors is hereafter changed, any newly created directorships or decrease in directorships shall be so apportioned among the classes as to make all classes as nearly equal in number as is practicable, *provided that* no decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

C. Any director may be removed from office by the stockholders of the Corporation only for cause by the affirmative vote of sixty-six and two-thirds percent (66 2/3%) of the outstanding shares entitled to vote thereon. Vacancies occurring on the Board of Directors for any reason and newly created directorships resulting from an increase in the authorized number of directors may be filled only by vote of a majority of the remaining members of the Board of Directors, although less than a quorum, or by a sole remaining director, at any meeting of the Board of Directors. A person elected to fill a vacancy or newly created directorship shall hold office until the next election of the class for which such director shall have been chosen and until his or her successor shall be duly elected and qualified.

## ARTICLE VI

The following provisions are inserted for the management of the business and the conduct of the affairs of the Corporation, and for further definition, limitation and regulation of the powers of the Corporation and not in limitation or exclusion or any powers conferred upon it by statute.

A. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors. In addition to the powers and authority expressly conferred by statute or by this Certificate of Incorporation or the Bylaws of the Corporation, the Board of Directors is hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation.

B. The directors of the Corporation need not be elected by written ballot unless the Bylaws so provide.

C. The Board of Directors is expressly authorized to adopt, amend and repeal the Bylaws of the Corporation. Unless a larger vote is required by the Bylaws of the Corporation or the Certificate of Incorporation, the stockholders are expressly authorized to adopt, amend and repeal the Bylaws of the Corporation, by the affirmative vote of sixty-six and two-thirds percent (66 2/3%) of the outstanding shares entitled to vote thereon.

D. Special meetings of the stockholders may be called only by (i) the Board of Directors pursuant to a resolution adopted by a majority of the Board of Directors; (ii) the Chairman of the Board; or (iii) the President of the Corporation.

E. Subject to the rights of the holders of any series of Preferred Stock, any action required or permitted to be taken by the stockholders of the Corporation must be effected at a duly called annual or special meeting of stockholders of the Corporation and may not be effected by any consent in writing by such stockholders.

F. No stockholder will be permitted to cumulate votes at any election of directors.

## ARTICLE VII

A. To the fullest extent permitted by the DGCL, as it presently exists or may hereafter be amended from time to time, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the DGCL is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

B. The Corporation shall indemnify, to the fullest extent permitted by applicable law, any director or officer of the Corporation who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a “**Proceeding**”) by reason of the fact that he or she is or was a director, officer, employee or agent of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any such Proceeding; provided, however, that the Corporation shall be required to indemnify a person in connection with a Proceeding initiated by such person (other than a Proceeding to enforce rights to indemnification granted by the Corporation hereunder or elsewhere) only if the Proceeding was authorized by the Board of Directors.

C. The Corporation shall have the power to indemnify, to the fullest extent permitted by applicable law, any employee or agent of the Corporation who was or is a party or is threatened to be made a party to any Proceeding by reason of the fact that he or she is or was a director, officer, employee or agent of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any such Proceeding.

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D. Neither any amendment nor repeal of this Article VII, nor the adoption of any provision of this Certificate of Incorporation inconsistent with this Article VII, shall eliminate or reduce the effect of this Article VII in respect of any matter occurring, or any cause of action, suit or proceeding accruing or arising or that, but for this Article VII, would accrue or arise, prior to such amendment, repeal or adoption of an inconsistent provision.

#### ARTICLE VIII

Whenever a compromise or arrangement is proposed between the Corporation and its creditors or any class of them and/or between the Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of the Corporation or of any creditor or stockholder thereof, or on the application of any receiver or receivers appointed for the Corporation under the provisions of Section 291 of DGCL or on the application of trustees in dissolution or of any receiver or receivers appointed for the Corporation under the provisions of Section 279 of DGCL order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of the Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of the Corporation as a consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of the Corporation, as the case may be, and also on the Corporation.

#### ARTICLE IX

Except for (i) actions in which the Court of Chancery in the State of Delaware concludes that an indispensable party is not subject to the jurisdiction of the Delaware courts, and (ii) actions in which a federal court has assumed exclusive jurisdiction of a proceeding, any derivative action brought by or on behalf of the Corporation, and any direct action brought by a stockholder against the Corporation or any of its directors or officers, alleging a violation of the DGCL, the Corporation's Certificate of Incorporation or Bylaws or breach of fiduciary duties or other violation of Delaware decisional law relating to the internal affairs of the Corporation, shall be brought in the Court of Chancery in the State of Delaware, which shall be the sole and exclusive forum for such proceedings; provided, however, that the Corporation may consent to an alternative forum for any such proceedings upon the approval of the Board of Directors of the Corporation.

#### ARTICLE X

Except as provided in Article VII above, the Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation; provided, however, that, notwithstanding any other provision of this Certificate of Incorporation or any provision of law that might otherwise permit a lesser vote or no vote, but in addition to any vote of the holders of any class or series of the stock of this Corporation required by law or by this Certificate of Incorporation, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of the outstanding shares of stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required to amend or repeal, or adopt any provision of this Certificate of Incorporation inconsistent with, Article V, Article VI, or this Article X.

IN WITNESS WHEREOF, the Corporation has caused this Fourth Amended and Restated Certificate of Incorporation to be signed by Pamela G. Marrone, its President, on this 1st day of August 2013.

**MARRONE BIO INNOVATIONS, INC.**

By: /s/ Pamela G. Marrone

Name: Pamela G. Marrone

Title: President

**AMENDED AND RESTATED  
BYLAWS  
OF  
MARRONE BIO INNOVATIONS, INC.,  
a Delaware Corporation**

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**SECOND AMENDED AND RESTATED BYLAWS**

**OF**

**MARRONE BIO INNOVATIONS, INC.**

**ARTICLE 1**

**OFFICES**

**Section 1.1 Registered Office.**

The registered office of the Corporation in the State of Delaware shall be set forth in the Certificate of Incorporation of the Corporation.

**Section 1.2 Other Offices.**

The Corporation may also have offices at such other places, either within or without the State of Delaware, as the Board of Directors may from time to time determine or the business of the Corporation may require.

**ARTICLE 2**

**STOCKHOLDERS' MEETINGS**

**Section 2.1 Place of Meetings.**

Meetings of the stockholders of the Corporation shall be held at such place, either within or without the State of Delaware, as may be designated by or in the manner provided in these Bylaws, or, if not so designated, as determined from time to time by the Board of Directors.

**Section 2.2 Annual Meetings.**

The annual meetings of the stockholders of the Corporation, for the purpose of election of directors and for such other business as may lawfully come before it, shall be held on such date and at such time as may be designated from time to time by the Board of Directors.

**Section 2.3 Special Meetings.**

Special meetings of the stockholders of the Corporation may be called, for any purpose or purposes, by the Chairman of the Board or the President or the Board of Directors at any time. Only such business shall be brought before a special meeting of stockholders as shall have been specified in the notice of such meeting.



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## **Section 2.4 Notice of Meetings.**

(a) Except as otherwise provided by law or the Certificate of Incorporation, written notice of each meeting of stockholders, specifying the place, if any, date and hour and purpose or purposes of the meeting, and the means of remote communication, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting, and the record date for determining the stockholders entitled to vote at the meeting, if such date is different from the record date for determining stockholders entitled to notice of the meeting, shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote thereat, directed to his address as it appears upon the books of the Corporation; except that where the matter to be acted on is a merger or consolidation of the Corporation or a sale, lease or exchange of all or substantially all of its assets, such notice shall be given not less than 20 nor more than 60 days prior to such meeting. If the Board of Directors fixes a date for determining the stockholders entitled to notice of a meeting of stockholders, such date shall also be the record date for determining the stockholders entitled to vote at such meeting, unless the Board of Directors determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination.

(b) If at any meeting action is proposed to be taken which, if taken, would entitle stockholders fulfilling the requirements of Section 262(d) of the Delaware General Corporation Law to an appraisal of the fair value of their shares, the notice of such meeting shall contain a statement to that effect and shall be accompanied by a copy of that statutory section.

(c) When a meeting is adjourned to another time or place, notice need not be given of the adjourned meeting if the time, place, if any, thereof, and the means of remote communication, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting, are announced at the meeting at which the adjournment is taken unless the adjournment is for more than thirty days, or unless after the adjournment a new record date is fixed for the adjourned meeting, in which event a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting; provided, however, that the Board of Directors may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote at the adjourned meeting.

(d) Notice of the time, place and purpose of any meeting of stockholders may be waived in writing, either before or after such meeting, and, to the extent permitted by law, will be waived by any stockholder by his attendance thereat, in person or by proxy.

(e) Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Corporation under any provision of Delaware General Corporation Law, the Certificate of Incorporation, or these Bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given. Any such consent shall be revocable by the stockholder by written notice to the Corporation. Any such consent shall be deemed revoked if (i) the Corporation is unable to deliver by electronic transmission two consecutive notices given by the Corporation in accordance with such consent, and (ii) such inability becomes known to the Secretary or an

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Assistant Secretary of the Corporation or to the transfer agent or other person responsible for the giving of notice; provided, however, the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action. Notice given pursuant to this subparagraph (e) shall be deemed given: (1) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice; (2) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice; (3) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and (4) if by any other form of electronic transmission, when directed to the stockholder. An affidavit of the Secretary or an Assistant Secretary or of the transfer agent or other agent of the Corporation that the notice has been given by a form of electronic transmission shall, in the absence of fraud, be prima facie evidence of the facts stated therein. For purposes of these Bylaws, "electronic transmission" means any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

#### **Section 2.5 Quorum and Voting.**

(a) At all meetings of stockholders except where otherwise provided by law, the Certificate of Incorporation or these Bylaws, the presence, in person or by proxy duly authorized, of the holders of a majority of the outstanding shares of stock entitled to vote shall constitute a quorum for the transaction of business. Shares, the voting of which at said meeting have been enjoined, or which for any reason cannot be lawfully voted at such meeting, shall not be counted to determine a quorum at said meeting. In the absence of a quorum, any meeting of stockholders may be adjourned, from time to time, by vote of the holders of a majority of the shares represented thereat, but no other business shall be transacted at such meeting. At such adjourned meeting at which a quorum is present or represented, any business may be transacted which might have been transacted at the original meeting. The stockholders present at a duly called or convened meeting at which a quorum is present may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum.

(b) Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, and except as otherwise required by the rules of any stock exchange upon which the Corporation's securities are listed, all action taken by the holders of a majority of the votes cast on a matter affirmatively or negatively shall be valid and binding upon the Corporation. For purposes of these Bylaws, a share present at a meeting, but for which there is an abstention or as to which a stockholder gives no authority or direction as to a particular proposal or director nominee, shall be counted as present for the purpose of establishing a quorum but shall not be counted as a vote cast.

#### **Section 2.6 Voting Rights.**

(a) Except as otherwise provided by law, only persons in whose names shares entitled to vote stand on the stock records of the Corporation on the record date for determining the stockholders entitled to vote at said meeting shall be entitled to vote at such meeting. Shares

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standing in the names of two or more persons shall be voted or represented in accordance with the determination of the majority of such persons, or, if only one of such persons is present in person or represented by proxy, such person shall have the right to vote such shares and such shares shall be deemed to be represented for the purpose of determining a quorum.

(b) Every person entitled to vote or to execute consents shall have the right to do so either in person or by an agent or agents authorized by a written proxy executed by such person or his duly authorized agent, which proxy shall be filed with the Secretary of the Corporation at or before the meeting at which it is to be used. Said proxy so appointed need not be a stockholder. No proxy shall be voted on after three (3) years from its date unless the proxy provides for a longer period. Unless and until voted, every proxy shall be revocable at the pleasure of the person who executed it or of his legal representatives or assigns, except in those cases where an irrevocable proxy permitted by statute has been given.

(c) Without limiting the manner in which a stockholder may authorize another person or persons to act for him as proxy pursuant to subsection (b) of this section, the following shall constitute a valid means by which a stockholder may grant such authority:

(1) A stockholder may execute a writing authorizing another person or persons to act for him as proxy. Execution may be accomplished by the stockholder or his authorized officer, director, employee or agent signing such writing or causing his or her signature to be affixed to such writing by any reasonable means including, but not limited to, by facsimile signature.

(2) A stockholder may authorize another person or persons to act for him as proxy by transmitting or authorizing the transmission of an electronic transmission to the person who will be the holder of the proxy or to a proxy solicitation firm, proxy support service organization or like agent duly authorized by the person who will be the holder of the proxy to receive such transmission, provided that any such transmission must either set forth or be submitted with information from which it can be determined that the transmission was authorized by the stockholder. Such authorization can be established by the signature of the stockholder on the proxy, either in writing or by a signature stamp or facsimile signature, or by a number or symbol from which the identity of the stockholder can be determined, or by any other procedure deemed appropriate by the inspectors or other persons making the determination as to due authorization.

(d) Any copy, facsimile telecommunication or other reliable reproduction of the writing or transmission created pursuant to subsection (c) of this section may be substituted or used in lieu of the original writing or transmission for any and all purposes for which the original writing or transmission could be used, provided that such copy, facsimile telecommunication or other reproduction shall be a complete reproduction of the entire original writing or transmission.

#### **Section 2.7 Voting Procedures and Inspectors of Elections.**

(a) The Corporation shall, in advance of any meeting of stockholders, appoint one or more inspectors to act at the meeting and make a written report thereof. The Corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. If

no inspector or alternate is able to act at a meeting of stockholders, the person presiding at the meeting shall appoint one or more inspectors to act at the meeting. Each inspector, before entering upon the discharge of his duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of his ability.

(b) The inspectors shall (i) ascertain the number of shares outstanding and the voting power of each, (ii) determine the shares represented at a meeting and the validity of proxies and ballots, (iii) count all votes and ballots, (iv) determine and retain for a reasonable period a record of the disposition of any challenges made to any determination by the inspectors, and (v) certify their determination of the number of shares represented at the meeting and their count of all votes and ballots. The inspectors may appoint or retain other persons or entities to assist the inspectors in the performance of the duties of the inspectors.

(c) The date and time of the opening and the closing of the polls for each matter upon which the stockholders will vote at a meeting shall be announced at the meeting. No ballot, proxies or votes, nor any revocations thereof or changes thereto, shall be accepted by the inspectors after the closing of the polls unless the Court of Chancery shall determine otherwise upon application by a stockholder.

(d) In determining the validity and counting of proxies and ballots, the inspectors shall be limited to an examination of the proxies, any envelopes submitted with those proxies, any information provided in accordance with Sections 211(e) or 212(c)(2) of the Delaware General Corporation Law, or any information provided pursuant to Section 211(a)(2)(B)(i) or (iii) thereof, ballots and the regular books and records of the Corporation, except that the inspectors may consider other reliable information for the limited purpose of reconciling proxies and ballots submitted by or on behalf of banks, brokers, their nominees or similar persons which represent more votes than the holder of a proxy is authorized by the record owner to cast or more votes than the stockholder holds of record. If the inspectors consider other reliable information for the limited purpose permitted herein, the inspectors at the time they make their certification pursuant to subsection (b)(v) of this section shall specify the precise information considered by them including the person or persons from whom they obtained the information, when the information was obtained, the means by which the information was obtained and the basis for the inspectors' belief that such information is accurate and reliable.

#### **Section 2.8 List of Stockholders.**

The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten days before every meeting of stockholders, a complete list of the stockholders entitled to vote at said meeting, (or, if the record date for determining the stockholders entitled to vote is less than 10 days before the meeting date, the list shall reflect the stockholders entitled to vote on the tenth day before the meeting date), arranged in alphabetical order, showing the address of and the number of shares registered in the name of each stockholder. The Corporation need not include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder for any purpose germane to the meeting for a period of at least 10 days prior to the meeting: (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours at the principal place of business of the

Corporation. In the event that the Corporation determines to make the list available on an electronic network, the Corporation may take reasonable steps to ensure that such information is available only to stockholders of the Corporation. If the meeting is to be held at a place, then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting.

