AMYRIS, INC.
Form 10-K
March 28, 2013

## UNITED STATES

SECURITIES AND EXCHANGE COMMISSION
Washington D.C. 20549
FORM 10-K
(Mark One)
ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2012
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
(State or other jurisdiction of incorporation or organization)
5885 Hollis Street, Suite 100, Emeryville, California
(Address of principal executive office)
(510) 450-0761
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:
Title of each class
Common Stock, $\$ 0.0001$ par value per share

55-0856151
(I.R.S. Employer

Identification No.)
94608
(Zip Code)

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 ${ }^{\text {. }}$ No x
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section $15(\mathrm{~d})$ of the Act. Yes ${ }^{\text {. }}$ 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

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 29, 2012, 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 $\$ 154.3$ million, based on the closing price of the registrant's common stock on the NASDAQ Global Select Market on such date. $73,876,289$ shares of the Registrant's common stock, par value $\$ 0.0001$ per share, were outstanding as of March 1, 2013.

DOCUMENTS INCORPORATED BY REFERENCE
Portions of registrant's proxy statement to be delivered to stockholders in connection with the registrant's 2013 Annual Meeting of Stockholders to be held on or about May 9, 2013 are incorporated by reference into Part III of this Form $10-\mathrm{K}$. The registrant intends to file its proxy statement within 120 days after its fiscal year end.
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For the Fiscal Year Ended December 31, 2012
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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. 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," "projects," "will," "w 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 ${ }^{\circledR}$, the Amyris logo, Biofene ${ }^{\circledR}$ and No Compromise ${ }^{\circledR}$ 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.

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## PART I

## ITEM 1. BUSINESS

## Overview

Amyris is a renewable products company focused on providing sustainable alternatives to a broad range of petroleum-sourced products. We developed innovative microbial engineering and screening technologies that modify the way microorganisms process sugars. We are using our proprietary synthetic biology platform to design microbes, primarily yeast, and use them as living factories in established fermentation processes to convert plant-sourced sugars into renewable hydrocarbons. We are developing, and, in some cases, already commercializing, products from these hydrocarbons in several target markets, including cosmetics, lubricants, flavors and fragrances, polymers and plastic additives, home and personal care products, and transportation fuels. We call these No Compromise ${ }^{\circledR}$ products because we design them to perform comparably to, or better than, currently available products.

We were founded in 2003 in the San Francisco Bay Area by a group of scientists from the University of California, Berkeley. Our first major milestone came in 2005 when, through a grant from the Bill \& Melinda Gates Foundation, our scientists developed technology capable of creating microbial strains to produce artemisinic acid - a precursor of artemisinin, an effective anti-malarial drug. In 2008, 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 2013.

Building on our success with semi-synthetic artemisinin to combat malaria, Amyris has been applying its industrial synthetic biology platform to provide alternatives to a broad range of petroleum-sourced products. Amyris has focused its development efforts on the production of Biofene ${ }^{\circledR}$, Amyris's brand of renewable farnesene, a long-chain, branched liquid hydrocarbon molecule. Using Biofene as a building block molecule, we are developing a wide range of renewable products for our target markets.

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. By locating our production facilities in Brazil, we are leveraging a mature sugarcane growing and fermentation infrastructure, reducing our production costs, and accessing feedstock that is somewhat insulated from price volatility. We have also produced Biofene from other feedstocks such as sugar beets, corn dextrose, sweet sorghum and cellulosic sugars.

Amyris's first purpose-built, large-scale Biofene production plant commenced operations in southeastern Brazil in December 2012. This plant is in Brotas in the state of São Paulo and is adjacent to an existing sugar and ethanol mill, Paraíso Bioenergia. Amyris has also advanced initial construction of a second large-scale production plant in Brazil, located at the Usina São Martinho sugar and ethanol mill (also in the state of São Paulo), which we intend to complete when production economics support start-up of that plant. To satisfy initial demand for our products until our own facilities are operating, we have leveraged contract-manufacturing capabilities of established companies.

Our business 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.

Amyris is focused on building its renewable-product leadership position initially with squalane in cosmetics, niche fuel opportunities, fragrance oils, and farnesene for liquid polymers applications. We believe that success in these early markets will pave the way to accessing larger markets and having a more significant impact in the longer term.

We were incorporated in 2003. 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 our production in Brazil. Amyris Fuels was originally established to help us develop fuel distribution capabilities in the U.S.

We began selling fuels through Amyris Fuels in June 2008. Amyris Fuels generated revenue from the sale of ethanol and reformulated ethanol-blended gasoline to wholesale customers through a network of terminals in the eastern U.S. We completed our planned transition out of the ethanol and ethanol-blended gasoline business in the third quarter of 2012. In 2012, we generated $\$ 73.7$ million in revenues, including $\$ 38.8$ million from sales of ethanol and ethanol-blended gasoline by Amyris Fuels, $\$ 24.1$ million from grants and collaborations, and $\$ 10.8$ million from product sales of our renewable products.

## Our Business Strategy

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 uncertainties and negative environmental impacts have 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, questionable environmental sustainability, limited product portfolio, and dependency on government policy.

Our objective is to become the leading provider of renewable, high-performance alternatives to selected petroleum-sourced chemicals and fuels. By leveraging our synthetic biology platform, our partners' know-how, and our experience in industrial fermentation, 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 provide superior performance to the petroleum-sourced products they are replacing.

Key elements of our strategy include:
Leveraging our technology platform to improve efficiency. We continue applying synthetic biology, primarily our strain engineering platform, to lower the cost of production of our products through improvements in yields and 1.other production process efficiencies. We do this with our industrial platform for yeast strain development at our world-class laboratories. We also support scale up to commercial production in two pilot plant facilities and a demonstration production facility, as well as at various contract manufacturing locations.

