AMYRIS, INC.
Form 10-K
February 28, 2012

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington D.C. 20549
FORM 10-K
(Mark One)

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

For the fiscal year ended December 31, 2011
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: 001-34885
AMYRIS, INC.
(Exact name of registrant as specified in its charter)

Delaware	55-0856151
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
5885 Hollis Street, Suite 100, Emeryville, California	94608
(Address of principal executive office)	(Zip Code)

(510) 450-0761
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.0001 par value per share	The NASDAQ Stock Market LLC (NASDAQ Global Select Market)

Securities registered pursuant to Section 12(g) of the Act: None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No x
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ¨ No x
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§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 x No ¨
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one.)

Large accelerated filer	x	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 x

As of June 30, 2011, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the voting stock held by non-affiliates of the registrant was approximately $755.7 million, based on the closing price of the registrant's

common stock on the NASDAQ Global Market.
56,259,745 shares of the Registrant's common stock, par value $0.0001 per share, were outstanding as of February 23, 2012.

DOCUMENTS INCORPORATED BY REFERENCE
Portions registrant's proxy statement to be delivered to stockholders in connection with the registrant's 2012 Annual Meeting of Stockholders to be held on or about May 22, 2012 are incorporated by reference into Part III of this Form 10-K. The registrant intends to file its proxy statement within 120 days after its fiscal year end.

AMYRIS, INC.
ANNUAL REPORT ON FORM 10-K
For the Fiscal Year Ended December 31, 2011

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FORWARD-LOOKING STATEMENTS

This report on Form 10-K, including the sections entitled “Item 1. Business,” “Item 1A. Risk Factors,” and “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations,” contains forward-looking statements reflecting our current expectations that involve risks and uncertainties and which are subject to safe harbors under the Securities Act of 1933, as amended, or the Securities Act, and the Securities Exchange Act of 1934, as amended, or the Exchange Act. These forward-looking statements include, but are not limited to, statements concerning our strategy, future production capacity and other aspects of our future operations, ability to improve our production efficiencies, future financial position, future revenues, projected costs, expectations regarding demand and acceptance for our technologies, growth opportunities and trends in the market in which we operate, prospects and plans and objectives of management. The words “anticipates,” “believes,” “estimates,” “expects,” “intends,” “may,” “plans,” “p “will,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. These forward-looking statements involve risks and uncertainties that could cause our actual results to differ materially from those in the forward-looking statements, including, without limitation, the risks set forth in Part I, Item 1A, “Risk Factors” in this Annual Report on Form 10-K and in our other filings with the Securities and Exchange Commission. We do not assume any obligation to update any forward-looking statements.

TRADEMARKS

Amyris®, the Amyris logo, Biofene® and No Compromise® are trademarks or registered trademarks of Amyris, Inc. This report also contains trademarks and trade names of other business that are the property of their respective holders.

PART I

ITEM 1. BUSINESS

Overview

We are building an integrated renewable products company to provide sustainable alternatives to a broad range of petroleum-sourced products used in specialty chemical and transportation fuel markets worldwide. We do this by applying our industrial synthetic biology technology platform to modify microorganisms, primarily yeast, to function as living factories in established fermentation processes to convert plant-sourced sugars into a variety of hydrocarbon molecules that can serve as flexible building blocks to be used in a wide range of products. We intend to commercialize these products as renewable ingredients in six target markets: cosmetics, lubricants, flavors and fragrances, polymers and plastic additives, home and personal care products, and transportation fuels. We call these No Compromise products because we design them to perform comparably to or better than currently available products.

Our first technology success came through the development and application of our platform to create microbial strains that produce artemisinic acid, a precursor of artemisinin, an anti-malarial therapeutic. We granted a royalty-free license to this technology to Sanofi-Aventis, which currently expects to begin distributing artemisinin-based anti-malarial drugs made through our technology in 2012. Our first proprietary commercialization efforts have been focused on a molecule called farnesene, or Biofene, which can be used as-is or can be further converted by conventional chemical process into other renewable ingredients in consumer and industrial products, as well as serve as transportation fuels such as diesel. Our strategy is to focus our direct commercialization efforts on higher-value, lower-volume markets while moving lower-margin, higher-volume commodity products, including our fuels and base oil lubricants products, into joint venture arrangements with established industry leaders. We believe this approach will permit access to the capital and resources necessary to support large-scale production and global distribution for our large-market commodity products. To support this strategy, we have established a number of relationships, including:

- Development and commercialization agreements with an affiliate of Total S.A., or Total, which currently provides funding for our Biofene research program as well as the research and development of our jet and diesel fuels. Under these agreements, we intend to establish one or more joint ventures with Total to commercialize these products.

- A supply agreement with Petrobras Distribuidora S.A., or Petrobras, under which we sell diesel produced from Biofene to Petrobras who blends our diesel in fuel sold to city bus fleets in São Paulo and Rio de Janeiro, Brazil.

- A joint venture agreement with an affiliate of Cosan Indústria e Comércio S.A., or Cosan, a leading producer of lubricants in Brazil, which established Novvi LLC, or Novvi, for the purpose of developing and commercializing base oils for use in finished lubricants products.

- Development and commercialization agreements with Firmenich SA, or Firmenich, and Givaudan Schweiz AG, or Givaudan, global flavors and fragrances companies, focusing on key ingredients for the flavors and fragrances market.

- A development agreement with Manufacture Francaise de Pneumatiques Michelin, or Michelin, focusing on development and commercialization of isoprene for use in tires.

- Agreements with several entities for the development of Biofene for various industrial polymer or home and personal care applications, including (i) Kuraray Co., Ltd., or Kuraray, for the use of Biofene in certain polymer products, (ii)

M&G Finanziaria S.R.L., or M&G, for use of Biofene in M&G's polyethylene terephthalate (PET) resins incorporated into containers for food, beverages and other products, (iii) Method Products, Inc., or Method, for the use of Biofene in home and personal care products, (iv) The Proctor & Gamble Company, or P&G, for the use of Biofene as an ingredient in certain household products, and (v) Wilmar Trading Pte. Ltd., or Wilmar, for the use of Biofene as a surfactant.

To support our manufacturing operations, we have established the following relationships:

- For the production of Biofene, contract manufacturing agreements with (i) Biomin do Brasil Nutricão Animal Ltda., or Biomin, related to the use of a facility located in Piracicaba, Brazil, (ii) Antibióticos, S.A., or Antibióticos, for a production facility located in León, Spain, and (iii) Tate & Lyle Ingredients Americas, Inc., or Tate & Lyle, an affiliate of Tate & Lyle PLC in Decatur, IL, to produce Biofene.

- For the conversion of Biofene into finished chemical products, agreements with (i) Glycotech, Inc., or Glycotech, related to the conversion of Biofene into squalane (a moisturizing ingredient used in cosmetics and other personal care products),

industrial lubricants and other final products at a facility located in Leland, North Carolina, (ii) Dottikon Exclusive Synthesis, AG, or Dottikon, for production of squalane and Biofene-derived molecules for use as oxygen scavengers in PET polymers at a facility in Switzerland (pending completion of process development work), and (iii) Albemarle Corporation, or Albemarle, for production of Biofene-derived base oils at a facility in Baton Rouge, Louisiana (also pending completion of process development work).

- For the future production of Biofene, a manufacturing agreement with Paraíso Bioenergia S.A., or Paraíso Bioenergia, in São Paulo State, Brazil, under which we are constructing fermentation and separation capacity to produce our products.

- Our joint venture with Usina São Martinho, or São Martinho, a subsidiary of São Martinho S.A., one of the largest sugar and ethanol producers in Brazil, pursuant to which we are building our first stand-alone, large-scale production facility at the São Martinho sugar and ethanol mill located in São Paulo state, Brazil.

- To support the expansion of our large-scale production capacity in Brazil, non-binding letters of intent with several leading Brazilian sugar and ethanol producers, including Usina Alvorada, or Alvorada, Cosan, ETH Bioenergia S.A., or ETH, and Acúcar Guarani S.A., or Acúcar Guarani.

While our platform is able to utilize a wide variety of feedstocks, we are focusing our large-scale production plans primarily on the use of Brazilian sugarcane as our feedstock because of its abundance, low cost and relative price stability. We intend to secure access to this feedstock, and expand our production capacity beyond our initial use of contract manufacturers, in a “capital light” manner through the production relationships we are establishing with sugar and ethanol producers in Brazil. With this approach, we expect to work with these entities to build new, “bolt-on” facilities adjacent to their existing mills instead of building entirely new “greenfield” facilities, thereby reducing the capital required to establish and scale our production.

We have two operating subsidiaries, Amyris Brasil Ltda. (formerly Amyris Brasil S.A.), or Amyris Brasil, and Amyris Fuels, LLC, or Amyris Fuels. Amyris Brasil oversees the establishment and expansion of Amyris's production in Brazil, and Amyris Fuels was established to help us develop fuel distribution capabilities in the U.S. Amyris Fuels currently generates revenue from the sale of ethanol and reformulated ethanol-blended gasoline to wholesale customers through a network of terminals in the eastern U.S. As of December 31, 2011, we had 493 employees worldwide, including 348 in Emeryville, California, 140 in Campinas and Piricicaba, Brazil, and 5 in Chicago, Illinois. We have also established a broad patent portfolio, including 66 issued patents and 279 patent applications pending worldwide as of February 15, 2012. This portfolio provides protection through coverage of composition of matter on many of our end products, our technology and research tools, and our manufacturing processes.

We were incorporated in 2003. We began selling fuels through our subsidiary Amyris Fuels in June 2008. Since inception we have generated $318.8 million in revenue, including $270.1 million from Amyris Fuels and substantially all of the remainder from grants and collaborations and to a lesser extent from product sales of our renewable products.

Industry Background

Petroleum is a fundamental building block for many products, such as consumer products, chemicals, plastics and transportation fuels that are essential to modern economies. Recently the increased demand for petroleum in the face of limited supply, supply chain uncertainty and negative environmental impacts has created challenges to the current petroleum infrastructure. As a result, there have been many attempts to create products comparable to petroleum derivatives without these drawbacks. However, initial approaches have faced a number of challenges that have limited their success, including:

Exposure to volatile feedstock pricing. Many U.S. renewable fuels companies have focused on the conversion of commodity feedstocks, such as corn or vegetable oil, into ethanol or biodiesel. These companies were exposed to swings in the market prices for their feedstocks, which at times made production unprofitable for a number of producers in these industries.

Limited product portfolio. Companies engaging in early attempts to create renewable fuels typically focused on one end product, such as ethanol or biodiesel. These companies generally lacked product diversity and, therefore, were vulnerable to variability of market prices and the degree of government support for their primary product. Further, the products these companies made were imperfect substitutes for the products they were intended to replace, as neither ethanol nor biodiesel can be stored or transported conventionally and both are subject to blend limits.

Capital intensity. Many initial U.S. ethanol companies utilized a vertically integrated business model that required hundreds of millions of dollars to construct and own mills. This left them with limited ability to enter new geographies and to access new feedstock, as they were tied to their existing facilities.

Dependence on policy. The economic viability of many alternative fuels is based on government regulations and support, making it difficult to build a business with long term sustainability.

Other efforts to develop alternatives to petroleum-sourced products include the use of non-food-based feedstocks, such as cellulosic sugars sourced from wood chips, corn stalks and sugarcane bagasse. Some of these approaches are showing promise and may not be influenced by commodity markets and food versus fuel concerns. However, they are not complete solutions to the challenges above, and to date, these approaches have been limited by cost and technical considerations, among others.

Our Solution

We seek to apply our synthetic biology platform to provide renewable, high-performance alternatives to selected petroleum-sourced chemicals and fuels. Our products are designed to enable our customers to reduce the environmental impact of their products without compromising performance, and, in some cases, our renewable products would provide superior performance to the petroleum-sourced products they are replacing. Our business model is designed to produce these products and bring them to market in a “capital light” manner and, for many of our products, without reliance on government subsidies. Our industrial synthetic biology platform is designed to produce competitive products from widely-available plant-derived feedstocks using genetically modified yeast strains in a well-established fermentation process. We are focusing our initial large-scale production efforts in Brazil, which allows us to access locally-grown sugarcane feedstock and to leverage the substantial infrastructure of existing sugar and ethanol mills.

Our Strategy

Our objective is to become the leading provider of renewable specialty chemicals and transportation fuels worldwide. Key elements of our strategy include:

Targeting markets to maximize returns. We intend to commercialize our products initially in select specialty chemical markets which are characterized by higher-margin, lower-volume products, where we believe we can earn positive gross margins with current production process efficiencies, as well as certain niche diesel markets where we can earn a positive margin at our current and near term production costs or where we see strong opportunity to support development of the market. Then as we lower our production costs through technical improvements, we intend to expand into broader lower-margin, higher volume commodity product markets, such as the broad-based fuels market and base oil lubricants markets, through joint venture arrangements. To accelerate our entry into select new product opportunities, we will continue to enter into collaborative research, development and commercialization agreements, such as the existing agreements with Cosan, Firmenich, Givaudan, Kuraray, M&G, Method, Michelin, P&G, Total and Wilmar.

Leveraging our technology platform to improve efficiency. Our technology platform is based on an industrial platform for strain development and includes activities to support scale up to commercial production in two pilot plant facilities, a demonstration facility. We intend to continually apply our technology platform to lower the cost of production of our products through improvements in yields and other production process efficiencies.

Focusing on Brazilian sugarcane. We are initially focusing on Brazilian sugarcane as the feedstock to support our production ramp because of its abundance, low cost and relative price stability. We are also able to use a wide variety of other feedstocks, including sweet sorghum, sugar beets, corn-based dextrose and other industrial sources of plant sugar.

Advancing capital light production. We are partnering with leading sugar and ethanol mills in Brazil, such as our joint venture with Usina Paraiso and Usina São Martinho, to establish and scale production at a lower cost than the cost of "greenfield" mill construction. Under this approach, we expect to work selectively with Brazilian sugar and ethanol producers to build new, "bolt-on" facilities adjacent to their existing mills, instead of building entirely new facilities, thereby reducing the capital required to establish and scale our production.

Our Technology

Our synthetic biology platform enables us to modify the genetic pathways of microorganisms, primarily yeast, to turn them into living factories to produce target molecules for which we believe there may be significant market opportunities. In addition to using our synthetic biology platform to identify and improve strains of microbes to produce target molecules, we are using our technology platform to develop production processes that we believe will allow us to scale to commercial levels.

The primary biological pathway within the microbe that we currently use to produce our target molecules is the isoprenoid pathway. Isoprenoids constitute a large, diverse class of molecules with current product applications in a wide range of industries, including specialty chemicals and fuels.

The key steps in our strain engineering and scale-up process are:

Identifying target molecules. We start our process by identifying a commercial application where we can deliver a No Compromise solution that we want to pursue. We identify the key molecular properties that are essential to product performance in a specific commercial application and then analyze the chemical structures that drive those key performance characteristics. Finally, we identify target molecules or derivatives of molecules that are comprised of these key chemical structures and that may be produced by our yeast strains.

Developing initial strains. Once we have chosen a target molecule, we identify the steps required for its production in a biological pathway. We then seek to design a pathway to produce the target, either directly or by producing a molecule that can, through simple chemical steps, be synthesized, or converted, into the target. Once this pathway is identified, we undertake to engineer it into our yeast strains by employing the processes discussed below.

Improving strain performance and process development to reduce production costs. After we have established a pathway and verified that it can produce the target molecule, the yeast strain must be improved to increase the level of efficiency of production. Initially, we focus primarily on yield, a measure of the amount of product produced by a defined amount of sugar as the means to improve strain output. As we advance in our scale up and commercial scale process development, we also seek to improve production output through improvements in strain productivity, the rate at which our product is produced by a given yeast strain and titer, the concentration of product in the fermentation broth. In addition, we seek to develop processes to improve production efficiency, including separation efficiency, which is the amount of product that is captured from a fermentation run, cycle-time, which is the time needed to run a full fermentation cycle, and the evolution of batch process methods to semi-continuous and continuous production methods.

Moving production from lab to commercial scale. Once we have established a pathway and verified that it can produce the target molecule, the yeast strain must be improved to increase the level of efficiency of production. We design our lab scale two liter fermentors to mimic the conditions found in larger scale fermentation so that our findings may translate predictably from lab scale to pilot, demonstration and commercial scale. In addition to our lab scale fermentors, we have operating pilot plants in our facilities in both Emeryville, California and Campinas, Brazil, as well as two 5,000-liter fermentors in our Campinas demonstration facility. We are also operating three contract manufacturing facilities in the U.S., Brazil and Spain using 100,000 to 240,000 liter fermentors.

Production

Our production operations involve two steps. First, we produce the target molecule by means of an industrial fermentation process. In certain cases this target molecule is itself the desired end product. In other cases, it must be converted into the desired end product by means of chemical finishing steps.

Commercial Production of Target Fermentation Molecules

We have initiated commercial production of Biofene, our initial fermentation molecule, by using contract manufacturers as we complete our facility at Paraíso, Brazil and our joint venture facility with Usina São Martinho, SMA Indústria Química S.A., or SMA. Following completion of SMA, we will seek to expand our large-scale

production capacity of intermediate molecules by entering into agreements with owners of additional sugar and ethanol mills in Brazil. We may also use alternative production resources in other geographies.

We are currently developing the engineering designs and technical capabilities to build out facilities at existing sugar and ethanol mills to produce Biofene and other target fermentation molecules. Because the bulk of our fermentation production process leverages the same equipment and process steps used to produce ethanol, we will be able to utilize much of the existing infrastructure. We expect this capital light approach will allow us to scale production at a lower cost than the cost of "greenfield" mill construction. The mill operator will retain the ability to direct the crushed sugarcane to produce either their current products or our products.

The manner in which we intend to develop our manufacturing capacity is as follows:

Contract manufacturing. To date, we have used contract manufacturing facilities to produce Biofene in quantities needed for certification and fleet testing as well as our 2011 and initial 2012 sales. For Biofene production, we have entered into agreements with Biomin and Tate & Lyle and Antibióticos. We have purchased certain equipment needed for production at these facilities. We will be the owner and distributor of the Biofene produced through these arrangements. We may seek to enter into additional contract manufacturing arrangements as an efficient way to ramp our near-term production. Depending primarily on the manufacturer's location and preferences, the most likely feedstocks to be used in these contracted facilities would be sugarcane syrup, sugar beet syrup, sugar beet molasses, VHP (“very high pol”) sugar or corn-based dextrose.

Production at Paraíso. We have an agreement with Paraíso Bioenergia to construct and operate a production facility on their premises. Under this agreement, Paraíso Bioenergia will supply sugar cane juice and other utilities and we are responsible for construction of the production facility. The new production facility is being designed to process juice from up to one million tons of cane annually. We commenced construction of this facility in August 2011.

Production at Joint Venture facility at Usina São Martinho. We formed SMA in 2010, and commenced site preparation in December 2010 and civil construction in February 2011. The SMA plant was our first facility construction project and it is intended to provide a large-scale production facility to support our longer-term production plans. The construction project is ongoing and our estimated completion date for the facility depends significantly on the timing and availability of financing for the project.

Increasing large-scale production in Brazil through arrangements with sugar and ethanol mill owners. We anticipate increasing our commercial production in Brazil through arrangements with other ethanol and sugar producers. We have in place non-binding letters of intent for production relationships with several sugar and ethanol producers in Brazil, including Alvorada, Cosan, ETH and Açúcar Guarani.

Alternative geographies and feedstocks for production. Although we have identified the use of new "bolt-on" facilities adjacent to existing sugar and ethanol mills in Brazil as the optimal source for a substantial portion of our primary large-scale production efforts, we will also use facilities in alternative geographies for certain products. Our contract manufacturing arrangements currently include the use of facilities in the U.S., Brazil and Spain. In addition, we are exploring other production options in the U.S., including evaluating the potential for the use of sweet sorghum, “energy grasses,” and woody biomass sourced from a variety of locations in the U.S. as feedstock, through an Integrated Biorefinery Grant from the U.S. Department of Energy, or DOE, and participation as a subcontractor to the DOE's National Renewable Energy Laboratory, or NREL, in connection with the NREL's National Advanced Biofuels Consortium.

Chemical Finishing Process

We may sell commercially-produced Biofene directly or we may first perform additional chemical finishing steps to convert Biofene into other finished products such as renewable squalane, lubricants, polymers, home and personal care products and diesel. We have established an agreement with Glycotech for use of the Leland, North Carolina facility of Salisbury Partners, LLC to convert Biofene into squalane, industrial lubricants and other final products starting in 2011. In addition, we have multiple agreements in place with Dottikon for the completion of process development work. Upon successful completion of such work, Dottikon may produce in Switzerland pilot and large-scale amounts of squalane or Biofene-derived molecules for use as oxygen scavengers in PET polymers or both. We have also entered into a services agreement with Albemarle under which it is completing process development work and will make pilot-scale amounts of certain Biofene-derived base oils at its facility in Baton Rouge, Louisiana. We expect to enter into additional agreements with other chemical companies for finishing services to access a flexible capacity and array of services.

Our Products

We focus on bringing forth a broad range of products to address six identified markets: cosmetics, lubricants, flavors and fragrances, polymers, consumer products and transportation fuels.

Cosmetics

Through simple chemical finishing steps, we are able to convert Biofene into squalane. Squalane is used today as a moisturizing ingredient in cosmetics and other personal care products. Squalane traditionally has been manufactured from olive oil or extracted from shark liver oil. We believe Amyris-produced squalane offers a purity that is equal or superior to squalane derived from conventional sources. The high price of squalane to date has meant that its use has been limited to small quantities in mass-market product formulations or to use in luxury products. We believe that we are capable of producing squalane at a price that would permit formulators to use squalane more broadly. To market and distribute squalane, we have established a

relationship with Soliance, a leading distributor of renewable cosmetics ingredients based in the Champagne-Ardenne region in France and we have an agreement with Nikko Chemicals Co.Ltd., a distributor in Japan.

Lubricants

Base oils are the building blocks of lubricating oils, which are currently derived from the crude oil refining process. Lubricants are manufactured by combining a base oil with additives that contribute additional performance properties as required by the thousands of lubricant product applications, including engine oils, gear oils, hydraulic oils and turbine oils. Biofene may be chemically modified to serve as a base oil. The high-purity synthetic base oil molecules made from Biofene will enable lubricant products to perform in harsh environments under extremes of temperature, moisture, dirt and wear.

In December 2010, we entered into an agreement with Cosan to establish a joint venture for the worldwide development, production and commercialization of renewable base oils. We established this joint venture, Novvi, in June 2011. We anticipate that Novvi will source Biofene initially from Amyris production facilities and the parties would share the development, marketing and operating costs.

Flavors and Fragrances

Since our microbial platform utilizes plant genes found in nature to make products via fermentation, we are well situated to cost-effectively and sustainably produce natural oils and aroma chemicals that are commonly used in the flavors and fragrances market. Many of the natural ingredients used in flavors and fragrances market are expensive because there is limited supply and the synthetic alternatives require complex chemical conversions. Amyris offers flavors and fragrances companies a natural route to procure these ingredients without sacrificing cost or quality.

Currently, we are developing a slate of flavors and fragrances ingredients that are either derivatives of building blocks we make from fermentation (e.g., Biofene) or products directly from fermentation.

We plan to participate in the flavors and fragrance market by providing sustainable replacements that are high quality, reliably available, and competitively priced. To begin to develop our product offerings in this area, we have established the following partnerships:

- A collaboration and joint development agreement with Firmenich, a global flavors and fragrances company headquartered in Geneva, Switzerland. Under this agreement, Firmenich will fund and collaborate with Amyris to produce a sustainable, cost-effective and reliable source of a key ingredient for the flavors and fragrances market. Amyris will manufacture and supply the ingredient to Firmenich, which will market and sell the ingredient or products incorporating the ingredient exclusively in the flavors and fragrance market. Both parties will share in the economic value derived from sales of the ingredient. The agreement also grants Firmenich an option to collaborate with Amyris to develop a second ingredient on similar terms.

- A co-development agreement with Givaudan, a global flavors and fragrance company headquartered in Vernier, Switzerland. Under the agreement, we will develop a derivative of Biofene to be used as a building block for one of the proprietary fragrance ingredients in Givaudan's palette. Upon achievement of certain success criteria, we will supply Biofene to Givaudan to derive the proprietary ingredient for the global fragrances and flavors market and share in the economic value created from the use of Biofene.

Polymers and Plastic Additives

Synthetic polymers are commonly used in the manufacture of thousands of products that incorporate plastics and other polymeric materials, and we believe Biofene has the potential to provide significant opportunities for development of renewable products for the polymer market. In June 2010, we announced a partnership with M&G, the world's largest producer of PET (polyethylene terephthalate) resins for packaging applications, to incorporate Biofene as an ingredient in M&G's PET processing. M&G is currently evaluating the potential for Biofene to improve product performance. Upon successful completion of product development and testing, Amyris would supply Biofene to M&G.

In August 2011, we signed a collaboration agreement with Kuraray to develop polymers from Biofene. Under the agreement, Kuraray will use Biofene to replace petroleum-derived molecules such as butadiene and isoprene in the production of specified classes of high-performing polymers. Upon successful completion of the technical development program for the first polymer, Amyris and Kuraray would enter into a supply agreement for Kuraray's exclusive use of Biofene in the manufacturing and commercialization of these polymer products.