## **Section 2.9 Stockholder Proposals at Annual Meetings.**

At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be (i) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Board of Directors, (ii) otherwise properly brought before the meeting by or at the direction of the Board of Directors, or (iii) otherwise properly brought before the meeting by a stockholder. The foregoing clause (iii) shall be the exclusive means for a stockholder to propose business (other than business included in the Corporation's proxy materials pursuant to Rule 14a-8 under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) at an annual meeting of stockholders.

In addition to any other applicable requirements for business to be properly brought before an annual meeting by a stockholder, whether or not the stockholder is seeking to have a proposal included in the Corporation's proxy statement or information statement under Rule 14a-8 under the Exchange Act, the stockholder must have given timely notice thereof in writing to the Secretary of the Corporation. To be timely, in the case of a stockholder seeking to have a proposal included in the Corporation's proxy statement or information statement, a stockholder's notice must be delivered to the Secretary at the Corporation's principal executive offices not less than 45 days or more than 75 days prior to the first anniversary of the date on which the Corporation first mailed its proxy materials (or, in the absence of proxy materials, its notice of meeting) for the previous year's annual meeting of stockholders. However, if the Corporation did not hold an annual meeting the previous year, or if the date of the annual meeting is advanced more than 30 days prior to or delayed by more than 30 days after the anniversary of the preceding year's annual meeting, then to be timely, notice by the stockholder must be delivered to the Secretary at the Corporation's principal executive offices not later than the close of business on the later of (i) the 45th day prior to such annual meeting or (ii) the 10th day following the day on which public announcement of the date of such meeting is first made. If the stockholder is not seeking inclusion of the proposal in the Corporation's proxy statement or information statement, timely notice consists of a stockholder's notice delivered to or mailed and received at the principal executive offices of the Corporation not less than 45 days prior to the date of the annual meeting. In no event shall any adjournment or postponement of an annual meeting or the announcement thereof commence a new time period for the giving of a stockholder's notice as described above. Other than with respect to stockholder proposals relating to director nomination(s), which requirements are set forth in Section 2.10 below, a stockholder's notice to the Secretary shall set forth as to each matter the stockholder proposes to bring before the annual meeting (i) a brief description of the business desired to be brought

before the annual meeting and the reasons for conducting such business at the annual meeting, (ii) the name and record address of the stockholder proposing such business, (iii) the class and number of shares of the Corporation which are beneficially owned by the stockholder, (iv) any material interest of the stockholder in such business, (v) as to the stockholder giving the notice and any Stockholder Associated Person (as defined below) or any member of such stockholder's immediate family sharing the same household, whether and the extent to which any hedging or other transaction or series of transactions has been entered into by or on behalf of, or any other agreement, arrangement or understanding (including, but not limited to, any short position or any borrowing or lending of shares of stock) has been made, the effect or intent of which is to mitigate loss or increase profit to or manage the risk or benefit of stock price changes for, or to increase or decrease the voting power of, such stockholder, such Stockholder Associated Person or family member with respect to any share of stock of the Corporation (each, a "Relevant Hedge Transaction"), and (vi) as to the stockholder giving the notice and any Stockholder Associated Person or any member of such stockholder's immediate family sharing the same household, to the extent not set forth pursuant to the immediately preceding clause, (a) whether and the extent to which such stockholder, Stockholder Associated Person or family member has direct or indirect beneficial ownership of any option, warrant, convertible security, stock appreciation right, or similar right with an exercise or conversion privilege or a settlement payment or mechanism at a price related to any class or series of shares of the Corporation, whether or not such instrument or right shall be subject to settlement in the underlying class or series of capital stock of the Corporation or otherwise, or any other direct or indirect opportunity to profit or share in any profit derived from any increase or decrease in the value of shares of the Corporation (a "Derivative Instrument"), (b) any rights to dividends on the shares of the Corporation owned beneficially by such stockholder, Stockholder Associated Person or family member that are separated or separable from the underlying shares of the Corporation, (c) any proportionate interest in shares of the Corporation or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which such stockholder, Stockholder Associated Person or family member is a general partner or, directly or indirectly, beneficially owns an interest in a general partner and (d) any performance-related fees (other than an asset-based fee) that such stockholder, Stockholder Associated Person or family member is entitled to based on any increase or decrease in the value of shares of the Corporation or Derivative Instruments, if any, as of the date of such notice (which information shall be supplemented by such stockholder and beneficial owner, if any, not later than 10 days after the record date for the meeting to disclose such ownership as of the record date).

For purposes of this Section 2.9 and Section 2.10, "Stockholder Associated Person" of any stockholder shall mean (i) any person controlling or controlled by, directly or indirectly, or acting in concert with, such stockholder, (ii) any beneficial owner of shares of stock of the Corporation owned of record or beneficially by such stockholder and (iii) any person controlling, controlled by or under common control with such Stockholder Associated Person.

Notwithstanding anything in the Bylaws to the contrary, no business shall be conducted at the annual meeting except in accordance with the procedures set forth in this Section 2.9, provided, however, that nothing in this Section 2.9 shall be deemed to preclude discussion by any stockholder of any business properly brought before the annual meeting in accordance with said procedure.

The chairman of an annual meeting shall, if the facts warrant, determine and declare to the meeting that business was not properly brought before the meeting in accordance with the provisions of this Section 2.9, and if he should so determine he shall so declare to the meeting, and any such business not properly brought before the meeting shall not be transacted.

Nothing in this Section 2.9 shall affect the right of a stockholder to request inclusion of a proposal in the Corporation's proxy statement or information statement pursuant to Rule 14a-8 under the Exchange Act.

#### **Section 2.10 Nominations of Persons for Election to the Board of Directors.**

In addition to any other applicable requirements, only persons who are nominated in accordance with the following procedures shall be eligible for election as directors. Nominations of persons for election to the Board of Directors of the Corporation may be made at a meeting of stockholders (i) pursuant to the Corporation's notice of meeting (or any supplement thereto) given by or at the direction of the Board of Directors, (ii) by or at the direction of the Board of Directors, or by any nominating committee or person appointed by the Board of Directors or (iii) by any stockholder of the Corporation entitled to vote for the election of directors at the meeting who complies with the notice procedures set forth in this Section 2.10. The foregoing clause (iii) shall be the exclusive means for a stockholder to make nominations at a meeting of stockholders, whether or not the stockholder is seeking to have a proposal included in the Corporation's proxy statement or information statement under an applicable rule of the Securities and Exchange Commission (the "SEC"). A stockholder who complies with the notice procedures set forth in this Section 2.10 is permitted to present the nomination at the meeting of stockholders but is not entitled to have a nominee included in the Corporation's proxy statement in the absence of an applicable rule of the SEC requiring the Corporation to include a director nomination made by a stockholder in the Corporation's proxy statement or information statement.

Such nominations, other than those made by or at the direction of the Board of Directors, shall be made pursuant to timely notice in writing to the Secretary of the Corporation. To be timely, in the case of a stockholder seeking to have a nomination included in the Corporation's proxy statement or information statement, a stockholder's notice must be delivered to or mailed and received at the principal executive offices of the Corporation, not less than 45 days or more than 75 days prior to the first anniversary of the date on which the Corporation first mailed its proxy materials (or, in the absence of proxy materials, its notice of meeting) for the previous year's annual meeting of stockholders. However, if the Corporation did not hold an annual meeting the previous year, or if the date of the annual meeting is advanced more than 30 days prior to or delayed by more than 30 days after the anniversary of the preceding year's annual meeting, then to be timely, notice by the stockholder must be delivered to the Secretary at the Corporation's principal executive offices not later than the close of business on the later of (i) the 45th day prior to such annual meeting or (ii) the 10th day following the day on which public announcement of the date of such meeting is first made. If the stockholder is not seeking inclusion of the nomination in the Corporation's proxy statement or information statement, timely notice consists of a stockholder's notice delivered to or mailed and received at the principal executive offices of the Corporation not less than 45 days prior to the date of the annual meeting. In no event shall any adjournment or postponement of an annual meeting or the announcement thereof commence a new time period for the giving of a stockholder's notice as

described above. The stockholder's notice relating to director nomination(s) shall set forth (a) as to each person whom the stockholder proposes to nominate for election or re-election as a director, (i) the name, age, business address and residence address of the person, (ii) the principal occupation or employment of the person, (iii) the class and number of shares of the Corporation which are beneficially owned by the person, (iv) any other information relating to the person that is required to be disclosed in solicitations for proxies for election of directors pursuant to Regulation 14A under the Exchange Act; (b) as to the stockholder giving the notice, (i) the name and record address of the stockholder, and (ii) the class and number of shares of the Corporation which are beneficially owned by the stockholder; (c) as to the stockholder giving the notice and any Stockholder Associated Person (as defined in Section 2.9), to the extent not set forth pursuant to the immediately preceding clause, whether and the extent to which any Relevant Hedge Transaction (as defined in Section 2.9) has been entered into, and (d) as to the stockholder giving the notice and any Stockholder Associated Person, (1) whether and the extent to which any Derivative Instrument (as defined in Section 2.9) is directly or indirectly beneficially owned, (2) any rights to dividends on the shares of the Corporation owned beneficially by such stockholder that are separated or separable from the underlying shares of the Corporation, (3) any proportionate interest in shares of the Corporation or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which such stockholder is a general partner or, directly or indirectly, beneficially owns an interest in a general partner and (4) any performance-related fees (other than an asset-based fee) that such stockholder is entitled to based on any increase or decrease in the value of shares of the Corporation or Derivative Instruments, if any, as of the date of such notice, including without limitation any such interests held by members of such stockholder's immediate family sharing the same household (which information shall be supplemented by such stockholder and beneficial owner, if any, not later than 10 days after the record date for the meeting to disclose such ownership as of the record date). The Corporation may require any proposed nominee to furnish such other information as may reasonably be required by the Corporation to determine the eligibility of such proposed nominee to serve as a director of the Corporation. The stockholder giving such notice shall indemnify the Corporation in respect of any loss arising as a result of any false or misleading information or statement submitted by the nominating stockholder in connection with the nomination, as provided by Section 112(5) of the Delaware General Corporation Law. No person shall be eligible for election as a director of the Corporation unless nominated in accordance with the procedures set forth herein. These provisions shall not apply to nomination of any persons entitled to be separately elected by holders of preferred stock.

The chairman of the meeting shall, if the facts warrant, determine and declare to the meeting that a nomination was not made in accordance with the foregoing procedure, and if he should so determine, he shall so declare to the meeting and the defective nomination shall be disregarded.

#### **Section 2.11 Action Without Meeting.**

Unless otherwise provided in the Certificate of Incorporation, the stockholders of the Corporation may not act by written consent.



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## ARTICLE 3

### DIRECTORS

#### Section 3.1 Number and Term of Office.

(a) The number of directors of the Corporation shall not be less than two (2) nor more than eleven (11) until changed by amendment of the Certificate of Incorporation or by a Bylaw amending this Section 3.1 duly adopted by the vote or written consent of holders of a majority of the outstanding shares or by the Board of Directors. The exact number of directors shall be fixed from time to time, within the limits specified in the Certificate of Incorporation or in this Section 3.1, by a bylaw, an amendment thereof or a resolution duly adopted by the Board of Directors. Subject to the foregoing provisions for changing the number of directors, the number of directors of the Corporation has been fixed at nine (9). Elected directors shall hold office until the next annual meeting for the year in which their terms expire and until their successors shall be duly elected and qualified. Directors need not be stockholders. If, for any cause, the Board of Directors shall not have been elected at an annual meeting, they may be elected as soon as convenient at a special meeting of the stockholders called for that purpose in the manner provided in these Bylaws. In no case will a decrease in the number of directors shorten the term of any incumbent director.

(b) The directors shall be divided into three classes, designated Class I, Class II, and Class III, as nearly equal in number as the then total number of directors permits. Upon the effectiveness of these bylaws, the initial Class I directors shall serve until the first regularly-scheduled annual meeting of the stockholders after the effectiveness of these bylaws, the initial Class II directors shall serve until the second regularly-scheduled annual meeting of the stockholders after the effectiveness of these bylaws and the initial Class III directors shall serve until the third regularly-scheduled annual meeting of the stockholders after the effectiveness of these bylaws. At each annual meeting of stockholders commencing with the first regularly scheduled annual meeting of stockholders following the effectiveness of these bylaws, each of the successors elected to replace the directors of a Class whose term shall have expired at such annual meeting shall be elected for three-year terms. If the number of directors is changed, any increase or decrease shall be apportioned among the classes so as to maintain the number of directors in each class as nearly equal as possible, and any additional directors of any class elected to fill a vacancy resulting from an increase in such class shall hold office for a term that shall coincide with the remaining term of that class. Notwithstanding the foregoing, whenever the holders of any one or more classes or series of Preferred Stock issued by the Corporation shall have the right, voting separately by class or series, to elect directors at an annual or special meeting of stockholders, the election, term of office, filling of vacancies and other features of such directorships shall be governed by the applicable terms of these Bylaws and any certificate of designation creating such class or series of Preferred Stock, and such directors so elected shall not be divided into classes pursuant to this Section 3.1 unless expressly provided by such terms.

Any amendment, change or repeal of this Section 3.1(b), or any other amendment to these Bylaws that will have the effect of permitting circumvention of or modifying this Section 3.1(b), shall require the affirmative vote, at a stockholders' meeting, of the holders of at least 80% of the then-outstanding shares of stock of the Corporation entitled to vote.

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(c) Except as provided in Section 3.3 of this Article 3, the directors shall be elected by a plurality vote of the votes cast and entitled to vote on the election of directors at any meeting for the election of directors at which a quorum is present.

### **Section 3.2 Powers.**

The powers of the Corporation shall be exercised, its business conducted and its property controlled by or under the direction of the Board of Directors.

### **Section 3.3 Vacancies.**

Vacancies and newly created directorships resulting from any increase in the authorized number of directors may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director, and each director so elected shall hold office for the unexpired portion of the term of the director whose place shall be vacant and until his successor shall have been duly elected and qualified. A vacancy in the Board of Directors shall be deemed to exist under this section in the case of the death, removal or resignation of any director, or if the stockholders fail at any meeting of stockholders at which directors are to be elected (including any meeting referred to in Section 3.4 below) to elect the number of directors then constituting the whole Board of Directors.

### **Section 3.4 Resignations and Removals.**

(a) Any director may resign at any time by delivering his resignation to the Secretary in writing or by electronic transmission, such resignation to specify whether it will be effective at a particular time, upon receipt by the Secretary or at the pleasure of the Board of Directors. If no such specification is made it shall be deemed effective at the pleasure of the Board of Directors. When one or more directors shall resign from the Board of Directors effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen shall hold office for the unexpired portion of the term of the director whose place shall be vacated and until his successor shall have been duly elected and qualified.

(b) At a special meeting of stockholders called for the purpose in the manner hereinabove provided, the Board of Directors or any individual director may be removed from office, for cause by the affirmative vote of stockholders holding sixty-six and two-thirds percent (66 2/3%) of the outstanding shares entitled to vote in election of the directors, and a new director or directors may be elected by a vote of stockholders holding a majority of the outstanding shares entitled to vote in election of the directors.

### **Section 3.5 Meetings.**

(a) The annual meeting of the Board of Directors shall be held immediately after the annual stockholders' meeting and at the place where such meeting is held or at the place announced by the chairman at such meeting. No notice of an annual meeting of the Board of Directors shall be necessary, and such meeting shall be held for the purpose of electing officers and transacting such other business as may lawfully come before it.