Accelerating development through collaborations. In order to accelerate the development of new technologies, production methods or products, we enter into collaborative research, development and commercialization agreements, such as our existing agreements with Total Gas \& Power USA SAS, or Total, Firmenich SA, or Firmenich, Givaudan Schweiz AG, or Givaudan, Cosan Indústria e Comércio S.A., or Cosan, Kuraray Co., Ltd., or ${ }^{2}$ Kuraray, M\&G Finanziaria S.R.L, or M\&G, Method Home Products, Inc., or Method, and Manufacture Francaise de Pneumatiques Michelin, or Michelin. We have also entered into partnerships with the U.S. government to develop certain technologies and processes capable of improving our ability of producing alternatives to petroleum-sourced products.

Delivering cost efficient manufacturing. Building on our breakthrough technology and experience gained from production through third party contract manufacturing, we built, commissioned and are now operating our own large-scale Biofene production plant in Brotas, in the state of São Paulo, Brazil. We opted to focus on Brazilian
3.sugarcane as the feedstock to support our production ramp because of its abundance, low-cost and relative price stability. As we develop cost efficient manufacturing in our first production facility, we expect to seek to work selectively with other Brazilian sugar and ethanol producers to build additional facilities adjacent to their existing mills, thereby reducing the capital required to establish and scale our production operations.

Targeting product markets to maximize returns. We have begun to commercialize our products derived from Biofene primarily in select specialty chemical markets characterized by higher-margin, lower-volume products, where we believe we can earn positive gross margins with current production process efficiencies. For example, in 2011 we initiated sales of a cosmetic emollient, squalane, produced from Biofene. We have also established sales channels to certain niche diesel markets in metropolitan bus fleets in Brazil. As we lower our production costs through technological and manufacturing 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.

## Our Breakthrough 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 organic chemicals with current product applications in a wide range of industries, including specialty chemicals and fuels. With this pathway, we can potentially produce thousands of different isoprenoid molecules.

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The key steps in our strain engineering and scale-up process have been as follows:
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. 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 recovery 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 fermenters 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 fermenters, we have operating pilot plants in our facilities in Emeryville, California and Campinas, Brazil, as well as two 5,000 -liter fermenters in our Campinas demonstration facility. To date, most of our efforts have focused on developing yeast strains to produce Biofene and, to a lesser extent, flavors and fragrances, with significant development efforts devoted to chemical synthesis of other products from Biofene. Though our technology platform allows us to develop yeast strains engineered to produce other target molecules, we expect to continue focusing most of our strain-engineering efforts on Biofene production and, to a lesser extent, selected specialty chemical ingredients, for the foreseeable future.

## Our Industrial Production

Our industrial production operations generally involve two major steps. First, we produce a target molecule by means of an industrial fermentation process. In some cases this target molecule is itself the desired end product. In other cases, it must be converted into the desired end product by a second step where we use chemical synthesis of the initial target molecule to produce a final target molecule.

## Commercial Production of Target Fermentation Molecules

We have initiated commercial production of Biofene, our initial fermentation molecule, at our purpose-built, large-scale Biofene production plant in Brotas, in the State of São Paulo, Brazil. Our Biofene production plant in Brotas is adjacent to an existing sugar and ethanol mill, Paraíso Bioenergia. Under our agreement with Paraíso Bioenergia S.A., or Paraíso Bioenergia, they will supply sugarcane juice and other utilities and we were responsible
for construction (which commenced in August 2011) and operation of our Biofene production facility. Our Biofene production plant has six 200,000 liter production fermenters and was designed to process sugarcane juice, or its equivalent, from up to one million tons of raw sugarcane annually. In December 2012, following a successful commissioning phase, we began production of Biofene at the facility. Our first shipment of Biofene produced at the facility occurred on February 1, 2013.

Prior to operating our own facility, we relied on multiple contract manufacturing facilities in the U.S., Brazil and Spain, which used 100,000 to 240,000 liter fermenters and multiple kinds of feedstock.

We have also advanced initial construction of a second large-scale production plant in Brazil, located at the Usina São Martinho sugar and ethanol mill also in the state of São Paulo, which we intend to complete when production economics support start-up of that plant. We entered into agreements with Usina São Martinho S.A., or Usina São Martinho, a subsidiary of São

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Martinho S.A., to establish the facility at Usina São Martinho, and the plant is being built by a joint venture (SMA Indústria Química S.A., or SMA). We formed SMA in 2010, and commenced site preparation in December 2010 and civil construction in February 2011. In early 2012, we suspended construction at SMA pending completion and operation of our Brotas facility. The SMA plant is intended to provide a large-scale production facility to support our longer-term production plans.

Following the completion of our SMA plant, we expect to 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.

## Chemical Finishing Process

In some cases, we perform additional chemical finishing steps to convert initial target molecules into other finished products, such as renewable squalane, lubricants, polymers and diesel. We have established an agreement with Glycotech Inc., or Glycotech, for use of the Leland, North Carolina facility of Salisbury Partners, LLC to convert Biofene into squalane and other final products. We expect to enter into additional agreements with other chemical companies for finishing services to access flexible capacity and an array of services as we develop additional products.

## Our Products

We are focused on developing 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 relatively 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 initially market and distribute squalane, we established a relationship with Soliance, a leading distributor of renewable cosmetics ingredients based in the Champagne-Ardenne region in France. We also have agreements with Nikko Chemicals Co. Ltd., or Nikko, a distributor in Japan, and Centerchem, Inc., or Centerchem, a distributor in North America. We anticipate identifying additional distributors in 2013.

## Lubricants

Base oils are the building blocks of lubricating oils and are currently derived from the crude oil refining process. Additives are materials added to base oils to change their properties, characteristics, or performance (e.g., anti-foam, anti-wear, corrosion inhibitor, detergent, dispersant, pour point depressant, anti-oxidant, or friction modifier). Lubricants are manufactured by combining a base oil with additives required by lubricant product applications, including engine oils, gear oils, hydraulic oils and turbine oils. Biofene may be chemically modified to serve as a base oil, additive, and/or lubricant. We believe the high-purity, synthetic base oil and additive molecules that can be made from Biofene could 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 and its affiliates to establish a joint venture for the worldwide development, production and commercialization of renewable base oils for the automotive, industrial and commercial lubricants markets. In March 2013, we expanded this collaboration to also include additives and
lubricants for the automotive, industrial and commercial lubricants markets. The joint venture is operated through Novvi LLC. We anticipate that Novvi LLC will source Biofene for its products initially from Amyris production facilities, and Amyris and Cosan, as co-owners of Novvi LLC, would share its development, marketing and operating costs.