Home & Personal Care Products

Biofene also offers a platform for development of sustainable, high-performing and cost-competitive ingredients for the fabric and home care (such as detergents, fabric softener, dish soap, and household cleaning products) and the personal care (such as hair care and body care) markets. To support our development and launch of ingredients to serve these markets, we have entered into a series of agreements with P&G. These agreements include collaboration on the development of certain specialty chemicals for P&G's products from Biofene and a related supply agreement for Biofene, which would commence upon successful completion of certain technical and commercial milestones.

In September 2011, we entered into a collaboration agreement with Wilmar focused on the development and worldwide commercialization of a family of surfactants derived from Biofene for use in a range of products, including consumer packaged goods, personal care products and industrial applications. In addition, in October 2011, we entered into a joint development agreement with Method to develop molecules derived from Biofene for use in home and personal care products.

As we develop and produce new chemicals via our technology platform, we will look for opportunities to use these new chemicals as-is or as sustainable building blocks to make other ingredients.

Transportation Fuels

We have selected diesel as our primary area of focus within the transportation fuels market because of its projected global demand growth, the lack of a scalable, competitive renewable product, and our belief that our fuel product has properties superior to those of existing renewable alternatives. In general, we will produce our renewable diesel by the simple chemical step of hydrogenating our Biofene. Hydrogenation is a common chemical process currently used in the production of numerous products, such as saturation of vegetable oils to make margarine.

In July 2011, we entered into an agreement with Petrobras to sell diesel derived from Biofene to Petrobras to blend with fuel supplied and distributed by Petrobras to city bus fleets of São Paulo and Rio de Janeiro, Brazil. In November 2011, we entered into an amendment of our technology license, development, research and collaboration agreement with Total to establish a renewable diesel development program. The amendment provides for an exclusive strategic collaboration for the development of renewable diesel products and contemplates that the parties will establish a joint venture for the production and commercialization of such renewable diesel products on an exclusive, worldwide basis. The amendment also provides that commercialization and production of jet fuel, already under development pursuant to the collaboration agreement, would be conducted on an exclusive, worldwide basis through the same joint venture.

We have completed significant steps to validate our ability to produce a market-accepted diesel product. By design, our product is a hydrocarbon of similar size to many of the hydrocarbons in petroleum-sourced diesel fuel. Due to the similarity of its chemical composition to that of existing petroleum-sourced diesel, our product has the properties required of diesel fuel and thereby satisfies the ASTM D975 Table 1 specifications for petroleum-derived diesel fuel oils. The Environmental Protection Agency, or EPA, has registered our diesel for use as a 35% blend with petroleum diesel in highway vehicles and non-road equipment and we are working to obtain registration for a higher blend with petroleum diesel, as opposed to the typical 3-10% blend of other bio-diesel products with petroleum diesel. We are currently pursuing Brazilian ANP (Agência Nacional do Petróleo) Diesel Fuel registration and CARB (California Air Resources Board) ULSD blend registration. We have received required approvals with Brazilian ANP (Agência Nacional do Petróleo, Gas Natural e Biocombustíveis) for our fuel in the country, and are pursuing Diesel Fuel registration with the CARB (California Air Resources Board) and other relevant regulatory bodies.

Our ability to enter the diesel market is also dependent upon our ability to continue to achieve the required regulatory approvals in the global markets in which we will seek to sell our diesel products. These approvals primarily involve clearance by the relevant environmental agencies in the particular jurisdiction. We must also be certified by a sufficient number of diesel engine manufacturers, vehicle manufacturers or operators of large trucking fleets so that our diesel will have an appropriately large and accessible addressable market. These certification processes include fuel analysis modeling and the testing of engines and their components to ensure that the use of our diesel fuel does not degrade performance or reduce the lifecycle of the engine or cause it to fail to meet emissions standards.

We have completed successful engine testing of our diesel fuel with Cummins Engine Company, or Cummins, and Mercedes-Benz Brasil at a blend of up to 10%, and our renewable diesel has received OEM engine warranties from Cummins, Volkswagen AG and Mercedes-Benz Brasil for demonstration purposes. We continue to work with other diesel engine manufacturers to qualify our product for use in their engines.

Other Total Collaboration Products

Our technology license, development, research and collaboration agreement with Total sets forth the terms for the research, development, production and commercialization of chemical and/or fuels products to be agreed on by the parties. The agreement establishes a multi-phased process through which compounds are identified, screened, selected for product feasibility study, and then ultimately selected as a lead compound for development. To commercialize any strains and compounds that are developed, Amyris and Total expect to form one or more joint ventures, the first of which we expect will be the diesel joint venture described above. Both Amyris and Total retain certain rights to make covered products independently subject to making royalty payments to the non-producing party, and Total has certain rights to require Amyris to work on non-collaboration projects. We have retained rights to produce and commercialize products in the following markets: flavors and fragrances; cosmetics, pharmaceuticals, consumer packaged goods, food additives, and pesticides. The first programs we are focusing on with Total relate to renewable diesel and jet fuel and industrial lubricants; however, we and Total retain the right to propose product development programs under these agreements in the future.

Product Distribution and Sales

We intend to distribute and sell our products either directly, through joint ventures, or with partners, depending on the market. For most chemical applications, we intend to sell directly to specialty chemical and consumer products companies. For example, we expect to sell directly to Firmenich, Givaudan, Kuraray, M&G, Method, Michelin, P&G and Wilmar under our agreements with them. Generally, these agreements do not include any specific purchase obligations, and sales are contingent upon achievement of technical and commercial milestones. In addition, we expect to commercialize certain products, including fuels and base oils through joint venture arrangements with Total and Cosan, respectively.

Commencing in 2008, we began developing a fuels distribution network and distribution capabilities in the U.S. through Amyris Fuels. We currently purchase ethanol produced by third parties and gasoline and sell both pure ethanol and ethanol-blended gasoline to wholesale customers. For 2011, Wawa, Inc. and Mansfield each accounted for more than 10% of our reported revenues by virtue of their purchases of ethanol and reformulated ethanol-blended gasoline from Amyris Fuels. Our customers purchase ethanol and ethanol-blended gasoline from us under short term agreements and spot transactions, and we currently do not have any contractual commitments from customers to purchase ethanol and ethanol-blended gasoline from us over a period of time. If we establish our joint venture with Total, we believe we may no longer need the capabilities represented by Amyris Fuels.

Intellectual Property

Our success depends in large part upon our ability to obtain and maintain proprietary protection for our products and technologies, and to operate without infringing the proprietary rights of others. We seek to avoid the latter by monitoring patents and publications in our product areas and technologies to be aware of developments that may affect our business, and to the extent we identify such developments, evaluate and take appropriate courses of action. With respect to the former, our policy is to protect our proprietary position by, among other methods, filing for patent applications on inventions that are important to the development and conduct of our business with the USPTO and its foreign counterparts.

As of February 15, 2012, we had 66 issued U.S. and foreign patents and 279 pending U.S. and foreign patent applications that are owned by or licensed to us. We also use other forms of protection (such as trademark, copyright, and trade secret) to protect our intellectual property, particularly where we do not believe patent protection is

appropriate or obtainable. We aim to take advantage of all of the intellectual property rights that are available to us and believe that this comprehensive approach provides us with a strong proprietary position.

Notwithstanding the increasing backlog and patent pendency at the USPTO, we have obtained U.S. patents for many of our potential products through the use of a recently introduced accelerated examination program by the USPTO. Using this procedure, we have obtained patents for various fuel products: U.S. Patent No. 7,399,323 directed to our renewable diesel fuel composition; U.S. Patent No. 7,540,888 directed to our renewable gasoline fuel composition; and U.S. Patents No. 7,589,243 and No. 7,671,245, which are directed to our renewable jet products. Since obtaining our fuels patents, we have expanded the use of this program to our chemicals portfolio and have recently obtained U.S. Patent Nos. 7,592,295 and 7,691,792 for our lubricant products, and U.S. Patent Nos. 7,655,739 and 7,759,444 for our adhesive and polymer products.

We also protect our proprietary information by requiring our employees, consultants, contractors and other advisers to execute nondisclosure and assignment of invention agreements upon commencement of their respective employment or engagement. Agreements with our employees also prevent them from bringing the proprietary rights of third parties to us. In

addition, we also require confidentiality or material transfer agreements from third parties that receive our confidential data or materials.

Competition

We expect that our renewable products will compete with both the traditional, largely petroleum-based specialty chemical and fuels products that are currently being used in our target markets and with the alternatives to these existing products that established enterprises and new companies are seeking to produce.

Chemical Products

The chemical products we initially plan to produce include Biofene, squalane, fragrance ingredients, industrial lubricants and certain polymers. In these markets, and other chemical markets that we may seek to enter in the future, we will compete with the established providers of the products we seek to replace. Producers of these incumbent products include global oil companies, large international chemical companies and other smaller or niche companies specializing in specific products, such as cosmetic ingredient suppliers or flavors & fragrances ingredient suppliers. We may also compete in one or more of these markets with products that are offered as alternatives to the traditional petroleum-based or other traditional products being offered in these markets. We believe that there may be a number of companies seeking to develop renewable alternatives for existing chemical markets products, including those that we are initially targeting.

Transportation Fuel Products

Independent and Integrated oil refiners. Our competitors with respect to traditional fuel products are independent and integrated oil refiners. These companies are also our primary competitors with respect to fuels, including jet fuel currently in use in other transportation markets. We compete with these companies because an increasing penetration of renewable fuels reduces the need for fuels derived from traditional petroleum sources.

Many of these companies are seeking to provide alternative transportation fuel products through investing in internal research and development programs or in emerging technology companies. These technologies are in varying states of development, and the most advanced of which are those using non-renewable feedstocks, such as coal.

Advanced biofuels. Many other companies are exploring options for the production of diesel and other transportation fuels from renewable resources in other ways. These include companies using enzymes to convert cellulosic biomass, which is non-food plant material such as wood chips, corn stalks and sugarcane bagasse, into fermentable sugars to be converted into renewable fuels.

Biodiesel. Another source of renewable fuels products is the biodiesel industry, which is served by large, well-established agricultural products companies that convert vegetable oils, and in some cases animal oils, into diesel fuel. Other companies are seeking to produce diesel and other transportation fuels using thermochemical methods to convert biomass into renewable fuels.

We believe the primary competitive factors in both the chemical and fuel markets are product price, product performance and other measures of quality, infrastructure compatibility of products, sustainability, and dependability of supply.

We believe that for our chemical products to succeed in the market, we must demonstrate that they are comparable to both existing products and other alternative products that are being developed for the same markets based on some

combination of product cost, availability, performance and consumer preference characteristics. With respect to our diesel and other transportation fuels products, we believe that our product must perform as effectively as the petroleum-sourced fuel and be available on a cost-competitive basis. Given the size of the traditional transportation fuels markets and the developing stage of alternatives fuels markets, we do not believe that our success will necessarily prevent other renewable diesel or other fuels products from achieving commercial success, or that the success of other renewable products will prevent our fuels products from being successful. However, with the wide range of renewable fuels products under development, we must be successful in reaching potential customers and convincing them that ours are effective and reliable alternatives.

Environmental and Other Regulatory Matters

Our development and production processes involve the use, generation, handling, storage, transportation and disposal of hazardous chemicals and radioactive and biological materials. We are subject to a variety of federal, state, local and international

laws, regulations and permit requirements governing the use, generation, manufacture, transportation, storage, handling and disposal of these materials in the U.S., Brazil and other countries where we operate or may operate or sell our products in the future. These laws, regulations and permits can require expensive fees, pollution control equipment or operational changes to limit actual or potential impact of our technology on the environment and violation of these laws could result in significant fines, civil sanctions, permit revocation or costs from environmental remediation. We believe we are currently in substantial compliance with applicable environmental regulations and permitting. However, future developments including our commencement of commercial manufacturing of one or more of our products, more stringent environmental regulation, policies and enforcement, the implementation of new laws and regulations or the discovery of unknown environmental conditions may require expenditures that could have a material adverse effect on our business, results of operations or financial condition. See "Risk Factors-Risks Relating to Our Business-We may incur significant costs complying with environmental laws and regulations, and failure to comply with these laws and regulations could expose us to significant liabilities."

The use of genetically-modified microorganisms, or GMMs like our yeast strains, is subject to laws and regulations in many countries. In the U.S., the EPA regulates the commercial use of GMMs as well as potential products from the GMMs. The strain of genetically modified yeast that we use, S. cerevisiae, is eligible for exemption from EPA review because the EPA recognizes it as posing a low risk given its long history of safe use and will qualify for such exemption provided that it meets certain criteria, including but not limited to use of compliant containment structures and safety procedures. In Brazil, GMMs are regulated by CTNBio under its Biosafety Law No. 11.105-2005. We have obtained approval from CTNBio to use GMMs in our Campinas facilities for research and development purposes. We expect to encounter GMM regulations in most if not all of the countries in which we may seek to make our products, however, the scope and nature of these regulations will likely be different from country to country. If we cannot meet the applicable requirements in countries in which we intend to use produce our products using our yeast strains, then our business will be adversely affected. See "Risk Factors-Risks Relating to Our Business-We may face risks relating to the use of our genetically modified yeast strains and if we are not able to secure regulatory approval for the use of our yeast strains or if we face public objection to our use of them, our business could be adversely affected."

Our renewable chemical products may be subject to regulation by government agencies in our target markets. The EPA administers the requirements of the Toxic Substances Control Act, or the TSCA, which regulates the commercial use of chemicals. Before an entity can manufacture a chemical, it needs to determine whether that chemical is listed in the TSCA inventory. If the substance is listed, then manufacture can commence immediately. If not, then in most cases a "Chemical Abstracts Service" number registration and pre-manufacture notice must be filed with the EPA, which has up to 180 days to review the filing.

Our diesel fuel is subject to regulation by various government agencies. In the U.S., this includes the EPA and the California Air Resources Board. In Brazil, this includes Agência Nacional do Petróleo, or ANP. To date we have obtained registration with the EPA for the use of our diesel in the U.S. at a 35% blend rate. We are currently exploring registration of our fuel with the California Air Resources Board and the European Commission. Registration with each of these bodies is required for the sale and use of our fuels within their respective jurisdictions. In addition, for us to achieve full access to the U.S. fuels market for our fuel products, we will need to obtain EPA and California Air Resources Board (and potentially other state agencies) certifications for our feedstock pathway and production facility, including certification of a feedstock lifecycle analysis relating to greenhouse gas emissions. Any delay in obtaining these additional certifications could impair our ability to sell our renewable fuels to refiners, importers, blenders and other parties that produce transportation fuels as they comply with Federal and state requirements to include certified renewable fuels in their products. See "Risk Factors-Risks Relating to Our Business-We may not be able to obtain regulatory approval for the sale of our renewable products."

Amyris Fuels is subject to various U.S. federal regulations relating to its marketing and distribution of ethanol and ethanol-blended gasoline, and it is registered with the EPA in connection with its use of ethanol as a fuel additive. In

addition, Amyris Fuels is subject to various state regulations, including regulations regarding excise tax payments and the posting of surety bonds.

Research and Development

We devote substantial resources to our research and development efforts. As of February 24, 2012, our research and development organization included approximately 268 employees, 90 of whom hold Ph.D.s. Our technology development is currently focused primarily on improving the performance of our production strains and on developing strains that produce new molecules. To facilitate the transfer of our fermentation technology to production, we operate pilot-scale fermentation facilities in both Emeryville, California and Campinas, Brazil, and transfer strains on a regular basis through this process. Our process consists of a number of discrete steps including:

- identifying new target molecules

- creating new microbial strains capable of producing the target molecule
- increasing product yield and productivity from microbial strains through strain modification or fermentation improvements
- increasing efficiency of product separation and purification
- continuous translation of these steps from lab to commercial scale production.

Our research and development expenditures were approximately $87.3 million, $55.2 million, and $38.3 million and for the fiscal years ended December 31, 2011, 2010 and 2009, respectively.

Employees

As of February 24, 2012, we had 489 full-time employees. Of these employees, 347 were in the U.S. and 142 were in Brazil. None of our employees is represented by a labor union or is covered by a collective bargaining agreement. We have never experienced any employment-related work stoppages and consider relations with our employees to be good.

Financial Information About Geographic Areas

Financial information regarding revenues and long-lived assets by geographic area is included in Note 17-”Reporting Segments” in “Notes to Consolidated Financial Statements” included in this Form 10-K.

Business Background and Available Information

We organized our business in 2003 as a California corporation under the name Amyris Biotechnologies, Inc. and have maintained our headquarters and research facilities in the San Francisco Bay Area since that time. In June 2010, we reincorporated in Delaware and changed our name to Amyris, Inc. We commenced research activities in 2005, focusing on the development of an alternative source of artemisinic acid for the treatment of malaria and launched research efforts for production of Biofene in 2006. In 2008, we began to sell third party ethanol to wholesale customers through our Amyris Fuels subsidiary. We first established a presence in Brazil in 2008 through the opening of laboratories in Campinas. Our corporate headquarters are located at 5885 Hollis Street, Suite 100, Emeryville, CA 94608, and our telephone number is (510) 450-0761. Our website address is www.amyris.com. The information contained in or accessible through our website or contained on other websites is not deemed to be part of this report on Form 10-K.

We are subject to the filing requirements of the Securities Exchange Act of 1934. Therefore, we file periodic reports, proxy statements and other information with the Securities and Exchange Commission. Such reports, proxy statements and other information may be obtained by visiting the Public Reference Room of the Securities and Exchange Commission at 100 F Street, NE, Washington, D.C. 20549. You may obtain information regarding the operation of the Public Reference Room by calling the Securities and Exchange Commission at 1-800-SEC-0330. In addition, the Securities and Exchange Commission maintains a website (www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically.

We make our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to such reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of

1934 available free of charge through a link on the Investors section of our website located at www.amyris.com (under "Financial Information-SEC Filings") as soon as reasonably practicable after they are filed with or furnished to the Securities and Exchange Commission.

ITEM 1A. RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information set forth in this Annual Report on Form 10-K, which could materially affect our business, financial condition or future results. If any of the following risks actually occurs, our business, financial condition, results of operations and future prospects could be materially and adversely harmed. The trading price of our common stock could decline due to any of these risks, and, as a result, you may lose all or part of your investment.

Risks Related to Our Business

We have incurred losses to date, anticipate continuing to incur losses in the future and may never achieve or sustain profitability.

As of December 31, 2011, we had an accumulated deficit of $381.2 million. We expect to incur additional costs and expenses related to the continued development and expansion of our business, including our research and development operations, continued operation of our pilot plants and demonstration facility, engineering and design work. Further, we expect to incur costs related to implementation of multiple contract manufacturing arrangements, including equipment purchases, facility construction and technology transfer, as well as those related to the facilities that we are developing with São Martinho and Paraíso Bioenergia and deployment of our technology at other sugar and ethanol mills. There can be no assurance that we will ever achieve or sustain profitability on a quarterly or annual basis.

We have very limited experience producing our products at the commercial scale needed for the development of our business, and we will not succeed if we cannot effectively scale our technology and processes.

To commercialize our products, we must be successful in using our yeast strains to produce target molecules at commercial scale and on an economically viable basis. Such production will require that our technology and processes be scalable from laboratory, pilot and demonstration projects and industrial-scale test runs to commercial-scale production. Up to and through most of 2010, our primary focus was research and development. In 2011, we commenced commercial manufacturing operations at three contract manufacturing facilities: Biomin in Brazil, Antibióticos in Spain and Tate & Lyle in the U.S. We have very limited manufacturing experience and cannot be sure that we will be successful in establishing these or future larger-scale production operations in a timely manner and on a scale that will allow us to meet our plans for commercialization. We are outsourcing to contract manufacturers and other third parties some of the production process development work associated with commercial scale-up and such third parties may not perform such development work at the level we expect. Furthermore, our technology may not perform as expected when applied at commercial scale on a sustained basis, or we may encounter operational challenges for which we are unable to devise a workable solution. For example, in 2011 at our contract manufacturing facilities, contamination in the production process, problems with plant utilities, lack of automation and related human error, process modifications to reduce costs and adjust product specifications, and other similar challenges decreased process efficiency, created delays and increased our costs. Such challenges are likely to continue as we and our contract manufacturing partners develop our production processes and establish new facilities. We may not be able to scale up our production in a timely manner, if at all, even to the extent we successfully complete product development in our laboratories and pilot and demonstration facilities and conduct successful industrial-scale test runs. If this occurs, our ability to commercialize our technology will be adversely affected, and, with respect to any products that we are able to bring to market, we may not be able to lower the cost of production, which would adversely affect our ability to sell our products and achieve profits. Similarly, our ability to produce the volume of Biofene covered by our existing agreements is based in part on our ability to achieve substantially higher production efficiencies than we have to date. We may never achieve those production efficiencies.

We will require additional financing to fund our anticipated operations and may not be able to obtain such financing on favorable terms, if at all.

We will continue to fund our research and development and related activities and to provide working capital to fund production, storage, distribution and other aspects of our business. We may also from time to time consider acquisitions of other companies, assets or technologies to accelerate our research and development and commercialization efforts. In addition, we plan to make significant capital expenditures in connection with our contract manufacturing arrangements and mill production plant arrangements. While we plan to enter into relationships with sugar and ethanol producers for them to provide some portion or all of the capital needed to build the new, adjacent bolt-on production facility, such parties may not be willing to provide such capital and we may be required to provide some or all of the financing that we currently expect to be provided by these owners. Furthermore, our anticipated working capital needs and our planned operating and capital expenditures for 2012 and 2013 will require significant inflows of cash from credit facilities and similar sources of indebtedness, as well as funding from collaboration partners. Some of these necessary financing sources are not yet subject to definitive agreements or have not committed to funding arrangements. In addition, our anticipated working capital needs and strategic plans in 2012 and beyond will depend on our ability to identify

and secure additional sources of funding beyond those we have currently identified. Such sources of funding may include equity or debt offerings, in addition to collaboration revenue and other forms of debt. If we fail to secure such funding, we may be forced to curtail our operations, which could include reductions or delays of planned capital expenditures or scaling back our operations. We have had to adjust the timing for construction projects relating to the São Martinho plant due to financing constraints, and the projected completion date for São Martinho is being assessed and could be subject to further delays and adjustment based on the timing and success of our financing activities. If we are forced to curtail our operations, we may be unable to proceed with construction of certain planned production facilities, enter into definitive agreements for supply of feedstock and associated production arrangements that are currently subject to letters of intent, commercialize our products within the timeline we expect, or otherwise continue our business as currently contemplated.

If, to support our planned operations, we seek additional types of funding that involve the issuance of equity securities, our existing stockholders would suffer dilution. For example, in February 2012, we completed a private placement of our common stock that resulted in the issuance of approximately 10.2 million shares of our common stock and entered into a securities purchase agreement that resulted in the issuance of $25.0 million in unsecured senior convertible promissory notes that are convertible into common stock at an initial conversion price of $7.0682. The convertible notes contain various covenants, including restrictions on the amount of debt we are permitted to incur. We may conduct additional financings if they become available on appropriate terms and we deem them to be consistent with our financing strategy. If we raise additional debt financing, we may be subject to additional restrictive covenants that limit our ability to conduct our business. We may not be able to raise sufficient additional funds on terms that are favorable to us, if at all. If we fail to raise sufficient funds and continue to incur losses, our ability to fund our operations, take advantage of strategic opportunities, develop and commercialize products or technologies, or otherwise respond to competitive pressures could be significantly limited. If this happens, we may be forced to delay or terminate research and development programs or the commercialization of products resulting from our technologies, curtail or cease operations, or obtain funds through collaborative and licensing arrangements that may require us to relinquish commercial rights, or grant licenses on terms that are not favorable to us. If adequate funds are not available, we will not be able to successfully execute our business plan or continue our business.

If our major production facilities in Brazil do not successfully commence operations, our customer relationships, business and results of operations may be adversely affected.

We have selected Brazil as the optimal geography for a substantial proportion of the initial large-scale commercial production of our products, largely because of the availability of sugarcane as a feedstock and the existing infrastructure for producing, gathering and processing this sugarcane. Our business plan envisions that we will develop this production capacity primarily through arrangements with existing sugar and ethanol producers. In order to have control over the development of our first major large-scale commercial production facility in Brazil, we entered into an agreement with São Martinho, one of the largest sugar and ethanol producers in Brazil, for the joint ownership and development of a production facility at the São Martinho mill. We also entered into a manufacturing agreement with Paraíso Bioenergia, also in Brazil, under which we will be responsible for construction of the production facility. A substantial component of our planned production capacity in the near and long term depends on the completion and commencement of operations at these production facilities, and development of additional facilities using similar models thereafter.

Delays in completion of our production facilities at São Martinho and Paraíso Bioenergia will cause delays in commencement of large-scale production and hamper our ability to reduce our production costs. We will have to adjust our goals for production volume in 2012 and beyond based on, among other things, our ability to raise sufficient financing to fund construction and commissioning costs, delays in process development at contract manufacturing facilities and uncertainty relating to the timing of these large-scale facilities. Once the facilities are operational, they must perform as we have designed them. If we encounter significant delays, cost overruns, engineering problems, equipment supply constraints or other serious challenges in bringing these facilities online, we may be unable to produce our initial renewable products in the time frame we have planned, or we may need to continue to use contract manufacturing sources to a greater degree, which would reduce our expected gross margins. Further, if our efforts to complete, and commence production at, these facilities are not successful, other mill owners

in Brazil may decide not to work with us to develop additional production facilities, demand more favorable terms or delay their commitment to invest capital in our production.