(b) Except as hereinafter otherwise provided, regular meetings of the Board of Directors shall be held at the principal executive office of the Corporation. Regular meetings of the Board of Directors may also be held at any place, within or without the State of Delaware, which has been designated by resolutions of the Board of Directors or the written consent of all directors.

(c) Special meetings of the Board of Directors may be held at any time and place within or without the State of Delaware whenever called by (i) the Board of Directors pursuant to a resolution adopted by a majority of the whole Board of Directors; (ii) the Chairman of the Board; or (iii) the President of the Corporation.

(d) Written notice of the time and place of all regular and special meetings of the Board of Directors shall be delivered personally to each director or sent by any form of electronic transmission at least 48 hours before the start of the meeting, or sent by first class mail at least 120 hours before the start of the meeting. Notice of any meeting may be waived in writing at any time before or after the meeting and will be waived by any director by attendance thereat.

### **Section 3.6 Quorum and Voting.**

(a) A quorum of the Board of Directors shall consist of a majority of the exact number of directors fixed from time to time in accordance with Section 3.1 of Article 3 of these Bylaws, but not less than one; provided, however, at any meeting, whether a quorum be present or otherwise, a majority of the directors present may adjourn from time to time until the time fixed for the next regular meeting of the Board of Directors, without notice other than by announcement at the meeting.

(b) At each meeting of the Board of Directors at which a quorum is present, all questions and business shall be determined by a vote of a majority of the directors present, unless a different vote be required by law, the Certificate of Incorporation, or these Bylaws.

(c) Any member of the Board of Directors, or of any committee thereof, may participate in a meeting by means of conference telephone or other communication equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting.

(d) The transactions of any meeting of the Board of Directors, or any committee thereof, however called or noticed, or wherever held, shall be as valid as though had at a meeting duly held after regular call and notice if a quorum be present and if, either before or after the meeting, each of the directors not present shall sign a written waiver of notice, or a consent to holding such meeting, or an approval of the minutes thereof. All such waivers, consents or approvals shall be filed with the corporate records or made a part of the minutes of the meeting.

### **Section 3.7 Action Without Meeting.**

Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or

of such committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

### **Section 3.8 Fees and Compensation.**

Directors and members of committees may receive such compensation, if any, for their services, and such reimbursement for expenses, as may be fixed or determined by resolution of the Board of Directors.

### **Section 3.9 Committees.**

(a) **Executive Committee:** The Board of Directors may, by resolution passed by a majority of the whole Board, appoint an Executive Committee of not less than one member, each of whom shall be a director. To the extent permitted by law, the Executive Committee shall have and may exercise when the Board of Directors is not in session all powers of the Board of Directors in the management of the business and affairs of the Corporation, except such committee shall not have the power or authority to amend these Bylaws or to approve or recommend to the stockholders any action which must be submitted to stockholders for approval under the General Corporation Law.

(b) **Other Committees:** The Board of Directors may, by resolution passed by a majority of the whole Board, from time to time appoint such other committees as may be permitted by law. Such other committees appointed by the Board of Directors shall have such powers and perform such duties as may be prescribed by the resolution or resolutions creating such committee, but in no event shall any such committee have the powers denied to the Executive Committee in these Bylaws.

(c) **Term:** The terms of members of all committees of the Board of Directors shall expire on the date of the next annual meeting of the Board of Directors following their appointment; provided that they shall continue in office until their successors are appointed. Subject to the provisions of subsections (a) or (b) of this Section 3.9, the Board of Directors may at any time increase or decrease the number of members of a committee or terminate the existence of a committee; provided that no committee shall consist of less than one member. The membership of a committee member shall terminate on the date of his death or voluntary resignation, but the Board of Directors may at any time for any reason remove any individual committee member and the Board of Directors may fill any committee vacancy created by death, resignation, removal or increase in the number of members of the committee. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and, in addition, in the absence or disqualification of any member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

(d) **Meetings:** Unless the Board of Directors shall otherwise provide, regular meetings of the Executive Committee or any other committee appointed pursuant to this Section 3.9 shall be held at such times and places as are determined by the Board of Directors, or by any such committee, and when notice thereof has been given to each member of such committee, no further notice of such regular meetings need be given thereafter; special meetings of any such committee may be held at the principal executive office of the Corporation or at any place which has been designated from time to time by resolution of such committee or by written consent of all members thereof, and may be called by any director who is a member of such committee upon written notice to the members of such committee of the time and place of such special meeting given in the manner provided for the giving of written notice to members of the Board of Directors of the time and place of special meetings of the Board of Directors. Notice of any special meeting of any committee may be waived in writing at any time after the meeting and will be waived by any director by attendance thereat. A majority of the authorized number of members of any such committee shall constitute a quorum for the transaction of business, and the act of a majority of those present at any meeting at which a quorum is present shall be the act of such committee.

## **ARTICLE 4**

### **OFFICERS**

#### **Section 4.1 Officers Designated.**

The officers of the Corporation shall be a President, a Secretary and a Treasurer. The Board of Directors may (and as expressly authorized by the Board of Directors, the President may) also appoint a Chairman of the Board, one or more Vice-Presidents, Assistant Secretaries, Assistant Treasurers, and such other officers and agents with such powers and duties as it or he shall deem necessary. The order of the seniority of the Vice-Presidents shall be in the order of their nomination unless otherwise determined by the Board of Directors. The Board of Directors may assign such additional titles to one or more of the officers as they shall deem appropriate. Any one person may hold any number of offices of the Corporation at any one time unless specifically prohibited therefrom by law. The salaries and other compensation of the officers of the Corporation shall be fixed by or in the manner designated by the Board of Directors.

#### **Section 4.2 Tenure and Duties of Officers.**

(a) **General:** All officers shall hold office at the pleasure of the Board of Directors and until their successors shall have been duly elected and qualified, unless sooner removed. Any officer elected or appointed by the Board of Directors may be removed at any time by the Board of Directors. If the office of any officer becomes vacant for any reason, the vacancy may be filled by the Board of Directors. Nothing in these Bylaws shall be construed as creating any kind of contractual right to employment with the Corporation.

(b) **Duties of the Chairman of the Board of Directors:** The Chairman of the Board of Directors (if there be such an officer appointed) when present shall preside at all meetings of the stockholders and the Board of Directors. The Chairman of the Board of Directors shall perform such other duties and have such other powers as the Board of Directors shall designate from time to time.

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(c) **Duties of President:** The President shall be the chief executive officer of the Corporation unless otherwise determine by the Board of Directors pursuant to a resolution adopted by a majority of the whole Board of Directors, and shall preside at all meetings of the stockholders and at all meetings of the Board of Directors, unless the Chairman of the Board of Directors has been appointed and is present. The President shall perform such other duties and have such other powers as the Board of Directors shall designate from time to time.

(d) **Duties of Vice-Presidents:** The Vice-Presidents, in the order of their seniority, may assume and perform the duties of the President in the absence or disability of the President or whenever the office of the President is vacant. The Vice-President shall perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

(e) **Duties of Secretary:** The Secretary shall attend all meetings of the stockholders and of the Board of Directors and any committee thereof, and shall record all acts and proceedings thereof in the minute book of the Corporation, which may be maintained in either paper or electronic form. The Secretary shall give notice, in conformity with these Bylaws, of all meetings of the stockholders and of all meetings of the Board of Directors and any Committee thereof requiring notice. The Secretary shall perform such other duties and have such other powers as the Board of Directors shall designate from time to time. The President may direct any Assistant Secretary to assume and perform the duties of the Secretary in the absence or disability of the Secretary, and each Assistant Secretary shall perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

(f) **Duties of Treasurer:** The Treasurer shall keep or cause to be kept the books of account of the Corporation in a thorough and proper manner, and shall render statements of the financial affairs of the Corporation in such form and as often as required by the Board of Directors or the President. The Treasurer, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the Corporation. The Treasurer shall perform all other duties commonly incident to his office and shall perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time. The President may direct any Assistant Treasurer to assume and perform the duties of the Treasurer in the absence or disability of the Treasurer, and each Assistant Treasurer shall perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

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## ARTICLE 5

### EXECUTION OF CORPORATE INSTRUMENTS, AND VOTING OF SECURITIES OWNED BY THE CORPORATION

#### Section 5.1 Execution of Corporate Instruments.

(a) The Board of Directors may in its discretion determine the method and designate the signatory officer or officers, or other person or persons, to execute any corporate instrument or document, or to sign the corporate name without limitation, except where otherwise provided by law, and such execution or signature shall be binding upon the Corporation.

(b) Unless otherwise specifically determined by the Board of Directors or otherwise required by law, formal contracts of the Corporation, promissory notes, deeds of trust, mortgages and other evidences of indebtedness of the Corporation, and other corporate instruments or documents requiring the corporate seal, and certificates of shares of stock owned by the Corporation, shall be executed, signed or endorsed by the Chairman of the Board (if there be such an officer appointed) or by the President; such documents may also be executed by any Vice-President and by the Secretary or Treasurer or any Assistant Secretary or Assistant Treasurer. All other instruments and documents requiring the corporate signature but not requiring the corporate seal may be executed as aforesaid or in such other manner as may be directed by the Board of Directors.

(c) All checks and drafts drawn on banks or other depositories on funds to the credit of the Corporation or in special accounts of the Corporation shall be signed by such person or persons as the Board of Directors shall authorize so to do.

(d) Execution of any corporate instrument may be effected in such form, either manual, facsimile or electronic signature, as may be authorized by the Board of Directors.

#### Section 5.2 Voting of Securities Owned by Corporation.

All stock and other securities of other Corporations owned or held by the Corporation for itself or for other parties in any capacity shall be voted, and all proxies with respect thereto shall be executed, by the person authorized so to do by resolution of the Board of Directors or, in the absence of such authorization, by the Chairman of the Board (if there be such an officer appointed), or by the President, or by any Vice-President.

## ARTICLE 6

### SHARES OF STOCK

#### Section 6.1 Form and Execution of Certificates.

The shares of the Corporation shall be represented by certificates, provided that the Board of Directors may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. Certificates

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for the shares of stock of the Corporation shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock in the Corporation shall be entitled to have a certificate signed by, or in the name of the Corporation by, the Chairman of the Board (if there be such an officer appointed), or by the President or any Vice-President and by the Treasurer or Assistant Treasurer or the Secretary or Assistant Secretary, certifying the number of shares owned by him in the Corporation. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued with the same effect as if he were such officer, transfer agent, or registrar at the date of issue. If the Corporation shall be authorized to issue more than one class of stock or more than one series of any class, the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate which the Corporation shall issue to represent such class or series of stock, provided that, except as otherwise provided in Section 202 of the Delaware General Corporation Law, in lieu of the foregoing requirements, there may be set forth on the face or back of the certificate which the Corporation shall issue to represent such class or series of stock, a statement that the Corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

#### **Section 6.2 Lost Certificates.**

The Board of Directors may direct a new certificate or certificates (or uncertificated shares in lieu of a new certificate) to be issued in place of any certificate or certificates theretofore issued by the Corporation alleged to have been lost or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost or destroyed. When authorizing such issue of a new certificate or certificates (or uncertificated shares in lieu of a new certificate), the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost or destroyed certificate or certificates, or his legal representative, to indemnify the Corporation in such manner as it shall require and/or to give the Corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the Corporation with respect to the certificate alleged to have been lost or destroyed.

#### **Section 6.3 Transfers.**

Transfers of record of shares of stock of the Corporation shall be made only upon its books by the holders thereof, in person or by attorney duly authorized, who shall furnish proper evidence of authority to transfer, and in the case of stock represented by a certificate, upon the surrender of a certificate or certificates for a like number of shares, properly endorsed.



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#### **Section 6.4 Fixing Record Dates.**

(a) In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than 60 nor less than 10 days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the date on which the meeting is held. A determination of stockholders of record entitled notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the Corporation may determine the stockholders entitled to consent to corporate action in writing or by electronic transmission without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which date shall not be more than 10 days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining stockholders entitled to consent to corporate action in writing or by electronic transmission without a meeting, when no prior action by the Board of Directors is required by the Delaware General Corporation Law, shall be the first date on which a signed written consent or electronic transmission setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders are recorded; provided that any such electronic transmission shall satisfy the requirements of Section 2.11(b) and, unless the Board of Directors otherwise provides by resolution, no such consent by electronic transmission shall be deemed to have been delivered until such consent is reproduced in paper form and until such paper form shall be delivered to the Corporation by delivery to its registered office in Delaware, its principal place of business or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to a Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors and prior action by the Board of Directors is required by law, the record date for determining stockholders entitled to consent to corporate action in writing or by electronic transmission without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

(c) In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

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**Section 6.5 Registered Stockholders.**

The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

**ARTICLE 7****OTHER SECURITIES OF THE CORPORATION**

All bonds, debentures and other corporate securities of the Corporation, other than stock certificates, may be signed by the Chairman of the Board (if there be such an officer appointed), or the President or any Vice-President or such other person as may be authorized by the Board of Directors and the corporate seal impressed thereon or a facsimile of such seal imprinted thereon and attested by the signature of the Secretary or an Assistant Secretary, or the Treasurer or an Assistant Treasurer; provided, however, that where any such bond, debenture or other corporate security shall be authenticated by the manual signature of a trustee under an indenture pursuant to which such bond, debenture or other corporate security shall be issued, the signature of the persons signing and attesting the corporate seal on such bond, debenture or other corporate security may be the imprinted facsimile of the signatures of such persons. Interest coupons appertaining to any such bond, debenture or other corporate security, authenticated by a trustee as aforesaid, shall be signed by the Treasurer or an Assistant Treasurer of the Corporation, or such other person as may be authorized by the Board of Directors, or bear imprinted thereon the facsimile signature of such person. In case any officer who shall have signed or attested any bond, debenture or other corporate security, or whose facsimile signature shall appear thereon has ceased to be an officer of the Corporation before the bond, debenture or other corporate security so signed or attested shall have been delivered, such bond, debenture or other corporate security nevertheless may be adopted by the Corporation and issued and delivered as though the person who signed the same or whose facsimile signature shall have been used thereon had not ceased to be such officer of the Corporation.

**ARTICLE 8****INDEMNIFICATION OF OFFICERS, DIRECTORS, EMPLOYEES AND AGENTS****Section 8.1 Right to Indemnification.**

Each person who was or is a party or is threatened to be made a party to or is involved (as a party, witness, or otherwise), in any threatened, pending, or completed action, suit, or proceeding, whether civil, criminal, administrative, or investigative (hereinafter a "Proceeding"), by reason of the fact that he, or a person of whom he is the legal representative, is or was a director, officer, employee, or agent of the Corporation or is or was serving at the request of the

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Corporation as a director, officer, employee, or agent of another Corporation or of a partnership, joint venture, trust, or other enterprise, including service with respect to employee benefit plans, whether the basis of the Proceeding is alleged action in an official capacity as a director, officer, employee, or agent or in any other capacity while serving as a director, officer, employee, or agent (hereafter an "Agent"), shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the Delaware General Corporation Law, as the same exists or may hereafter be amended or interpreted (but, in the case of any such amendment or interpretation, only to the extent that such amendment or interpretation permits the Corporation to provide broader indemnification rights than were permitted prior thereto) against all expenses, liability, and loss (including attorneys' fees, judgments, fines, ERISA excise taxes or penalties, and amounts paid or to be paid in settlement, and any interest, assessments, or other charges imposed thereon, and any federal, state, local, or foreign taxes imposed on any Agent as a result of the actual or deemed receipt of any payments under this Article) reasonably incurred or suffered by such person in connection with investigating, defending, being a witness in, or participating in (including on appeal), or preparing for any of the foregoing in, any Proceeding (hereinafter "Expenses"); *provided, however*, that except as to actions to enforce indemnification rights pursuant to Section 8.3 of this Article, the Corporation shall indemnify any Agent seeking indemnification in connection with a Proceeding (or part thereof) initiated by such person only if the Proceeding (or part thereof) was authorized by the Board of Directors of the Corporation.