Flavors and Fragrances
We believe 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 intends to offer flavors and fragrances companies a natural route to procure these ingredients without sacrificing cost or quality.

Currently, we are working with partners to develop a variety of flavors and fragrances ingredients that are either direct fermentation target molecules or derivatives of fermentation target molecules.

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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 arrangement with Firmenich, a global flavors and fragrances company headquartered in Geneva, Switzerland. Under a March 2013 master collaboration agreement (which superseded prior arrangements with Firmenich), we will research and develop flavors and fragrances compounds and grant Firmenich exclusive access to such compounds in exchange for research and development funding and a profit sharing arrangement. The new agreement superseded and expanded a prior collaboration agreement with Firmenich for joint development and commercialization of specific ingredients within the flavors and fragrances field.

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 portfolio. Under the agreement, upon achievement of certain success criteria, we would 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 July 2011, we entered into 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. We have entered into some evaluation and collaboration agreements with certain producers of home and personal care products to explore opportunities in these markets.

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 Distribuidora S.A., or 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 and July 2012, we entered into amendments of our technology license, development, research and collaboration agreement with Total to establish a renewable diesel development program
as described in more detail below under "Total Collaboration Products."

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 have received required approvals with Brazilian ANP (Agência Nacional do Petróleo,

Gas Natural e Biocombustíveis) for specific uses of 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.

## Total Collaboration Products

We have a license, development, research and collaboration agreement with Total that 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 fuels joint venture described below. 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.

In November 2011, we entered into an amendment of the collaboration agreement with Total with respect to development and commercialization of Biofene for diesel. This represented an expansion of the initial collaboration that the parties established in 2010, and established a global, exclusive collaboration for the development of Biofene for diesel and a framework for the creation of a joint venture to manufacture and commercialize Biofene for diesel. In addition, a limited number of other potential products were subject to development for the joint venture on a non-exclusive basis. In July 2012, we entered into a further amendment of the collaboration agreement with Total that expanded Total's investment in the Biofene collaboration, incorporated the development of certain joint venture products for use in diesel and jet fuel into the scope of the collaboration, and changed the structure of the funding from Total to include a convertible debt mechanism.

## 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 would expect to sell directly to Firmenich, Givaudan, Kuraray, M\&G, Method and Michelin under our agreements with them. Generally, our collaboration agreements such as these 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. Through mid-2012, we purchased ethanol produced by third parties and gasoline and sold both pure ethanol and reformulated ethanol-blended gasoline to wholesale customers. For 2012, Mansfield Oil Company accounted for more than $10 \%$ of our reported revenues by virtue of its purchases of ethanol and reformulated ethanol-blended gasoline from Amyris Fuels. Collaboration revenues from Total also accounted for more than $10 \%$ of our reported revenues in 2012. Customers purchased ethanol and ethanol-blended gasoline from us under short-term agreements and spot transactions, and we generally did not have any contractual commitments from customers to purchase ethanol and ethanol-blended gasoline from us over any period of time.

Nearly all of our customer revenue through the third quarter of 2012 came from the sale of ethanol and reformulated ethanol-blended gasoline, with the remainder of our revenues coming from collaborations and government grants and, more recently, sales of our renewable products. In the third quarter of 2012, we transitioned out of the ethanol and ethanol-blended gasoline

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business. We do not expect to be able to replace much of the revenue lost as a result of this transition, particularly in 2013, while we continue our efforts to establish a renewable products business.

## 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 U.S. Patent and Trademark Office, or the USPTO, and its foreign counterparts.

As of March 1, 2013, we had 202 issued U.S. and foreign patents and 302 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.

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.

Patents extend for varying periods according to the date of patent filing or grant and the legal term of patents in various countries where patent protection is obtained. The actual protection afforded by patent, which can vary from country to country, depends on the type of patent, the scope of its coverage and the availability of legal remedies in the country. See "Risk Factors-Risks Relating to Our Business-Our proprietary rights may not adequately protect our technologies and product candidates."

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

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 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 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.

## Transportation Fuel Products

In the transportation fuels market, we expect to compete with independent and integrated oil refiners, advanced biofuels companies and biodiesel companies. 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

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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.

## Competitive Factors

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.
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.

## 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, such as 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 produced from the GMMs. Various states within the U.S. could choose to regulate products made with

GMMs as well. While 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 we must satisfy certain criteria to achieve this exemption, 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 generally use GMMs under specific conditions in our Campinas facilities and our production plant in Brotas for research and development purposes. In addition, we have received CTNBio approval for commercial use of a specific strain in our Brotas plant.

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 produce our products using our yeast strains, then our business will be adversely affected. See "Risk Factors-Risks Related to Our Business-Our use of genetically-modified feedstocks and yeast strains to produce our products subjects us to risks of regulatory limitations and rejection of our products."

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 CARB. In Brazil, this includes 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 with petroleum diesel. In addition, ANP has authorized the use of our diesel fuel at blend rates of $10 \%$ and $30 \%$ for specific bus fleets. We are also currently in the process of registering our fuel with the CARB 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 CARB (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 March 1, 2013, our research and development organization included approximately 209 employees, 63 of whom held 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. Our process consists of a number of discrete steps including:
identifying new target molecules
ereating 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 $\$ 73.6$ million, $\$ 87.3$ million, and $\$ 55.2$ million and for the fiscal years ended December 31, 2012, 2011 and 2010, respectively.