Our construction of manufacturing facilities at São Martinho and Paraíso Bioenergia requires significant capital expenditures and subjects us to significant liquidity and production risks.

Our initial large-scale production facility construction plan was for the plant at São Martinho and we are designing and managing the project. We expect the construction costs of the new facility to total approximately $100 million. Ultimately, under the terms of our joint venture agreements, São Martinho will contribute the lower of R$61.8 million reais (US$32.9 million based on the exchange rate at December 31, 2011) and half of the aggregate cost of construction with us contributing the remainder; however the timing of contributions from São Martinho depend on in part on the successful commencement of commercial operations at the plant, which could leave us vulnerable in the event we encounter challenges in building the facility or bringing

it online, delays in achieving commercial viability with our Biofene production process, disputes with São Martinho or other unanticipated events that may occur prior to the time São Martinho makes its capital contribution. In addition, because São Martinho's contribution is capped, we will bear the responsibility for construction costs in excess of those anticipated. Furthermore, under our manufacturing agreement with Paraíso Bioenergia, we are responsible for building fermentation and separation capacity to establish the planned production facility. We anticipate funding construction of such facilities with our working capital and with debt and other financing; however, we cannot be sure that we will be able to raise financing for these projects in sufficient amounts or on acceptable terms in a timely manner, and we have already had to delay certain construction projects associated with the São Martinho plant due to financing constraints. If we fail to raise sufficient funds or are required to conserve working capital for other uses, we may be forced to delay or terminate projects, which could have a material adverse effect on our ability to achieve target production levels in the coming years.

Our joint venture with São Martinho subjects us to certain legal and financial terms that could adversely affect us.
The terms of our joint venture with São Martinho are complex and are set forth in a number of agreements and schedules. If we and São Martinho disagree over the interpretation of any of these joint venture documents, the future success of the joint venture may be impaired and any amount that we have invested in it may be at risk.
The joint venture has agreed to purchase, and São Martinho has agreed to provide, feedstock for a price that is based on the average return that São Martinho could receive from the production of its current products, sugar and ethanol. If the cost of these products increases relative to the price at which we can sell the output that we are required to purchase from the joint venture, our return on sales of products produced by the joint venture would be adversely affected. We are required to purchase the output of the joint venture for the first four years at a price that guarantees the return of São Martinho's investment plus a fixed interest rate. We may not be able to sell the output at a price that allows us to achieve anticipated, or any, level of profitability on the product we acquire under these terms. Similarly, the return that we are required to provide the joint venture for products after the first four years may have an adverse effect on the profitability we achieve from acquiring the mill's output. Finally, our purchase obligation with the mill requires us to purchase the output regardless of whether we have a customer for such output, and our results of operations and financial condition would be adversely affected if we are unable to sell the output that we are required to purchase.
If the joint venture is terminated, we would be required to buy the joint venture's assets at fair value and transfer them to another location. In that event, we could incur significant unexpected costs and be required to find alternative locations for our facility, which would substantially delay the commencement of production. In addition, if Amyris Brasil becomes controlled, directly or indirectly, by a competitor of São Martinho, then São Martinho has the right to acquire our interest in the joint venture and if São Martinho becomes controlled, directly or indirectly, by a competitor of ours, then we have the right to sell our interest in the joint venture to São Martinho. In either case, the purchase price is to be determined in accordance with the joint venture agreements, and we would continue to have the obligation to acquire products produced by the joint venture for the remainder of the term of the supply agreement then in effect even though we might no longer be involved in the joint venture's management.
We consolidate our joint venture with São Martinho in accordance with the guidance for consolidation of variable interest entities, which requires an ongoing assessment of whether we have the power to direct the activities that most significantly impact the joint venture's economic performance. We may be unable to consolidate this joint venture in the future, if we no longer meet the requirements for consolidation as a variable interest entity.
We plan to enter into arrangements with Brazilian sugar and ethanol producers to produce a substantial portion of our products, and if we are not able to complete these arrangements in a timely manner and on terms favorable to us, our business will be adversely affected.
To expand our production in Brazil beyond that of our initial production facilities with Biomin, Antibióticos, Tate & Lyle, São Martinho and Paraíso Bioenergia, we intend to enter into agreements with sugar and ethanol producers in Brazil that require them to make a substantial capital or operating contribution to produce our renewable products. In return, we expect to provide them with a share of the higher gross margin we believe we will realize from the sale of these products relative to their existing products. There can be no assurance that a sufficient number of Brazilian sugar

and ethanol mill owners will accept the opportunity to partner with us for the production of our products, whether on those terms or at all. Reluctance on the part of mill owners may be caused, for example, by their failure to understand our technology or product opportunities or agree with the greater economic benefits that we believe they can achieve from partnering with us. Mill owners may also be reluctant or unable to obtain needed capital, or they may be limited by existing contractual obligations with other third parties, liability, health and safety concerns, additional maintenance, training, operating and other ongoing expenses. We have entered into letters of intent with certain Brazilian sugar and ethanol producers to produce our products and São Martinho has the option for production at a second mill, but these do not bind either the mill owner or us to enter into and proceed with a formal relationship. In addition, there are numerous issues regarding these mill relationships that must be successfully negotiated with each of the mill owners and we may not be successful in completing these negotiations. Even if sugar and ethanol producers are willing to build new facilities and produce our products, they may do so only on economic terms that place more of the cost, or confer less of the economic return, on us than we currently

anticipate. If we are not successful in negotiations with sugar and ethanol mill owners, our cost of gaining this production capacity may be higher than we anticipate in terms of up-front costs, capital expenditure or lost future returns, and we may not gain the production base that we need in Brazil to allow us to grow our business.

Building new, bolt-on facilities adjacent to existing sugar and ethanol mills for production of our products requires significant capital, and if mill owners are unwilling to contribute capital, or do not have or have access to this capital, production of our products would be more limited or more expensive than expected and our business would be harmed.

We expect to expand our production capacity over time using a capital light approach, through which mill owners would invest a substantial portion or all of the capital needed to build our bolt-on production facilities, in exchange for a share of the higher gross margin from the sale of our renewable chemicals and fuels, as compared to their current products. Mill owners may perceive this construction as a costly process requiring substantial capital or operating contribution. Mill owners may not have sufficient capital of their own for this purpose or may not be willing or able to secure financing. As a result, they may choose not to contribute the amount of capital that we anticipate or may need to seek external sources of financing, which may not be available. If the mill owner needs to obtain financing through debt, we may be required to provide a guarantee. Furthermore, even if we are able to establish mill relationships where mill owners contribute desired levels of capital, we will be required to contribute significant capital ourselves, as is the case with the facilities at Biomin, Antibióticos, Tate & Lyle, São Martinho and Paraíso Bioenergia. As we add relationships and commit to building additional production facilities, we will require additional financial resources to finance such projects, which could include equity financing, debt and additional contributions from existing and new collaboration partners. Even if sugar and ethanol producers are attracted to the opportunity, they may not be able to obtain credit to pursue it, which could adversely affect our ability to develop the production capacity needed to allow us to grow our business.

Our reliance on contract manufacturers for near term production exposes us to risks relating to the costs, contractual terms, location, equipment installation, technology transfer and availability of that contract manufacturing and could adversely affect our growth.

We commenced commercial production of Biofene and some specialty chemical products in 2011 through the use of contract manufacturers, and we anticipate that we will continue to use contract manufacturers for the next several years. Setting up sufficient contract manufacturing facilities requires us to make significant capital expenditures, which reduces our cash and subjects us to losses from depreciation. For example, we have incurred, and expect to continue to incur, significant capital expenditures in connection with our contract manufacturing arrangements, including Biomin in Brazil, Tate & Lyle in the U.S., and Antibióticos in Spain. In addition, many of our contract manufacturing agreements contain terms that commit us to pay for such capital expenditures and other costs incurred by the plant operators and owners, which could result in contractual liability for us even if we determine that we no longer wish to pursue a particular contract manufacturing arrangement. Some of such agreements also contain requirements to pay bonuses for milestone achievements by the contractor, minimum offtake requirements with penalties for failure to purchase specified amounts in a given period, and other terms that create contingent liabilities or other obligations for us. Any failure to comply with such requirements could result in legal claims against us, resulting in additional liability and diverting management attention, which could have a material adverse effect on our business.

Furthermore, we cannot be sure that contract manufacturers will be available when we need their services, that they will be willing to dedicate a portion of their capacity to our projects, or that we will be able to reach acceptable price and other terms with them for the provision of their production services. If we are unable to secure the services of such third parties when and as needed, we may lose customer opportunities and the growth of our business may be impaired. Also, in order for production to commence under our contract manufacturing arrangements, we will generally have to provide equipment needed for the production of our products and we cannot be assured that such equipment can be ordered, or installed, on a timely basis, at acceptable costs, or at all. In addition, to establish new manufacturing facilities we need to transfer our yeast strains and production processes from lab to commercial plants controlled by third parties, which may pose technical or operational challenges that delay production or increase our costs.

The locations of contract manufacturers can pose additional cost, logistics and feedstock challenges. If production capacity is available at a plant that is remote from usable chemical finishing or distribution facilities, or from customers, we will be required to incur additional expenses in shipping products to other locations. Such costs could include shipping costs, compliance with export and import controls, tariffs and additional taxes, among others. In addition, we may be required to use feedstock from a particular region for a given production facility. The feedstock available in a particular region may not be the least expensive or most effective feedstock for production, which could significantly raise our overall production cost until we are able to optimize the supply chain. For example, we currently rely on Antibióticos in Spain for a large percentage of our production volume. This reliance means that we must ship Biofene produced in Spain to satisfy demand in various locations around the world. In addition, Antibióticos uses non-sugarcane syrup as its feedstock source, which results in higher production costs than using Brazilian sugarcane syrup used in our Brazilian facilities.

We rely on third parties for process development and such third parties may not be successful in helping us achieve the production efficiency we need.

We have outsourced some of our production process development to contract manufacturers and other third parties and are relying on them to help us achieve production efficiency in our commercial scale-up efforts. Such third parties may not perform this work as well as we need them to in order for us to produce our products in a commercially viable manner. For example, third parties may prioritize other projects or customers or lack expertise or resources at any given time. Failures to develop our production process could prevent us from being able to offer our planned products at competitive prices, on the timeline we expect, or at all. In addition, we expect that our production costs using contract manufacturers will be higher, based on scale of operations, feedstock and contract manufacturing economics, than the costs to produce our products in sugar and ethanol mills with which we have entered into long term relationships.

If we are unable to decrease our production costs, we may not be able to produce our products at competitive prices and our ability to grow our business will be limited.

Currently, our costs of production are not low enough to allow us to offer many of our planned products at competitive prices. For us to establish significant sales of our specialty chemicals or fuels, we must achieve commercially-viable production efficiencies and cost structures. Our production cost depends on many factors that could have a negative effect on our ability to offer our planned products at competitive prices. For example, the price of feedstock and our ability to build large-scale production capacity will have a significant impact on our pricing. Other factors that impact our production cost include yield, productivity, separation efficiency and chemical process efficiency. Yield refers to the amount of the desired molecule that can be produced from a fixed amount of feedstock. Productivity represents the rate at which our product is produced by a given yeast strain. Separation efficiency refers to the amount of desired product produced in the fermentation process that we are able to extract and the time that it takes to do so. Chemical process efficiency refers to the cost and yield for the chemical finishing steps that convert our target molecule into a desired product. In order to successfully enter transportation fuels and certain chemical markets, we must produce those products at significantly lower cost, which will require both substantially higher yields than we have achieved to date and other significant improvements in production efficiency, including in productivity and in separation and chemical process efficiencies. There can be no assurance that we will be able to make these improvements or reduce our production costs sufficiently to offer our planned products at competitive prices, and any such failure could have a material adverse impact on our business and prospects.

Our ability to establish substantial commercial sales of our products is subject to many risks, any of which could prevent or delay revenue growth and adversely impact our customer relationships, business and results of operations.

There can be no assurance that our products will be approved or accepted by customers, that customers will choose our products over competing products, or that we will be able to sell our products profitably at prices and with features sufficient to establish demand. Although we have begun to sell squalane and some diesel, we are in the very early stages of selling our products into the commercial markets we are targeting. Our sales and marketing efforts for our initial products are primarily focused on a small number of target customers and we will need to convince them that our products are comparable to or better than products they currently use that we seek to replace, both in terms of cost and performance. In addition, these customers will need to complete product qualification procedures, which may not be achieved in a timely manner or at all. We also face various risks related to commercial production, including obtaining assistance of contract manufacturers, production process development and production efficiency as discussed in the production risk factors above.

Our manufacturing operations require sugar feedstock, and the inability to obtain such feedstock in sufficient quantities or in a timely manner may limit our ability to produce our products.

We anticipate that the production of our products will require large volumes of feedstock. In the near term, we will rely on a mixture of feedstock sources for use at our contract manufacturing operations, including corn-based dextrose, beet molasses and cane sugar. For our large-scale production facilities in Brazil, we expect to rely primarily on Brazilian sugarcane. We cannot predict the future availability or price of these various feedstocks, nor can we be sure that our mill partners, which we expect to supply the sugarcane feedstock necessary to produce our products in Brazil, will be able to supply it in sufficient quantities or in a timely manner. Furthermore, to the extent we are

required to rely on sugar feedstock other than Brazilian sugarcane, the cost of such feedstock may be higher than we expect, increasing our anticipated production costs. Feedstock crop yields and sugar content depend on weather conditions, such as rainfall and temperature that vary. Weather conditions have historically caused volatility in the ethanol and sugar industries by causing crop failures or reduced harvests. Excessive rainfall can adversely affect the supply of sugarcane and other sugar feedstock available for the production of our products by reducing the sucrose content and limiting growers' ability to harvest. Crop disease and pestilence can also occur from time to time and can adversely affect feedstock growth, potentially rendering useless or unusable all or a substantial portion of affected harvests. With respect to sugarcane, our initial primary feedstock, the limited amount of time during which it keeps its sugar content after harvest and the fact that sugarcane is

not itself a traded commodity increases these risks and limits our ability to substitute supply in the event of such an occurrence. If production of sugarcane or any other feedstock we may use to produce our products is adversely affected by these or other conditions, our production will be impaired, and our business will be adversely affected.

We have entered into a number of agreements for the development, initial commercialization and sale of certain products that contain important technical, development and commercial milestones. If we do not meet those milestones our future revenue and financial results will be harmed.

We have entered into a number of agreements regarding arrangements for the further development of certain of our products and, in some cases, for ultimate sale to the customer under the agreement. None of these agreements affirmatively obligates the other party to purchase specific quantities of any products at this time, and these agreements contain important conditions that must be satisfied before any such purchases may be made. These conditions include research and development milestones and technical specifications that must be achieved to the satisfaction of our customers, which we cannot be certain we will achieve. Some agreements provide that we will not initiate sales until we achieve advances in production efficiency to lower production costs. In addition, these agreements contain exclusivity and other terms that may limit our ability to commercialize our products and technology in ways that we do not currently envision. If we do not achieve these contractual milestones, our revenues and financial results will be harmed.

Our relationship with our strategic partner Total may have a substantial impact on our company.

We have entered into a strategic relationship with Total. As part of this relationship, Total has made a significant equity investment in our company and has certain board membership rights, as well as certain first negotiation rights in the event of a sale of our company. As a result, Total will have access to a significant amount of information about our company and the ability to influence our management and affairs. Total's right of first negotiation may adversely affect our ability to complete a change in control transaction that our Board of Directors believes is in the best interests of stockholders other than Total.

We also entered into a license, development, research and collaboration agreement with an affiliate of Total, under which we may develop, produce and commercialize products with Total. The agreement provides for Total to pay up to the first $50.0 million in research costs for selected research and development projects, but we must agree with Total on the product development projects we wish to pursue. Although we have agreed on two initial product development programs, we have not yet finalized all relevant terms and conditions for those programs. We cannot be certain that we will agree on any future product development projects. Our ability to successfully pursue product development under this agreement will depend, among other things, on our ability to work cooperatively with Total. If we cannot agree to the final terms and conditions for our initial projects, or agree on any subsequent projects, then we would not receive the research and development funding we expect from Total, and this could adversely affect our product development plans and would lead to an impairment of our deferred charged assets. In addition, Total has a right of first negotiation with us with respect to exclusive commercialization arrangements that we would propose to enter into with certain third parties, as well as the right to purchase any of our products on terms not less favorable than those offered to or received by us from third parties in any market where Total or its affiliates have a significant market position. These rights might inhibit potential strategic partners or potential customers from entering into negotiations with us about future business opportunities. Further, the agreement is complex and covers a range of future activities, and disputes may arise between us and Total that could delay the programs on which we are working or could prevent the commercialization of products developed under our collaboration agreement. Total also has the right to terminate the collaboration agreement in the event we undergo a sale or change of control to certain entities, which could discourage a potential acquirer from making an offer to acquire us.

In November 2011, we entered into an amendment of the collaboration agreement that provides for an exclusive strategic collaboration for the development of renewable diesel products and contemplates that the parties will establish a joint venture for the production and commercialization of such renewable diesel products on an exclusive, worldwide basis. It also provides that commercialization and production of jet fuel, already under development pursuant to the original collaboration agreement, would be conducted on an exclusive, worldwide basis through the same joint venture. Further, the amendment provides the joint venture with the right to produce and commercialize certain other chemical products made through the use of our technology on a non-exclusive basis. In addition to

requiring us to work with Total in these key strategic areas of our business, the amendment contains a number of provisions that create contractual risk for us. These include various provisions that allow Total to terminate its efforts with respect to the development project, reduce its funding, not participate in the joint venture, and/or require royalty payments by us. For example, the amendment provides that definitive agreements to form the joint venture must be in place by March 31, 2012 (or another date as agreed to by the parties) or the renewable diesel program, including any further collaboration payments by Total related to the renewable diesel program, will terminate. The continuation of the renewable diesel program and the formation of the joint venture are also subject to certain mutual intellectual property due diligence conditions. Under the amendment, each party retains certain rights to independently produce and sell renewable diesel under specified circumstances subject to paying royalties to the other party. In addition, Total has an option, upon completion of the renewable diesel program, to notify us that it does not wish to pursue production or commercialization of renewable diesel under the amendment. If Total exercises this right,

we are obligated pay Total specified royalties based on our net income. Such royalty payments would also include a share of net proceeds received by us from any sale of our renewable diesel business.

An increase in the price and profitability of ethanol and sugar relative to our products could adversely affect our arrangements with sugar and ethanol producers.

In order to induce owners of sugar and ethanol facilities to produce our products, we generally have planned to compensate them for the feedstock consumed in the production of our products in an amount equal to the revenue they would have realized had they instead produced their traditional products, plus any incremental costs incurred in the production of our products over their usual production costs. Also, as we sell our products, we expect to share a portion of the realized gross margin with these mill owners. An increase in the price of ethanol or sugar relative to the price at which we can sell our products could result in the cost of our products increasing without a corresponding increase in the price at which we can sell our products. In this event our results of operations would be adversely affected. If ethanol prices are sufficiently high that the return from converting a given amount of sugarcane to ethanol exceeds the return from converting that amount of sugarcane into our products, then we will have to compensate the mill owner for that loss or risk the mill owner reverting to the production of ethanol and not producing our products at all. Many factors could cause this unfavorable price dislocation. If sugar prices increase over a sustained period of time, this may encourage sugar production at the expense of ethanol in mills with flexibility to produce both products, which in turn could cause domestic prices in Brazilian reais for ethanol to increase. In addition, the Brazilian government currently requires the use of anhydrous ethanol as a gasoline additive. Any change in these government policies could affect ethanol demand in a way that discourages mill owners from producing our products.

The price of sugarcane feedstock can be volatile as a result of changes in industry policy and may increase the cost of production of our products.

In Brazil, Conselho dos Produtores de Cana, Açúcar e Álcool (Council of Sugarcane, Sugar and Ethanol Producers), or Consecana, an industry association of producers of sugarcane, sugar and ethanol, sets market terms and prices for general supply, lease and partnership agreements for sugarcane. Changes in such prices and terms could result in higher sugarcane prices and/or a significant decrease in the volume of sugarcane available for the production of our products. If Consecana were to cease to be involved in this process, such prices and terms could become more volatile. Any of these events could adversely affect our business and results of operations.

Our initial large-scale commercial production capacity is planned for Brazil, and our business will be adversely affected if we do not operate effectively in that country.

For the foreseeable future, we will be subject to risks associated with the concentration of essential product sourcing and operations in Brazil. In the past, the Brazilian economy was characterized by frequent and occasionally extensive intervention by the Brazilian government and unstable economic cycles. The Brazilian government has changed in the past, and may change in the future, monetary, taxation, credit, tariff and other policies to influence the course of Brazil's economy. For example, the government's actions to control inflation have at times involved setting wage and price controls, adjusting interest rates, imposing taxes and exchange controls and limiting imports into Brazil. We have no control over, and cannot predict, what policies or actions the Brazilian government may take in the future. For example, the Brazilian government may take actions to support state-controlled entities in our industry that could adversely affect us. Our business, financial performance and prospects may be adversely affected by, among others, the following factors:

- delays or failures in securing licenses, permits or other governmental approvals necessary to build and operate facilities and use our yeast strains to produce products;
- rapid consolidation in the sugar and ethanol industries in Brazil, which could result in a decrease in competition;
- political, economic, diplomatic or social instability in or affecting Brazil;
- changing interest rates;
- tax burden and policies;
- effects of changes in currency exchange rates;
- exchange controls and restrictions on remittances abroad;
- inflation;

- land reform movements;
- export or import restrictions that limit our ability to move our products out of Brazil or interfere with the import of essential materials into Brazil;

- changes in or interpretations of foreign regulations that may adversely affect our ability to sell our products or repatriate profits to the U.S.;
- tariffs, trade protection measures and other regulatory requirements;
- successful compliance with U.S. and foreign laws that regulate the conduct of business abroad;
- an inability, or reduced ability, to protect our intellectual property in Brazil including any effect of compulsory licensing imposed by government action; and
- difficulties and costs of staffing and managing foreign operations.

Such factors could have a material adverse impact on our results of operations and financial condition.

We cannot predict whether the current or future Brazilian government will implement changes to existing policies on taxation, exchange controls, monetary strategy and social security, among others. We cannot estimate the impact of any such changes on the Brazilian economy or our operations.

We may face risks relating to the use of our genetically modified yeast strains and if we are not able to secure regulatory approval for the use of our yeast strains or if we face public objection to our use of them, our business could be adversely affected.

The use of genetically-modified microorganisms, or GMMs, such as our yeast strains, is subject to laws and regulations in many countries, some of which are new and some of which are still evolving. Public attitudes about the safety and environmental hazards of, and ethical concerns over, genetic research and GMMs could influence public acceptance of our technology and products. In the U.S., the Environmental Protection Agency, or EPA, regulates the commercial use of GMMs as well as potential products from the GMMs. While the strain of genetically modified yeast that we currently use for the development and anticipate using for the commercial production of our target molecules, S. cerevisiae, is eligible for exemption from EPA review because it is recognized as posing a low risk, we must satisfy certain criteria to achieve this exemption, including but not limited to use of compliant containment structures and safety procedures, and we cannot be sure that we will meet such criteria in a timely manner, or at all. If exemption of S. cerevisiae is not obtained, our business may be substantially harmed. In addition to S. cerevisiae, we may seek to use different GMMs in the future that will require EPA approval. If approval of different GMMs is not secured, our ability to grow our business could be adversely affected.

In Brazil, GMMs are regulated by the National Biosafety Technical Commission, or CTNBio. We have obtained approval from CTNBio to use GMMs in a contained environment in our Campinas facilities for research and development purposes as well as at Biomin, our first contract manufacturing facility in Brazil. In addition, we have obtained initial commercial approval from CTNBio for one of our current yeast strains. As we continue to develop new yeast strains and deploy our technology at new production facilities in Brazil, we will be required to obtain further approvals from CTNBio in order to use these strains in commercial production in Brazil. We may not be able to obtain approvals from relevant Brazilian authorities on a timely basis, or at all, and if we do not, our ability to produce our products in Brazil would be impaired, which would adversely affect our results of operations and financial condition.

In addition to our production operations in the U.S. and Brazil, we have entered into a contract manufacturing agreement with Antibióticos in Spain and expect to identify other locations for production around the world. The use of GMM technology is strictly regulated in the European Union, which has established various directives for member states regarding regulation of the use of such technology, including notification processes for contained use of such technology. We expect to encounter GMM regulations in most if not all of the countries in which we may seek to establish production capabilities, and the scope and nature of these regulations will likely be different from country to country. If we cannot meet the applicable requirements in other countries in which we intend to produce products using our yeast strains, or if it takes longer than anticipated to obtain such approvals, our business could be adversely affected.

We may not be able to obtain regulatory approval for the sale of our renewable products.