#### **Section 8.2 Authority to Advance Expenses.**

Expenses incurred by an officer or director (acting in his capacity as such) in defending a Proceeding shall be paid by the corporation in advance of the final disposition of such Proceeding,, provided, however, that if required by the Delaware General Corporation Law, as amended, such Expenses shall be advanced only upon delivery to the Corporation of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that he is not entitled to be indemnified by the Corporation as authorized under this Article or otherwise. Expenses incurred by other Agents of the Corporation (or by the directors or officers not acting in their capacity as such, including service with respect to employee benefit plans) may be advanced on such terms and conditions as the Board of Directors deems appropriate. Any obligation to reimburse the Corporation for Expense advances shall be unsecured and no interest shall be charged thereon.

#### **Section 8.3 Right of Claimant to Bring Suit.**

If a claim under Section 8.1 or 8.2 of this Article is not paid in full by the Corporation within 60 days after a written claim has been received by the Corporation, the claimant may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim and, if successful in whole or in part, the claimant shall be entitled to be paid also the expense (including attorneys' fees) of prosecuting such claim. It shall be a defense to any such action (other than an action brought to enforce a claim for expenses incurred in defending a Proceeding in advance of its final disposition where the required undertaking has been tendered to the Corporation) that the claimant has not met the standards of conduct that make it permissible under the Delaware General Corporation Law for the Corporation to indemnify the claimant for the amount claimed. The burden of proving such a defense shall be on the Corporation. Neither the failure of the Corporation (including its Board of Directors, independent legal counsel, or its

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stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper under the circumstances because he has met the applicable standard of conduct set forth in the Delaware General Corporation Law, nor an actual determination by the Corporation (including its Board of Directors, independent legal counsel, or its stockholders) that the claimant had not met such applicable standard of conduct, shall be a defense to the action or create a presumption that claimant has not met the applicable standard of conduct.

#### **Section 8.4 Provisions Nonexclusive.**

The rights conferred on any person by this Article shall not be exclusive of any other rights that such person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, agreement, vote of stockholders or disinterested directors, or otherwise, both as to action in an official capacity and as to action in another capacity while holding such office. To the extent that any provision of the Certificate of Incorporation, agreement, or vote of the stockholders or disinterested directors is inconsistent with these Bylaws, the provision, agreement, or vote shall take precedence. The Corporation may, to the extent authorized from time to time by the Board of Directors, grant rights to indemnification and to the advancement of expenses to any employee or agent of the Corporation to the fullest extent of the provisions of this Article 8 with respect to the indemnification and advancement of expenses of directors and officers of the Corporation.

#### **Section 8.5 Authority to Insure.**

The Corporation may purchase and maintain insurance to protect itself and any Agent against any Expense, whether or not the Corporation would have the power to indemnify the Agent against such Expense under applicable law or the provisions of this Article.

#### **Section 8.6 Enforcement of Rights**

Without the necessity of entering into an express contract, all rights provided under this Article shall be deemed to be contractual rights and be effective to the same extent and as if provided for in a contract between the Corporation and such Agent. Any rights granted by this Article to an Agent shall be enforceable by or on behalf of the person holding such right in any court of competent jurisdiction.

#### **Section 8.7 Survival of Rights.**

The rights provided by this Article shall continue as to a person who has ceased to be an Agent and shall inure to the benefit of the heirs, executors, and administrators of such a person.

#### **Section 8.8 Settlement of Claims.**

The Corporation shall not be liable to indemnify any Agent under this Article (a) for any amounts paid in settlement of any action or claim effected without the Corporation's written consent, which consent shall not be unreasonably withheld; or (b) for any judicial award if the Corporation was not given a reasonable and timely opportunity, at its expense, to participate in the defense of such action.

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**Section 8.9 Effect of Amendment.**

Any amendment, repeal, or modification of this Article that adversely affects any rights provided in this Article to an Agent shall only be effective upon the prior written consent of such Agent.

**Section 8.10 Primacy of Indemnification.**

Notwithstanding that an Agent may have certain rights to indemnification, advancement of expenses and/or insurance provided by other persons (collectively, the “Other Indemnitors”), the Corporation: (i) shall be the indemnitor of first resort (i.e., its obligations to an Agent are primary and any obligation of the Other Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by such Agent are secondary); and (ii) shall be required to advance the full amount of expenses incurred by an Agent and shall be liable for the full amount of all Expenses, without regard to any rights such Agent may have against any of the Other Indemnitors. No advancement or payment by the Other Indemnitors on behalf of an Agent with respect to any claim for which such Agent has sought indemnification from the Corporation shall affect the immediately preceding sentence, and the Other Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of such Agent against the Corporation.

**Section 8.11 Subrogation.**

In the event of payment under this Article, the Corporation shall be subrogated to the extent of such payment to all of the rights of recovery of the Agent (other than against the Other Indemnitors), who shall execute all papers required and shall do everything that may be necessary to secure such rights, including the execution of such documents necessary to enable the Corporation effectively to bring suit to enforce such rights.

**Section 8.12 No Duplication of Payments.**

Except as otherwise set forth in Section 8.10 above, the Corporation shall not be liable under this Article to make any payment in connection with any claim made against the Agent to the extent the Agent has otherwise actually received payment (under any insurance policy, agreement, vote, or otherwise) of the amounts otherwise indemnifiable hereunder.

**Section 8.13 Saving Clause.**

If this Article or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Corporation shall nevertheless indemnify each Agent to the fullest extent not prohibited by any applicable portion of this Article that shall not have been invalidated, or by any other applicable law.

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## ARTICLE 9

### NOTICES

Whenever, under any provisions of these Bylaws, notice is required to be given to any stockholder, the same shall be given either (1) in writing, timely and duly deposited in the United States Mail, postage prepaid, and addressed to his last known post office address as shown by the stock record of the Corporation or its transfer agent, or (2) by a means of electronic transmission that satisfies the requirements of Section 2.4(e) of these Bylaws, and has been consented to by the stockholder to whom the notice is given. Any notice required to be given to any director may be given by either of the methods hereinabove stated, except that such notice other than one which is delivered personally, shall be sent to such address or (in the case of electronic communication) such e-mail address, facsimile telephone number or other form of electronic address as such director shall have filed in writing or by electronic communication with the Secretary of the Corporation, or, in the absence of such filing, to the last known post office address of such director. If no address of a stockholder or director be known, such notice may be sent to the principal executive office of the Corporation. An affidavit of mailing, executed by a duly authorized and competent employee of the Corporation or its transfer agent appointed with respect to the class of stock affected, specifying the name and address or the names and addresses of the stockholder or stockholders, director or directors, to whom any such notice or notices was or were given, and the time and method of giving the same, shall be conclusive evidence of the statements therein contained. All notices given by mail, as above provided, shall be deemed to have been given as at the time of mailing and all notices given by means of electronic transmission shall be deemed to have been given as at the sending time recorded by the electronic transmission equipment operator transmitting the same. It shall not be necessary that the same method of giving notice be employed in respect of all directors, but one permissible method may be employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others. The period or limitation of time within which any stockholder may exercise any option or right, or enjoy any privilege or benefit, or be required to act, or within which any director may exercise any power or right, or enjoy any privilege, pursuant to any notice sent him in the manner above provided, shall not be affected or extended in any manner by the failure of such a stockholder or such director to receive such notice. Whenever any notice is required to be given under the provisions of the statutes or of the Certificate of Incorporation, or of these Bylaws, a waiver thereof in writing signed by the person or persons entitled to said notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent thereto. Whenever notice is required to be given, under any provision of law or of the Certificate of Incorporation or Bylaws of the Corporation, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the Corporation is such as to require the filing of a certificate under any provision of the Delaware General Corporation Law, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

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## ARTICLE 10

### AMENDMENTS

Except as otherwise provided in Section 3.1(b) or Section 8.9 above, these Bylaws may be repealed, altered or amended or new Bylaws adopted at any meeting of the stockholders, either annual or special, by the affirmative vote of sixty six and two thirds percent (66 2/3%) of the stock entitled to vote at such meeting, unless a larger vote is required by these Bylaws or the Certificate of Incorporation. Except as otherwise provided in Section 3.1(b) or Section 8.9 above, the Board of Directors shall also have the authority to repeal, alter or amend these Bylaws or adopt new Bylaws (including, without limitation, the amendment of any Bylaws setting forth the number of directors who shall constitute the whole Board of Directors) by unanimous written consent or at any annual, regular, or special meeting by the affirmative vote of a majority of the whole number of directors, subject to the power of the stockholders to change or repeal such Bylaws.

## ARTICLE 11

### FORUM FOR CERTAIN ACTIONS

Except for (a) actions in which the Court of Chancery in the State of Delaware concludes that an indispensable party is not subject to the jurisdiction of the Delaware courts, and (b) actions in which a federal court has assumed exclusive jurisdiction of a proceeding, any derivative action brought by or on behalf of the Corporation, and any direct action brought by a stockholder against the Corporation or any of its directors or officers, alleging a violation of the Delaware General Corporation Law, the Corporation's Certificate of Incorporation or Bylaws or breach of fiduciary duties or other violation of Delaware decisional law relating to the internal affairs of the Corporation, shall be brought in the Court of Chancery in the State of Delaware, which shall be the sole and exclusive forum for such proceedings; provided, however, that the Corporation may consent to an alternative forum for any such proceedings upon the approval of the Board of Directors of the Corporation.

### CERTIFICATE OF SECRETARY

The undersigned, Secretary of Marrone Bio Innovations, a Delaware corporation, hereby certifies that the foregoing is a full, true and correct copy of the Bylaws of said corporation, with all amendments to date of this Certificate.

WITNESS the signature of the undersigned this 1st day of August, 2013.

/s/ Donald Glidewell  
\_\_\_\_\_  
Donald Glidewell, Secretary

THIS WARRANT AND THE SHARES OF STOCK WHICH MAY BE PURCHASED UPON THE EXERCISE OF THIS WARRANT HAVE BEEN ACQUIRED SOLELY FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR ANY STATE SECURITIES LAWS. SUCH SECURITIES MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF SUCH REGISTRATION OR AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY AND ITS COUNSEL THAT SUCH SALE, OFFER, PLEDGE OR HYPOTHECATION IS EXEMPT FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF THE ACT AND OF ANY APPLICABLE STATE SECURITIES LAWS UNLESS SOLD PURSUANT TO RULE 144 OF THE ACT.

**MARRONE BIO INNOVATIONS, INC.  
STOCK PURCHASE WARRANT**

WARRANT TO PURCHASE SHARES OF STOCK

THIS CERTIFIES THAT, for value received, and subject to the provisions and upon the terms and conditions hereinafter set forth below, as of the Exercise Date [\_\_\_\_\_] (the "Holder") is entitled to subscribe for and purchase the number of shares of the fully paid and nonassessable shares of the Common Stock (the "Shares") of Marrone Bio Innovations, Inc., a Delaware corporation (the "Company") as set forth below under the definition of Warrant Shares (as may be adjusted pursuant to Section 3 hereof). The capitalized terms used in this Warrant shall, to the extent not defined where first used, have the meanings given to them in Section 20 of this Warrant. This Warrant is one of a series of warrants issued by the Company pursuant to the Loan Agreement dated as of [\_\_\_\_], 2012 (as amended, modified or supplemented, the "Loan Agreement") between Company and the Lenders (as defined in the Loan Agreement).

1. Method of Exercise; Payment.

(a) Cash Exercise. The purchase rights represented by this Warrant may be exercised by the Holder, in whole or in part, after the Exercise Date by the surrender of this Warrant (with the notice of exercise form attached hereto as Exhibit A duly executed) at the principal office of the Company, and by the payment to the Company, by certified, cashier's or other check acceptable to the Company, of an amount equal to the aggregate Exercise Price of the Shares being purchased.



(b) Net Issue Exercise. In lieu of exercising this Warrant, the Holder shall have the right to convert this Warrant (or any portion thereof) by surrender of this Warrant at the principal office of the Company together with notice of such conversion on the form attached hereto as Exhibit A, in which event the Company shall issue to the Holder a number of Shares computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where X = the number of the Shares to be issued to the Holder.

Y = the number of the Shares purchasable under this Warrant in respect of which the net issue exercise election is made pursuant to this Section 1(b).

A = the fair market value of one share of the Shares.

B = the Exercise Price on the date of conversion (as adjusted to the date of such conversion).

(c) Fair Market Value. For purposes of this Section 1, the per share fair market value of the Shares shall mean:

(i) If this Warrant is exercised as part of the consummation of the IPO as provided in Section 9(a), the per share fair market value of the Shares shall be seventy percent (70%) of the price per share of Common Stock sold to the public in the IPO.

(ii) If this Warrant is exercised as part of the consummation of an Acquisition as provided in Section 9(b), the per share fair market value of the Shares shall be seventy percent (70%) of the value of one share of Common Stock sold or valued in the Acquisition.

(d) Stock Certificates. In the event of any exercise of the rights represented by this Warrant, certificates for the Shares so purchased shall be delivered to the Holder within a reasonable time. Notwithstanding any delay in the delivery of the certificates for the Shares, the Company agrees that Shares purchased under this Warrant shall be and are deemed to be issued to the Holder hereof as the record owner of such Shares as of the close of business on the date on which this Warrant shall be been surrendered, the completed exercise form and the payment of the purchase price has been delivered (or, in the alternative the conversion notice specified in Section 1(b) has been delivered) to the Company.

2. Stock Fully Paid; Reservation of Stock. All of the Shares issuable upon the exercise of the rights represented by this Warrant will, upon issuance and receipt of the Exercise Price therefor, be fully paid and nonassessable, and free from all taxes, liens and charges with respect to the issue thereof.

3. Adjustments. The number and kind of securities purchasable upon the exercise of this Warrant and the Exercise Price therefor shall be subject to adjustment from time to time upon the occurrence of certain events, as follows:

(a) Reclassification. In case of any reclassification or change of the Common Stock (other than a change in par value, or as a result of a subdivision or combination), the Company shall execute a new Warrant, providing that the holder of this Warrant shall have the right to exercise such new Warrant, and procure upon such exercise and payment of the same aggregate Exercise Price, in lieu of the shares of the Common Stock theretofore issuable upon exercise of this Warrant, the kind and amount of shares of stock, other securities, money and property receivable upon such reclassification or change, by a holder of an equivalent number of shares of Common Stock. Such new Warrant shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Section 3. The provisions of this subsection (a) shall similarly apply to successive reclassifications or changes.

(b) Stock Splits, Dividends and Combinations. In the event that the Company shall at any time subdivide the outstanding shares of Common Stock or shall issue a stock dividend on its outstanding shares of Common Stock the number of shares issuable upon exercise of this Warrant immediately prior to such subdivision or to the issuance of such stock dividend shall be proportionately increased, and the Exercise Price shall be proportionately decreased, and in the event that the Company shall at any time combine the outstanding shares of Common Stock the number of shares issuable upon exercise of this Warrant immediately prior to such combination shall be proportionately decreased, and the Exercise Price shall be proportionately increased, effective at the close of business on the date of such subdivision, stock dividend or combination, as the case may be.

4. Notice of Adjustments. Whenever the number of shares purchasable hereunder or the Exercise Price thereof shall be adjusted pursuant to Section 3 hereof, the Company shall promptly provide notice to the Holder setting forth, in reasonable detail, the event requiring the adjustment, the amount of the adjustment, the method by which such adjustment was calculated, and the number and class of shares which may be purchased and the Exercise Price therefor after giving effect to such adjustment.