## Employees

As of March 1, 2013, we had 397 full-time employees. Of these employees, 254 were in the U.S. and 143 were in Brazil. Except for labor union representation for Brazil-based employees based on labor code requirements 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 July 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

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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. In the third quarter of 2012, we transitioned out of the ethanol and reformulated ethanol-blended gasoline business, though we continue to maintain the Amyris Fuels subsidiary for activities related to renewable fuel sales. 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.

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## 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.

We have incurred significant losses in each year since our inception and believe that we will continue to incur losses and negative cash flow from operations into at least 2014. As of December 31, 2012, we had an accumulated deficit of $\$ 586.3$ million and had cash, cash equivalents and short term investments of $\$ 30.7$ million. We have significant outstanding debt and contractual obligations related to purchase commitments, as well as capital and operating leases. As of December 31, 2012, our debt totaled $\$ 104.2$ million, of which $\$ 3.3$ million matures within the next twelve months. In addition, our debt agreements contain various covenants, including restrictions on business that could cause us to be at risk of defaults. We expect to incur additional costs and expenses related to the continued development and expansion of our business, including construction and operation of our manufacturing facilities, our research and development operations, continued operation of our pilot plants and demonstration facility, and engineering and design work. Further, we expect to incur costs related to contract manufacturing arrangements. There can be no assurance that we will ever achieve or sustain profitability on a quarterly or annual basis.

We have limited experience producing our products at commercial scale and may not be able to commercialize our products to the extent necessary to sustain and grow our current business.

To commercialize our products, we must be successful in using our yeast strains to produce target molecules at commercial scale and at a commercially viable cost. Such production will require that our technology and processes be scaled from laboratory, pilot and demonstration projects to commercial-scale production. If we cannot achieve commercially-viable production economics, we will be unable to achieve a sustainable integrated renewable products business. Most of our commercial manufacturing experience to date has been at contract manufacturing facilities. For the future, we are focused on developing most of our production capacity through purpose-built, large-scale production plants in Brazil, which is a time-consuming, costly, uncertain and expensive process. Given our limited experience commissioning and operating our own manufacturing facilities and our limited financial resources, we cannot be sure that we will be successful in commissioning and scaling up production at these larger-scale plants, either in a timely manner or with production economics that allow us to meet our plans for commercialization. Even to the extent we successfully complete product development in our laboratories and pilot and demonstration facilities, and at contract manufacturing facilities, we may be unable to translate such success to large-scale, purpose-built plants. If this occurs, our ability to commercialize our technology will be adversely affected and we may be unable to produce and sell any significant volumes of our products. Also, with respect to 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 such products profitably.

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.

Our planned 2013 working capital needs and our planned operating and capital expenditures for 2013 are dependent on significant inflows of cash from existing collaboration partners, as well as additional funding from new collaborations, equity or debt offerings, credit facilities or loans, or combinations of these sources. We will continue to need to fund our research and development and related activities and to provide working capital to fund production, storage, distribution and other aspects of its business. Our operating plan contemplates capital expenditures of approximately $\$ 10.0$ million in 2013 and we expect to continue to incur costs in connection with our existing contract manufacturing arrangements. Furthermore, we are expecting additional funding in 2013 from collaborations, equity or debt offerings, or combinations of these sources. Our operating plan contemplates securing a portion of this additional funding in the second quarter of 2013. However, as of the date of this filing, we have not yet secured this additional funding and there can be no assurance that financing will be available on commercially acceptable terms or at all. For example, some of our existing anticipated financing sources, such as research and development collaborations, are subject to risk that we cannot meet milestones or are not yet subject to definitive agreements or mandatory

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funding commitments and we may not be able to secure additional equity or debt financing in a timely manner or on reasonable terms, if at all.

If we seek additional types of funding that involve the issuance of equity securities, our existing stockholders would suffer dilution. For example, in 2012 , we completed private placements of our common stock that resulted in the issuance of approximately 26.1 million shares of our common stock of which approximately 5.0 million shares were issued in January 2013 following receipt of proceeds. We also issued approximately $\$ 78.3$ million in unsecured senior convertible promissory notes that are convertible into common stock at an initial conversion price of $\$ 7.0682$ per share. Through 2015, we expect to issue up to an aggregate of $\$ 51.7$ million in additional unsecured senior convertible promissory notes under the agreements with Total described below under the caption, "Our relationship with our strategic partner, Total, may have a substantial impact on our company." In addition to dilution, to the extent we issue convertible promissory notes and similar instruments, we would become subject to various covenants, including restrictions on our business, that could cause us to be at risk of defaults. For example, the convertible notes we issued in 2012 contained various covenants, including restrictions on the amount of debt we are permitted to incur.

If we are unable to raise additional financing, or if other expected sources of funding are delayed or not received, we would take the following actions as early as the second quarter of 2013 to support our liquidity needs through the remainder of 2013 and into 2014:

Effect significant headcount reductions in the U.S. and in Brazil, particularly with respect to both general and administrative employees and other employees not connected to critical or contracted activities.

Shift our focus to existing products and customers with significantly reduced investment in new product and commercial development efforts.

Reduce our expenditures for third party contractors, including consultants, professional advisors and other vendors.

Suspend operations at our pilot plants and demonstration facilities.
Reduce or delay uncommitted capital expenditures, including non-essential lab equipment and information technology projects.

The contingency cash plan contemplating these actions is designed to save us an estimated $\$ 35$ million to $\$ 40$ million over the next twelve months. Implementing this plan could have a material negative impact on our ability to continue our business as currently contemplated, including, without limitation, delays or failures in our ability to:

Achieve planned production levels;

Develop and commercialize products within planned timelines or at planned scales; and

Continue other core activities.