Our renewable chemical products may be subject to government regulation in our target markets. In the U.S., the EPA administers the Toxic Substances Control Act, or TSCA, which regulates the commercial registration, distribution, and use of many chemicals. Before an entity can manufacture or distribute significant volumes of a chemical, it needs to determine whether that chemical is listed in the TSCA inventory. If the substance is listed, then manufacture or

distribution can commence immediately. If not, then in most cases a “Chemical Abstracts Service” number registration and pre-manufacture notice must be filed with the EPA, which has up to 180 days to review the filing. Some of the products we produce or plan to produce, such as Biofene and squalane, are already in the TSCA inventory. Others, such as our lubricants, farnesane (diesel) and new jet fuel molecules, are not yet listed. We may not be able to expediently receive approval from the EPA to list the molecules we would like to make on the TSCA registry, resulting in delays or significant increases in testing requirements. A similar program exists in the European Union,

called REACH (Registration, Evaluation, Authorization, and Restriction of Chemical Substances). We similarly need to register our products with the European Commission, and this process could cause delays or significant costs. To the extent that other geographies, such as Brazil, may rely on TSCA or REACH for chemical registration in their geographies, delays with the U.S. or European authorities may subsequently delay entry into these markets as well.
Our diesel fuel is subject to regulation by various government agencies, including the EPA and the California Air Resources Board in the U.S. and Agência Nacional do Petróleo, or ANP, in Brazil. To date, we have obtained registration with the EPA for the use of our diesel in the U.S. at a 35% blend rate with petroleum diesel. We are currently working to secure ANP approval for use of our diesel in Brazil at a 10% blend rate. We are also currently in the process of registration of our fuel with the California Air Resources Board and the European Commission. Registration with each of these bodies is required for the sale and use of our fuels within their respective jurisdictions. In addition, for us to achieve full access to the U.S. fuels market for our fuel products, we will need to obtain EPA and California Air Resources Board (and potentially other state agencies) certifications for our feedstock pathway and production facilities, including certification of a feedstock lifecycle analysis relating to greenhouse gas emissions. Any delay in obtaining these additional certifications could impair our ability to sell our renewable fuels to refiners, importers, blenders and other parties that produce transportation fuels as they comply with Federal and state requirements to include certified renewable fuels in their products.
We expect to encounter regulations in most if not all of the countries in which we may seek to sell our renewable chemical and fuel products, and we cannot assure you that we will be able to obtain necessary approvals in a timely manner or at all. If our chemical and fuel products do not meet applicable regulatory requirements in a particular country or at all, then we may not be able to commercialize our products and our business will be adversely affected.
We cannot assure you that our products will be approved or accepted by customers in specialty chemical markets. The markets we intend to enter first are primarily those for specialty chemical products used by large consumer products or specialty chemical companies. In entering these markets, we intend to sell our products as alternatives to chemicals currently in use, and in some cases the chemicals that we seek to replace have been used for many years. The potential customers for our molecules generally have well developed manufacturing processes and arrangements with suppliers of the chemical components of their products and may have a resistance to changing these processes and components. These potential customers frequently impose lengthy and complex product qualification procedures on their suppliers, influenced by consumer preference, manufacturing considerations such as process changes and capital and other costs associated with transitioning to alternative components, supplier operating history, regulatory issues, product liability and other factors, many of which are unknown to, or not well understood by, us. Satisfying these processes may take many months or years. If we are unable to convince these potential customers that our products are comparable to the chemicals that they currently use or that the use of our products is otherwise to their benefits, we will not be successful in entering these markets and our business will be adversely affected.
If we are unable to satisfy the significant product qualification requirements of equipment manufacturers, we may not be able to successfully enter markets for transportation fuels, and our business would be adversely affected.
In order for our diesel fuel product to be accepted in various countries around the world, diesel engine manufacturers must determine that the use of our fuels in their equipment will not invalidate product warranties and that they otherwise regard our diesel as an acceptable fuel. In addition, we must successfully demonstrate to these manufacturers that our fuel does do not degrade the performance or reduce the life cycle of their engines or cause them to fail to meet emissions standards. Meeting these suitability standards can be a time consuming and expensive process, and we may invest substantial time and resources into such qualification efforts without ultimately securing approval. To date, our diesel fuel products have achieved limited approvals from certain engine manufacturers, but we cannot be assured that other engine or vehicle manufacturers or fleet operators, will approve usage of our fuels. Although our diesel fuel satisfies existing pipeline operator and fuel distributor requirements, such fuel has not been reviewed nor transported by such operators as of this date. If these operators impose volume limitations on the transport of our fuels, our ability to sell our fuels may be impaired.
Our ability to sell a jet fuel product will be subject to the same types of qualification requirements as our diesel fuel, although we believe the qualification process will take longer and will be more expensive than the process for diesel.

We expect our international operations to expose us to the risk of fluctuation in currency exchange rates and rates of foreign inflation, which could adversely affect our results of operations.

We currently incur some costs and expenses in Brazilian reais and may in the future incur additional expenses in foreign currencies and derive a portion of our revenues in the local currencies of customers throughout the world. As a result, our revenues and results of operations are subject to foreign exchange fluctuations, which we may not be able to manage successfully. During the past few decades, the Brazilian currency in particular has faced frequent and substantial exchange rate fluctuations in relation to the U.S. dollar and other foreign currencies. There can be no assurance that the real will not significantly appreciate or depreciate

against the U.S. dollar in the future.

We bear the risk that the rate of inflation in the foreign countries where we incur costs and expenses or the decline in value of the U.S. dollar compared to those foreign currencies will increase our costs as expressed in U.S. dollars. For example, future measures by the Central Bank of Brazil to control inflation, including interest rate adjustments, intervention in the foreign exchange market and changes to the fixed the value of the real, may weaken the U.S. dollar in Brazil. Whether in Brazil or otherwise, we may not be able to adjust the prices of our products to offset the effects of inflation or foreign currency appreciation on our cost structure, which could increase our costs and reduce our net operating margins. If we do not successfully manage these risks through hedging or other mechanisms, our revenues and results of operations could be adversely affected.

We expect to face competition for our specialty chemical and transportation fuels products from providers of petroleum-based products and from other companies seeking to provide alternatives to these products, and if we cannot compete effectively against these companies or products we may not be successful in bringing our products to market or further growing our business after we do so.

We expect that our renewable products will compete with both the traditional, largely petroleum-based specialty chemical and fuels products that are currently being used in our target markets and with the alternatives to these existing products that established enterprises and new companies are seeking to produce.

In the specialty chemical markets that we are initially seeking to enter, and in other chemical markets that we may seek to enter in the future, we will compete primarily with the established providers of chemicals currently used in these products. Producers of these incumbent products include global oil companies, large international chemical companies and other companies specializing in specific products, such as squalane or essential oils. We may also compete in one or more of these markets with products that are offered as alternatives to the traditional petroleum-based or other traditional products being offered in these markets.

In the transportation fuels market, we expect to compete with independent and integrated oil refiners, advanced biofuels companies and biodiesel companies. These refiners compete with us by selling traditional fuel products and some are also pursuing hydrocarbon fuel production using non-renewable feedstocks, such as natural gas and coal, as well as processes using renewable feedstocks, such as vegetable oil and biomass. We also expect to compete with companies that are developing the capacity to produce diesel and other transportation fuels from renewable resources in other ways. These include advanced biofuels companies using specific enzymes that they have developed to convert cellulosic biomass, which is non-food plant material such as wood chips, corn stalks and sugarcane bagasse, into fermentable sugars. Similar to us, some companies are seeking to use engineered enzymes to convert sugars, in some cases from cellulosic biomass and in others from natural sugar sources, into renewable diesel and other fuels. Biodiesel companies convert vegetable oils and animal oils into diesel fuel and some are seeking to produce diesel and other transportation fuels using thermochemical methods to convert biomass into renewable fuels.

With the emergence of many new companies seeking to produce chemicals and fuels from alternative sources, we may face increasing competition from alternative fuels and chemicals companies. As they emerge, some of these companies may be able to establish production capacity and commercial partnerships to compete with us. If we are unable to establish production and sales channels that allow us to offer comparable products at attractive prices, we may not be able to compete effectively with these companies.

We believe the primary competitive factors in both the chemicals and fuels markets are:

- product price;
- product performance and other measures of quality;
- infrastructure compatibility of products;
- sustainability; and
- dependability of supply.

The oil companies, large chemical companies and well-established agricultural products companies with whom we compete are much larger than we are, have, in many cases, well developed distribution systems and networks for their products, have valuable historical relationships with the potential customers we are seeking to serve and have much more extensive sales and marketing programs in place to promote their products. In order to be successful, we must

convince customers that our products are at least as effective as the traditional products they are seeking to replace and must provide our products on a cost-competitive basis with these traditional products and other available alternatives. Some of our competitors may use their influence to impede the development and acceptance of renewable products of the type that we are seeking to produce.

We believe that for our chemical products to succeed in the market, we must demonstrate that our products are comparable alternatives to existing products and to any alternative products that are being developed for the same markets based on some

combination of product cost, availability, performance, and consumer preference characteristics. With respect to our diesel and other transportation fuels products, we believe that our product must perform as effectively as petroleum-based fuel, or alternative fuels, and be available on a cost-competitive basis. In addition, with the wide range of renewable fuels products under development, we must be successful in reaching potential customers and convincing them that ours are effective and reliable alternatives.

Amyris Fuels currently competes with regional distributors in its purchase, distribution and sale of third party ethanol and reformulated ethanol-blended gasoline in the southeastern U.S. and competes with other suppliers based on price, convenience and reliability of supply.

A decline in the price of petroleum and petroleum-based products may reduce demand for many of our renewable products and may otherwise adversely affect our business.

We anticipate that most of our renewable products, and in particular our fuels, will be marketed as alternatives to corresponding petroleum-based products. If the price of oil falls, we may be unable to produce products that are cost-effective alternatives to their petroleum-based products. Declining oil prices, or the perception of a future decline in oil prices, may adversely affect the prices we can obtain from our potential customers or prevent potential customers from entering into agreements with us to buy our products. During sustained periods of lower oil prices we may be unable to sell some of our products, which could materially and adversely affect our operating results.

Our pursuit of new product opportunities may not be technically feasible, which would limit our ability to expand our product line and sources of revenues.

Our technology provides us with the capability to genetically engineer microbes to produce potentially thousands of types of molecules. In order to grow our business over time we will need to, and we intend to, commit substantial resources, alone or with collaboration partners, to the development and analysis of these new molecules and the new pathways, or microbial strains, required to produce them. There is no guarantee that we will be successful in creating microbial strains that are capable of producing each target molecule or that the molecule can be produced with the required purity profile for a given market in a cost effective manner. For example, some target molecules may be “toxic” to the microbe, which means that the production of the molecule kills the microbe. Other molecules may be biologically producible in small amounts but cannot be produced in quantities adequate for commercial production. Alternatively, the compounds are produced in adequate quantities but, because they are volatile, we are unable to capture the compounds in commercially adequate quantities or at a commercially viable cost. In addition, some of our microbes may have longer production cycles that may make production of the target molecules more costly. If we are unable to resolve issues of this nature, we may not be able to expand our product line to introduce new sources of future revenues.

Changes in government regulations, including subsidies and economic incentives, could have a material adverse effect upon our business.

The market for renewable fuels is heavily influenced by foreign, federal, state and local government regulations and policies. Changes to existing or adoption of new domestic or foreign federal, state and local legislative initiatives that impact the production, distribution or sale of renewable fuels may harm our renewable fuels business. For example, in 2007, the U.S. Congress passed an alternative fuels mandate that called for more than 15 billion gallons of liquid transportation fuels sold in 2012 to come from alternative sources, including renewable fuels, a mandate that grows to 36 billion gallons by 2022. Of this amount, a minimum of 21 billion gallons must be advanced biofuels, mostly cellulosic, by 2022. In the U.S. and in a number of other countries, these regulations and policies have been modified in the past and may be modified again in the future. Any reduction in mandated requirements for fuel alternatives and additives to gasoline or diesel may cause demand for biofuels to decline and deter investment in the research and development of renewable fuels. In addition, in December 2011, the U.S. Congress did not renew legislation that extended tax credits to blenders of certain renewable fuel products and is not likely to renew them retroactively. The absence of tax credits, subsidies and other incentives in the U.S. and foreign markets for renewable fuels, or any inability of our customers to access such credits, subsidies and incentives, may adversely affect demand for our products and increase the overall cost of commercialization of our renewable fuels, which would adversely affect our renewable fuels business. In addition, in December 2011, a U.S. federal court found the State of California's Low

Carbon Fuel Standard unconstitutional, which could have a negative impact on demand for advanced renewable fuels. The resulting market uncertainty regarding this and future standards and policies may also affect our ability to develop new renewable products or to license our technologies to third parties and to sell products to our end customers. Any inability to address these requirements and any regulatory or policy changes could have a material adverse effect on our business, financial condition and results of operations.

Concerns associated with renewable fuels, including land usage, national security interests and food crop usage, continue to receive legislative, industry and public attention. This could result in future legislation, regulation and/or administrative action that could adversely affect our business. Any inability to address these requirements and any regulatory or policy changes could have a material adverse effect on our business or the business of our partners or customers, financial condition and results of operations.

Furthermore, the production of our products will depend on the availability of feedstock, especially sugarcane. Agricultural production and trade flows are subject to government policies and regulations. Governmental policies affecting the agricultural industry, such as taxes, tariffs, duties, subsidies, incentives and import and export restrictions on agricultural commodities and commodity products, can influence the planting of certain crops, the location and size of crop production, whether unprocessed or processed commodity products are traded, the volume and types of imports and exports, and the availability and competitiveness of feedstocks as raw materials. Future government policies may adversely affect the supply of sugarcane, restrict our ability to use sugarcane to produce our products, and negatively impact our future revenues and results of operations.

We may incur significant costs complying with environmental laws and regulations, and failure to comply with these laws and regulations could expose us to significant liabilities.

We use hazardous chemicals and radioactive and biological materials in our business and are subject to a variety of federal, state and local laws and regulations governing the use, generation, manufacture, storage, handling and disposal of these materials both in the U.S. and overseas. Although we have implemented safety procedures for handling and disposing of these materials and waste products in an effort to comply with these laws and regulations, we cannot be sure that our safety measures are compliant or capable of eliminating the risk of accidental injury or contamination from the use, storage, handling or disposal of hazardous materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could exceed our insurance coverage. There can be no assurance that violations of environmental, health and safety laws will not occur in the future as a result of human error, accident, equipment failure or other causes. Compliance with applicable environmental laws and regulations may be expensive, and the failure to comply with past, present, or future laws could result in the imposition of fines, third party property damage, product liability and personal injury claims, investigation and remediation costs, the suspension of production, or a cessation of operations, and our liability may exceed our total assets. Liability under environmental laws can be joint and several and without regard to comparative fault. Environmental laws could become more stringent over time, imposing greater compliance costs and increasing risks and penalties associated with violations, which could impair our research, development or production efforts and harm our business.

Our financial results could vary significantly from quarter to quarter and are difficult to predict.

Our revenues and results of operations could vary significantly from quarter to quarter because of a variety of factors, many of which are outside of our control. As a result, comparing our results of operations on a period-to-period basis may not be meaningful. Factors that could cause our quarterly results of operations to fluctuate include:

- achievement, or failure to achieve, technology, product development or manufacturing milestones needed to allow us to enter identified markets on a cost effective basis;
- delays or greater than anticipated expenses associated with the completion or commissioning of new production facilities, or the time to ramp up and stabilize production following completion of a new production facility;
- disruptions in the production process at any facility where we produce our products;
- the timing, size and mix of sales to customers for our products;
- increases in price or decreases in availability of feedstock;
- the unavailability of contract manufacturing capacity altogether or at anticipated cost;
- fluctuations in foreign currency exchange rates;
- gains or losses associated with our hedging activities, especially in Amyris Fuels;
- fluctuations in the price of and demand for sugar, ethanol, and petroleum-based and other products for which our products are alternatives;
- seasonal production and sale of our products;
- the effects of competitive pricing pressures, including decreases in average selling prices of our products;
- unanticipated expenses associated with changes in governmental regulations and environmental, health and safety requirements;
- reductions or changes to existing fuel and chemical regulations and policies;
- departure of executives or other key management employees;

- our ability to use our net operating loss carry forwards to offset future taxable income;
- business interruptions such as earthquakes and other natural disasters;

- our ability to integrate businesses that we may acquire;
- risks associated with the international aspects of our business; and
- changes in general economic, industry and market conditions, both domestically and in our foreign markets.

Due to these factors and others the results of any quarterly or annual period may not meet our expectations or the expectations of our investors and may not be meaningful indications of our future performance.

Disruption of transportation and logistics services or insufficient investment in public infrastructure could adversely affect our business.

We intend to conduct initial large-scale manufacturing of most of our renewable products in Brazil, where existing transportation infrastructure is underdeveloped. Substantial investments required for infrastructure changes and expansions may not be made on a timely basis or at all. Any delay or failure in making the changes to or expansion of infrastructure could harm demand or prices for our renewable products and impose additional costs that would hinder their commercialization.

In Brazil, a substantial portion of commercial transportation is by truck, which is significantly more expensive than the rail transportation available to U.S. and certain other international producers. Our dependence on truck transport may affect our production cost and, consequently, impair our ability to compete with petroleum-sourced products in local and world markets.

We may not continue to operate a fuels marketing and distribution business, which could have a material adverse effect on our revenues.

Amyris Fuels currently purchases ethanol produced by third parties and gasoline and sells both pure ethanol and ethanol-blended gasoline to wholesale customers. To date, these sales have accounted for nearly all of our revenue, with substantially all of the remainder coming from grants and collaborations. If we establish our joint venture with Total, we believe we may no longer need the capabilities represented by Amyris Fuels. We may not be able to replace the revenues lost if we transition out of the Amyris Fuels business, particularly in 2012 and 2013 while we continue our efforts to establish our renewable products business.

Our fuels marketing and distribution business depends on purchasing and reselling ethanol produced by third parties and reformulated ethanol-blended gasoline, which may not be available to us on favorable terms or at all and which subjects us to distribution and environmental risks.

Amyris Fuels currently purchases and sells ethanol and reformulated ethanol-blended gasoline under short-term agreements and in spot transactions. In the near term, we plan to continue the purchase and sale of ethanol and reformulated ethanol-blended gasoline and to hedge the price volatility of ethanol and gasoline using futures contracts. We cannot predict future market prices or other terms of any supply contracts that Amyris Fuels may enter into. We cannot assure you that Amyris Fuels will be able to purchase ethanol and reformulated ethanol-blended gasoline at favorable prices, allowing our ethanol and reformulated ethanol-blended gasoline marketing activities to be profitable. In addition, there can be no guarantee that futures contracts to hedge the risks from the purchase and sale of ethanol and gasoline will effectively mitigate risk as intended, that such hedging instruments will always be available, or that counterparties to such hedging contracts will honor their obligations. As a result of these pricing and hedging uncertainties, Amyris Fuels may incur operating losses, harming our results of operations and financial condition. In addition, in order to distribute and sell ethanol and reformulated ethanol-blended gasoline, Amyris Fuels needs access to certain terminal and other storage capacity for ethanol and reformulated ethanol-blended gasoline, and relies on providers of transportation and transloading services for the movement of ethanol and reformulated ethanol-blended gasoline. If Amyris Fuels is unable to access sufficient terminal and other storage capacity and/or to obtain transportation and transloading services on favorable terms, its business will be substantially harmed, which will reduce our future revenues and adversely affect our results of operations and financial condition. Furthermore, there are potential environmental hazards, including risk of spill or fire, associated with the movement and storage of fuel. Although Amyris maintains insurance coverage to mitigate its exposure to such risks, its liability coverage may not be sufficient for a catastrophic event.

Growth may place significant demands on our management and our infrastructure.

We have experienced, and may continue to experience, expansion of our business as we continue to make efforts to develop and bring our products to market. We have grown from 18 employees at the end of 2005 to 493 at December

31, 2011. We are working simultaneously on multiple projects to develop, produce and commercialize several types of renewable chemicals and fuels. Our growth and diversified operations have placed, and may continue to place, significant demands on our management and our operational and financial infrastructure. In particular, continued growth could strain our ability to:

- manage multiple research and development programs;
- operate multiple manufacturing facilities around the world;
- develop and improve our operational, financial and management controls;

- enhance our reporting systems and procedures;
- recruit, train and retain highly skilled personnel;
- develop and maintain our relationships with existing and potential business partners;
- maintain our quality standards; and
- maintain customer satisfaction.

In addition, if we grow our organization too rapidly, we may be forced to scale back our headcount and other aspects of our operating structure to maintain alignment with changing strategies. For example, as part of our operating plan for 2012, we intend to reduce our cost structure by improving efficiency in our operations and reducing non-critical expenditures. We expect these efforts to include reductions to our workforce and adjustments to the timing and scope of planned capital expenditures in the coming quarters.

Managing our growth will require significant expenditures and allocation of valuable management resources. If we fail to achieve the necessary level of efficiency in our organization as it grows, our business, results of operations and financial condition would be harmed.

Our proprietary rights may not adequately protect our technologies and product candidates.

Our commercial success will depend substantially on our ability to obtain patents and maintain adequate legal protection for our technologies and product candidates in the U.S. and other countries. As of February 15, 2012, we had 66 issued U.S. and foreign patents and 279 pending U.S. and foreign patent applications that are owned by or licensed to us. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies and future products are covered by valid and enforceable patents or are effectively maintained as trade secrets.

We apply for patents covering both our technologies and product candidates, as we deem appropriate. However, we may fail to apply for patents on important technologies or product candidates in a timely fashion, or at all. Our existing and future patents may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products or technologies. In addition, the patent positions of companies like ours are highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of patent claims has emerged to date in the U.S. and the landscape is expected to become even more uncertain in view of recent rule changes by the Patent and Trademark Office, or USPTO, the introduction of patent reform legislation in Congress and recent decisions in patent law cases by the U.S. Supreme Court. In addition, we obtained certain key U.S. patents using a procedure for accelerated examination recently implemented by the USPTO which requires special activities and disclosures that may create additional risks related to the validity or enforceability of the U.S. patents so obtained. The patent situation outside of the U.S. is even less predictable. As a result, the validity and enforceability of patents cannot be predicted with certainty. Moreover, we cannot be certain whether:

- we or our licensors were the first to make the inventions covered by each of our issued patents and pending patent applications;
- we or our licensors were the first to file patent applications for these inventions;
- others will independently develop similar or alternative technologies or duplicate any of our technologies;
- any of our or our licensors' patents will be valid or enforceable;
- any patents issued to us or our licensors will provide us with any competitive advantages, or will be challenged by third parties;
- we will develop additional proprietary products or technologies that are patentable; or
- the patents of others will have an adverse effect on our business.

We do not know whether any of our patent applications or those patent applications that we license will result in the issuance of any patents. Even if patents are issued, they may not be sufficient to protect our technology or product candidates. The patents we own or license and those that may be issued in the future may be challenged, invalidated, rendered unenforceable, or circumvented, and the rights granted under any issued patents may not provide us with proprietary protection or competitive advantages. In particular, U.S. patents we obtained using the USPTO accelerated examination program may introduce additional risks to the validity or enforceability of some or all of these

specially-obtained U.S. patents if validity or enforceability are challenged. Moreover, third parties could practice our inventions in territories where we do not have patent protection or in territories where they could obtain a compulsory license to our technology where patented. Such third parties may then try to import products made using our inventions into the U.S. or other territories. Additional uncertainty may result from potential passage of patent reform legislation by the U.S. Congress, legal precedent by the U.S. Federal Circuit and Supreme Court as they

determine legal issues concerning the scope and construction of patent claims and inconsistent interpretation of patent laws by the lower courts. Accordingly, we cannot ensure that any of our pending patent applications will result in issued patents, or even if issued, predict the breadth, validity and enforceability of the claims upheld in our and other companies' patents.

Unauthorized parties may attempt to copy or otherwise obtain and use our products or technology. Monitoring unauthorized use of our intellectual property is difficult, and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in certain foreign countries where the local laws may not protect our proprietary rights as fully as in the U.S. or may provide, today or in the future, for compulsory licenses. If competitors are able to use our technology, our ability to compete effectively could be harmed. Moreover, others may independently develop and obtain patents for technologies that are similar to, or superior to, our technologies. If that happens, we may need to license these technologies, and we may not be able to obtain licenses on reasonable terms, if at all, which could cause harm to our business.

We rely in part on trade secrets to protect our technology, and our failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

We rely on trade secrets to protect some of our technology, particularly where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to maintain and protect. Our strategy for contract manufacturing and scale-up of commercial production requires us to share confidential information with our Brazilian business partners and other parties. Our product development collaborations with third parties, including with Total, require us to share confidential information, including with employees of Total who are seconded to Amyris during the term of the collaboration. While we use reasonable efforts to protect our trade secrets, our or our business partners' employees, consultants, contractors or scientific and other advisors may unintentionally or willfully disclose our proprietary information to competitors. Enforcement of claims that a third party has illegally obtained and is using trade secrets is expensive, time consuming and uncertain. In addition, foreign courts are sometimes less willing than U.S. courts to protect trade secrets. If our competitors independently develop equivalent knowledge, methods and know-how, we would not be able to assert our trade secrets against them. We require new employees and consultants to execute confidentiality agreements upon the commencement of an employment or consulting arrangement with us. These agreements generally require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. These agreements also generally provide that inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. Nevertheless, our proprietary information may be disclosed, or these agreements may be unenforceable or difficult to enforce. Additionally, trade secret law in Brazil differs from that in the U.S. which requires us to take a different approach to protecting our trade secrets in Brazil. Some of these approaches to trade secret protection may be novel and untested under Brazilian law and we cannot guarantee that we would prevail if our trade secrets are contested in Brazil. If any of the above risks materializes our failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

Third parties may misappropriate our yeast strains.