5. Fractional Shares. This Warrant may not be exercised for fractional shares. In lieu of fractional shares the Company shall make a cash payment therefor based upon the Exercise Price then in effect.

6. Representations of the Company. The Company represents that all corporate actions on the part of the Company, its officers, directors and shareholders necessary for the sale and issuance of this Warrant and the performance of the Company's obligations hereunder were taken, or will be taken, prior to and are, or will be, effective as of the Exercise Date.

7. Representations and Warranties by the Holder. The Holder represents and warrants to the Company as follows:

(a) This Warrant and the Shares issuable upon exercise thereof are being acquired for its own account, for investment and not with a view to, or for resale in connection with, any

distribution or public offering thereof within the meaning of the Securities Act of 1933, as amended (the “Act”). Upon exercise of this Warrant, the Holder shall, if so requested by the Company, confirm in writing, in a form satisfactory to the Company, that the securities issuable upon exercise of this Warrant are being acquired for investment and not with a view toward distribution or resale.

(b) The Holder understands that the Warrant and the Shares have not been registered under the Act by reason of their issuance in a transaction exempt from the registration and prospectus delivery requirements of the Act pursuant to Section 4(2) thereof, and that they must be held by the Holder indefinitely, and that the Holder must therefore bear the economic risk of such investment indefinitely, unless a subsequent disposition thereof is registered under the Act or is exempted from such registration. The Holder further understands that the Shares have not been qualified under any state securities law by reason of their issuance in a transaction exempt from the qualification requirements thereof, which exemption depends upon, among other things, the bona fide nature of the Holder’s investment intent expressed above.

(c) The Holder has such knowledge and experience in financial and business matters that it is capable of evaluating the merits and risks of the purchase of this Warrant and the Shares purchasable pursuant to the terms of this Warrant and of protecting its interests in connection therewith.

(d) The Holder is able to bear the economic risk of the purchase of the Shares pursuant to the terms of this Warrant.

8. Restrictive Legend.

The Shares (unless registered under the Act) shall be stamped or imprinted with a legend in substantially the following form:

THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF, AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED. SUCH SHARES MAY NOT BE SOLD OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR UNLESS THE COMPANY RECEIVES AN OPINION OF COUNSEL REASONABLY ACCEPTABLE TO IT STATING THAT SUCH SALE OR TRANSFER IS EXEMPT FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF THE ACT. COPIES OF THE AGREEMENT COVERING THE PURCHASE OF THESE SHARES AND RESTRICTING THEIR TRANSFER MAY BE OBTAINED AT NO COST BY WRITTEN REQUEST MADE BY THE HOLDER OF RECORD OF THIS CERTIFICATE TO THE SECRETARY OF THE COMPANY AT THE PRINCIPAL EXECUTIVE OFFICES OF THE COMPANY.

9. IPO or Acquisition.

(a) Upon receipt of a written notice of the Company's intention to raise capital by selling shares of Common Stock in an IPO, which notice shall be delivered to Holder at least thirty (30) but not more than ninety (90) days before the anticipated date of the consummation of the IPO, the Holder shall, within 10 days of receipt of such notice, notify the Company whether or not the Holder will exercise this Warrant as part of the consummation of the IPO. If Holder has elected to exercise this Warrant as provided in this Section 9 in connection with an IPO and the IPO is not consummated, then Holder's exercise of this Warrant shall not be effective.

(b) Upon receipt of a written notice of the Company's intention to consummate an Acquisition, which notice shall be delivered to Holder at least thirty (30) but not more than ninety (90) days before the anticipated date of the consummation of the Acquisition, the Holder shall, within 10 days of receipt of such notice, notify the Company whether or not the Holder will exercise this Warrant as part of the consummation of the Acquisition. If Holder has elected to exercise this Warrant as provided in this Section 9 in connection with an Acquisition and the Acquisition is not consummated, then Holder's exercise of this Warrant shall not be effective.

10. Rights of Shareholders. No holder of this Warrant shall be entitled, as a Warrant holder, to vote or receive dividends or be deemed the holder of the Shares or any other securities of the Company which may at any time be issuable on the exercise hereof for any purpose, nor shall anything contained herein be construed to confer upon the holder of this Warrant, as such, any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to shareholders at any meeting thereof, or to give or withhold consent to any corporate action (whether upon any recapitalization, issuance of stock, reclassification of stock, change of par value, consolidation, merger, conveyance, or otherwise) or, except as provided in Section 11 below, to receive notice of meetings, or to receive dividends or subscription rights or otherwise until the Warrant shall have been exercised and the Shares purchasable upon the exercise hereof shall have become deliverable, as provided herein.

11. Notices of Record Date. In the event:

- (a) the Company shall declare any dividend or distribution upon any of its capital stock;
- (b) there shall be any capital reorganization, reclassification of the capital stock of the Company or an Acquisition; or
- (c) there shall be a voluntary or involuntary dissolution, liquidation or winding up of the Company;

the Company shall give to the Holder of this Warrant written notice of any relevant record, payment, effective and exchange dates and the amount and nature of any dividend, distribution or right. Such notice shall be given at least 10 days prior to any record date for distribution or voting and also at least 20 days prior to the effective date of the transactions referred to in (b) and (c) above. Failure to so give notice or any defect in any certification or notice given under this Warrant shall not affect the validity or legality of any transaction giving rise thereto so long as such failure or defect does not result in the termination of Holder's rights under this Warrant.

12. Expiration of Warrant. This Warrant shall expire and shall no longer be exercisable upon the earlier to occur of:

(a) the date of the later of the Initial Maturity Date (as defined in the Loan Agreement) or the later applicable maturity date (as such term is used in the Loan Agreement), if any;

(b) An Acquisition, provided that the Company has complied with Section 9(b) in all material respects; and

(c) The IPO, provided that the Company has complied with Section 9(a) in all material respects.

13. Notices. All notices and other communications required or permitted hereunder shall be in writing, shall be effective when given, and shall in any event be deemed to be given upon receipt or, if earlier, (a) five (5) days after deposit with the U.S. Postal Service or other applicable postal service, if delivered by first class mail, postage prepaid, (b) upon delivery, if delivered by hand, (c) one business day after the business day of deposit with Federal Express or similar overnight courier, freight prepaid or (d) one business day after the business day of facsimile transmission, if delivered by facsimile transmission with copy by first class mail, postage prepaid, and shall be addressed (i) if to the Holder, at [\_\_\_\_], and (ii) if to the Company, at the address of its principal corporate offices (attention: President), or at such other address as a party may designate by advance written notice to the other party pursuant to the provisions above.

14. "Market Stand-Off" Agreement. Holder agrees not to sell or otherwise transfer or dispose of any Common Stock (or other securities) of the Company held by Holder during a period of time determined by the Company and its underwriters not to exceed (180) days following the effective date of the Company's initial registration statement.

If requested by the Company, Holder agrees to enter into a separate agreement consistent with the foregoing with any underwriter of the Company's securities. Such agreement shall be in writing in a form reasonably satisfactory to the Company and such underwriter; provided, however, that such agreement (and the Holder's obligation pursuant to the previous paragraph) shall not be required unless all officers and directors (and related funds) of the Company and all other holders of at least 1% of the Company's outstanding equity securities enter into similar agreements. The Company may impose stop-transfer instructions with respect to the securities subject to the foregoing restriction until the end of said period.

15. Governing Law. This Warrant and all actions arising out of or in connection with this Agreement shall be governed by and construed in accordance with the internal laws of the State of California, without regard to the conflicts of law provisions thereof.

16. Exchange of Warrants. On surrender for exchange of this Warrant, properly endorsed, the Company at its expense, but on payment by the Holder of any applicable transfer taxes,

shall issue and deliver to or on the order of the Holder a new Warrant or Warrants of like tenor, for the same aggregate number of Shares as called for by the Warrant surrendered.

17. Replacement of Warrants. In the case of the loss, theft or destruction of a Warrant then held by Holder or his assigns, an affidavit of an officer of such Holder stating the loss, theft or destruction, as the case may be, shall constitute evidence satisfactory to the Company and no indemnity or security shall be required for replacement other than the Holder's written agreement to indemnify the Company.

18. No Impairment. The Company shall not, by amendment of its Certificate of Incorporation or bylaws, or through reorganization, consolidation, merger, dissolution, issue or sale of securities, sale of assets or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but shall at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the Holder of this Warrant against impairment.

19. Severability. If any term, provision, covenant or restriction of this Warrant is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions of this Warrant shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

20. Certain Definitions. As used in this Warrant the following terms shall have the following respective meanings:

"Acquisition" shall mean (a) the acquisition of the Company by another entity by means of any transaction or series of related transactions (including, without limitation, any transfer of more than 50% of the voting power of the Company, reorganization, merger or consolidation, but excluding any merger effected exclusively for the purpose of changing the domicile of the Company); or (b) a sale of all or substantially all of the assets of the Company; unless the Company's stockholders of record as constituted immediately prior to such acquisition or sale will, immediately after such acquisition or sale (by virtue of securities issued as consideration for the Company's acquisition or sale or otherwise) hold at least fifty percent (50%) of the voting power of the surviving or acquiring entity.

"Exercise Date" shall mean (a) if this Warrant is to be exercised as part of the consummation of the IPO as provided in Section 9(a), the date immediately prior to the consummation of the IPO; and (b) if this Warrant is to be exercised as part of the consummation of an Acquisition as provided in Section 9(b), the date immediately prior to the consummation of the Acquisition.

"Exercise Price" shall mean (a) if this Warrant is exercised as part of the consummation of the IPO as provided in Section 9(a), the exercise price of a Share will be seventy percent (70%) of the price at which one share of Common Stock is sold to the public in the IPO; and (b) if this Warrant is exercised as part of the consummation of an Acquisition as provided in Section 9(b), the exercise price of a Share will be seventy percent (70%) of the value of one share of Common Stock sold or valued in the Acquisition.

“IPO” shall mean the Company’s firmly underwritten public offering pursuant to a registration statement under the Securities Act of 1933, as amended, covering the offer and sale of Common Stock of the Company for the account of the Company in which the gross cash proceeds to the Company (before underwriting discounts, commissions and fees) are at least \$30,000,000.

“Warrant Shares” shall mean as to the Holder (a) if this Warrant is exercised as part of the consummation of the IPO as provided in Section 9(a), the number of Shares as is equal to the quotient (rounded to the nearest whole number) obtained by dividing (i) the product obtained by multiplying the original principal amount of such Holder’s Loan (as defined in the Loan Agreement) by 0.15, by (ii) seventy percent (70%) of the price at which one share of Common Stock is sold to the public in the IPO; and (b) if this Warrant is exercised as part of the consummation of an Acquisition as provided in Section 9(b), the number of Shares as is equal to the quotient (rounded to the nearest whole number) obtained by dividing (i) the product obtained by multiplying the original principal amount of such Holder’s Loan (as defined in the Loan Agreement) by 0.15, by (ii) seventy percent (70%) of the value of one share of Common Stock sold or valued in the Acquisition.

Issued as of [\_\_\_\_\_], 2012.

**MARRONE BIO INNOVATIONS, INC.**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**EXHIBIT A**  
**NOTICE OF EXERCISE**

TO: Marrone Bio Innovations, Inc.  
2121 Second Street, Ste. B-107  
Davis, CA 95618  
Attention: President

1. The undersigned hereby elects to purchase \_\_\_\_\_ shares of Marrone Bio Innovations, Inc. pursuant to the terms of the attached Warrant.

2. Method of Exercise (Please initial the applicable blank):

\_\_\_\_ The undersigned elects to exercise the attached Warrant by means of a cash payment, and tenders herewith payment in full for the purchase price of the Shares being purchased, together with all applicable transfer taxes, if any.

\_\_\_\_ The undersigned elects to exercise the attached Warrant by means of the net exercise provisions of Section 1(b) of the Warrant.

3. Please issue a certificate or certificates representing said Shares in the name of the undersigned or in such other name as is specified below:

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
\_\_\_\_\_  
(Address)

4. The undersigned hereby represents and warrants that the aforesaid Shares are being acquired for the account of the undersigned for investment and not with a view to, or for resale, in connection with the distribution thereof, and that the undersigned has no present intention of distributing or reselling such shares and all representations and warranties of the undersigned set forth in Section 7 of the attached Warrant are true and correct as of the date hereof.

\_\_\_\_\_  
(Signature)

Title: \_\_\_\_\_

\_\_\_\_\_  
(Date)



FORM OF WARRANT

THIS WARRANT AND THE SHARES OF STOCK WHICH MAY BE PURCHASED UPON THE EXERCISE OF THIS WARRANT HAVE BEEN ACQUIRED SOLELY FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"), OR ANY STATE SECURITIES LAWS. SUCH SECURITIES MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF SUCH REGISTRATION OR AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY AND ITS COUNSEL THAT SUCH SALE, OFFER, PLEDGE OR HYPOTHECATION IS EXEMPT FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF THE ACT AND OF ANY APPLICABLE STATE SECURITIES LAWS UNLESS SOLD PURSUANT TO RULE 144 OF THE ACT.

MARRONE BIO INNOVATIONS, INC.  
STOCK PURCHASE WARRANT

Void after June [     ], 2023

WARRANT TO PURCHASE SHARES OF STOCK

THIS CERTIFIES THAT, for value received, and subject to the provisions and upon the terms and conditions hereinafter set forth below, as of the Exercise Date, [     ] (the "Holder") is entitled to subscribe for and purchase the number of shares of the fully paid and nonassessable shares of the capital stock (the "Shares") of Marrone Bio Innovations, Inc., a Delaware corporation (the "Company") as set forth below under the definition of Warrant Shares (as may be adjusted pursuant to Section 3 hereof). The capitalized terms used in this Warrant shall, to the extent not defined where first used, have the meanings given to them in Section 20 of this Warrant. This Warrant is issued by the Company pursuant to the Credit Facility Agreement dated as of June [     ], 2013 (as amended, modified or supplemented, the "Facility Agreement").

Method of Exercise: Payment.

Cash Exercise. The purchase rights represented by this Warrant may be exercised by the Holder, in whole or in part, after the Exercise Date by the surrender of this Warrant (with the notice of exercise form attached hereto as Exhibit A duly executed) at the principal office of the Company, and by the payment to the Company, by certified, cashier's or other check acceptable to the Company, of an amount equal to the aggregate Exercise Price of the Shares being purchased.

Net Issue Exercise. In lieu of exercising this Warrant, the Holder shall have the right to convert this Warrant (or any portion thereof) by surrender of this Warrant at the principal

office of the Company together with notice of such conversion on the form attached hereto as Exhibit A, in which event the Company shall issue to the Holder a number of Shares computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where X = the number of the Shares to be issued to the Holder.

Y = the number of the Shares purchasable under this Warrant in respect of which the net issue exercise election is made pursuant to this Section 1(b).

A = the fair market value of one share of the Shares.

B = the Exercise Price on the date of conversion (as adjusted to the date of such conversion).

Fair Market Value. For purposes of this Section 1, the per share fair market value of the Shares shall mean:

(i) If the Company's Common Stock is publicly traded, the per share fair market value of the Shares shall be the average of the closing prices of the Common Stock as quoted on the Nasdaq National Market or the principal exchange on which the Common Stock is listed, or if not so listed then the fair market value shall be the average of the closing bid and asked prices of the Common Stock as published in The Wall Street Journal, in each case for the ten trading days prior to the date of determination of fair market value.

(ii) If the Company's Common Stock is not publicly traded, the per share fair market value of the Shares shall be such fair market value as is determined by a majority of the Board of Directors in good faith upon a review of relevant factors, including due consideration of Holder's determination of fair market value, it being further understood that the exercise of this Warrant pursuant to the net exercise provision contained in Section 1 shall be delayed until such determination is made.