Furthermore, any inability to scale-back operations as necessary, and any unexpected liquidity needs, could create pressure to implement more severe measures. Such measures could have a material adverse effect on our ability to meet contractual requirements, including obligations to maintain manufacturing operations, and increase the severity of the consequences described above. We also may be forced to seek funding on terms that are not favorable to us. For example, in order to raise sufficient funds, we could be forced to issue preferred and discounted equity, agree to onerous covenants, grant security interests in our assets, enter into collaboration and licensing arrangements that require us to relinquish commercial rights or grant licenses on terms that are not favorable to us, or any or all of these.

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

A substantial component of our planned production capacity in the near and long term depends on successful operations at our initial and planned large-scale production plants in Brazil. We are in the early stages of operating our first purpose-built, large-scale production plant in Brotas and may complete construction of certain other facilities in the coming years. Delays or problems in the construction, start-up or operation of these facilities will cause delays in our ramp-up of production and hamper our ability to reduce our production costs. Delays in construction can occur due to a variety of factors, including regulatory requirements and our ability to fund construction and commissioning costs. Once our large-scale production facilities are built, we must successfully commission them and they must perform as we have designed them. If we encounter significant delays, cost overruns, engineering
issues, contamination problems, equipment supply constraints or other serious challenges in bringing these facilities online and operating them at commercial scale, we may be unable to produce our initial renewable products in the time frame we have planned. We may also need to continue to use contract manufacturing sources more than we expect, which would reduce our anticipated gross margins and may prevent us from accessing certain markets for our products. 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 reliance on the large-scale production plant in Brotas subjects us to execution and economic risks.
Our decision to focus our efforts for production capacity on the manufacturing facility in Brotas means that we will have limited manufacturing sources for our products in 2013 and beyond. Accordingly, any failure to establish operations at that plant could have a significant negative impact on our business, including our ability to achieve commercial viability for our products. Construction and commissioning of the plant in Brotas was recently completed, and we cannot be sure that we will be able to successfully scale up and operate the plant at levels sufficient to supply farnesene previously produced at contract manufacturing facilities. Furthermore, while we are moving our production focus to our plant in Brotas based on an expectation that we will ultimately be able to produce farnesene at a lower cost using such facility, we cannot be sure when, or if, using such plant will in fact result in such lower production costs than contract manufacturing facilities. Also, with the facility in Brotas, we will, for the first time, be the operator of a commercial fermentation and separation facility. We are inexperienced at operating plants and may face unexpected difficulties associated with the operation of the plant. For example, we have in the past, at certain contract manufacturing facilities, encountered significant delays and difficulties in ramping up production based on contamination in the production process, problems with plant utilities, lack of automation and related human error, issues arising from process modifications to reduce costs and adjust product specifications, and other similar challenges. Such challenges could arise in our plant in Brotas, and we cannot be certain that we will be able to remedy them quickly or effectively enough to achieve commercially viable near-term production costs and volumes.

As part of our arrangement to build the plant in Brotas, we have an agreement with Paraíso Bioenergia to purchase from Paraíso Bioenergia sugarcane juice corresponding to a certain number of tons of sugarcane per year, along with specified water and vapor volumes. Until this annual volume is reached, we are restricted from purchasing sugarcane juice for processing in the facility from any third party, subject to limited exceptions, unless we pay the premium to Paraíso Bioenergia that we would have paid if we bought the juice from them. As such, we will be relying on Paraíso Bioenergia to supply such juice and utilities on a timely basis, in the volumes we need, and at competitive prices. If a third party can offer superior prices and Paraíso Bioenergia does not consent to our purchasing from such third party, we would be required to pay Paraíso Bioenergia the applicable premium, which would have a negative impact on our production cost. Furthermore, we agreed to pay a price for the juice that is based on the lower of the cost of two other products produced by Paraíso Bioenergia using such juice, plus a premium. Paraíso Bioenergia may not want to sell sugarcane juice to us if the price of one of the other products is substantially higher than the one setting the price for the juice we purchase. While the agreement provides that Paraíso Bioenergia would have to pay a penalty to us if it fails to supply the agreed-upon volume of juice for a given month, the penalty may not be enough to compensate us for the increased cost if third-party suppliers do not offer competitive prices. Also, if the prices of the other products produced by Paraíso Bioenergia increase, we could be forced to pay those increased prices for production without a related increase in the price at which we can sell our products, reducing or eliminating any margins we can otherwise achieve. If in the future these supply terms no longer provide a viable economic structure for the operation in Brotas, we may be required to renegotiate our agreement, which could result in manufacturing disruptions and delays.

Our joint venture with Usina São Martinho subjects us to certain legal and financial terms that could adversely affect us.

We have various agreements with Usina São Martinho that contemplate construction of another large-scale manufacturing facility in Brazil. Under these agreements, we are responsible for designing and managing the construction project, and are responsible for the initial construction costs. We projected the construction costs of the project to be approximately US $\$ 100$ million. While we completed a significant portion of the construction of the plant before 2012, we delayed further construction and commissioning of the plant while we constructed and commissioned our production plant in Brotas, and we expect to continue to defer the project for the near term based on economic considerations and to allow us to focus on successful implementation at our production plant in Brotas. While Usina São Martinho was obligated to contribute up to approximately R\$61.8 million (approximately US $\$ 30.2$ million based on the exchange rate as of December 31, 2012) to the construction of the plant, such contributions depended on, among other things, successful commencement of operations at the plant. Based on our shifting manufacturing priorities and uncertainty regarding financing availability, we cannot currently predict when or if our facility at Usina São Martinho will be completed or commence commercial operations, which means that Usina São Martinho's anticipated contribution will be delayed and may never occur. Under our existing agreement with Usina São Martinho, if the joint venture fails to commence operations by the end of 2013, Usina São Martinho has the right to terminate the joint venture and to require us to buy Usina São Martinho's equity in the joint venture at its acquisition cost, and transfer the joint venture's assets at the Usina

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São Martinho site to another location. In that event, we would incur significant costs and be required to find alternative locations for the facility. In March 2013, we met with Usina São Martinho and the parties agreed in principle to a revised business plan for the joint venture with the plant becoming operational in 2016, and, while we are in the process of documenting that revised business plan as an amendment to the agreement, we may not be able to reach final agreement on the revised terms. In addition, if Amyris Brasil becomes controlled, directly or indirectly, by a competitor of Usina São Martinho, then Usina São Martinho has the right to acquire our interest in the joint venture and if Usina 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 Usina 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.