Third parties, including contract manufacturers, sugar and ethanol mill owners, other contractors and shipping agents, often have custody or control of our yeast strains. If our yeast strains were stolen, misappropriated or reverse engineered, they could be used by other parties who may be able to reproduce the yeast 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 where we have limited intellectual property protection or that do not have robust intellectual property law regimes.

If we are sued for infringing intellectual property rights or other proprietary rights of third parties, litigation could be costly and time consuming and could prevent us from developing or commercializing our future products.

Our commercial success depends on our ability to operate without infringing the patents and proprietary rights of other parties and without breaching any agreements we have entered into with regard to our technologies and product candidates. We cannot determine with certainty whether patents or patent applications of other parties may materially affect our ability to conduct our business. Our industry spans several sectors, including biotechnology, renewable

fuels, renewable specialty chemicals and other renewable compounds, and is characterized by the existence of a significant number of patents and disputes regarding patent and other intellectual property rights. Because patent applications can take several years to issue, there may currently be pending applications, unknown to us, that may result in issued patents that cover our technologies or product candidates. We are aware of a significant number of patents and patent applications relating to aspects of our technologies filed by, and issued to, third parties. The existence of third-party patent applications and patents could significantly reduce the coverage of patents owned by or licensed to us and limit our ability to obtain meaningful patent protection. If we wish to make, use, sell, offer to sell, or import the technology or compound claimed in issued and unexpired patents owned by others, we will need to obtain a license from the owner, enter into litigation to challenge the validity of the patents or incur the risk of litigation in the event that the owner asserts that we infringe its patents. If patents containing competitive or conflicting claims are issued to third parties and these claims are ultimately determined to be valid, we may be enjoined from pursing research, development, or commercialization of products, or be required to obtain licenses to these patents, or to develop or obtain alternative technologies.

If a third-party asserts that we infringe upon its patents or other proprietary rights, we could face a number of issues that could seriously harm our competitive position, including:

- infringement and other intellectual property claims, which could be costly and time consuming to litigate, whether or not the claims have merit, and which could delay getting our products to market and divert management attention from our business;
- substantial damages for past infringement, which we may have to pay if a court determines that our product candidates or technologies infringe a competitor's patent or other proprietary rights;
- a court prohibiting us from selling or licensing our technologies or future products unless the holder licenses the patent or other proprietary rights to us, which it is not required to do; and
- if a license is available from a third party, we may have to pay substantial royalties or grant cross licenses to our patents or proprietary rights.

The industries in which we operate, and the biotechnology industry in particular, are characterized by frequent and extensive litigation regarding patents and other intellectual property rights. Many biotechnology companies have employed intellectual property litigation as a way to gain a competitive advantage. If any of our competitors have filed patent applications or obtained patents that claim inventions also claimed by us, we may have to participate in interference proceedings declared by the relevant patent regulatory agency to determine priority of invention and, thus, the right to the patents for these inventions in the U.S. These proceedings could result in substantial cost to us even if the outcome is favorable. Even if successful, an interference proceeding may result in loss of certain claims. Our involvement in litigation, interferences, opposition proceedings or other intellectual property proceedings inside and outside of the U.S., to defend our intellectual property rights or as a result of alleged infringement of the rights of others, may divert management time from focusing on business operations and could cause us to spend significant resources, all of which could harm our business and results of operations.

Many of our employees were previously employed at universities, biotechnology, specialty chemical or oil companies, including our competitors or potential competitors. We may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel and be enjoined from certain activities. A loss of key research personnel or their work product could hamper or prevent our ability to commercialize our product candidates, which could severely harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and demand on management resources.

We may need to commence litigation to enforce our intellectual property rights, which would divert resources and management's time and attention and the results of which would be uncertain.

Enforcement of claims that a third party is using our proprietary rights without permission is expensive, time consuming and uncertain. Litigation would result in substantial costs, even if the eventual outcome is favorable to us and would divert management's attention from our business objectives. In addition, an adverse outcome in litigation could result in a substantial loss of our proprietary rights and we may lose our ability to exclude others from practicing our technology or producing our product candidates.

The laws of some foreign countries do not protect intellectual property rights to the same extent as do the laws of the U.S. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology and/or bioindustrial technologies. This could make it difficult for us to stop the infringement of our patents or misappropriation of our other intellectual property rights. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business. Moreover, our efforts to protect our intellectual property rights in such countries may be inadequate.

Loss of key personnel, including key management personnel, and/or failure to attract and retain additional personnel could delay our product development programs and harm our research and development efforts and our ability to meet our business objectives.

Our business involves complex, global operations across a variety of markets and requires a management team and employee workforce that is knowledgeable in the many areas in which we operate. The loss of any key member of our management or key technical and operational employees, or the failure to attract or retain such employees could prevent us from developing and commercializing our products for our target markets and executing our business strategy. We may not be able to attract or retain qualified employees in the future due to the intense competition for qualified personnel among biotechnology and other technology-

based businesses, particularly in the renewable chemicals and fuels area, or due to the availability of personnel with the qualifications or experience necessary for our business. In addition, in recent quarters our stock price has declined significantly, which reduces our ability to recruit and retain employees using equity compensation. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience staffing constraints that will adversely affect our ability to meet the demands of our collaborators and customers in a timely fashion or to support our internal research and development programs. In particular, our product and process development programs are dependent on our ability to attract and retain highly skilled technical and operational personnel. Competition for such personnel from numerous companies and academic and other research institutions may limit our ability to do so on acceptable terms. All of our employees are at-will employees, which mean that either the employee or we may terminate their employment at any time.

As we build our business, 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, in both the U.S. and Brazil, is a lengthy and expensive one. The market for qualified personnel is very competitive because of the limited number of people available with the necessary technical skills and understanding of our technology and anticipated products, particularly in Brazil. 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 may be sued for product liability.

The design, development, production and sale of our products involve an inherent risk of product liability claims and the associated adverse publicity. We may be named directly in product liability suits relating to our products, even for defects resulting from errors of our commercial partners, contract manufacturers or chemical finishers. These claims could be brought by various parties, including customers who are purchasing products directly from us or other users who purchase products from our customers. We could also be named as co-parties in product liability suits that are brought against the contract manufacturers or Brazilian sugar and ethanol mills who produce our products. Insurance coverage is expensive, may be difficult to obtain and may not be available in the future on acceptable terms. We cannot assure you that our contract manufacturers or the sugar and ethanol producers who produce our products will have adequate insurance coverage to cover against potential claims. This insurance may not provide adequate coverage against potential losses, and if claims or losses exceed our liability insurance coverage, we may go out of business. In addition, insurance coverage may become more expensive, which would harm our results of operations.

During the ordinary course of business, we may become subject to lawsuits or indemnity claims, which could materially and adversely affect our business and results of operations.

From time to time, we may in the ordinary course of business be named as a defendant in lawsuits, claims and other legal proceedings. These actions may seek, among other things, compensation for alleged personal injury, worker's compensation, employment discrimination, breach of contract, property damages, civil penalties and other losses of injunctive or declaratory relief. In the event that such actions or indemnities are ultimately resolved unfavorably at amounts exceeding our accrued liability, or at material amounts, the outcome could materially and adversely affect our reputation, business and results of operations. In addition, payments of significant amounts, even if reserved, could adversely affect our liquidity position.

If we fail to maintain an effective system of internal controls, we might not be able to report our financial results accurately or prevent fraud; in that case, our stockholders could lose confidence in our financial reporting, which would harm our business and could negatively impact the price of our stock.

Effective internal controls are necessary for us to provide reliable financial reports and prevent fraud. In addition, Section 404 of the Sarbanes-Oxley Act of 2002 requires us and our independent registered public accounting firm to evaluate and report on our internal control over financial reporting beginning with this Annual Report on Form 10-K for the year ending December 31, 2011. The process of implementing our internal controls and complying with Section 404 is expensive and time consuming, and requires significant attention of management. We cannot be certain that these measures will ensure that we maintain adequate controls over our financial processes and reporting in the future. In addition, to the extent we create joint ventures or have any variable interest entities and the financial statements of such entities are not prepared by us, we will not have direct control over their financial statement

preparation. As a result, we will, for our financial reporting, depend on what these entities report to us, which could result in us adding monitoring and audit processes and increase the difficulty of implementing and maintaining adequate controls over our financial processes and reporting in the future. This may be particularly true where we are establishing such entities with commercial partners that do not have sophisticated financial accounting processes in place, or where we are entering into new relationships at a rapid pace, straining our integration capacity. Additionally, if we do not receive the information from the joint venture or variable interest entity on a timely basis, this could cause delays in our external reporting. Even if we conclude, and our independent registered public accounting firm concurs, that our internal control over financial reporting provides reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles, because of its inherent limitations, internal control over financial reporting may not prevent or detect fraud or misstatements. Failure to implement required new or improved controls, or difficulties

encountered in their implementation, could harm our results of operations or cause us to fail to meet our reporting obligations. If we or our independent registered public accounting firm discover a material weakness, the disclosure of that fact, even if quickly remedied, could reduce the market's confidence in our financial statements and harm our stock price. In addition, a delay in compliance with Section 404 could subject us to a variety of administrative sanctions, including SEC action, ineligibility for short form resale registration, the suspension or delisting of our common stock from the stock exchange on which it is listed and the inability of registered broker-dealers to make a market in our common stock, which would further reduce our stock price and could harm our business.

If the value of our goodwill or other intangible assets becomes impaired, it could materially reduce the value of our assets and reduce our net income for the year in which the related impairment charges occur.

We apply the applicable accounting principles set forth in the U.S. Financial Accounting Standards Board's Accounting Standards Codification to our intangible assets (including goodwill), which prohibits the amortization of intangible assets with indefinite useful lives and requires that these assets be reviewed for impairment at least annually. There are several methods that can be used to determine the estimated fair value of the IPR&D acquired in a business combination. We utilized the "income method," which applies a probability weighting that considers the risk of development and commercialization, to the estimated future net cash flows that are derived from projected sales revenues and estimated costs. These projections are based on factors such as relevant market size, pricing of similar products, and expected industry trends. The estimated future net cash flows are then discounted to the present value using an appropriate discount rate. These assets are treated as indefinite-lived intangible assets until completion or abandonment of the projects, at which time the assets will be amortized over the remaining useful life or written off, as appropriate. If the carrying amount of the assets is greater than the measures of fair value, impairment is considered to have occurred and a write-down of the asset is recorded. Any finding that the value of our intangible assets has been impaired would require us to write-down the impaired portion, which could reduce the value of our assets and reduce our net income for the year in which the related impairment charges occur. As of December 31, 2011, we recorded a net carrying value of approximately $9.1 million in in-process research and development and goodwill associated with our acquisition of Draths Corporation.

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

In general, under Section 382 of the Internal Revenue Code, or Code, a corporation that undergoes an “ownership change” is subject to limitations on its ability to utilize its pre-change net operating loss carry forwards, or NOLs, to offset future taxable income. If the Internal Revenue Service challenges our analysis that our existing NOLs are not subject to limitations arising from previous ownership changes, or if we undergo an ownership change, our ability to utilize NOLs could be limited by Section 382 of the Code. Future changes in our stock ownership, some of which are outside of our control, could result in an ownership change under Section 382 of the Code. Furthermore, our ability to utilize NOLs of companies that we may acquire in the future may be subject to limitations. For these reasons, we may not be able to utilize a material portion of the NOLs reflected on our balance sheet, even if we attain profitability.

Loss of our government grant funding could impair our research and development efforts.

In 2010, we were awarded a $24.3 million “Integrated Bio-Refinery” grant from the U.S. Department of Energy, or DOE. The terms of this grant make the funds available to us to leverage and expand our existing Emeryville, California, pilot plant and support laboratories to develop U.S.-based production capabilities for renewable fuels and chemicals derived from sweet sorghum. Generally, government grant agreements have fixed terms and may be terminated, modified or recovered by the granting agency under certain conditions. For example, our grant requires us to implement substantial reporting, governance and other processes to comply with the grant contract, and we are subject to audits and reviews by government agencies with respect to such compliance. We have limited experience in complying with such government contract requirements, and any compliance failures can result in additional audits, burdensome corrective action plans, and significant penalties, up to and including termination, modification and recovery of the grant by the granting agency. Our first DOE audit was performed in 2011 for the year ended December 31, 2010, and as a result of the audit we were required to implement a corrective action plan with respect to certain administrative requirements. If the DOE terminates its grant agreement with us, our U.S.-based research and development activities could be impaired, which could harm our business.

Our headquarters and other facilities are located in an active earthquake zone, and an earthquake or other types of natural disasters affecting us or our suppliers could cause resource shortages and disrupt and harm our results of operations.

We conduct our primary research and development operations in the San Francisco Bay Area in an active earthquake zone, and certain of our suppliers conduct their operations in the same region or in other locations that are susceptible to natural disasters. In addition, California and some of the locations where certain of our suppliers are located have experienced shortages of water, electric power and natural gas from time to time. The occurrence of a natural disaster, such as an earthquake, drought or flood, or localized extended outages of critical utilities or transportation systems, or any critical resource shortages, affecting us or our suppliers could cause a significant interruption in our business, damage or destroy our facilities, production equipment or inventory or those of our suppliers and cause us to incur significant costs or result in limitations on the availability of our raw materials, any

of which could harm our business, financial condition and results of operations. The insurance we maintain against fires, earthquakes and other natural disasters may not be adequate to cover our losses in any particular case.

Risks Related to Ownership of Our Common Stock

Our stock price may be volatile.

The market price of our common stock has been, and we expect it to continue to be, subject to significant fluctuations. As of February 23, 2012, the reported closing price for our common stock on the NASDAQ Global Select Market was $5.74. Market prices for securities of early stage companies have historically been particularly volatile. Such fluctuations could be in response to, among other things, the factors described in this “Risk Factors” section or elsewhere in this registration statement, or other factors, some of which are beyond our control, such as:

- fluctuations in our financial results or outlook or those of companies perceived to be similar to us;
- changes in estimates of our financial results or recommendations by securities analysts;
- changes in market valuations of similar companies;
- changes in the prices of commodities associated with our business such as sugar, ethanol and petroleum;
- changes in our capital structure, such as future issuances of securities or the incurrence of debt;
- announcements by us or our competitors of significant contracts, acquisitions or strategic alliances;
- regulatory developments in the U.S., Brazil, and/or other foreign countries;
- litigation involving us, our general industry or both;
- additions or departures of key personnel;
- investors' general perception of us; and
- changes in general economic, industry and market conditions.

Furthermore, the stock markets have experienced price and volume fluctuations that have affected, and continue to affect, the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market fluctuations, as well as general economic, political and market conditions, such as recessions, interest rate changes and international currency fluctuations, may negatively affect the market price of our common stock.

In the past, many companies that have experienced volatility in the market price of their stock have become subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

We are incurring increased costs and demands upon management as a result of complying with the laws and regulations affecting public companies, which could harm our results of operations.

As a public company, we are incurring significant additional accounting, legal and other expenses, including costs associated with public company reporting requirements. We also have incurred and will continue to incur costs associated with corporate governance requirements, including requirements under Section 404 and other provisions of the Sarbanes-Oxley Act, as well as rules implemented by the SEC and NASDAQ. The expenses incurred by public companies for reporting and corporate governance purposes have increased dramatically in recent years. We expect these rules and regulations to substantially increase our financial and legal compliance costs.

The concentration of our capital stock ownership with insiders will limit your ability to influence corporate matters.

As of December 31, 2011, our executive officers, directors, current ten percent or greater stockholders and entities affiliated with them together beneficially owned approximately 68% and a single stockholder-Total-held approximately 21.0% of our outstanding common stock, respectively. In addition, certain of our existing stockholders, including stockholders who held 5% or more of our common stock as of December 31, 2011, purchased additional shares in an offering completed in February 2012, resulting in an increase in the concentration of capital stock ownership by insiders. This significant concentration of share ownership may adversely affect the trading price for our common stock because investors often perceive disadvantages in owning stock in companies with controlling stockholders. Also, these stockholders, acting together, will be able to control our management and affairs and matters requiring stockholder approval, including the election of directors and the approval of significant corporate transactions, such as mergers, consolidations or the sale of substantially all of our assets. Consequently, this

concentration of

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ownership may have the effect of delaying or preventing a change of control, including a merger, consolidation or other business combination involving us, or discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control, even if that change of control would benefit our other stockholders.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business or our market, or if they change their recommendations regarding our stock adversely, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. If any of the analysts who may cover us change their recommendation regarding our stock adversely, or provide more favorable relative recommendations about our competitors, our stock price would likely decline. If any analyst who may cover us were to cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

We do not expect to declare any dividends in the foreseeable future.

We do not anticipate declaring any cash dividends to holders of our common stock in the foreseeable future. In addition, certain of our equipment leases and credit facilities currently restrict our ability to pay dividends. Consequently, investors may need to rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investment. Investors seeking cash dividends should not purchase our common stock.

Anti-takeover provisions contained in our certificate of incorporation and bylaws, as well as provisions of Delaware law, could impair a takeover attempt.

Our amended and restated certificate of incorporation and our amended and restated bylaws that became effective upon the completion of our initial public offering contain provisions that could delay or prevent a change in control of our company. These provisions could also make it more difficult for stockholders to elect directors and take other corporate actions. These provisions include:

- staggered board of directors;
- authorizing the board to issue, without stockholder approval, preferred stock with rights senior to those of our common stock;
- authorizing the board to amend our bylaws and to fill board vacancies until the next annual meeting of the stockholders;
- prohibiting stockholder action by written consent;
- limiting the liability of, and providing indemnification to, our directors and officers;
- not authorizing our stockholders to call a special stockholder meeting;
- eliminating the ability of our stockholders to call special meetings; and
- requiring advance notification of stockholder nominations and proposals.

Section 203 of the Delaware General Corporation Law prohibits, subject to some exceptions, “business combinations” between a Delaware corporation and an “interested stockholder,” which is generally defined as a stockholder who becomes a beneficial owner of 15% or more of a Delaware corporation's voting stock, for a three-year period following the date that the stockholder became an interested stockholder. We have agreed to opt out of Section 203 through our certificate of incorporation, but our certificate of incorporation contains substantially similar protections to our company and stockholders as those afforded under Section 203, except that we have agreed with Total that it and its affiliates will not be deemed to be “interested stockholders” under such protections.

In addition, we have an agreement with Total, which provides that, so long as Total holds at least 10% of our voting securities, we must inform Total of any offer to acquire us or any decision of our Board of Directors to sell our company, and we must provide Total with information about the contemplated transaction. In such events, Total will have an exclusive negotiating period of 15 business days in the event the Board of Directors authorizes us to solicit offers to buy Amyris, or five business days in the event that we receive an unsolicited offer to purchase us. This exclusive negotiation period will be followed by an additional restricted negotiation period of 10 business days, during which we are obligated to continue to negotiate with Total and will be prohibited from entering into an agreement

with any other potential acquirer.

These and other provisions in our amended and restated certificate of incorporation and our amended and restated bylaws that became effective upon the completion of our initial public offering under Delaware law and in our agreement with Total could discourage potential takeover attempts, reduce the price that investors might be willing to pay in the future for shares of our common stock and result in the market price of our common stock being lower than it would be without these provisions.

EXECUTIVE OFFICERS OF THE REGISTRANT

The following table provides the names, ages and offices of each of our executive officers as of February 23, 2012:

Name	Age	Position
Executive Officers:		
John Melo	45	Director, President and Chief Executive Officer
Jeryl Hilleman	54	Chief Financial Officer
Joel Cherry, Ph.D.	51	President of Research and Development
Paulo Diniz	54	Chief Executive Officer, Amyris Brasil Ltda.
Mario Portela	50	President of Global Operations
Neil Renninger, Ph.D.	37	Chief Technical Officer
Tamara Tompkins	47	Executive Vice President, General Counsel and Secretary
Key Employees:		
Jack Newman, Ph.D.	45	Chief Scientific Officer

John Melo

John Melo has served as our President and Chief Executive Officer and a director since January 2007 and our President since January 2008. Before joining Amyris, Mr. Melo served in various senior management positions at BP Plc (formerly British Petroleum), one of the world's largest energy firms, from 1997 to 2006, most recently as President of U.S. Fuels Operations from 2004 until December 2006, and previously as Chief Information Officer of the refining and marketing segment from 2001 to 2003, Senior Advisor for e-business strategy to Lord Browne, BP Chief Executive, from 2000 to 2001, and Director of Global Brand Development from 1999 to 2000. Before joining BP, Mr. Melo was with Ernst & Young, an accounting firm, from 1996 to 1997, and a member of the management teams of several startup companies, including Computer Aided Services, a management systems integration company, and Alldata Corporation, a provider of automobile repair software to the automotive service industry. Mr. Melo currently serves on the board of directors of U.S. Venture, Inc. and Renmatix Inc., and also serves as Vice Chairman of the Board of Directors of the Bay Area Biosciences Association (BayBio). Mr. Melo is an appointed member to the U.S. section of the U.S.-Brazil CEO Forum. Mr. Melo's experience as a senior executive at one of the world's largest energy companies provides critical leadership in designing the fuels value chain, shaping strategic direction and business transactions, and in building teams to drive innovation.

Jeryl Hilleman

Jeryl Hilleman has served as our Chief Financial Officer since January 2008. Before joining Amyris, from 1997 to June 2007, she was Executive Vice President and Chief Financial Officer of Symyx Technologies, Inc., a research and development infrastructure company providing scientific software and research services to technology companies. Before Symyx, Ms. Hilleman worked with two biotechnology companies, Geron Corporation, a biopharmaceutical company, as Vice President, Finance from 1992 to 1997, and Cytel Corporation, a biopharmaceutical company, as Chief Financial Officer from 1987 to 1992. Ms. Hilleman holds a Bachelor of Arts degree in History from Brown University and a Master of Business Administration degree from the Wharton Graduate School of Business.

Joel Cherry, Ph.D.

Dr. Joel Cherry has served as our President of Research and Development since July 2011 and previously as our Senior Vice President of Research Programs and Operations since November 2008. Before joining Amyris, Dr. Cherry was Senior Director of Bioenergy Biotechnology at Novozymes, a biotechnology company focusing on development and manufacture of industrial enzymes from 1992 to November 2008. At Novozymes, he served in a variety of R&D scientific and management positions, including membership in Novozymes' International R&D Management team, and as Principal Investigator and Director of the BioEnergy Project, a U.S. Department of Energy-funded $18 million effort initiated in 2000. Dr. Cherry holds a Bachelor of Arts degree in Chemistry from Carleton College and a Doctor of Philosophy degree in Biochemistry from the University of New Hampshire.

Paulo Diniz

Paulo Diniz joined us as the CEO of Amyris Brasil in March 2011. Prior to joining Amyris, Mr. Diniz served as Chief Financial Officer of Bunge Brasil S.A., a wholly owned subsidiary of Bunge Ltd., an agribusiness and food company, from April 2009 to November 2010. From 2003 to April 2009, Mr. Diniz was Chief Financial Officer and a member of the board of directors of Cosan S.A., a renewable energy company. He received a Master of Business Administration degree from IMD in Switzerland, a B. of Sc. degree in Production Engineering from USP in Brazil, and did post graduate work in human resources at INSEAD in France.

Mario Portela

Mario Portela joined us as our Chief Operating Officer in December 2009 and has served as President of Global Operations since July 2011. He was Chief Executive Officer of Amyris Brasil until March 2011. He has worked since December 2008 as an advisor to TPG Capital on strategy, mergers and acquisitions. From December 2007 to December 2008, Mr. Portela was Vice President and Officer, Corporate Development, with LyondellBasell Industries, a leading manufacturer of polymers, petrochemicals, fuels and technology licensing. He held a similar position with Lyondell Chemical Company from 2003 until its merger with Basell in December 2007. Mr. Portela holds a degree in Mechanical Engineering from the IMPE Institute in Lisbon, Portugal.

Neil Renninger, Ph.D.

Dr. Neil Renninger is a co-founder of Amyris and has served as our Chief Technical Officer since January 2008, and has also served as our Vice President of Development from 2003 to March 2007 and as our Senior Vice President of Development from March 2007 to January 2008. Dr. Renninger holds a Bachelor of Science degree in Chemical Engineering from the Massachusetts Institute of Technology, a Master of Science degree in Environmental Engineering and a Doctor of Philosophy degree in Chemical Engineering from the University of California, Berkeley.

Tamara Tompkins

Tamara Tompkins has served as our General Counsel since February 2005 and as Secretary since November 2005, In addition, Ms. Tompkins has served as Executive Vice President since July 2011 and previously as and Senior Vice President since July 2007. Before joining Amyris, she practiced as an attorney at Morgan, Lewis & Bockius LLP, a law firm, from 2003 to February 2005. Previously, Ms. Tompkins worked as an attorney at Brobeck, Phleger & Harrison LLP, a law firm, from 1996 to 1999 and from 2000 to 2003, and Shearman & Stearling LLP, a law firm, from 1994 to 1996. From 1999 to 2000, she was the Director of the Berkeley Center for Law and Technology at the Boalt Hall School of Law. Ms. Tompkins holds a Bachelor of Arts degree in History from Middlebury College and a Juris Doctor degree from Georgetown University Law Center.