Stock Certificates. In the event of any exercise of the rights represented by this Warrant, certificates for the Shares so purchased shall be delivered to the Holder within a reasonable time. Notwithstanding any delay in the delivery of the certificates for the Shares, the Company agrees that Shares purchased under this Warrant shall be and are deemed to be issued to the Holder hereof as the record owner of such Shares as of the close of business on the date on which this Warrant shall be been surrendered, the completed exercise form and the payment of the purchase price has been delivered (or, in the alternative the conversion notice specified in Section 1(b) has been delivered) to the Company.

(e) For the avoidance of doubt, once the first of the IPO, the Qualified Financing or the Acquisition occurs, this Warrant shall be exercisable for the Warrant Shares, and at the Exercise Price, applicable to such first to occur event and not for any other securities or at any other price even in the event of an occurrence of a subsequent such event.

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Stock Fully Paid. All of the Shares issuable upon the exercise of the rights represented by this Warrant will, upon issuance and receipt of the Exercise Price therefor, be fully paid and nonassessable, and free from all taxes, liens and charges with respect to the issue thereof.

Adjustments. The number and kind of securities purchasable upon the exercise of this Warrant and the Exercise Price therefor shall be subject to adjustment from time to time upon the occurrence of certain events, as follows:

Reclassification. In case of any reclassification or change of the Company's Common Stock (other than a change in par value, or as a result of a subdivision or combination), the Company shall execute a new Warrant, providing that the holder of this Warrant shall have the right to exercise such new Warrant, and procure upon such exercise and payment of the same aggregate Exercise Price, in lieu of the shares of the Common Stock theretofore issuable upon exercise of this Warrant, the kind and amount of shares of stock, other securities, money and property receivable upon such reclassification or change, by a holder of an equivalent number of shares of Common Stock. Such new Warrant shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Section 3. The provisions of this subsection (a) shall similarly apply to successive reclassifications or changes.

Stock Splits, Dividends and Combinations. In the event that the Company shall at any time subdivide the outstanding shares of Common Stock or shall issue a stock dividend on its outstanding shares of Common Stock the number of shares issuable upon exercise of this Warrant immediately prior to such subdivision or to the issuance of such stock dividend shall be proportionately increased, and the Exercise Price shall be proportionately decreased, and in the event that the Company shall at any time combine the outstanding shares of Common Stock the number of shares issuable upon exercise of this Warrant immediately prior to such combination shall be proportionately decreased, and the Exercise Price shall be proportionately increased, effective at the close of business on the date of such subdivision, stock dividend or combination, as the case may be.

Notice of Adjustments. Whenever the number of shares purchasable hereunder or the Exercise Price thereof shall be adjusted pursuant to Section 3 hereof, the Company shall promptly provide notice to the Holder setting forth, in reasonable detail, the event requiring the adjustment, the amount of the adjustment, the method by which such adjustment was calculated, and the number and class of shares which may be purchased and the Exercise Price therefor after giving effect to such adjustment.

Fractional Shares. This Warrant may not be exercised for fractional shares. In lieu of fractional shares the Company shall make a cash payment therefor based upon the Exercise Price then in effect.

Representations of the Company. The Company represents to Holder that all corporate actions on the part of the Company, its officers, directors and shareholders necessary for the sale and issuance of this Warrant and the performance of the Company's obligations hereunder were taken, or will be taken, prior to and are, or will be, effective as of the Exercise Date.

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Representations and Warranties by the Holder. The Holder represents and warrants to the Company as follows:

This Warrant and the Shares issuable upon exercise thereof are being acquired for its own account, for investment and not with a view to, or for resale in connection with, any distribution or public offering thereof within the meaning of the Securities Act of 1933, as amended (the "Act"). Upon exercise of this Warrant, the Holder shall, if so requested by the Company, confirm in writing, in a form satisfactory to the Company, that the securities issuable upon exercise of this Warrant are being acquired for investment and not with a view toward distribution or resale.

The Holder understands that the Warrant and the Shares have not been registered under the Act by reason of their issuance in a transaction exempt from the registration and prospectus delivery requirements of the Act pursuant to Section 4(2) thereof, and that they must be held by the Holder indefinitely, and that the Holder must therefore bear the economic risk of such investment indefinitely, unless a subsequent disposition thereof is registered under the Act or is exempted from such registration. The Holder further understands that the Shares have not been qualified under any state securities law by reason of their issuance in a transaction exempt from the qualification requirements thereof, which exemption depends upon, among other things, the bona fide nature of the Holder's investment intent expressed above.

The Holder has such knowledge and experience in financial and business matters that it is capable of evaluating the merits and risks of the purchase of this Warrant and the Shares purchasable pursuant to the terms of this Warrant and of protecting its interests in connection therewith.

The Holder is able to bear the economic risk of the purchase of the Shares pursuant to the terms of this Warrant.

Restrictive Legend.

The Shares (unless registered under the Act) shall be stamped or imprinted with a legend in substantially the following form:

THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF, AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED. SUCH SHARES MAY NOT BE SOLD OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR UNLESS THE COMPANY RECEIVES AN OPINION OF COUNSEL REASONABLY ACCEPTABLE TO IT STATING THAT SUCH SALE OR TRANSFER IS EXEMPT FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF THE ACT. COPIES OF THE AGREEMENT COVERING THE PURCHASE OF THESE SHARES AND RESTRICTING THEIR TRANSFER MAY BE OBTAINED AT NO COST BY WRITTEN REQUEST MADE BY THE HOLDER OF RECORD OF THIS CERTIFICATE

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TO THE SECRETARY OF THE COMPANY AT THE PRINCIPAL EXECUTIVE OFFICES OF THE COMPANY.

IPO or Acquisition.

(a) Upon receipt of a written notice of the Company's intention to raise capital by selling shares of Common Stock in an IPO, which notice shall be delivered to Holder at least thirty (30) but not more than ninety (90) days before the anticipated date of the consummation of the IPO, the Holder shall, within 10 days of receipt of such notice, notify the Company whether or not the Holder will exercise this Warrant as part of the consummation of the IPO. If Holder has elected to exercise this Warrant as provided in this Section 9 in connection with an IPO and the IPO is not consummated, then Holder's exercise of this Warrant shall not be effective.

(b) Upon receipt of a written notice of the Company's intention to consummate an Acquisition, which notice shall be delivered to Holder at least thirty (30) but not more than ninety (90) days before the anticipated date of the consummation of the Acquisition, the Holder shall, within 10 days of receipt of such notice, notify the Company whether or not the Holder will exercise this Warrant as part of the consummation of the Acquisition. If Holder has elected to exercise this Warrant as provided in this Section 9 in connection with an Acquisition and the Acquisition is not consummated, then Holder's exercise of this Warrant shall not be effective.

Rights of Shareholders. No holder of this Warrant shall be entitled, as a Warrant holder, to vote or receive dividends or be deemed the holder of the Shares or any other securities of the Company which may at any time be issuable on the exercise hereof for any purpose, nor shall anything contained herein be construed to confer upon the holder of this Warrant, as such, any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to shareholders at any meeting thereof, or to give or withhold consent to any corporate action (whether upon any recapitalization, issuance of stock, reclassification of stock, change of par value, consolidation, merger, conveyance, or otherwise) or, except as provided in Section 11 below, to receive notice of meetings, or to receive dividends or subscription rights or otherwise until the Warrant shall have been exercised and the Shares purchasable upon the exercise hereof shall have become deliverable, as provided herein.

Notices of Record Date. In the event:

- (a) the Company shall declare any dividend or distribution upon any of its capital stock;
- (b) there shall be any capital reorganization, reclassification of the capital stock of the Company or an Acquisition; or
- (c) there shall be a voluntary or involuntary dissolution, liquidation or winding up of the Company;

the Company shall give to the Holder of this Warrant written notice of any relevant record, payment, effective and exchange dates and the amount and nature of any dividend, distribution or right. Such notice shall be given at least 10 days prior to any record date for distribution or voting and also at least 20 days prior to the effective date of the transactions referred to in (b)

and (c) above. Failure to so give notice or any defect in any certification or notice given under this Warrant shall not affect the validity or legality of any transaction giving rise thereto so long as such failure or defect does not result in the termination of Holder's rights under this Warrant.

Expiration of Warrant. This Warrant shall expire and shall no longer be exercisable upon the earlier to occur of:

5:00 p.m., California local time, on June [ ], 2023; and

An Acquisition, provided that the Company has complied with Section 9(b) in all material respects.

Notices. All notices and other communications required or permitted hereunder shall be in writing, shall be effective when given, and shall in any event be deemed to be given upon receipt or, if earlier, (a) five (5) days after deposit with the U.S. Postal Service or other applicable postal service, if delivered by first class mail, postage prepaid, (b) upon delivery, if delivered by hand, (c) one business day after the business day of deposit with Federal Express or similar overnight courier, freight prepaid or (d) one business day after the business day of facsimile transmission, if delivered by facsimile transmission with copy by first class mail, postage prepaid, and shall be addressed (i) if to the Holder, at [ ] and (ii) if to the Company, at the address of its principal corporate offices (attention: President), or at such other address as a party may designate by advance written notice to the other party pursuant to the provisions above.

“Market Stand-Off” Agreement. Holder agrees not to sell or otherwise transfer or dispose of any Common Stock (or other securities) of the Company held by Holder during a period of time determined by the Company and its underwriters not to exceed eighteen (18) months following the effective date of the Company’s initial registration statement. If requested by the Company, Holder agrees to enter into a separate agreement consistent with the foregoing with any underwriter of the Company’s securities. Such agreement shall be in writing in a form reasonably satisfactory to the Company and such underwriter. The Company may impose stop-transfer instructions with respect to the securities subject to the foregoing restriction until the end of said period.

**Governing Law.** This Warrant and all actions arising out of or in connection with this Agreement shall be governed by and construed in accordance with the internal laws of the State of California, without regard to the conflicts of law provisions thereof.

**Exchange of Warrants.** On surrender for exchange of this Warrant, properly endorsed, the Company at its expense, but on payment by the Holder of any applicable transfer taxes, shall issue and deliver to or on the order of the Holder a new Warrant or Warrants of like tenor, for the same aggregate number of Shares as called for by the Warrant surrendered.

**Replacement of Warrants.** In the case of the loss, theft or destruction of a Warrant then held by Holder or his assigns, an affidavit of an officer of such Holder stating the loss, theft or destruction, as the case may be, shall constitute evidence satisfactory to the Company and no indemnity or security shall be required for replacement other than the Holder's written agreement to indemnify the Company.

**No Impairment.** The Company shall not, by amendment of its Certificate of Incorporation or bylaws, or through reorganization, consolidation, merger, dissolution, issue or sale of securities, sale of assets or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but shall at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the Holder of this Warrant against impairment.

**Severability.** If any term, provision, covenant or restriction of this Warrant is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions of this Warrant shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

**Certain Definitions.** As used in this Warrant the following terms shall have the following respective meanings:

**“Acquisition”** shall mean (a) the acquisition of the Company by another entity by means of any transaction or series of related transactions (including, without limitation, any transfer of more than 50% of the voting power of the Company, reorganization, merger or consolidation, but excluding any merger effected exclusively for the purpose of changing the domicile of the Company); or (b) a sale of all or substantially all of the assets of the Company; unless the Company’s stockholders of record as constituted immediately prior to such acquisition or sale will, immediately after such acquisition or sale (by virtue of securities issued as consideration for the Company’s acquisition or sale or otherwise) hold at least fifty percent (50%) of the voting power of the surviving or acquiring entity.

**“Exercise Date”** shall mean the first to occur of: (a) if this Warrant is to be exercised as part of the consummation of or at any time after the IPO, the date immediately prior to the consummation of the IPO; (b) if this Warrant is to be exercised as part of the consummation of or at any time after the Qualified Financing, the date immediately prior to the consummation of the Qualified Financing; and (c) if this Warrant is to be exercised as part of the consummation of an Acquisition as provided in Section 9(b), the date immediately prior to the consummation of the Acquisition.

**“Exercise Price”** shall mean the first to occur of: (a) if this Warrant is exercised as part of the consummation of or at any time after the IPO, the exercise price of a Share will be seventy percent (70%) of the price at which one share of the Company’s Common Stock is sold to the public in the IPO; (b) if this Warrant is exercised as part of the consummation of or at any time after the Qualified Financing, the exercise price of a Share will be seventy percent (70%) of the value of one share of Common Stock equivalents (the number of shares of equity securities convertible into one share of the Company’s Common Stock) sold in the Qualified Financing; and (c) if this Warrant is exercised as part of the consummation of an Acquisition as provided in Section 9(b), the exercise price of a Share will be seventy percent (70%) of the value of one share of the Company’s Common Stock sold or valued in the Acquisition.

**“IPO”** shall mean the Company’s firmly underwritten public offering pursuant to a registration statement under the Securities Act of 1933, as amended, covering the offer and sale

of Common Stock of the Company for the account of the Company in which the gross cash proceeds to the Company (before underwriting discounts, commissions and fees) are at least \$30,000,000.

“Qualified Financing” shall mean the first equity financing (or substantially concurrent equity financings), primarily for equity financing purposes, occurring after the date hereof which results in immediately available gross proceeds to the Company, excluding proceeds from any indebtedness of the Company that converts into equity in such financing, of at least \$20 million; provided, that, in order for any such equity financing to constitute a “Qualified Financing,” at least 50% of the amount invested in such equity financing must be made by persons who are not (i) a holder of Common Stock or Common Stock equivalents (any equity security convertible into or exchangeable for Common Stock and any warrant or option to acquire Common Stock or any such convertible or exchangeable security) of the Company, (ii) an affiliate of the Company, (iii) any strategic investor or (iv) an affiliate of any of the persons identified in clauses (i), (ii) or (iii) above; and provided, further, that the term Qualified Financing shall exclude the issuance of any “Excluded Securities” of the type specified in clauses (a) through (g) and clauses (i) through (k) of Section 4.6 of the Second Amended and Restated Investor Rights Agreement, dated as of March 5, 2010, among the Company and the stockholders of the Company party thereto (the “Investor Rights Agreement”).

“Warrant Shares” shall mean as to the Holder the first to occur of: (a) if this Warrant is exercised as part of or at any time after the consummation of the IPO, the number of Shares as is equal to the quotient (rounded to the nearest whole number) obtained by dividing (i) the product obtained by multiplying the original principal amount of such Holder’s Commitment Amount (as defined in the Facility Agreement) by 0.10, by (ii) seventy percent (70%) of the price at which one share of Common Stock is sold to the public in the IPO; (b) if this Warrant is exercised as part of the consummation of or at any time after the Qualified Financing, the number of Shares as is equal to the quotient (rounded to the nearest whole number) obtained by dividing (i) the product obtained by multiplying the original principal amount of such Holder’s Commitment Amount (as defined in the Facility Agreement) by 0.10, by (ii) seventy percent (70%) of the value of one share of Common Stock equivalents (the number of shares of equity securities convertible into one share of Common Stock) sold in the Qualified Financing; or (c) if this Warrant is exercised as part of the consummation of an Acquisition as provided in Section 9(b), the number of Shares as is equal to the quotient (rounded to the nearest whole number) obtained by dividing (i) the product obtained by multiplying the original principal amount of such Holder’s Commitment Amount (as defined in the Facility Agreement) by 0.10, by (ii) seventy percent (70%) of the value of one share of Common Stock sold or valued in the Acquisition.

Issued as of June [     ], 2013.

[Signature page follows]



MARRONE BIO INNOVATIONS, INC.