If we are ultimately successful in establishing the plant at Usina São Martinho, the agreements governing the joint venture subject us to terms that may not be favorable to us under certain conditions. For example, we are required to purchase the output of the joint venture for the first four years at a price that guarantees the return of Usina 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. Additionally, 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.

Our reliance on and relationships with contract manufacturers exposes us to risks relating to costs, contractual terms and logistics .

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 chemical conversion and production of end-products and, to mitigate cost and volume risks at our large-scale production facilities, for production of Biofene. Establishing and operating contract manufacturing facilities requires us to make significant capital expenditures, which reduces our cash and places this capital at risk. For example, based on an evaluation of our assets associated with contract manufacturing facilities and anticipated levels of use of such facilities, we recorded a loss on write off of production assets of approximately $\$ 5.5$ million in the year ended December 31, 2012. Further write off of such assets may occur in future quarters as we continue to evaluate and adjust our priorities for production, including the levels of utilization of our current and planned manufacturing facilities, which would cause us to incur additional losses associated with such facilities in the future. Also, many of our contract manufacturing agreements contain terms that commit us to pay for capital expenditures and other costs incurred or expected to be earned by the plant operators and owners, which can result in contractual liability and losses for us even if we terminate a particular contract manufacturing arrangement or decide to reduce or stop production under such an arrangement. We incurred a $\$ 40.4$ million loss in the year ended December 31,2012 related to $\$ 10.0$ million in facility modification costs and $\$ 30.4$ million of fixed purchase commitment losses associated with a scale-back of production at certain facilities. Some of our contract manufacturing agreements have also contained 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 created 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.

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.

Loss or termination of contract manufacturing relationships could harm our ability to meet our production goals.

As we have focused on building and commissioning our own plant and improving our production economics, we have limited our use of contract manufacturing and have terminated relationships with some of our contract manufacturing partners. The failure to have multiple available supply options could create a risk for us if a single source or a limited number of sources of manufacturing runs into operational issues. In addition, if we are unable to secure the services of contract manufacturers when and as needed, we may lose customer opportunities and the growth of our business may be impaired. 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

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that we will be able to reach acceptable price and other terms with them for the provision of their production services. If we shift priorities and stop or adjust anticipated production levels at contract manufacturing facilities, such adjustments could also result in disputes or otherwise harm our business relationships with contract manufacturers. In addition, reducing or stopping production at one facility while increasing or starting up production at another facility generally results in significant losses of production efficiency, which can persist for varying periods of time. 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. Further, in order 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.

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. Our production costs depend on many factors that could have a negative effect on our ability to offer our planned products at competitive prices. Key factors beyond production scale and feedstock cost that impact our production costs 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 costs, 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. 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 (and the consumers who purchase products containing such chemicals) 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.

In order for our diesel fuel 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 fuel as an acceptable fuel. In addition, we must successfully demonstrate to these manufacturers that our fuel does 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 has 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. To distribute our diesel fuel, we must also meet requirements imposed by pipeline operators and fuel distributors. 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 is subject to similar types of qualification requirements as diesel, although we believe the qualification process will ultimately take longer and will be more expensive than the process for diesel.

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 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. 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 we 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.

Our relationship with our strategic partner, Total, has a substantial impact on our company.
We have a license, development, research and collaboration agreement with Total, under which we may develop, produce and commercialize products with Total, that originally contemplated Total paying up to the first $\$ 50$ million in research costs for selected research and development projects (which arrangement has been modified as described below). As of March 1, 2013, Total held approximately $18.4 \%$ of our outstanding common stock. Under the agreement, 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. 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 with Total with respect to development and commercialization of Biofene for diesel. This represented an expansion of the initial collaboration that the parties established in 2010, and established a global, exclusive collaboration for the development of Biofene for diesel and a framework for the creation of a joint venture to manufacture and commercialize Biofene for diesel. In addition, a limited number of other potential products were subject to development for the joint venture on a non-exclusive basis. In July 2012, we entered into a further amendment of the collaboration agreement with Total that expanded Total's investment in the Biofene collaboration, incorporated the development of certain joint venture products for use in diesel and jet fuel into the scope of the collaboration, and changed the structure of the funding from Total to include a convertible debt mechanism. Under the new agreements, Total funded $\$ 30$ million in new cash investment during the third quarter of 2012 and, in March 2013, agreed to provide an additional $\$ 30$ million in 2013. Total may decide to provide further funding in 2014. Upon completion of the research and development program, we and Total would form a joint venture company that would have exclusive rights to produce and market renewable diesel and/or jet fuel. Should Total decide not to pursue commercialization, under certain conditions, it is eligible to recover up to $\$ 100$ million, payable in March 2017, in the form of cash or in the form of common stock at a conversion price of $\$ 7.0682$ per share (or, for notes issued in 2013, a lower price as determined under the March 2013 letter agreement as described below in MD\&A-Overview-Total).

Under the agreements related to the July 2012 amendment, the $\$ 50$ million in funding by Total originally contemplated under the collaboration agreement is deemed to be exhausted, so the funding under the most recent amendment is all the funding still contemplated by our agreements with Total. We cannot be certain that Total will choose to continue funding the research and development program or ultimately opt in to participate in the anticipated joint venture. Under the new agreements, Total may, at certain decision points through a final decision date following the earlier of completion of the research and development program or December 31, 2016, decide not to continue funding or participating in the program and, if it does, any notes issued to Total to date will remain outstanding and become payable or convertible into our common stock. If Total chooses to demand repayment of amounts advanced under the notes, we may not be able to repay them by the maturity date in March 2017, which could lead to defaults and our insolvency, and Total and other creditors could pursue collection claims against us. If the notes become convertible and Total chooses to convert them, the resulting issuance of common stock would be dilutive to other stockholders. Under the July 2012 agreements, Total also has a right to participate in our future equity or convertible debt financings through December 31, 2013 to preserve its pro rata ownership of us (and thereafter in limited circumstances). The agreements provided that the purchase price for the first $\$ 30$ million of purchases under this pro rata right would be paid by cancellation of outstanding notes held by Total; Total canceled $\$ 5$ million of an outstanding convertible promissory note in connection with a private placement in December 2012, which reduced the amount of notes it could cancel to exercise its pro rata rights by $\$ 5$ million. Exercise by Total of this right by cancellation of notes reduces the cash proceeds we receive from any covered offering.