Key Employee

Jack Newman, Ph.D.

Dr. Jack Newman is a co-founder of Amyris and has served as our Chief Scientific Officer since July 2011 and previously as our Senior Vice President of Research since July 2007, and also served as our Director, Biology from 2004 to June 2007. Dr. Newman holds a Bachelor of Arts degree in Molecular and Cell Biology from the University of California, Berkeley and a Doctor of Philosophy degree from the University of Wisconsin-Madison in the field of microbial physiology and gene regulation.

Our executive officers are elected by, and serve at the discretion of, our Board of Directors. There are no family relationships among any of our directors and executive officers.

ITEM 1B. UNRESOLVED STAFF COMMENTS
Not applicable.

ITEM 2. PROPERTIES

We lease approximately 136,000 square feet of space in two adjacent buildings in Emeryville, California, pursuant to two leases. Of this, we use approximately 113,000 square feet for general office purposes and lab space, and approximately 23,000

square feet comprise our pilot plant. In September 2010, our Board of Directors approved a plan to reoccupy the part of our headquarter facility that vacated in August 2009 as part of a restructuring effort. This reoccupied space is being used to meet our growth requirements. Our leases expire in May 2018 and we have an option to extend these leases for five years. We also lease approximately 19,375 square feet of space in North Carolina under a lease that expires in January 2013. This lease relates to manufacturing operations through Glycotech, one of our variable interest entities.

Amyris Brasil leases approximately 29,000 square feet of space in Campinas, Brazil, pursuant to two leases that will expire in May 2013 and November 2016. Of this, approximately 9,000 square feet comprise a pilot plant and demonstration facility, and the remainder is general office and lab space. Amyris Brasil has a right of first refusal to purchase the space if the landlord elects to sell it and an option to extend the lease for five additional years. Amyris Brasil also leases approximately 791,147 square feet of space at two different locations in Brazil, pursuant to two leases that will expire in January 2031 and March 2026. This space will be used for future manufacturing.

Amyris Fuels has secured the use of ethanol and gasoline storage tanks with an aggregate capacity of 25,500 barrels at various locations in Virginia, North Carolina, South Carolina, Georgia and Tennessee. Certain of these agreements have expired in December 2011 and were not renewed. The remaining agreements are set to expire between June 2012 and December 2012.

We have also secured the use of a Biofene storage tank with an aggregate capacity of 10,000 barrels in Illinois. This facility provides temporary storage of our renewable farnesene prior to further processing into one of our finished products. Our current agreement expires in September 2012.

We also use a small amount of office space in Oakbrook Terrace, Illinois.

We believe that our current facilities are suitable and adequate to meet our needs and that suitable additional space will be available to accommodate the foreseeable expansion of our operations.

ITEM 3. LEGAL PROCEEDINGS

We are not involved in any legal proceedings that management believes will have a material adverse effect on our business, results of operations, financial position or cash flows. We may, however, be involved, from time to time, in legal proceedings and claims arising in the ordinary course of our business. Such matters are subject to many uncertainties and there can be no assurance that legal proceedings arising in the ordinary course of business or otherwise will not have a material adverse effect on our business, results of operations, financial position or cash flows.

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 commenced trading on the NASDAQ Global Market on September 28, 2010 under the symbol "AMRS" and currently trades on the NASDAQ Global Select Market under the same symbol. The following table sets forth the high and low per share sale prices of our common stock as reported on the NASDAQ Global Select Market during each of the previous six quarters.

	Price Range Per Share	
	High	Low
Fiscal 2011		
Fourth quarter	$20.86	$9.90
Third quarter	$28.75	$17.57
Second quarter	$30.78	$24.01
First quarter	$33.99	$26.57
Fiscal 2010		
Fourth quarter	$27.50	$16.91
Third quarter (commencing September 28, 2010)	$17.44	$16.48

Holders

As of February 23, 2012, there were approximately 95 holders of record (not including beneficial holders of stock held in street names) of our common stock.

Dividend Policy

We have never declared or paid cash dividends on our capital stock. We currently intend to retain any future earnings and do not expect to declare or pay any dividends in the foreseeable future. Any further determination to pay dividends on our capital stock will be at the discretion of our Board of Directors and will depend on our financial condition, results of operations, capital requirements and other factors that our Board of Directors considers relevant. In addition, our equipment lease with TriplePoint Capital LLC currently restricts our ability to pay dividends.

Securities Authorized for Issuance Under Equity Compensation Plans

See Item 12 of Part III of this Report regarding information about securities authorized for issuance under our equity compensation plans.

Performance Graph[(1)]

The following graph shows a comparison from September 28, 2010 through December 31, 2011 of cumulative total return on assumed investment of $100.00 in cash in our common stock, the S&P SmallCap 600 Index and the NASDAQ Clean Edge Green Energy Index. Such returns are based on historical results and are not intended to suggest future performance. Data for the S&P SmallCap 600 Index and the NASDAQ Clean Edge Green Energy Index assume reinvestment of dividends.

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COMPARISON OF 15 MONTH CUMULATIVE TOTAL RETURN
Among Amyris, Inc., the S&P SmallCap 600 Index, and the NASDAQ Clean Edge Green Energy Index

	9/28/2010	12/31/2010	3/31/2011	6/30/2011	9/30/2011	12/31/2011
Amyris, Inc.	$100	$162	$173	$170	$123	$70
S&P SmallCap 600 Index	$100	$116	$124	$124	$99	$116
NASDAQ Clean Edge Green Energy Index	$100	$109	$112	$102	$66	$64

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

Recent Sales of Unregistered Securities

In March 2011, (i) Advanced Equities, Inc. exercised warrants to purchase approximately 117,210 shares of our common stock (based on conversion ratios applicable to the underlying preferred stock originally subject to the warrants) at an as-converted exercise price of approximately $22.53 per share of common stock and 49,157 shares of our common stock at an exercise price of $12.46 per share, and (ii) TriplePoint Capital LLC exercised warrants to purchase 24,103 shares of our common stock at an exercise price of $12.46 per share. Both parties net exercised the warrants in full (paid the full exercise price by forfeiting a number of shares of our common stock subject to the warrant with a fair market value equal to the exercise price on the date of exercise), which resulted in a net issuance of 62,450 shares to Advanced Equities, Inc. and 14,637 shares to TriplePoint Capital LLC.

In October 2011, as partial consideration for our acquisition of substantially all the assets of Draths, we issued 362,319 shares of our common stock to Draths, of which 41,408 shares were withheld in escrow as security of indemnification obligations of Draths. The fair value of the shares issued to Draths is approximately $7.0 million.

In December 2011, we issued a warrant to purchase 21,087 shares of our common stock at an exercise price of $10.67 per share to Atel in connection with a capital lease agreement.

No underwriters were involved in the foregoing sales of securities. These shares were issued in private transactions pursuant to Section 4(2) of the Securities Act. The recipients of these shares of common stock acquired the shares for investment purposes only and without intent to resell, were able to fend for themselves in these transactions, and were accredited investors as defined in Rule 501 of Regulation D promulgated under Section 3(b) of the Securities Act, and appropriate restrictions were set out in the agreements for, and stock certificates issued in, these transactions. These security holders had adequate access, through their relationships with us, to information about us.

Use of Proceeds

Our initial public offering of common stock was effected through a Registration Statement on Form S-1 (File No. 333-164593) that was declared effective by the SEC on September 27, 2010. The net offering proceeds to us, after deducting underwriting discounts and commissions and offering costs, were approximately $85.5 million. Of the net proceeds, as of December 31, 2011, approximately $79.8 million has been used for capital expenditures, including deposits on capital expenditures, and approximately $5.7 million has been used for debt reduction and payment of capital lease obligations. Our use of the net proceeds from the initial public offering conformed to the intended use of proceeds as described in our initial public offering prospectus dated September 27, 2010.

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated statement of operations data for the years ended December 31, 2011, 2010 and 2009 and the selected consolidated balance sheet data as of December 31, 2011 and 2010 are derived from our audited Consolidated Financial Statements, appearing elsewhere in this report. The historical results presented below are not necessarily indicative of financial results to be achieved in future periods. You should read the following selected financial data in conjunction with “Management’s Discussion Analysis of Financial Condition and Results of Operations” and our Consolidated Financial Statements and related Notes included in Item 8 of this report.

	Years Ended December 31,				
	2011	2010	2009	2008	2007
	(In Thousands, Except share and Per Share Amounts)				
Consolidated Statement of Operations Data:					
Revenues					
Product sales	$129,837	$68,664	$61,689	$10,680	$—
Grants and collaborations revenue	17,154	11,647	2,919	3,212	6,184
Total revenues	146,991	80,311	64,608	13,892	6,184
Cost and operating expenses					
Cost of product sales	155,615	70,515	60,428	10,364	—
Research and development[(1)]	87,317	55,249	38,263	30,306	8,662
Sales, general and administrative[(1)]	83,231	40,393	23,558	16,622	10,522
Restructuring and asset impairment (income) charges	—	(2,061)	5,768	—	—
Total cost and operating expenses	326,163	164,096	128,017	57,292	19,184
Loss from operations	(179,172)	(83,785)	(63,409)	(43,400)	(13,000)
Other income (expense):					
Interest income	1,542	1,540	448	1,378	1,178
Interest expense	(1,543)	(1,443)	(1,218)	(377)	(28)
Other income (expense), net	214	898	(621)	(144)	76
Total other income (expense)	213	995	(1,391)	857	1,226
Loss before income taxes	(178,959)	(82,790)	(64,800)	(42,543)	(11,774)
Income tax benefit (provision)	(552)	—	—	207	—
Net loss	$(179,511)	$(82,790)	$(64,800)	$(42,336)	$(11,774)
Loss attributable to noncontrolling interest	641	920	341	472	—
Net loss attributable to Amyris, Inc.	$(178,870)	$(81,870)	$(64,459)	$(41,864)	$(11,774)
Deemed dividend related to a beneficial conversion feature	—	(42,009)	—	—	—
Net loss attributable to Amyris, Inc. common stockholders	$(178,870)	$(123,879)	$(64,459)	$(41,864)	$(11,774)
Net loss per share attributable to common stockholders, basic and diluted	$(3.99)	$(8.35)	$(13.56)	$(9.91)	$(3.28)
Weighted-average shares of common stock outstanding used in computing net loss per share of common stock, basic and diluted	44,799,056	14,840,253	4,753,085	4,223,533	3,592,932

(1) Includes stock-based compensation expense.

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	As of December 31,				
	2011	2010	2009	2008	2007
	(In Thousands)				
Consolidated Balance Sheet Data:					
Cash, cash equivalents, investments and restricted cash	$103,592	$257,933	$71,716	$52,888	$45,862
Working capital	$47,205	$242,818	$51,062	$32,356	$31,045
Total assets	$320,111	$357,453	$122,159	$98,823	$50,889
Total indebtedness[(1)]	$47,660	$12,590	$20,608	$6,747	$655
Convertible preferred stock warrant liability	$—	$—	$2,740	$2,132	$—
Convertible preferred stock	$—	$—	$179,651	$121,436	$58,126
Redeemable noncontrolling interest	$—	$—	$5,506	$—	$—
Total equity (deficit)	$160,812	$307,548	$(113,745)	$(52,143)	$(13,301)

(1) Total indebtedness as of December 31, 2011 and 2010 includes $6.3 million and $5.9 million, respectively, in capital lease obligations, $3.1 million and $5.7 million, respectively, in notes payable, $19.4 million and $1.0 million, respectively, in loan payable, and $18.9 million and zero, respectively, in credit facility (see Note 5 and Note 6 to our Consolidated Financial Statements).

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

Overview

We are building an integrated renewable products company to provide sustainable alternatives to a broad range of petroleum-sourced products used in specialty chemical and transportation fuel markets worldwide. We do this by applying our industrial synthetic biology technology platform to modify microorganisms, primarily yeast, to function as living factories in established fermentation processes to convert plant-sourced sugars into a variety of hydrocarbon molecules that can serve as flexible building blocks to be used in a wide range of products.

We were incorporated in 2003 and commenced research, development, marketing and administrative activities in 2005. To further develop our business we have established two subsidiaries, Amyris Brasil Ltda. (formerly Amyris Brasil S.A.), which oversees the establishment and expansion of our production in Brazil, and Amyris Fuels LLC, which we believe will help us develop fuel distribution capabilities in the U.S. Amyris Fuels currently generates revenue from the sale of ethanol and ethanol blended gasoline to wholesale customers through a network of terminals primarily in the southeastern U.S.

While our technology enables us to design yeast and other microorganisms to produce many different kinds of molecules, our current priority is the commercialization and production of Biofene, and its derivatives for sale in a range of specialty chemical applications within the following six identified markets: cosmetics, lubricants, flavors and fragrances, polymers, consumer products and transportation fuels.

In April 2010 we entered into a definitive agreement with Usina São Martinho, one of the largest sugar and ethanol producers in Brazil, to establish a joint venture entity that intends to construct and operate the first commercial plant dedicated to the production of Amyris renewable products. Usina São Martinho will share a portion of the costs associated with this construction. In March 2011, we entered into an agreement with Paraíso Bioenergia headquartered in São Paulo State, Brazil where we will construct a fermentation and separation facility to produce our products and Paraíso Bioenergia will supply sugar cane juice and certain utilities. In addition to these agreements, we have entered

into non-binding letters of intent with various other Brazilian sugar and ethanol producers, including Alvorada, Cosan, ETH and Açúcar Guarani, to produce our products. Usina São Martinho also has the right to produce Amyris products at a second facility. We expect to work with these producers to build new, "bolt-on" facilities adjacent to their existing mills instead of building entirely new "greenfield" facilities, thereby reducing the capital required to establish and scale our production.

In June 2010, we entered into a collaboration agreement with Total. This agreement provides for joint collaboration on the development of products through the use of our synthetic biology platform. In connection with this agreement, Total invested $133.2 million in our equity, which represented approximately 21.0% of our outstanding shares as of December 31, 2011. In

addition, Total received the right to appoint a Total representative to our Board of Directors. In November 2010, Philippe Boisseau, President of Total's Gas & Power division, joined our Board of Directors. At the end of the second quarter of 2010, we recorded a deferred charge asset of $27.9 million associated with the Total investment. This deferred charge asset resulted from the difference between a third party valuation of our stock and the price paid by Total. This deferred charge asset will be offset against future revenue earned under arrangements with Total. As of December 31, 2011, we recognized a cumulative reduction of $9.1 million against the deferred charge asset.
In November 2011, we entered into an amendment of the collaboration agreement to establish a diesel development program. The amendment provides for an exclusive strategic collaboration for the development of renewable diesel products and contemplates that the parties will establish a joint venture, or JV, for the production and commercialization of such renewable diesel products on an exclusive, worldwide basis. It also provides that commercialization and production of jet fuel, already under development pursuant to the collaboration agreement, would be conducted on an exclusive, worldwide basis through the same JV. In addition, the amendment provides the JV with the right to produce and commercialize certain other chemical products on a non-exclusive basis. The amendment provides that definitive agreements to form the JV must be in place by March 31, 2012 (or another date as agreed to by the parties) or the renewable diesel program, including any further collaboration payments by Total related to the renewable diesel program, will terminate. Total has an option, upon completion of the renewable diesel program, to notify us that it does not wish to pursue production or commercialization of renewable diesel under the amendment. If Total exercises this right, all of Total's intellectual property rights that were developed during the renewable diesel program would terminate and would be assigned to us, and we would be obligated to pay Total specified royalties based on the Company's net income. Such royalty payments would also include a share of net proceeds received by us from any sale of its renewable diesel business.

Pursuant to the amendment, Total has agreed to solely fund the following amounts: (i) the first $30.0 million in research and development costs related to the renewable diesel program which have been incurred since August 1, 2011, which amount shall be in addition to the $50.0 million in research and development funding contemplated by the collaboration, and (ii) for any research and development costs incurred following the JV formation date that are not covered by the initial $30.0 million, up to an additional $10 million in 2012 and up to an additional $10.0 million in 2013, which amounts will be considered part of the $50.0 million contemplated by the collaboration agreement. In addition to these payments, Total has further agreed to fund 50% of all remaining research and development costs for the renewable diesel program under the amendment. The parties have separately agreed that, if the JV is formed, Total will fund additional amounts with respect to JV expenditures.

To support our goal of commencing commercial production of Biofene in 2011, we entered into contract manufacturing agreements in June 2010 with Biomin in Brazil and in November 2010 with Tate & Lyle in the U.S. In addition, in March 2011, we entered into an agreement with Antibióticos for the production of Biofene at its facilities in León, Spain. We are providing certain equipment to these producers to enable their production of Biofene.

We have also established contract manufacturing relationships to support conversion of Biofene into finished chemical products. In January 2011, we entered into a production service agreement with Glycotech under which Glycotech will perform finishing steps to convert Biofene into squalane, diesel, base oils for industrial lubricants, and other products. In July 2011, we entered into a contract manufacturing agreement with Albemarle under which Albemarle will provide toll manufacturing services at its facility in South Carolina and we are obligated to reimburse Albemarle for capital expenditures related to facility modifications required for the services. In February 2012, we entered into a new toll manufacturing agreement with Ablemarle that supersedes the July 2011 original agreement. The term of the agreement continues through December 31, 2019. The agreement includes certain obligations for us to pay fixed costs totaling $7.5 million, of which $3.5 million and $4.0 million are payable in 2012 and 2014, respectively.In addition, fixed costs of $2.0 million is payable per quarter in 2013 if we exercise our option to have product manufactured in the facility in 2013. The agreement also includes variable pricing during the contract term.
In September 2011, we entered into a service agreement with Dottikon for the production of squalane and

Biofene-derived molecules for use as oxygen scavengers in PET polymers at a facility in Switzerland (pending completion of process development work), We may seek to enter into additional contract manufacturing arrangements. We expect to work with third parties specializing in particular industries to convert Biofene by simple chemical processes and to sell it initially primarily in the forms of squalane, diesel, base oils for industrial lubricants, and other products.

During the twelve months ended December 31, 2011, we incurred $25.5 million of scale-up production costs to support our renewable products. These scale-up production costs include the contract manufacturing cost related to production of farnesene-derived products and the finishing of farnesene into finished products. In the year ended December 31, 2011 the Company incurred substantial losses totaling $15.4 million as a result of applying the lower-of-cost-or-market inventory rules. We continue to commit significant resources to our production process in advance of our achieving full commercial production volume. As only a portion of our production costs varies with our revenue, our production costs will be greater than our revenue until we achieve significant product volume and revenue. We anticipate that our scale-up production costs will decrease as we continue to improve our

processes and increase throughput.

To commercialize our initial product, squalane, for sale to cosmetics companies for use as a moisturizing ingredient in the cosmetics and other personal care products, we entered into a marketing and distribution agreement with Soliance, a leading provider of ingredients to the cosmetics industry based in the Champagne-Ardenne region of France, in June 2010. As an early step toward selling diesel, in addition to the Total collaboration described above, we have entered into an arrangements with Petrobras under which we sell diesel produced from Biofene to Petrobras, which blends our diesel in fuel sold to city bus fleets in São Paulo and Rio de Janeiro, Brazil. For the industrial lubricants market, in June 2011 we established a joint venture with Cosan for the worldwide development, production and commercialization of renewable base oils. In September 2011, for development and commercialization of isoprene for use in tires, we entered into a development agreement with Michelin.

We have also entered into agreements for the sale of Biofene and its derivatives directly to customers, including with P&G for use in cleaning products, with M&G for use in plastics, with Kuraray for use in production of polymers, with Firmenich and Givaudan for ingredients for the flavors and fragrances market, with Method for use in home and personal care products, and with Wilmar for use as a surfactant. Production and sale of our products pursuant to any of these relationships will depend on the achievement of contract-specific technical, development and commercial milestones.

In December 2011, we received loans from Brazilian banks totaling approximately $30.6 million based on the exchange rate at December 31, 2011 (R$57.4 million reais) to fund capital and other expenditures relating to the production facilities we are establishing at Paraíso Bioenergia and Biomin. We secured these loans to allow us to continue construction and process development at these plants, and expect to seek additional loans from these banks and others in order to be able to fund the establishment of other plants in Brazil and elsewhere. There remains significant uncertainty regarding the timing and availability of such additional loans and, if we are unable to obtain necessary financing in a timely manner, among other things, we may be forced to curtail our operations, including delays or stoppages in construction or process development at production sites.

On February 17, 2012, we entered into a supplemental agreement with Banco Pine S.A. under which the parties agreed to extend the maturity date for the repayment of the original loan entered into on December 22, 2011 (see Note 6) from February 17, 2012 to May 17, 2012. In connection with the extension, we are obligated to pay R$129,150 reais (approximately US$75,000 based on the exchange rate as of February 17, 2012) as tax on the financial transaction as required by Brazilian law.

On February 23, 2012, we sold 10,160,325 shares of our common stock in a private placement for aggregate offering proceeds of $58.7 million.

On February 24, 2012, we entered into a security purchase agreement to sell $25.0 million in principal amount of unsecured senior convertible promissory notes due in 2017. The notes have a 3.0% annual interest rate and are convertible into shares of the Company's common stock at a conversion price of $7.0682 (an 18.0% premium to market value determined under the governance rules of The NASDAQ Stock Market), subject to adjustment for proportional adjustments to outstanding common stock and anti-dilution provisions in case of dividends and distributions. The note holders have a right to require repayment of 101% of the principal amount of the notes in an acquisition of the Company, and the notes provide for payment of unpaid interest on conversion following such an acquisition if the note holders do not require such repayment. The securities purchase agreement and notes include covenants regarding payment of interest, maintaining our listing status, limitations on debt, maintenance of corporate existence, and filing of SEC reports. The notes include standard events of default resulting in acceleration of indebtedness, including failure to pay, bankruptcy and insolvency, cross-defaults, and breaches of the covenants in the securities purchase agreement and notes, with default interest rates and associated cure periods applicable to the

covenant regarding SEC reporting.

Since inception through December 31, 2011, we have recognized $318.8 million in revenue, primarily from the sale of ethanol and reformulated ethanol-blended gasoline by our Amyris Fuels subsidiary. As of December 31, 2011, we had an accumulated deficit of $381.2 million. We expect to fund operations for the foreseeable future with cash and investments currently on hand, with cash inflows from collaboration and grant funding and potential cash contributions from product sales, and with new debt and equity financing to provide additional working capital and to cover portions of our capital expenditures. Our anticipated working capital needs and our planned operating and capital expenditures for 2012 and 2013 will require significant inflows of cash from credit facilities and similar sources of indebtedness, as well as funding from collaboration partners. Some of these necessary financing resources are not yet subject to definitive agreements or have not committed to funding arrangements. In addition, our anticipated working capital needs and strategic plans in 2012 and beyond will depend on our ability to identify and secure additional sources of funding beyond those we have currently identified. Such sources of funding may include equity or debt offerings, in addition to collaboration revenue and other forms of debt. If we fail to secure such funding, we may be forced to curtail our operations, which could include reductions or delays of planned capital expenditures or scaling back our operations. We have had to adjust the timing for construction projects relating to the São Martinho plant due to financing constraints, and the

projected completion date for São Martinho is being assessed and could be subject to further delays and adjustment based on the timing and success of our financing activities. If we are forced to curtail our operations, we may be unable to proceed with construction of certain planned production facilities, enter into definitive agreements for supply of feedstock and associated production arrangements that are currently subject to letters of intent, commercialize our products within the timeline we expect, or otherwise continue our business as currently contemplated.

If, to support our planned operations, we seek additional types of funding that involve the issuance of equity securities, our existing stockholders would suffer dilution. For example, in February 2012, we completed a private placement of our common stock that resulted in the issuance of approximately 10.2 million shares and entered into a securities purchase agreement that resulted in the issuance of $25.0 million in unsecured senior convertible promissory notes that are convertible into common stock at an initial conversion price of $7.0682. The convertible notes contain various covenants, including restrictions on the amount of debt we are permitted to incur. We may conduct additional financings if they become available on appropriate terms and we deem them to be consistent with our financing strategy. If we raise additional debt financing, we may be subject to additional restrictive covenants that limit our ability to conduct our business. We may not be able to raise sufficient additional funds on terms that are favorable to us, if at all. If we fail to raise sufficient funds and continue to incur losses, our ability to fund our operations, take advantage of strategic opportunities, develop and commercialize products or technologies, or otherwise respond to competitive pressures could be significantly limited. If this happens, we may be forced to delay or terminate research and development programs or the commercialization of products resulting from our technologies, curtail or cease operations, or obtain funds through collaborative and licensing arrangements that may require us to relinquish commercial rights, or grant licenses on terms that are not favorable to us. If adequate funds are not available, we will not be able to successfully execute our business plan or continue our business.

As part of our operating plan for 2012, we intend to reduce our cost structure by improving efficiency in our operations and reducing non-critical expenditures. We expect these efforts to include reductions to our workforce and adjustments to the timing and scope of planned capital expenditures in the coming quarters.

Critical Accounting Policies and Estimates

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

We believe the following critical accounting policies involve significant areas of management’s judgments and estimates in the preparation of our financial statements.