By: \_\_\_\_\_  
Name: Pamela G. Marrone  
Title: President and CEO

**EXHIBIT A**

**NOTICE OF EXERCISE**

TO: Marrone Bio Innovations, Inc.  
2121 Second Street, Ste. B-107  
Davis, CA 95618  
Attention: President

1. The undersigned hereby elects to purchase \_\_\_\_\_ shares of Marrone Bio Innovations, Inc. pursuant to the terms of the attached Warrant.

2. Method of Exercise (Please initial the applicable blank):

The undersigned elects to exercise the attached Warrant by means of a cash payment, and tenders herewith payment in full for the purchase price of the Shares being purchased, together with all applicable transfer taxes, if any.

The undersigned elects to exercise the attached Warrant by means of the net exercise provisions of Section 1(b) of the Warrant.

3. Please issue a certificate or certificates representing said Shares in the name of the undersigned or in such other name as is specified below:

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
\_\_\_\_\_  
(Address)

4. The undersigned hereby represents and warrants that the aforesaid Shares are being acquired for the account of the undersigned for investment and not with a view to, or for resale, in connection with the distribution thereof, and that the undersigned has no present intention of distributing or reselling such shares and all representations and warranties of the undersigned set forth in Section 7 of the attached Warrant are true and correct as of the date hereof.

\_\_\_\_\_  
(Signature)

Title: \_\_\_\_\_

\_\_\_\_\_  
(Date)



February 10, 2014

James B. Boyd

Dear Jim,

We are pleased to offer to you the position of Chief Financial Officer with Marrone Bio Innovations, Inc. (the "Company"), reporting to Pam Marrone, CEO and Founder. Your start date is Feb 25 or as soon as practical. Your first six months on the job will be considered an introductory period.

You will receive a base salary of \$240,000 on an annualized basis. Subject to the approval of our Board of Directors, you will be granted an option to purchase 190,000 shares of the Company's common stock. The price per share of any approved option will be the closing price of our common stock as of the date on which the Board approves the award. Your entitlement to any stock option that may be approved is, of course, conditioned upon your signing of an Award Agreement and will be subject to its terms and the terms of our 2014 Stock Incentive Plan. The option will vest over a period of four (4) years. One year from the date of grant of the option, 25% of the total shares will be vested. Such option will continue to vest over the remaining 3 years on a pro-rata basis equally each month over the period following the date of grant (2.083% per month over 36 months). You must be continually employed by the Company for the option to continue to vest.

You will be eligible to participate in the Company Bonus Plan, which changes from year to year, based on company and individual goals. Your portion of the 2014 bonus program will be paid on a pro-rata basis for the portion of the year worked for the Company. Your bonus can be up to 30% of your salary.

We will also pay you a one-time \$10,000 sign-on bonus and provide you up to \$20,000 moving allowance for your relocation expenses from Tiburon to Davis, reimbursable from receipts, plus three (3) months of temporary housing paid for by the company. Should you leave the Company before completing 12 months of service you agree to pay back a pro rata portion of the relocation expenses and sign-on bonus. For example, if you were to leave after 9 months you would owe back 25% of the moving expenses.

MBI will provide you with a company cell phone, laptop computer (choice of Mac or PC), and iPad.

You should be aware that your employment with the Company is for no specified period and constitutes at-will employment. As a result, you are free to resign at any time, for any reason or for no reason. We prefer, that if you resigned you would provide a four-week notice. Similarly, the Company is free to conclude its employment relationship with you at any time, with or without cause. However, in the event that your employment is actually or constructively terminated by the Company without cause (whether or not occurring in connection with a change of control of the Company) the Company will continue to pay for Salary, Life, Medical, Dental and Disability coverage for a period of six (6) months post termination.

2121 Second Street, Suite B-107

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Davis, CA 95618

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Phone: 530-750-2800

You will be eligible for the Company's benefits programs on the first day of the first full month of your employment:

- Medical (MBI offers you a choice of a PPO, HMO or an HSA Plan), Dental and Vision Insurance for you. The Company will pay for 50% of your dependent premium for medical and dental insurance and you may pay the remaining 50% on a pre-tax basis under the Company's medical plan.
- Cafeteria Plan (Section 125 Plan) which gives you the ability to set aside a portion of your paycheck on a pre-tax basis for dependent premiums as well as set up a flexible spending account for dependent care and unreimbursed medical expenses.
- Voluntary Supplemental Term Life Insurance and AD&D.
- Long-term Disability Insurance for you, and \$50,000 in Life Insurance for you with the option to increase the amount for you and dependents.
- 401(k) Plan participation. Subject to Board approval, you will receive a company match of \$1 for \$1 for the first 3% of your salary you contribute and \$0.5 for the next 2% of your salary (i.e. the maximum match is 4% if you contribute 5% of your salary).

You will be entitled 3 weeks of vacation, which is accrued at 5.00 hours per pay period, which is equivalent to 120 hours on an annual basis.

All the benefit programs and plans are offered solely at the discretion of the Company and may be added to, deleted from, or modified at any time and for any reason. In addition to a timely response, this offer is contingent upon successfully passing a background check, which may include work references, criminal, and education credential checks. For purposes of federal immigration laws, you are required to provide to the Company documentary evidence of your identity and eligibility to work in the United States. Such documentation must be provided to us within three (3) business days of your date of hire or our contingent employment relationship with you will be terminated. You will also be required to take a drug test within 24 hours of notification by the Company as a condition of employment. You will be required to sign the company's standard employee confidentiality and inventions agreement.

To indicate your acceptance of the Company's offer, please sign and date this letter in the space provided below and return it to Pam Marrone. This letter sets forth the terms of your employment with the Company and supersedes any prior representations or agreements, whether written or oral. This letter may not be modified or amended except by a written agreement signed by the Company and by you.

**2121 Second Street, Suite B-107**

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**Davis, CA 95618**

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**Phone: 530-750-2800**

We are very excited to have you join MBI. These are exciting times at MBI and we know that your skills and experience will be enhancing for MBI. I look forward to continuing to build the company with you and our team.

Sincerely,



Pam Marrone,  
President/CEO

I, James B. Boyd, accept the terms of this agreement.

Signature: /s/ James B Boyd

Date Signed: 2/16/14

**2121 Second Street, Suite B-107**

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**Davis, CA 95618**

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**Phone: 530-750-2800**

TRANSITION AGREEMENT

THIS TRANSITION AGREEMENT (this "Agreement") is made and entered into as of November 6, 2013 (the "Effective Date") between MARRONE BIO INNOVATIONS, INC., a Delaware corporation company (the "Company"), and DONALD GLIDEWELL (the "Executive").

RECITALS

- A. The Company and the Executive are parties to a letter agreement dated as of March 16, 2011 (the "Letter Agreement"), pursuant to which the Employee is currently employed by the Company as its Chief Financial Officer.
- B. The Company and the Executive mutually desire for the Executive to transition out of his various roles at the Company.
- C. The Company and the Executive wish to enter into this Agreement to (i) provide for the orderly transition of Executive's responsibilities and position as Chief Financial Officer to a new chief financial officer (the "New CFO") and (ii) ensure Executive's continued dedication and efforts to the Company during the Transition Period (as defined below).

AGREEMENT

NOW, THEREFORE, in consideration of the premises and the mutual promises set forth in this Agreement, the Company and the Executive hereby agree as follows:

1. Definitions. Unless otherwise defined herein, the capitalized terms defined in Exhibit A shall have the meanings therein specified for all purposes of this Agreement.

2. Transition Period.

(a) During the Transition Period (or, if earlier, until the Termination Date), and pursuant to the Letter Agreement:

(i) the Executive will continue in his current role of Chief Financial Officer of the Company, and the Executive agrees to carry out the duties and responsibilities commensurate with that position (taking into account all relevant circumstances); and

(ii) the Executive will devote his entire business time and attention to the services of the Company and to the promotion of its interests.

(b) Without limiting the forgoing, the Executive shall (i) consistent with past practice (as to clause (A)) or at reasonably mutually convenient times for the parties (as to clauses (B)-(C)), (A) meet with the Board and the Company's Audit Committee as requested, (B) participate in "earnings calls" and other calls and conferences as may be requested by the CEO, and (C) participate in investor presentations as may be requested by the CEO, and (ii) assist the Company in connection with the orderly transition of the Executive's responsibilities and position as Chief Financial Officer to a New CFO.

(c) In performing his services hereunder, the Executive shall continue to comply with all written Company policies, as adopted or modified from time to time in the Company's sole discretion, and applicable law.

(d) Pursuant to the Letter Agreement, during the Transition Period the Executive shall remain an at-will employee and, subject to Sections 4(b) and 4(d) below, (i) the Company may terminate the Executive's employment at any time, with or without Cause, and (ii) the Executive may voluntarily terminate his employment at any time upon reasonable advance notice to the Company, with or without Good Reason.

(e) The Executive and the Company will mutually agree to the form of press release to be issued by the Company announcing the Company's transition from the Company pursuant to the terms hereof.

### 3. Compensation and Benefits.

(a) During the Transition Period (or, if earlier, until the Termination Date):

(i) The Executive shall continue to receive base salary in effect as of the Effective Date, payable in accordance with the Company's standard payroll procedures; and

(ii) All Options shall continue to vest during the Transition Period in accordance with the provisions of the Company's Stock Plans, as applicable, and the applicable stock option agreements;

(iii) The Executive shall continue to participate in all of the Company's employee benefit plans and programs to the extent Executive participates in such plans and programs as of the Effective Date and to the extent Executive remains eligible to participate in such plans and programs pursuant to their terms, as they may be modified from time to time, and subject to the determination of any person or committee administering the plans and programs; provided that the Executive acknowledges and agrees that (i) he shall not be eligible for or entitled to any future stock option or other equity incentive awards and (ii) his rights with respect to receive a bonus is as set forth in subsection 3(b) below.

(b) Pursuant to the Letter Agreement, on or before January 15, 2014, the Company shall pay to the Executive a bonus for the 2013 fiscal year, as determined as follows (for purposes of clarity, Executive shall be entitled to these payments if Executive is employed on the payment date or if Executive is not employed on the payment date because (i) the Executive's employment is terminated by the Company other than for Cause, (ii) the Executive's employment is terminated by Voluntary Termination for Good Reason, or (iii) the Executive's employment is terminated by Voluntary Termination upon at least ten business days' written notice to the Company following the Company's hiring of a New CFO):

(i) The Executive will be entitled to receive 100% of the "individual component" of the 2013 Bonus (representing 25% of his potential bonus); and

(ii) The Executive, as is the case with the other employees eligible for a bonus, shall be entitled to receive such portion of the "company component" of his 2013 Bonus (representing 75% of his potential bonus) based on the Company's actual achievement in 2013 of the goals and objectives established by the Board prior to the date hereof.

The Executive acknowledges and agrees that he will not be eligible for or entitled to a bonus with respect to any portion of the 2014 fiscal year.

(c) Provided the Executive (or the Executive's spouse and dependents) are eligible for and timely elect to continue health insurance coverage under the Consolidated Omnibus Budget Reconciliation Act ("COBRA") following the Termination Date and in full satisfaction of the Company's obligation to provide the Executive with medical and dental coverage for 6 months pursuant to the Letter Agreement, the Company will timely pay the premium payments for such COBRA coverage for the Executive (and the Executive's spouse and dependents) from the first date on which Executive loses health care coverage as an employee of the Company until the earlier of: (i) the date that 6 months of premium payments have been paid by the Company, (ii) the date that the Executive (or the Executive's spouse and dependents, as applicable) receive substantially equivalent health coverage in connection with new employment, or (iii) the date that the Executive (or the Executive's spouse and dependents, as applicable) are no longer eligible for COBRA.

(d) The Executive acknowledges and agrees that, except as expressly set forth in this Section 3 or in Sections 4(b) and 4(d) below, the Executive does not have, is not eligible for, entitled to, and shall not receive (i) any other compensation or benefits except to the extent provided by the Board, (ii) any further stock options or other equity grants or awards or (iii) any further rights, title or interest in or to (A) the Company or any Subsidiary or (B) any of their respective businesses, properties or assets.

(e) The Company agrees to provide Executive with a reimbursement of Executive's reasonable attorneys' fees incurred in connection with this Agreement, not to exceed \$15,000, provided that Executive submits appropriate receipts and documentation evidencing such services as may be reasonably requested by the Company.

#### 4. Termination of Employment.

(a) The Executive hereby tenders his resignation as Chief Financial Officer, and from all other positions he may hold with the Company or any Subsidiary, effective as of the Termination Date, and the Company hereby accepts such resignation. The parties acknowledge and agree that the Executive's employment shall terminate on the Termination Date.

(b) Upon the earlier of (A) the Transition Date, provided the Executive's employment continues through such date, (B) the date the Executive's employment is terminated by the Company without Cause or by Executive by reason of a Voluntary Termination for Good Reason and (C) by Voluntary Termination upon at least ten business days' written notice to the Company following the Company's hiring of a New CFO, then subject to the Executive's execution and delivery to the Company on the Termination Date of the Release and the Termination Certificate:



(i) upon the Termination Date the vesting of the Unvested Options shall accelerate such that the Unvested Options shall become 100% vested as of such date; and

(ii) the Company shall reimburse Executive up to \$5,000 in transition/outplacement services received during the 12 months following the Effective Date, provided that Executive submits appropriate receipts and documentation evidencing such services as may be reasonably requested by the Company;

provided, that the Executive shall not be eligible for or entitled to the benefits described in clauses (i) through (ii) above, and such benefits shall be null and void ab initio if the Executive timely revokes the Release pursuant to paragraph (g) thereof.

(c) Notwithstanding Section 4(b), above, in the event of a Voluntary Termination occurring after January 1, 2014, the Board may in its sole and absolute discretion, taking into account such circumstances and factors as it deems appropriate, determine to accelerate the vesting of such portion of the Unvested Options, if any, as the Board deems appropriate.

(d) The Company shall pay to the Executive an amount equal to one-twelfth of the Executive's annual base salary (as in effect on the Effective Date) on or before the 15th day of each of the six (6) full calendar months following Executive's termination of employment; provided Executive agrees to forfeit these severance payments if Executive voluntarily terminates his employment with the Company, or the Company terminates the Executive for Cause, before January 15, 2014. Each party hereto acknowledges and agrees that the base salary severance set forth in this Section 4(d) is intended to be exempt from Section 409A (as defined below) pursuant to Treasury Regulation Section 1.409A-1(b)(9)(iii).

#### 5. Additional Obligations

(a) The Executive acknowledges and agrees that his obligations under the Confidentiality Agreement shall continue in full force and effect, including after the Termination Date.

(b) The Executive will not, directly or indirectly, individually or in concert with others, engage in any conduct or make any statement calculated or likely to have the effect of undermining, disparaging or otherwise reflecting poorly upon the Company (or its products, business, employees, officers and directors), except to the extent the Executive provides truthful statements to the extent required by applicable law or regulation or agency rule, and then only after consultation with the Company (or the Board) to the extent reasonably practicable.

(c) The Company's executive officers with the title of Senior Vice President and above shall not, directly or indirectly, individually or in concert with others, engage in any conduct or make any statement, calculated or likely to have the effect of undermining, disparaging or otherwise reflecting poorly upon Executive, except to the extent such individual, as applicable, provides truthful statements to the extent required by applicable law or regulation or agency rule, and then only after consultation with the Executive to the extent reasonably practicable.

(d) On the Termination Date, the Executive shall surrender to the Company (or, in accordance with the Termination Certificate, shall have deleted or destroyed) the personal property of the Company in his possession or control.