The new agreements provide that we will provide an exclusive license to our intellectual property related to the manufacture and commercialization of Biofene-based diesel and jet fuel to the above-mentioned fuels joint venture, and also contemplate providing an option to Total to buy out our interest in the joint venture under certain circumstances such as our insolvency. Furthermore, the new agreements contemplate that Total can, if there is a deadlock in finalizing various matters related to the formation of the joint venture, initiate a bidding process where the fair value of the proposed joint venture would be determined and we would be required to choose whether to (i) sell our joint venture assets to Total for $50 \%$ of the joint venture value, (ii) proceed with formation of the joint venture with Total as a $50 \%$ owner and accept Total's position regarding the funding requirements of the joint venture, or (iii) proceed with the formation of the joint venture with Total as a $50 \%$ owner, accepting Total's position regarding the funding requirements of the joint venture, and then sell all or a portion of our $50 \%$ interest in the joint venture to Total for a price equal to the fair value multiplied by the percentage ownership of the joint venture sold to Total. If we are forced to relinquish our rights with respect to diesel and jet fuel under these scenarios (or under an early exclusive license as described above), our ability to continue pursuing our fuels business will be impaired.

If we do not meet technical, development and commercial milestones in our collaboration agreements, our future revenue and financial results will be adversely impacted.

We have entered into a number of agreements regarding the further development of certain of our products and, in some cases, for ultimate sale of certain products 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 most contain important conditions that must be satisfied before additional research and development funding or product purchases would occur. These conditions include research and development milestones and technical specifications that must be achieved to the satisfaction of our collaborators, which we cannot be certain we will achieve. If we do not achieve these contractual milestones, our revenues and financial results will be harmed.

We are subject to risks related to our reliance on collaboration arrangements to fund development and commercialization of our products.

For most product markets we are trying to address, we either have or are seeking collaboration partners to fund the research and development, commercialization and production efforts required for the target products. Typically we provide limited exclusive rights and revenue sharing with respect to the production and sale of particular types of products in specific markets in exchange for such up-front funding. These exclusivity, revenue-sharing and other similar terms limit our ability to commercialize our products and technology, and may impact the size of our business or our profitability in ways that we do not currently envision. In addition, revenues from these types of relationships are a key part of our cash plan for 2013 and beyond. If we fail to collect expected collaboration revenues, or to identify and add sufficient additional collaborations to fund our planned operations, we may be unable to fund our operations or pursue development and commercialization of our planned products. To achieve our collaboration revenue targets from year to year, we may be forced to enter into agreements that contain less favorable terms, including broader exclusivity provisions for commercial partners and a smaller financial stake in any successful ventures resulting from collaborations.

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

We anticipate that the production of our products will require large volumes of feedstock. We have relied on a mixture of feedstock sources for use at our contract manufacturing operations, including cane sugar, corn-based dextrose and beet molasses. For our large-scale production facilities in Brazil, we are relying 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. 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.

The price of sugarcane and other feedstocks 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. If Consecana makes changes to such terms and prices, this could result higher sugarcane prices and/or a significant decrease in the volume of sugarcane available for the production of our products. Furthermore, if Consecana were to cease to be involved in this process, such prices and terms could become more volatile. Similar principles apply to pricing of other feedstocks as well. Any of these events could adversely affect our business and results of operations.

Our large-scale commercial production capacity is centered in 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. 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. 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;
ehanging interest rates;
\&ax burden and policies;
effects of changes in currency exchange rates;
exchange controls and restrictions on remittances abroad;
inflation;
\&and 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.
We cannot predict whether the current or future Brazilian government will implement changes to existing policies on taxation, exchange controls, monetary strategy, social security and the like, nor can we estimate the impact of any such changes on the Brazilian economy or our operations.

Our international operations 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 significant 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 Brazilian real will not significantly appreciate or depreciate against the U.S. dollar in the future. We also 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 actions to fix 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.

Our use of genetically-modified feedstocks and yeast strains to produce our products subjects us to risks of regulatory limitations and rejection of our products.

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 produced from the GMMs. Various states within the U.S. could choose to regulate products made with GMMs as well. 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 addition to the regulatory requirements relating directly to our yeast strains and products, we must satisfy the product specification requirements of our customers, which can include requirements that we use non-genetically modified feedstocks. For example, some cosmetics suppliers require that ingredients used in their cosmetics not be produced from any genetically-modified feedstocks.

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 a 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 been party to contract manufacturing agreements with parties in other production locations around the world, including Europe. 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 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). Under this program, we need to register our products, including Biofene, 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 (or similar laws and programs) 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 CARB in the U.S. and ANP in Brazil. To date, we have obtained registration with the EPA for the use of our diesel fuel in the U.S. at a $35 \%$ blend rate with petroleum diesel. In addition, ANP has authorized the use our diesel fuel at blend rates of $10 \%$ and $30 \%$ for specific bus fleets. We are also currently in the process of registering our fuel with the CARB 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 CARB (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.

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. In the U.S. and in a number of other countries, regulations and policies encouraging production and use of alternative fuels 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. The 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 attention 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, 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 feedstocks, restrict our ability to use sugarcane or other feedstocks 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 such materials 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 related waste products in an effort to comply with these laws and regulations, we cannot be sure that our safety measures will prevent 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.