Revenue Recognition

We currently recognize revenues from the sale of ethanol and reformulated ethanol-blended gasoline, from the sale of farnesene-derived products, from the delivery of collaborative research services and from government grants. Revenues are recognized when all of the following criteria are met: persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the fee is fixed or determinable and collectability is reasonably

assured.

If sales arrangements contain multiple elements, we evaluate whether the components of each arrangement represent separate units of accounting. We have determined that all of our revenue arrangements should be accounted for as a single unit of accounting. Application of revenue recognition standards requires subjective determination and requires management to make judgments about the fair values of each individual element and whether it is separable from other aspects of the contractual relationship.

For each source of revenues, we apply the above revenue recognition criteria in the following manner:

Product Sales

We sell ethanol and reformulated ethanol-blended gasoline under short-term agreements and in spot transactions at prevailing market prices. Starting in the second quarter of 2011, the Company commenced sales of farnesene-derived products. Revenues

are recognized, net of discounts and allowances, once passage of title and risk of loss have occurred, provided all other revenue recognition criteria have also been met.

Shipping and handling costs charged to customers are recorded as revenues. Shipping costs are included in cost of product revenues. Such charges were not significant in any of the periods presented.

Grants and Collaborative Research Services

Revenues from collaborative research services are recognized as the services are performed consistent with the performance requirements of the contract. In cases where the planned levels of research services fluctuate over the research term, we recognize revenues using the proportionate performance method based upon actual efforts to date relative to the amount of expected effort to be incurred by us. When up-front payments are received and the planned levels of research services do not fluctuate over the research term, revenues are recorded on a ratable basis over the arrangement term, up to the amount of cash received. When up-front payments are received and the planned levels of research services fluctuate over the research term, revenues are recorded using the proportionate performance method, up to the amount of cash received. Where arrangements include milestones that are determined to be substantive and at risk at the inception of the arrangement, revenues are recognized upon achievement of the milestone and is limited to those amounts whereby collectability is reasonably assured.

Government grants are made pursuant to agreements that generally provide cost reimbursement for certain types of expenditures in return for research and development activities over a contractually defined period. Revenues from government grants are recognized in the period during which the related costs are incurred, provided that the conditions under which the government grants were provided have been met and only perfunctory obligations are outstanding.

Consolidations

We have interests in certain joint venture entities that are variable interest entities or VIEs. Determining whether to consolidate a variable interest entity may require judgment in assessing (i) whether an entity is a variable interest entity and (ii) if we are the entity's primary beneficiary and thus required to consolidate the entity. To determine if we are the primary beneficiary of a VIE, we evaluate whether we have (i) the power to direct the activities that most significantly impact the VIE's economic performance and (ii) the obligation to absorb losses or the right to receive benefits of the VIE that could potentially be significant to the VIE. Our evaluation includes identification of significant activities and an assessment of our ability to direct those activities based on governance provisions and arrangements to provide or receive product and process technology, product supply, operations services, equity funding and financing and other applicable agreements and circumstances. Our assessment of whether we are the primary beneficiary of our VIEs requires significant assumptions and judgment.

Impairment of Long-Lived Assets

We assess impairment of long-lived assets, which include property and equipment and test long-lived assets for recoverability when events or changes in circumstances indicate that their carrying amount may not be recoverable. Circumstances which could trigger a review include, but are not limited to, significant decreases in the market price of the asset; significant adverse changes in the business climate or legal factors; accumulation of costs significantly in excess of the amount originally expected for the acquisition or construction of the asset; current period cash flow or operating losses combined with a history of losses or a forecast of continuing losses associated with the use of the asset; or expectations that the asset will more likely than not be sold or disposed of significantly before the end of its estimated useful life.

Recoverability is assessed based on the fair value of the asset, which is calculated as the sum of the undiscounted cash flows expected to result from the use and the eventual disposal of the asset. An impairment loss is recognized in the consolidated statements of operations when the carrying amount is determined to be not recoverable and exceeds fair value, which is determined on a discounted cash flow basis.

We make estimates and judgments about future undiscounted cash flows and fair values. Although our cash flow forecasts are based on assumptions that are consistent with our plans, there is significant exercise of judgment involved in determining the cash flow attributable to a long-lived asset over its estimated remaining useful life. Our estimates of anticipated cash flows could be reduced significantly in the future. As a result, the carrying amounts of our long-lived assets could be reduced through impairment charges in the future.

Goodwill and Intangible Assets

Goodwill represents the excess of the cost over the fair value of net assets acquired from our business combinations. Intangible

assets are comprised primarily of in-process research and development ('IPR&D"). We make significant judgments in relation to the valuation of goodwill and intangible assets resulting from business combinations and asset acquisitions.

There are several methods that can be used to determine the estimated fair value of the IPR&D acquired in a business combination. We utilized the "income method," which applies a probability weighting that considers the risk of development and commercialization, to the estimated future net cash flows that are derived from projected sales revenues and estimated costs. These projections are based on factors such as relevant market size, pricing of similar products, and expected industry trends. The estimated future net cash flows are then discounted to the present value using an appropriate discount rate. These assets are treated as indefinite-lived intangible assets until completion or abandonment of the projects, at which time the assets will be amortized over the remaining useful life or written off, as appropriate.

Goodwill and intangible assets with indefinite lives are assessed for impairment using fair value measurement techniques on an annual basis or more frequently if facts and circumstance warrant such a review. When required, a comparison of fair value to the carrying amount of assets is performed to determine the amount of any impairment.

We evaluate our intangible assets with finite lives for indications of impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Intangible assets consist of purchased licenses and permits and are amortized on a straight-line basis over their estimated useful lives. Factors that could trigger an impairment review include significant under-performance relative to expected historical or projected future operating results, significant changes in the manner of our use of the acquired assets or the strategy for our overall business or significant negative industry or economic trends. If this evaluation indicates that the value of the intangible asset may be impaired, we make an assessment of the recoverability of the net carrying value of the asset over its remaining useful life. If this assessment indicates that the intangible asset is not recoverable, based on the estimated undiscounted future cash flows of the technology over the remaining amortization period, we reduce the net carrying value of the related intangible asset to fair value and may adjust the remaining amortization period. Any such impairment charge could be significant and could have a material adverse effect on our reported financial results. We have not recognized any impairment charges on our intangible assets through December 31, 2011.

Stock-Based Compensation

We recognize compensation expense related to stock-based transactions, including the awarding of employee stock options, based on the grant date estimated fair value. We amortize the fair value of the employee stock options on a straight-line basis over the requisite service period of the award, which is generally the vesting period. We account for restricted stock units issued to employees based on the fair market value of our common stock.

We account for stock options issued to nonemployees based on the fair value of the awards using the Black-Scholes option pricing model. We account for restricted stock units issued to nonemployees based on the estimated fair value of our common stock. The measurement of stock-based compensation is subject to periodic adjustments as the underlying equity instruments vest, and the resulting change in value, if any, is recognized in our consolidated statements of operations during the period the related services are rendered. There is inherent uncertainty in these estimates and if different assumptions had been used, the fair value of the equity instruments issued to nonemployee consultants could have been significantly different.

In future periods, our stock-based compensation expense is expected to increase as a result of our existing unrecognized stock-based compensation still to be recognized and as we issue additional stock-based awards in order

to attract and retain employees and nonemployee consultants.

Significant Factors, Assumptions and Methodologies Used In Determining Fair Value

We utilize the Black-Scholes option pricing model to estimate the fair value of our share-based payment awards. The Black-Scholes option pricing model requires inputs such as the expected term of the grant, expected volatility and risk-free interest rate. Further, the forfeiture rate also affects the amount of aggregate compensation that we are required to record as an expense. These inputs are subjective and generally require significant judgment.

The fair value of employee stock options was estimated using the following weighted-average assumptions:

	Years Ended December 31,					
	2011		2010		2009	
Expected dividend yield	—	%	—	%	—	%
Risk-free interest rate	2.3	%	2.5	%	2.8	%
Expected term (in years)	5.8		6		6	
Expected volatility	86	%	96	%	97	%

Our expected term is derived from a comparable group of publicly listed companies that has a similar industry, life cycle, revenue, and market capitalization and the historical data on employee exercises.

Our expected volatility is derived from the historical volatilities of comparable group of publicly listed companies within our industry over a period equal to the expected term of our options because we do not yet have a long trading history to use for calculating the volatility of our own common stock.

Our risk-free interest rate is the market yield currently available on United States Treasury securities with maturities approximately equal to the option’s expected term.

Our expected dividend yield was assumed to be zero as we have not paid, and do not anticipate declaring any cash dividends to holders of our common stock in the foreseeable future.

We estimate our forfeiture rate based on an analysis of our actual forfeitures and will continue to evaluate the appropriateness of the forfeiture rate based on actual forfeiture experience, analysis of employee turnover and other factors. Quarterly changes in the estimated forfeiture rate can have a significant effect on reported stock-based compensation expense, as the cumulative effect of adjusting the rate for all expense amortization is recognized in the period the forfeiture estimate is changed. If a revised forfeiture rate is higher than the previously estimated forfeiture rate, an adjustment is made that will result in a decrease to the stock-based compensation expense recognized in the consolidated financial statements. If a revised forfeiture rate is lower than the previously estimated forfeiture rate, an adjustment is made that will result in an increase to the stock-based compensation expense recognized in the consolidated financial statements.

We will continue to use judgment in evaluating the expected term, volatility and forfeiture rate related to our own stock-based compensation on a prospective basis and incorporating these factors into the Black-Scholes option pricing model.

Each of these inputs is subjective and generally requires significant management and director judgment to determine. If, in the future, we determine that another method for calculating the fair value of our stock options is more reasonable, or if another method for calculating these input assumptions is prescribed by authoritative guidance, and, therefore, should be used to estimate expected volatility or expected term, the fair value calculated for our employee stock options could change significantly. Higher volatility and longer expected terms generally result in an increase to stock-based compensation expense determined at the date of grant.

Income Taxes

We are subject to income taxes in both the U.S. and foreign jurisdictions, and we use estimates in determining our provisions for income taxes. We use the liability method of accounting for income taxes, whereby deferred tax assets or liability account balances are calculated at the balance sheet date using current tax laws and rates in effect for the year in which the differences are expected to affect taxable income.

Recognition of deferred tax assets is appropriate when realization of such assets is more likely than not. We recognize a valuation allowance against our net deferred tax assets if it is more likely than not that some portion of the deferred tax assets will not be fully realizable. This assessment requires judgment as to the likelihood and amounts of future taxable income by tax jurisdiction. At December 31, 2011, we had a full valuation allowance against all of our deferred tax assets.

We apply the provisions of FASB's guidance on accounting for uncertainty in income taxes. We assess all material positions taken in any income tax return, including all significant uncertain positions, in all tax years that are still subject to assessment or challenge by relevant taxing authorities. Assessing an uncertain tax position begins with the initial determination of the position’s sustainability and the tax benefit to be recognized is measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon ultimate settlement. As of each balance sheet date, unresolved uncertain tax positions must be reassessed, and we will determine whether (i) the factors underlying the sustainability assertion have changed and (ii) the amount of the recognized tax benefit is still appropriate. The recognition and measurement of tax benefits requires significant judgment. Judgments

concerning the recognition and measurement of a tax benefit might change as new information becomes available.

Results of Operations

Comparison of Year Ended December 31, 2011 to Year Ended December 31, 2010

Revenues

	Years Ended December 31,		Year-to Year Change	Percentage Change	
	2011	2010			
	(Dollars in thousands)				
Revenues					
Product sales	$129,837	$68,664	$61,173	89	%
Grants and collaborations revenue	17,154	11,647	5,507	47	%
Total revenues	$146,991	$80,311	$66,680	83	%

Our total revenue increased by $66.7 million to $147.0 million in 2011 from $80.3 million in 2010 primarily as a result of increases in product sales. Revenue from product sales increased by $61.2 million to $129.8 million primarily from sales of ethanol and reformulated ethanol-blended gasoline purchased from third parties in 2011, resulting primarily from an increase in average selling price per gallon and an increase in gallons sold over 2010 due primarily to an increase in demand from existing customers. We sold 10.1 million gallons of ethanol and 36.4 million gallons of reformulated ethanol-blended gasoline in the 2011 compared to 20.6 million gallons of ethanol and 12.4 million gallons of reformulated ethanol-blended gasoline sales in the comparable period of the prior year. We recognized product sales from farnesene-derived products for the first time in the quarter ended June 30, 2011, which have not been significant to date. The increase of $5.5 million in grants and collaborations revenue was primarily the result of higher revenue generated from collaborative research offset in part by lower grant revenue in 2011 compared to the prior year.

Cost and Operating Expenses

	Years Ended December 31,		Year-to Year Change	Percentage Change	
	2011	2010			
	(Dollars in thousands)				
Cost of product sales	$155,615	$70,515	$85,100	121	%
Research and development	87,317	55,249	32,068	58	%
Sales, general and administrative	83,231	40,393	42,838	106	%
Restructuring and asset impairment (income) charges	—	(2,061)	2,061	(100)	%
Total cost and operating expenses	$326,163	$164,096	$162,067	99	%

Cost of Product Sales

Our cost of product sales increased by $85.1 million to $155.6 million in 2011 compared to the prior year. The increase was primarily the result of an increase of $59.6 million in costs of ethanol and reformulated ethanol-blended gasoline purchased from third parties, which was based on an increase in product cost per gallon and higher product volume. We also incurred $25.5 million of cost of renewable products, of which $15.4 million is associated with inventory write down resulting from applying the lower-of-cost-or-market inventory rules. Cost of renewable products also included some costs related to the scale-up in production of such products and had no corresponding charge in the

prior year.

Research and Development Expenses

Our research and development expenses increased by $32.1 million in 2011 over the prior year, primarily the result of an $11.3 million increase in personnel-related expenses associated with headcount growth and higher stock-based compensation, a $10.0 million increase in outside consulting expenses associated with increased development activities and $5.8 million in higher overhead costs associated with increased headcount and development activities. Research and development expenses included

stock-based compensation expense of $6.3 million in 2011 compared to $2.2 million in 2010.

Sales, General and Administrative Expenses

Our sales, general and administrative expenses increased by $42.8 million in 2011 over the prior year, primarily as a result of increased personnel-related expenses of $24.1 million, higher consulting fees of $8.4 million and higher professional fees of $2.0 million associated with higher legal and auditing fees. The increase in consulting and professional fees was due primarily to success fee of $5.0 million owed to a chemical conversion contract manufacturer and a termination penalty of $1.0 million owed to terminate a research and development contract related to production development. Sales, general and administrative expenses included stock-based compensation expense of $19.1 million and $8.3 million during 2011 and 2010, respectively.

Restructuring and Asset Impairment Charges (Income)

In June 2009, we initiated a restructuring plan to reduce our cost structure. The restructuring plan resulted in the consolidation of our headquarter facility located in Emeryville, California, which is under an operating lease. We ceased using a certain part of our headquarter facility in August 2009. We recorded approximately $5.4 million of restructuring charges associated with the facility lease costs after the operations ceased. In addition, as a result of the consolidation of the headquarter facility, we recorded approximately $3.1 million related to asset impairments and reversed $2.7 million related to deferred rent associated with the leased facility.

In September 2010, our Board of Directors approved our plan to reoccupy the part of our headquarter facility that previously was the subject of the 2009 restructuring. This reoccupied space was used to meet our expansion requirements. As a result, we reversed approximately $4.6 million of our restructuring liability that had been accrued in connection with the 2009 restructuring and recognized income from restructuring of $2.1 million during the year ended December 31, 2010.

Other Income (Expense)

	Years Ended December 31,		Year-to Year Change	Percentage Change
	2011	2010		
	(Dollars in thousands)			
Other income (expense):				
Interest income	$1,542	$1,540	$2	— %
Interest expense	(1,543)	(1,443)	(100)	7 %
Other income, net	214	898	(684)	(76)%
Total other income	$213	$995	$(782)	(79)%

Total other income decreased by approximately $0.8 million to $0.2 million in 2011 compared to the prior year. The decrease is related primarily to a decline in other income, net of approximately $0.7 million and to higher interest expense of $0.1 million associated with higher debt balances. We expect interest expense to be larger in 2012 than in 2011 due to increased amounts of debt incurred to fund our operations, including capital expenditures for the coming year. The $0.7 million decrease in other income, net is primarily the result of our having recorded $0.9 million in income for the change in fair value of our convertible preferred stock warrants in 2010. These warrants converted into warrants to purchase our common stock on completion of our initial public offering, or IPO, in September 2010.

Deemed Dividend

We recognized a deemed dividend in 2010 related to the charges incurred with the one-time beneficial conversion feature of the Series D convertible preferred stock of $39.3 million and to the one-time beneficial conversion feature related to the conversion of Amyris Brasil S.A. shares of $2.7 million, each of which converted into Amyris Inc. common stock upon the consummation of our IPO. The deemed dividend was recorded at the closing of the IPO and impacted earnings and earnings per share in 2010.

Comparison of Year Ended December 31, 2010 to Year Ended December 31, 2009

Revenues

	Years Ended December 31,		Year-to Year Change	Percentage Change	
	2010	2009			
	(Dollars in thousands)				
Revenues					
Product sales	$68,664	$61,689	$6,975	11	%
Grants and collaborations revenue	11,647	2,919	8,728	299	%
Total revenues	$80,311	$64,608	$15,703	24	%

Our total revenue increased by $15.7 million to $80.3 million in 2010 from $64.6 million in 2009. The increase of $8.7 million in grants and collaborative revenue was primarily the result of $9.5 million in revenue recognized from our DOE grant in 2010 compared to no revenue from government grants in the prior year, partially offset by $0.8 million decline in collaborations revenue over the prior year. Revenue from product sales increased by $7.0 million to $68.7 million in sales of ethanol and reformulated ethanol-blended gasoline purchased from third parties in year ended December 31, 2010, resulting primarily from an increase in gallons sold over the prior year and from an increase in average selling price per gallon. We sold 20.6 million gallons of ethanol in 2010 compared to 29.9 million gallons in 2009 and 12.4 million gallons of reformulated ethanol-blended gasoline in 2010 compared to no reformulated ethanol-blended gasoline sales in the prior year.

Cost and Operating Expenses

	Years Ended December 31,		Year-to Year Change	Percentage Change	
	2010	2009			
	(Dollars in thousands)				
Cost of product sales	$70,515	$60,428	$10,087	17	%
Research and development	55,249	38,263	16,986	44	%
Sales, general and administrative	40,393	23,558	16,835	71	%
Restructuring and asset impairment (income) charges	(2,061)	5,768	(7,829)	(136)	%
Total cost and operating expenses	$164,096	$128,017	$36,079	28	%

Cost of Product Sales

Our cost of product sales of ethanol and reformulated gasoline purchased from third parties increased by $10.1 million to $70.5 million in 2010 compared to the prior year resulting from higher product volume and an increase in product cost per gallon.

Research and Development Expenses

Our research and development expenses increased by $17.0 million to $55.2 million in 2010 compared to the prior year, primarily the result of an $8.7 million increase in personnel-related expenses associated with headcount growth, bonus expenses and higher stock-based compensation, a $3.8 million increase in outside consulting expenses associated with increased development activities and $3.5 million in higher overhead costs associated with increased headcount and development activities. Research and development expenses included stock-based compensation expense of $2.2 million in 2010 compared to $0.8 million in 2009.

Sales, General and Administrative Expenses

Our sales, general and administrative expenses increased by $16.8 million to $40.4 million in 2010 compared to the prior year, primarily the result of a $10.9 million increase in personnel-related costs associated with higher stock-based compensation, headcount growth and higher bonus expenses, a $1.8 million increase in professional service expense related primarily to higher legal cost to support business development and higher accounting fees and a $1.0 million increase in recruitment and relocation expenditures associated with headcount increase. Sales, general and administrative expenses included stock-based compensation of $8.3 million compared to $2.5 million in 2009.

Restructuring and Asset Impairment (Income) Charges

In June 2009, we initiated a restructuring plan to reduce our cost structure. The restructuring plan resulted in the consolidation of our headquarter facility located in Emeryville, California, which is under an operating lease. We ceased using a certain part of our headquarter facility in August 2009. We recorded approximately $5.4 million of restructuring charges associated with the facility lease costs after the operations ceased. In addition, as a result of the consolidation of the headquarter facility, we recorded approximately $3.1 million related to asset impairments and reversed $2.7 million related to deferred rent associated with the leased facility.

In September 2010, our Board of Directors approved our plan to reoccupy the part of our headquarter facility that previously was the subject of the 2009 restructuring. This reoccupied space was used to meet our expansion requirements. As a result, we reversed approximately $4.6 million of our restructuring liability that had been accrued in connection with the 2009 restructuring and recognized income from restructuring of $2.1 million during the year ended December 31, 2010.

Other Income (Expense)

	Years Ended December 31,		Year-to Year Change	Percentage Change
	2010	2009		
	(Dollars in thousands)			
Other income (expense):				
Interest income	$1,540	$448	$1,092	244 %
Interest expense	(1,443)	(1,218)	(225)	18 %
Other income (expense), net	898	(621)	1,519	(245)%
Total other income (expense)	$995	$(1,391)	$2,386	(172)%

Total other income (expense) increased by approximately $2.4 million to $1.0 million in 2010 compared to the prior year. The increase related primarily to an increase in other income, net of approximately $1.5 million and to higher interest income of $1.1 million associated with higher cash and investment balances, partially offset by higher interest expense of $0.2 million associated with higher debt balances. The $1.5 million increase in other income, net is primarily the result of $1.6 million gain in fair value of our convertible preferred stock warrants which was reclassified to stockholders' equity in the third quarter of 2010 upon conversion at the time of our IPO to common stock warrants.

Deemed Dividend

We recognized a deemed dividend in the year ended December 31, 2010 related to the charges incurred with the one-time beneficial conversion feature of the Series D convertible preferred stock of $39.3 million and to the one-time beneficial conversion feature related to the conversion of Amyris Brasil S.A. shares of $2.7 million, each of which converted into Amyris Inc. common stock at the time of our IPO. The deemed dividend was recorded at the closing of the IPO and impacted earnings and earnings per share for the year ended December 31, 2010.

Liquidity and Capital Resources

	December 31,	
	2011	2010
	(Dollars in thousands)	

Working capital	$47,205	$242,818
Cash and cash equivalents and short-term investments	$103,592	$257,933

	Years Ended December 31,		
	2011	2010	2009
	(Dollars in thousands)		
Net cash used in operating activities	$(92,496)	$(64,577)	$(45,718)
Net cash provided by (used in) investing activities	$5,853	$(79,405)	$(25,422)
Net cash provided by financing activities	$41,052	$266,687	$71,473

As of December 31, 2011, we had cash, cash equivalents and short-term investments of $103.6 million compared to $257.9 million as of December 31, 2010. As of December 31, 2011, we had total debt, including capital lease obligations, of $47.7 million. In addition, we had total borrowing capacity of $7.2 million substantially all of which was under our uncommitted facility letter, or Credit Agreement, which we currently utilize in connection with our Amyris Fuels business.

Working Capital.Working capital was $47.2 million at December 31, 2011, a decrease of $195.6 million from working capital as of December 31, 2010. This decrease was primarily attributable to:

- a decline of $154.3 million in cash, cash equivalents and short-term marketable securities;
- an increase of $35.5 million in accounts payable and accrued and other current liabilities;
- an increase of $26.1 million in the current portion of debt.

The decrease was partially offset by an increase of $17.0 million in prepaid assets and $5.1 million increase in inventory.

In February 2012, we entered into securities purchase agreements for private placements resulting in aggregate offering proceeds of $83.7 million, as described below.

To support production of our products in contract manufacturing and dedicated production facilities, we have incurred, and we expect to continue to incur, capital expenditures as we invest in these facilities. Additionally, we have incurred and expect to continue to incur capital expenditures for research and scale-up equipment and tenant improvements. We plan to secure external debt financing from U.S. and Brazilian sources to offset our investment in these contract manufacturing and dedicated production facilities.

The Company believes that its existing cash, cash equivalents and short-term investments at December 31, 2011 and amounts raised subsequent to December 31, 2011, cash inflows from collaboration, grants and product sales, as well as reduction in cash outflows as a result of planned actions, will be sufficient to fund its operations and other capital expenditures for at least the next twelve months.

The timing and amount of capital expenditures for additional production facilities at least in the near term will depend on our ability to access external sources of financing as well as our business and financial outlook and the specifics of the opportunity. For example, we believe that the amount of financing that we agree to provide for the construction of bolt-on, or other, production facilities may influence the other terms of the arrangements that we establish with the facility owner, and, accordingly, expect to evaluate the optimal amount of capital expenditures that we agree to fund on a case-by-case basis. We may also consider additional strategic investments or acquisitions. These events may require us to access additional capital through equity or debt offerings. If we are unable to access additional capital, our growth may be limited due to the inability to invest in additional production facilities.