(e) The Executives agrees to cooperate fully with the Company and its affiliates and Subsidiaries in connection with their actual or contemplated defense, prosecution, or investigation of any claim or demands by third parties, or other matters, arising from events, acts, or failures to act that occurred during the time period in which the Executive was employed by the Company. Such cooperation includes, without limitation, making himself reasonably available upon reasonable notice, without subpoena, for interviews and truthful and accurate deposition and trial testimony. The Company shall reimburse the Executive for any reasonable and documented out-of-pocket fees and expenses incurred by the Executive in connection with such cooperation.

**6. Representations.**

(a) The Executive represents that he has full authority to enter into this Agreement and is not under any contractual restraint which would prohibit him from satisfactorily performing his duties to the Company under this Agreement.

(b) The Executive acknowledges that the Company has indicated to the Executive that he is free to seek advice from independent counsel with respect to this Agreement, and the Executive has obtained such advice. The Executive is not relying on any representation or advice from the Company or any MBI Party regarding this Agreement, its content or effect, including any tax effects of the transactions described herein.

7. Section 409A. Each party hereto intends that all payments made under this Agreement are exempt from the requirements of Section 409A of the Internal Revenue Code of 1986, as amended, the regulations and other guidance there under and any state law of similar effect (collectively "Section 409A") so that none of the payments or benefits will be subject to the adverse tax penalties imposed under Section 409A, and any ambiguities herein will be interpreted to be so exempt.

8. Governing Law; Jurisdiction. This Agreement shall be governed by and construed and enforced in accordance with the internal substantive laws (and not the laws of conflicts) of the State of California. The parties agree that any dispute or disagreement which may arise under or pursuant to this Agreement or the Release or the transactions contemplated hereby or thereby may be enforceable against the parties hereto in the courts of the State of California and the Federal courts of the United States sitting in Sacramento County, State of California. For such purpose, the parties hereto hereby irrevocably submit to the nonexclusive jurisdiction of such courts, and agree that all claims in respect of this Agreement and the Release may be heard and determined in such courts.

9. Equitable Relief. Each party hereto acknowledges that the other party is relying for its protection upon the existence and validity of the provisions of this Agreement, that the services to be rendered by the Executive and the benefits and other items agreed to by the Company are of a special, unique and extraordinary character, and that irreparable injury will

result to the other party from any violation or continuing violation of the provisions hereof by such party for which damages may not be an adequate remedy. Accordingly, each party hereby agrees that in addition to the remedies available to the other party by law or under this Agreement, the other party shall be entitled to obtain such equitable relief as may be permitted by law in a court of competent jurisdiction including, without limitation, injunctive relief from any violation or continuing violation by such party of any term or provision of this Agreement.

10. Entire Agreement. It is understood, acknowledged and agreed that there are no oral agreements between the parties hereto or their affiliates and that this Agreement (together with the Letter Agreement, the Confidentiality Agreement, the Executive's Indemnification Agreement with the Company and the terms of any outstanding stock option awards) constitutes the parties' and their affiliates' entire agreement and supersedes and cancels any and all previous negotiations, arrangements, agreements and understandings, if any, between the parties hereto and their affiliates, and none thereof shall be used to interpret or construe this Agreement. This Agreement, and the exhibits attached hereto contain all of the terms, covenants, conditions, warranties and agreements of the parties and their affiliates, shall be considered to be the only agreement between the parties hereto and their affiliates and their respective representatives and agents with respect thereto. Except as expressly stated in this Agreement, no party or its affiliates has made any statement or representation to the other party or its affiliates regarding any fact, which statement or representation is relied upon by the other party in entering into this Agreement. Except as expressly stated in this Agreement, in connection with the execution of this Agreement, no party to this Agreement or its affiliates has relied upon any statement, representation or promise of the other party or its affiliates not expressly contained herein.

11. Assignability.

(a) In the event the Company shall merge or consolidate with any other corporation, partnership or business entity, or all or substantially all of the Company's business or assets shall be transferred in any manner to any other corporation, partnership or business entity, then such successor to the Company shall thereupon succeed to, and be subject to, all rights, interests, duties and obligations of, and shall thereafter be deemed for all purposes hereof to be, the "Company" under this Agreement.

(b) The rights and obligations of the Executive hereunder are personal in nature and the Executive shall not, without the written consent of the Company, assign or transfer this Agreement or any rights or obligations hereunder.

(c) Except as set forth in Section 6, nothing expressed or implied in this Agreement is intended or shall be construed to confer upon or give to any person, other than the parties to this Agreement, any right, remedy or claim under or by reason of this Agreement or of any term, covenant or condition of this Agreement.

12. Amendments; Waivers. This Agreement may be amended, modified, superseded, canceled, renewed or extended and the terms or covenants of this Agreement may be waived only by a written instrument executed by the parties to this Agreement or, in the case of a waiver, by the party waiving compliance. Any such written instrument must be approved by the Board to

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be effective as against the Company. The failure of any party at any time or times to require performance of any provision of this Agreement shall in no manner affect the right at a later time to enforce the same. No waiver by any party of the breach of any term or provision contained in this Agreement, whether by conduct or otherwise, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such breach, or a waiver of the breach of any other term or covenant contained in this Agreement.

13. Notice. All notices, requests or consents required or permitted under this Agreement shall be made in writing and shall be given to the other parties by personal delivery, overnight air courier (with receipt signature), email, or facsimile transmission (with “answerback” confirmation of transmission), sent to such party’s addresses or telecopy numbers as are set forth below such party’s signatures to this Agreement, or such other addresses or telecopy numbers of which the parties have given notice pursuant to this Section 13. Each such notice, request or consent shall be deemed effective upon the date of actual receipt, receipt signature or confirmation of transmission, as applicable.

14. Severability. Any provision of this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.

IN WITNESS WHEREOF, the parties to this Agreement have executed this Transition Agreement as of the date first above written.

MARRONE BIO INNOVATIONS, INC.

By: /s/ Pamela Marrone  
Pamela Marrone  
Chief Executive Officer

/s/ Donald Glidewell  
DONALD GLIDEWELL

EXHIBIT A

DEFINITIONS

“Board” shall mean the Company’s Board of Directors.

“Cause” shall mean a determination by the Board that the Executive has during the Transition Period (i) committed a material breach of this Agreement or any other material written policy of the Company, which breach is not cured to the satisfaction of the Board within five days after written notice of such breach is provided to the Executive from the Board or the CEO, (ii) failed to substantially perform his duties to the Company (under this Agreement or otherwise), which failure is not cured to the satisfaction of the Board within five days after written notice of such failure is provided to the Executive from the Board, (iii) failed to follow a reasonable and lawful policy or directive of the Board or the CEO, which failure is not cured to the satisfaction of the Board within five days after written notice of such failure is provided to the Executive from the Board or the CEO, (iv) been indicted for any felony or convicted of a crime involving dishonesty or physical harm to any person, (v) engaged in dishonesty, unethical conduct, gross negligence or willful misconduct in the performance of his duties to the Company which has resulted in, or is reasonably expected to result in, material injury to the business or reputation of the Company, (vi) engaged in conduct which constitutes a material violation of federal or state law relating to the Company or its business, (vii) misappropriated assets of the Company, or (viii) been under the influence of alcohol or illegal drugs (or has engaged in abusive use of legal drugs) in performing his or her duties to the Company (which the Board has determined has materially adversely affected the Executive’s performance of his duties to the Company). For purposes of clarity, the Company’s determination that Executive’s continued services are no longer required as a result of Company’s hiring of the New CFO shall not be considered Cause for purposes of this Agreement.

“CEO” shall mean the Company’s Chief Executive Officer.

“Confidentiality Agreement” shall mean Employee Confidential Information and Assignment of Inventions Agreement, dated as of April 12, 2012 between the Executive and the Company.

“Good Reason” shall mean a Voluntary Termination within 60 days following the Company’s material breach of this Agreement, provided Executive has provided the Company with written notice of such breach within 30 days after the breach first comes into existence and the Company fails to remedy the breach within 5 days after first receiving such written notice.

“MBI Parties” shall mean (i) the Company, (ii) each Subsidiary, and (ii) each of their respective current and former officers, directors, affiliates, attorneys, agents, employees and representatives

“Options” shall mean the stock options granted to the Employee that have not been terminated, as set forth on Exhibit B.

“Release” shall mean a release entered into by and between Executive and the Company in the form attached hereto as Exhibit C.

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“Stock Plans” shall mean the Marrone Bio Innovations, Inc. Stock Option Plan (as amended), the Marrone Bio Innovations, Inc. 2011 Stock Plan, and the Marrone Bio Innovations, Inc. 2013 Stock Incentive Plan.

“Subsidiaries” shall mean, collectively, Marrone Michigan Manufacturing, Inc. a Delaware corporation, and any other entity in which the Company may, directly or indirectly, acquire an equity interest during the Transition Period.

“Termination Certificate” shall mean the termination certificate attached as Exhibit C to the Confidentiality Agreement.

“Termination Date” shall mean the earlier to occur of (i) the Transition Date or (ii) the date on which the Executive’s employment is terminated by the Company, by the Executive or by reason of the Executive’s death or permanent disability.

“Transition Date” shall mean the earlier to occur of (i) March 31, 2014, or (ii) such date as may be specified in a written or electronic notice that the Company provides to the Executive by the Company at least five days prior to such specified date.

“Transition Period” shall mean the date commencing on the date hereof and ending on the Transition Date.

“Unvested Options” shall mean those portions of the Options granted to the Executive which have not yet vested, as identified on Exhibit B.

“Voluntary Termination” shall mean the voluntary termination by the Executive of his employment, which shall include a determination by the Board that the Executive has voluntarily ceased to perform the business activities described in Section 2(b) (other than by reason of death or disability).

EXHIBIT B  
OPTION SCHEDULE

<u>Grant Date</u>	<u># of Shares subject to Option</u>	<u>Vested Options as of 11/6/13</u>	<u>Unvested Options as of 11/6/13</u>
4/27/11	95,588	59,753	35,835
12/15/11	15,931	6,372	9,559
2/20/12	10,706	10,706	0
5/11/12	31,863	19,918	11,945
10/29/12	31,863	7,966	23,897
8/1/2013	637	0	637
Totals	186,588	104,715	81,873



FORM OF RELEASE

(a) This release (the "Release") is being delivered by the undersigned pursuant to the Transition Agreement between the undersigned and Marrone Bio Innovations, Inc. (the "Company") dated as of November 6, 2013 (the "Transition Agreement"). Capitalized terms not otherwise defined in this Release shall have the meaning set forth in the Transition Agreement.

(b) The undersigned hereby releases and discharges the Company and each other MBI Party from any and all claims (including claims for equity), obligations and liabilities, whether known or unknown, at law or in equity, through the date hereof relating to or arising out of (i) the undersigned's services to, or positions with, the Company or any Subsidiary or any of their affiliates, or (ii) the undersigned's equity interests in the Company, including any and all claims under the Age Discrimination in Employment Act, as amended by the Older Workers Benefit Protection Act of 1990, Title VII of the Civil Rights Act of 1964, the Americans with Disabilities Act, the Employee Retirement Income Security Act of 1974, the Equal Pay Act, the Family and Medical Leave Act, and any other federal, state, or local statute, rule, regulation, ordinance, public policy, or principle of common law, including but not limited to any and all claims based upon alleged wrongful or retaliatory discharge, constructive discharge, tortious interference, negligence, intentional infliction of emotional distress, defamation, invasion of privacy, employment discrimination on any basis, harassment on any basis, retaliation on any basis, fraud, breach of express or implied contract and emotional distress, and all claims for compensatory damages, punitive damages, attorneys' fees, salary, commissions, bonuses, expense reimbursements, severance payments, deferred compensation payments, health benefits, retirement benefits, vacation pay, holiday pay, sick pay and any other wages or monies due. Notwithstanding the foregoing, the undersigned does not waive any rights he may have to enforce the terms of the Transition Agreement.

(c) The undersigned represents and agrees that he (i) has not and will not file or initiate any legal proceedings, complaints or charges of any kind with any court or governmental or administrative agency against the Company or any one or more of the MBI Parties relating to or arising out of (X) the undersigned's services to, or positions with, the Company or any Subsidiary or any of their affiliates, or (Y) the undersigned's equity interests in the Company and (ii) will not participate in or accept any monies from any such action either in his individual capacity or as part of a representative or class action. The undersigned further agrees that he will not solicit, encourage, assist or cooperate in any proceedings, complaints or charges against the Company or any one or more of the MBI Parties brought by any other person or entity unless specifically subpoenaed to appear or otherwise required by court order or in an official governmental investigation or otherwise required by law. The Company and each MBI Party shall be entitled to plead this Release as a complete defense to any claim or entitlement relating to or arising out of (X) the undersigned's services to, or positions with, the Company or any Subsidiary or any of their affiliates, or (Y) the undersigned's equity interests in the Company, which hereafter may be asserted by the undersigned or other persons or agencies acting on their behalf in any suit or claim against the Company or any one or more of the MBI Parties. In the

event that the undersigned sues the Company or any one or more of the MBI Parties in violation of this Release, he agrees and acknowledges that he will pay such Person its litigation or arbitration costs and expenses, including reasonable attorneys' fees, associated with his defense.

(d) The undersigned acknowledges that he is familiar with the provisions of Section 1542 of the Civil Code of the State of California, which reads as follows:

“A general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him must have materially affected his settlement with the debtor.”

The undersigned hereby waives and relinquishes all rights and benefits which he may have under Section 1542 of the Civil Code of the State of California (or the law of any other state or jurisdiction to the same or similar effect) to the full extent permitted by law.

(e) The undersigned has been advised in writing to consult with an attorney concerning this Release before signing it.

(f) The undersigned has twenty-one (21) calendar days after receipt of this Release to consider its terms before signing it.

(g) The undersigned has the right to revoke this Release in full within seven (7) calendar days of executing it. Any revocation must be personally delivered or mailed to the Company (Attention, Pamela Marrone) and postmarked within seven (7) calendar days of the date of execution of this Release. None of the terms and provisions of this Release shall become effective or be enforceable until such revocation period has expired.

(h) Nothing contained in this Release waives any claim that may arise after the date of its execution or any right that may not be waivable under applicable law.

Executed this        of        ,        .

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DONALD GLIDEWELL

## Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-191048) pertaining to the 2013 Stock Incentive Plan, the 2011 Stock Plan, and the Stock Option Plan, as amended, of Marrone Bio Innovations, Inc. of our report dated March 25, 2014, with respect to the consolidated financial statements of Marrone Bio Innovations, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2013, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Sacramento, California  
March 25, 2014

I, Pamela G. Marrone, certify that:

1. I have reviewed this Annual Report on Form 10-K of Marrone Bio Innovations, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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) 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
  - (c) 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 25, 2014

/s/ Pamela G. Marrone

Pamela G. Marrone

President and Chief Executive Officer

I, Donald J. Glidewell, certify that:

1. I have reviewed this Annual Report on Form 10-K of Marrone Bio Innovations, Inc.;

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

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

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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) 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

(c) 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 25, 2014

/s/ Donald J. Glidewell

Donald J. Glidewell

Chief Financial Officer

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

I, Pamela G. Marrone, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Marrone Bio Innovations, Inc. on Form 10-K for the fiscal year ended December 31, 2013 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of Marrone Bio Innovations, Inc.

Date: March 25, 2014

By: /s/ Pamela G. Marrone  
Name: Pamela G. Marrone  
Title: President and Chief Executive Officer

I, Donald J. Glidewell, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Marrone Bio Innovations, Inc. on Form 10-K for the fiscal year ended December 31, 2013 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Annual Report on Form 10-K fairly presents in all material respects the financial condition and results of operations of Marrone Bio Innovations, Inc.

Date: March 25, 2014

By: /s/ Donald J. Glidewell  
Name: Donald J. Glidewell  
Title: Chief Financial Officer

This certification accompanies this Report on Form 10-K pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Such certification will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent that the Company specifically incorporates it by reference.