If, to support our planned operations, we seek additional types of funding that involve the issuance of equity securities, our existing stockholders would suffer dilution. For example, in February 2012, we completed a private placement of our common stock that resulted in approximately 10.2 million shares and entered into a security purchase agreement that resulted in the issuance of $25.0 million in unsecured senior convertible promissory notes that are convertible into our common stock at an initial conversion price of $7.0682. The convertible notes contain

various covenants, including restrictions on the amount of debt we are permitted to incur. We may conduct additional financings if they become available on appropriate terms and we deem them to be consistent with our financing strategy. If we raise additional debt financing, we may be subject to additional restrictive covenants that limit our ability to conduct our business. We may not be able to raise sufficient additional funds on terms that are favorable to us, if at all. If we fail to raise sufficient funds and continue to incur losses, our ability to fund our operations, take advantage of strategic opportunities, develop and commercialize products or technologies, or otherwise respond to competitive pressures could be significantly limited. If this happens, we may be forced to delay or terminate research and development programs or the commercialization of products resulting from our technologies, curtail or cease operations, or obtain funds through collaborative and licensing arrangements that may require us to relinquish commercial rights, or grant licenses on terms that are not favorable to us. If adequate funds are not available, we will not be able to successfully execute our business plan or continue our business.

Convertible Note Offering. On February 24, 2012, we entered into a securities purchase agreement to sell $25.0 million in principal amount of unsecured senior convertible promissory notes due in 2017. The notes have a 3.0% annual interest rate and are convertible into shares of our common stock at a conversion price of $7.0682 (an 18.0% premium to market value determined under the governance rules of The NASDAQ Stock Market), subject to adjustment for proportional adjustments to outstanding common stock and anti-dilution provisions in case of dividends and distributions. The note holders have a right to require repayment of 101% of the principal amount of the notes in an acquisition of the Company, and the notes provide for payment of unpaid interest on conversion following such an acquisition if the note holders do not require such repayment. The securities purchase agreement and notes include covenants regarding payment of interest, maintaining our listing status, limitations on debt, maintenance of corporate existence, and filing of SEC reports. The notes include standard events of default resulting in acceleration of indebtedness, including failure to pay, bankruptcy and insolvency, cross-defaults, and breaches of the covenants in the securities purchase agreement and notes, with default interest rates and associated cure periods applicable to the covenant regarding SEC reporting.

Common Stock Offering. On February 23, 2012,we sold 10,160,325 shares of our common stock in a private placement for aggregate offering proceeds of $58.7 million.

Bridge Loan from Banco Pine. In December 2011, we entered into a loan agreement with Banco Pine S.A. under which Banco Pine S.A. provided us with a short term loan of up to R$35.0 million reais (approximately US$18.7 million based on the exchange rate at December 31, 2011). The loan was an advance on anticipated 2012 financing from Nossa Caixa Desenvolvimento (“Nossa Caixa”), the Sao Paulo State development bank, and the Lender, under which the Lender and Nossa Caixa may provide us with loans of up to approximately R$52.0 million reais (approximately US$27.7 million based on the exchange rate at December 31, 2011) as financing for capital expenditures relating to the Paraíso Bioenergia manufacturing facility in Brazil. The interest rate for the loan is 119.2% of Brazilian interbank lending rate (approximately 12.8% on an annualized basis). The principal and interest of loans under the loan agreement mature and are required to be repaid on May 17, 2012 based on the supplemental agreement entered into with Banco Pine S.A. under which the parties agreed to extend the maturity date for the repayment of the original loan , subject to extension by the Lender. Under the agreement, we would owe a prepayment penalty if we repay the loan prior to the maturity date based on the net value of the loan to Banco Pine S.A. if the Bridge Loan were repaid on the maturity date.

BNDES Credit Facility. In December 2011, we entered into a credit facility in the amount of R$22.4 million reais (approximately US$11.9 million based on the exchange rate at December 31, 2011) with Banco Nacional de Desenvolvimento Econômico e Social, or BNDES, a government owned bank headquartered in Brazil. This BNDES facility was extended as project financing for a production site in Brazil. The credit line is divided into an initial tranche for up to approximately R$19.1 million reais and an additional tranche of approximately R$3.3 million reais that becomes available upon delivery of additional guarantees. The credit line is available for 12 months from the date of the credit agreement, subject to extension by the lender.

The principal of loans under the BNDES credit facility is required to be repaid in 60 monthly installments, with the first installment due in January 2013 and the last due in December 2017. Interest will be due initially on a quarterly basis with the first installment due in March 2012. From and after January 2013, interest payments will be due on a monthly basis together with principal payments. The loaned amounts carry interest of 7% per year. Additionally, a credit reserve charge of 0.1% on the unused balance from each credit installment from the day immediately after it is made available through its date of use, when it is paid.

The credit line is collateralized by first priority security interest in certain of certain of our equipment and other tangible assets with an original purchase price of R$24.9 million reais. We are a parent guarantor for the payment of the outstanding balance under the BNDES credit facility. Additionally, we are required to provide a bank guarantee equal to 10% of all the approved amount (R$22.4 million reais in total debt) under the credit agreement. For advances in the second tranche (above R$19.1 million reais), we are required to provide additional bank guarantees equal to 90% of each such advance, plus additional Amyris guarantees equal to at least 130% of such advance. The credit agreement contains customary events of default, including payment failures, failure to satisfy other obligations under the Credit Agreement or related documents, defaults in respect of other indebtedness, bankruptcy, insolvency and inability to pay debts when due, material judgments, and changes in control of Amyris Brasil. If any event of default under the credit agreement occurs, the lender may terminate its commitments and declare immediately due all borrowings under the facility. As of December 31, 2011 we had $19.1 million reais (approximately US$10.2 million based on the exchange rate at December 31, 2011) in outstanding advances under the BNDES credit facility.

FINEP Credit Facility. In November 2010, we entered into a credit facility with Financiadora de Estudos e Projetos, or

FINEP, a state-owned company subordinated to the Brazilian Ministry of Science and Technology. This FINEP Credit Facility was extended to partially fund expenses related to our research and development project on sugarcane-based biodiese, or the FINEP Project, and provides for loans of up to an aggregate principal amount of R$6.4 million reais (approximately US$3.4 million based on the exchange rate at December 31, 2011) which is guaranteed by a chattel mortgage on certain of our equipment as well as bank letters of guarantee. The first disbursement of approximately R$1.8 million reais was received on February 11, 2011 and the next three disbursements will each be approximately R$1.6 million reais. Subject to compliance with certain terms and conditions under the FINEP Credit Facility, the three remaining disbursements of the loan will become available to us for withdrawal.

Interest on loans drawn under this credit facility is fixed at 5.0% per annum. In case of default under or non-compliance with the terms of the agreement the interest on loans will be dependent on the long-term interest rate as published by the Central Bank of Brazil, or TJLP. If the TJLP at the time of default is greater than 6%, then the interest will be 5.0% + a TJLP adjustment factor otherwise the interest will be at 11.0% per annum. In addition, a fine of up to 10.0% will apply to the amount of any obligation in default. Interest on late balances will be 1.0% interest per month, levied on the overdue amount. Payment of the outstanding loan balance will be made in 81 monthly installments which will commence in July 2012 and extend through March 2019. Interest on loans drawn and other charges are paid on a monthly basis commencing in March 2011. As of December 31, 2011 and December 31, 2010, there were R$1.8 million reais (approximately US$1.0 million based on the exchange rate at December 31, 2011) and zero amount outstanding, respectively, under this FINEP Credit Facility.

The FINEP Credit Facility contains the following significant terms and conditions:

- We will share with FINEP the costs associated with the FINEP Project. At a minimum, we will contribute approximately R$14.5 million Brazilian reais (US$7.7 million based on the exchange rate at December 31, 2011) of which R$11.1 million reais to be contributed prior to the release of the second disbursement, which is expected to occur in 2012;
- After the release of the first disbursement, prior to any subsequent drawdown from the FINEP Credit Facility, we are required to provide letters of guarantee of up to R$3.3 million reais in aggregate (approximately US$1.8 million based on the exchange rate at December 31, 2011);
- Amounts released from the FINEP Credit Facility must be completely used by us towards the FINEP Project within 30 months after the contract execution.

Revolving Credit Facility. In December 2010 we established a revolving credit facility which provides for loans and standby letters of credit of up to an aggregate principal amount of $10.0 million with a sublimit of $5.0 million on the standby letters of credit. Interest on loans drawn under this revolving credit facility will be equal to (i) the Eurodollar Rate plus 3.0%; or (ii) the Prime Rate plus 0.5%. In case of default or non-compliance with the terms of the agreement, the interest on loans will be Prime Rate plus 2.0%. The credit facility is collateralized by a first priority security interest in certain of our present and future assets. It has a $5,000 annual loan fee and contains financial and non-financial covenants (see Note 6 to our Consolidated Financial Statements) including a required liquidity of at least $10.0 million plus two times our quarterly “Net Cash Used in Operating Activities” calculated using our Condensed Consolidated Statements of Cash Flows reflected in our most recent periodic report filed with the SEC. In addition, as of the end of each fiscal quarter, we must maintain a current ratio (current assets to current liabilities) equal to or greater than 2:1. As of December 31, 2011, we were not in compliance with the current ratio covenant. The non-compliance was caused in part by the additional short term debt proceeds received by us and in part by and cash outflows. Following the funding from the equity and convertible debt financings in February 2012, our current ratio was returned to a level equal to or greater than 2:1. Events of default under the credit facility provides the lender various rights, including the right to require immediate repayment or foreclose on collateral.

On February 10, 2011, we borrowed $3.3 million under this revolving credit facility to pay off certain notes payable balances of approximately the same amount. As a result of the payoff, $1.0 million of the $4.1 million outstanding letters of credit under the revolving credit facility was canceled.

On March 29, 2011, we borrowed an additional $3.2 million under this revolving credit facility to finance capital expenditures. On December 22. 2011, we borrowed an additional $1.2 million under this credit facility to finance capital expenditures. Under this facility, there were $7.7 million in loans outstanding and one letter of credit outstanding totaling $2.3 million as of December 31, 2011. The outstanding letter of credit serves as security for a facility lease and expires November 2012 and may be automatically extended for another one-year period.

Credit Agreement. In November 2008, we entered into a Credit Agreement with a financial institution to secure letters of credit and to finance short term advances for the purchase of ethanol and associated margin requirements as needed. In October 2009, the agreement was amended to decrease the maximum amount that we may borrow under such facility. The Credit Agreement, as amended, provides for an aggregate maximum availability of up to the lower of $20.0 million or the borrowing base as defined

in the agreement to secure letters of credit and to finance short term advances for the purchase of ethanol and associated margin requirements as needed. We may use this line to secure letters of credit for product purchases in an aggregate amount up to $5.7 million. In addition, we may borrow cash for the purchase of product, which is determined by our borrowing base. As of December 31, 2011 we had sufficient borrowing base levels to draw up to a total of $7.2 million in short-term cash advances and had $0.7 million available for letters of credit in addition to those then outstanding. As of December 31, 2011 and December 31, 2010 we had no outstanding advances and had $5.0 million and $4.6 million, respectively in outstanding letters of credit under the Credit Agreement which are guaranteed by Amyris, Inc. and payable on demand. The Credit Agreement is collateralized by a first priority security interest in certain of our present and future assets.

Government Grants. In 2010, we were awarded a $24.3 million “Integrated Bio-Refinery” grant from the U.S. Department of Energy, or DOE. Under this grant, we are required to fund an additional $10.6 million in cost sharing expenses. According to the terms of the DOE grant, we are required to maintain a cash balance of $8.7 million, calculated as a percentage of the total project costs, to cover potential contingencies and cost overruns. These funds are not legally restricted but they must be available and unrestricted during the term of the project. Our obligation for this cost share is contingent on reimbursement for project costs incurred. During 2011, we recognized $7.3 million in revenue under this grant, of which $6.7 million was received during the year ended December 31, 2011.

In August 2010, we were appointed as a subcontractor to National Renewable Energy Laboratory, or NREL, under a DOE grant awarded to NREL. We have the right to be reimbursed for up to $3.9 million and are required to fund an additional $1.5 million in cost sharing expenses. During 2011, we recognized $447,000 in revenue under this grant, of which $269,000 was received during the year ended December 31, 2011.

Auction Rate Securities. Our investment portfolio included ARS, which were issued principally by student loan entities and rated AAA by a major credit rating agency. In February 2008, auctions failed for $12.95 million in par value of ARS that we held because sell orders exceeded buy orders. During the year ended December 31, 2009, a total of $250,000 of the ARS held by us were called at par by the issuer. As of December 31, 2010 and 2009, we owned zero and $12.7 million par value of these securities, respectively. We received the $12.7 million par value upon liquidation of our ARS holdings during the second and third quarters of 2010.

In October 2008, UBS AG, or UBS, offered to repurchase all of the ARS that we purchased from them. We formally accepted the settlement offer and entered into a repurchase agreement with UBS in November 2008. By accepting the agreement, we received the right (“Put Option”) to sell our ARS at par value to UBS between June 30, 2010 and July 2, 2012. The Put Option was exercised on June 30, 2010 to sell the remaining auction rate securities at par value and was settled in the third quarter of 2010 (see Note 3 to our Consolidated Financial Statements).

Cash Flows during the Years Ended December 31, 2011, 2010, and 2009

Cash Flows from Operating Activities

Our primary uses of cash from operating activities are cost of product sales and personnel related expenditures offset by
cash received from product sales. Cash used in operating activities was $92.5 million, $64.6 million, and $45.7 million for the years ended December 31, 2011, 2010, and 2009.

Net cash used in operating activities of $92.5 million in 2011 reflected a net loss of $179.5 million partially offset by non-cash charges of $52.9 million and a $34.1 million net change in our operating assets and liabilities. Net change in operating assets and liabilities of $34.1 million primarily consists of a $53.9 million increase in accrued and other long

term liabilities of which $31.9 million is due to the contingently repayable advance from Total, a $15.6 million increase in accounts payable and a $5.5 million increase in deferred revenue partially offset by a $20.7 million increase in inventory, a $17.3 million increase in prepaid expenses and other assets, a $2.0 million increase in accounts receivable and a $1.1 million reduction in deferred rent. Non-cash charges primarily included $25.5 million of stock-based compensation, a $15.4 million inventory write down to its net realizable value, and an $11.1 million of depreciation and amortization expenses.

Cash used in operating activities of $64.6 million in 2010 reflected a net loss of $82.8 million partially offset by non-cash charges of $16.6 million and a $1.6 million net change in our operating assets and liabilities. Non-cash charges primarily included $10.4 million of stock-based compensation and $7.3 million of depreciation and amortization.

Cash used in operating activities of $45.7 million in 2009 reflected a net loss of $64.8 million, partially offset by aggregate non-cash charges of $10.4 million and a net change of $8.7 million in our net operating assets and liabilities. Non-cash charges

primarily included $5.8 million of depreciation and amortization and $3.3 million of stock-based compensation. The net change in our operating assets and liabilities was primarily a result of our restructuring activity of $5.1 million, the increase in accrued and other liabilities of $4.5 million and the decrease in prepaid and other assets of $1.0 million, partially offset by the increase in inventory of $0.9 million and the decrease in accounts payable of $1.0 million.

Cash Flows from Investing Activities

Our investing activities consist primarily of net investment purchases, maturities and sales and capital expenditures.

In 2011, cash provided by investing activities was $5.9 million as a result of $105.6 million in net investment securities maturities and $0.3 million in acquisition of cash in noncontrolling interest offset by a $97.0 million of capital expenditures and deposits on property and equipment and a $2.9 million payment to Draths Corporation in relation to business acquisition.

In 2010, cash used in investing activities was $79.4 million as a result of $68.4 million in net investment purchases and $15.5 million of capital expenditures and deposits on property and equipment, offset by the release of $4.5 million in restricted cash.

In 2009, cash used in investing activities was $25.4 million as a result of $16.0 million in net investment purchases and $7.6 million of capital expenditures, and a $1.8 million increase in restricted cash.

Cash Flows from Financing Activities

In 2011, cash provided by financing activities was $41.1 million, primarily the result of the net receipt of $38.0 million from debt financing, the receipt of $8.4 million in proceeds from option exercises, and the receipt of $3.0 million in equipment financing. These cash receipts were offset in part by principal payments on debt of $5.0 million, principal payments on capital leases of $2.8 million, and $0.5 million in costs related to the initial public offering of our common stock.

In 2010 cash provided by financing activities was $266.7 million, primarily the result of the net receipt of $132.9 million from our sale of Series D convertible preferred stock, the receipt of the net proceeds of $86.0 million from the initial public offering of our common stock, the net receipt of $47.8 million from our sale of Series C-1 convertible preferred stock, the net receipt of $3.7 million from our sale of Series C convertible preferred stock, the receipt of $7.1 million from investors in Amyris Brasil and $1.4 million in proceeds from equipment financing. These cash receipts were offset in part by principal payments on debt of $9.7 million and principal payments on capital leases of $2.7 million.

In 2009, cash provided by financing activities was $71.5 million, primarily as a result of the net receipt of $56.5 million from our sale of Series C convertible preferred stock, the net receipt of $1.8 million from our sale of Series B-1 convertible preferred stock, the receipt of $9.6 million from debt, primarily from an advance on student loan auction rate securities held at UBS, $4.8 million in proceeds from equipment financing and the receipt of $3.1 million from investors for their noncontrolling interest in Amyris Brasil, partially offset by our purchase of the noncontrolling interest in Amyris Brasil for $2.3 million, our principal payments on our equipment financing facilities of $1.1 million and principal repayments on our debt of $1.0 million.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any material off-balance sheet arrangements, as defined under SEC rules, such as relationships with unconsolidated entities or financial partnerships, which are often referred to as structured finance or special purpose entities, established for the purpose of facilitating financing transactions that are not required to be reflected on our consolidated financial statements.

Contractual Obligations

The following is a summary of our contractual obligations as of December 31, 2011 (in thousands):

	Total	2012	2013	2014	2015	2016	Thereafter
Principal payments on long-term debt	$41,324	$28,050	$2,981	$2,453	$2,480	$2,510	$2,850
Interest payments on long-term debt, fixed rate[1]	4,073	1,455	909	716	510	343	140
Interest payments on long-term debt, variable rate[2]	252	252	—	—	—	—	—
Operating leases	44,981	6,807	6,519	6,598	6,776	6,905	11,376
Principal payments on capital leases	6,336	3,717	1,365	956	298	—	—
Interest payments on capital leases	558	382	124	51	1	—	—
Terminal storage costs	399	399	—	—	—	—	—
Purchase obligations[3] [4]	35,819	31,609	210	4,000	—	—	—
Total	$133,742	$72,671	$12,108	$14,774	$10,065	$9,758	$14,366

(1) For fixed rate facilities, the interest rates are more fully described in Note 6 of our consolidated financial statements.

(2) For variable rate facilities, amounts are based on weighted average interest rate which was 3.5% as of December 31, 2011.

(3) Purchase obligations include $33.8 million in non-cancelable contractual obligations and construction commitments.

(4) On February 24, 2012, the Company entered into a toll manufacturing agreement with Albemarle. This agreement supersedes the original agreement with Albemarle dated July 2011. The term of the agreement continues through December 31, 2019. The agreement includes certain contractually binding fixed costs totaling $7.5 million, which are payable in 2012 and 2014 and fixed costs of $2.0 million per quarter in 2013 if the Company exercises it option to have product manufactured in the facility in 2013. The agreement also includes variable pricing during the contract term.

This table does not reflect that portion of the expenses that we expect to incur from 2011 through 2012 in connection with research activities under the DOE Integrated Bio-Refinery grant and the DOE grant to NREL, with respect to which we are a subcontractor, for which we will not be reimbursed. We have the right to be reimbursed for up to $24.3 million of a total of up to $34.9 million of expenses for research activities that we undertake under the DOE Integrated Bio-Refinery grant. We have the right to be reimbursed for up to $3.9 million of a total of $5.4 million of expenses for research activities that we undertake under the NREL grant.

Recent Accounting Pronouncements

The information contained in Note 2 to the Consolidated Financial Statements under the heading "Recent Accounting Pronouncements" is hereby incorporated by reference into this Part II, Item 8.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to financial market risks, primarily changes in interest rates, currency exchange rates and commodity prices. On a limited basis we use derivative financial instruments primarily to manage commodity price risk.

Interest Rate Risk

Our exposure to market risk for changes in interest rates relates primarily to our investment portfolio and our outstanding debt obligations. We generally invest our cash in investments with short maturities or with frequent interest reset terms. Accordingly, our interest income fluctuates with short-term market conditions. As of December 31, 2011, our investment portfolio consisted primarily of money market funds, and certificates of deposit, all of which are highly liquid investments. Due to the short-term nature of our investment portfolio, our exposure to interest rate risk is minimal. Additionally, as of December 31, 2011, 81% of our debt portfolio was comprised of fixed-rate debt and the balance was variable-rate debt. As of December 31, 2011, our weighted average borrowing rate on the revolving credit facility was 3.5%. If interest had increased by 100 basis points to the outstanding borrowings under our revolving credit facility as of December 31, 2011, our interest expense would have increased by $77,000 on an annual basis. Because our average borrowings under our revolving credit facility are not substantial, changes in the interest rate will not have a significant impact our interest expense.

Foreign Currency Risk

Most of our sales contracts are principally denominated in U.S. dollars and, therefore, our revenues are not currently subject to significant foreign currency risk. We do incur certain of our production costs, primarily sugar feedstocks and manufacturing service fees, operating expenses and capital expenditures in currencies other than the U.S. dollar and, therefore, are subject to volatility in cash flows due to fluctuations in foreign currency exchange rates, particularly changes in the Brazilian reais and the Euro. To date, we have not entered into any foreign exchange hedging contracts.

Commodity Price Risk

Our exposure to market risk for changes in commodity prices currently relates to our purchases of ethanol and reformulated ethanol-blended gasoline and to purchases of sugar feedstocks. When possible, we manage our exposure to this risk primarily through the use of supplier pricing agreements. We also, at times, use standard derivative commodity instruments to hedge the price volatility of ethanol and reformulated ethanol-blended gasoline, principally through futures contracts. The changes in fair value of these contracts are recorded on the balance sheet and recognized immediately in cost of product sales. We recognized a loss of $2.4 million, $2.2 million and $1.9 million, as the change in fair value for the years ended December 31, 2011, 2010 and 2009, respectively (see Note 3 to our Consolidated Financial Statements).

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA
AMYRIS, INC.
Index to Financial Statements and Financial Statement Schedules

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
To the Board of Directors and Stockholders of
Amyris, Inc.:

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Amyris, Inc. and its subsidiaries at December 31, 2011 and December 31, 2010, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2011 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements and financial statement schedule, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control over Financial Reporting appearing under Item9A. Our responsibility is to express opinions on these financial statements, on the financial statement schedule, and on the Company's internal control over financial reporting based on our audits (which was an integrated audit in 2011). 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 audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included 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. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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

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

/s/ PricewaterhouseCoopers LLP
San Jose, California
February 28, 2012

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Amyris, Inc.
Consolidated Balance Sheets
(In Thousands, Except Share and Per Share Amounts)

	December 31, 2011	2010
Assets		
Current assets:		
Cash and cash equivalents	$95,703	$143,060
Short-term investments	7,889	114,873
Accounts receivable, net of allowance of $245 and zero, respectively	6,936	5,215
Inventories	9,070	4,006
Prepaid expenses and other current assets	19,873	2,905
Total current assets	139,471	270,059
Property and equipment, net	128,101	54,847
Other assets	43,001	32,547
Goodwill and intangible assets	9,538	—
Total assets	$320,111	$357,453
Liabilities and Equity		
Current liabilities:		
Accounts payable	$26,379	$7,116
Deferred revenue	3,139	565
Accrued and other current liabilities	30,982	14,795
Capital lease obligation, current portion	3,717	2,854
Debt, current portion	28,049	1,911
Total current liabilities	92,266	27,241
Capital lease obligation, net of current portion	2,619	3,091
Long-term debt, net of current portion	13,275	4,734
Deferred rent, net of current portion	9,957	11,186
Deferred revenue, net of current portion	4,097	1,130
Other liabilities	37,085	2,523
Total liabilities	159,299	49,905
Commitments and contingencies (Note 5)		
Stockholders’ equity:		
Preferred stock - $0.0001 par value, 5,000,000 shares authorized, none issued and outstanding	—	—
Common stock - $0.0001 par value, 100,000,000 shares authorized as of December 31, 2011 and 2011; 45,933,138 and 43,847,425 shares issued and outstanding as of December 31, 2011 and 2010, respectively	5	4
Additional paid-in capital	548,159	506,988
Accumulated other comprehensive income (loss)	(5,924)	2,872
Accumulated deficit	(381,188)	(202,318)
Total Amyris, Inc. stockholders’ equity	161,052	307,546
Noncontrolling interest	(240)	2,000 2
Total stockholders' equity	160,812	307,548
Total liabilities and stockholders' equity	$320,111	$357,453

See the accompanying notes to the consolidated financial statements.

Amyris, Inc.
Consolidated Statements of Operations
(In Thousands, Except Share and Per Share Amounts)

	Years Ended December 31,		
	2011	2010	2009
Revenues			
Product sales	$129,837	$68,664	$61,689
Grants and collaborations revenue	17,154	11,647	2,919
Total revenues	146,991	80,311	64,608
Cost and operating expenses			
Cost of product sales	155,615	70,515	60,428
Research and development	87,317	55,249	38,263
Sales, general and administrative	83,231	40,393	23,558
Restructuring and asset impairment (income) charges	—	(2,061)	5,768
Total cost and operating expenses	326,163	164,096	128,017