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 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 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, with respect to 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;
impairment of assets based on shifting business priorities and working capital limitations;
disruptions in the production process at any manufacturing facility;
dosses associated with producing our products as we ramp to commercial production levels;
failure to recover value added tax (VAT) that we currently reflect as recoverable in our financial statements (e.g., due to failure to meet conditions for reimbursement of VAT under local law);
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 reasonable cost;
fluctuations in foreign currency exchange rates;
gains or losses associated with our hedging activities;
fluctuations in the price of and demand for sugar, ethanol, and petroleum-based and other products for which our products are alternatives;
seasonal variability in production and sales of our products;
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 resulting in transition and severance costs; our ability to use our net operating loss carryforwards 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
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changes in general economic, industry and market conditions, both domestically and in our foreign markets.

In addition, nearly all of our revenue through the third quarter of 2012 came from the sale of ethanol and reformulated ethanol-blended gasoline, with the remainder coming from collaborations and government grants and, more recently, sales of our renewable products. In the third quarter of 2012, we transitioned out of the ethanol and reformulated ethanol-blended gasoline business. We do not expect to be able to replace much of the revenue lost as a result of this transition, particularly in 2013 while we continue our efforts to establish a renewable products business.

As part of our operating plan for 2013, we are reducing our cost structure by improving efficiency in our operations and reducing non-critical expenditures. These efforts have included, and may include in the future, reductions to our workforce and adjustments to the timing and scope of planned capital expenditures.

Due to the factors described above, among 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.

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. As we build our business, we will need to hire additional qualified research and development, management and other 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.

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 also 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, reductions to our workforce as part of cost-saving measures may make it more difficult for us to attract and retain key employees. If do not maintain 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 and operations. 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.

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

We have experienced, and expect to 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 397 at March 1, 2013. 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;

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develop and maintain our relationships with existing and potential business partners;
maintain our quality standards; and
maintain customer satisfaction.

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 adversely impacted.

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 March 1, 2013, we had 202 issued U.S. and foreign patents and 302 pending U.S. and foreign patent applications that were 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;
awe 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;
ave 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.

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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 international 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

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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 third party'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, such third party may require us 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. Significant 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.

Our products subject us to product-safety risks, and we may be sued for product liability.

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The design, development, production and sale of our products involve an inherent risk of product liability claims and the associated adverse publicity. Our potential products could be used by a wide variety of consumers with varying levels of sophistication. Although safety is a priority for us, we are not always in control of the final uses and formulations of the products we supply or their use as ingredients. Our products could have detrimental impacts or adverse impacts we cannot anticipate. Despite our efforts, negative publicity about Amyris, including product safety or similar concerns, whether real or perceived, could occur, and our products could face withdrawal, recall or other quality issues. In addition, 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 with whom we partner to 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 be certain that our contract manufacturers or the sugar and ethanol producers who partner with us to produce our products will have adequate insurance coverage to cover against potential claims. Any insurance we do maintain may not provide adequate coverage against potential losses, and if claims or losses exceed our liability insurance coverage, our business would be adversely impacted. 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. 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, failure to comply 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 in-process research and development acquired in a business combination. We have used 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, 2012, we had a net carrying value of approximately $\$ 9.1$ million million in in-process research and development and goodwill associated with our acquisition of Draths Corporation.

Our ability to use our net operating loss carryforwards 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 carryforwards, 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 carryforward as of December 31, 2012, even if we attain profitability.

Loss of government contract revenues could impair our research and development efforts.
In 2010, we were awarded an "Integrated Bio-Refinery" grant from the U.S. Department of Energy, or DOE. The terms of this grant make 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. In 2012, we entered into a Technology Investment Agreement with The Defense Advanced Research Projects Agency (DARPA), under which we are performing certain research and development activities funded in part by DARPA. Generally, these agreements have fixed terms and may be terminated, modified or recovered by the government agency under certain conditions (such as failure to comply with detailed reporting and governance processes or failure to achieve milestones). Under these agreements, we are also subject to audits, which can result in corrective action plans and penalties up to and including termination. If the DOE or DARPA terminate their agreements with us, in addition to reducing our revenues, our U.S.-based research and development activities could be impaired, which would 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 volatility, and it has declined significantly from our initial public offering price. As of January 31, 2013, the reported closing price for our common stock on the NASDAQ Global Select Market was $\$ 3.04$ per share. 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 report, 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;
ehanges in estimates of our financial results or recommendations by securities analysts;
ehanges in market valuations of similar companies;
ehanges 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;
ditigation 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, 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 and sustained declines 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.

The concentration of our capital stock ownership with insiders will limit your ability to influence corporate matters.
As of March 1, 2013:
our executive officers and directors and their affiliates (including Total) together held approximately $36.5 \%$ of our outstanding common stock;

Total held approximately $18.4 \%$ of our outstanding common stock; and
our next two largest holders of outstanding common stock after Total (Maxwell Mauritius Pte. Ltd. and Biolding Investment SA, each of whom has a designee on our Board of Directors) together held approximately $22.1 \%$ of our
outstanding common stock.

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 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 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 certificate of incorporation and bylaws 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;
dimiting the liability of, and providing indemnification to, our directors and officers;
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 fifteen 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 ten 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 March 5, 2013:

Name
Executive Officers:
John Melo
Steven R. Mills
Peter Boynton
Joel Cherry, Ph.D.
Paulo Diniz
Gary Loeb
Zanna McFerson
Key Employees:
Jack Newman, Ph.D.

Age Position
47 Director, President and Chief Executive Officer
57 Chief Financial Officer
58 Chief Commercial Officer
52 President of Research and Development
55 Chief Executive Officer, Amyris Brasil Ltda.
43 Senior Vice President, General Counsel and Corporate Secretary
47 Chief Business Officer
46 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.

## Steven R. Mills

Steven Mills has served as our Chief Financial Officer since May 2012. Prior to joining Amyris, Mr. Mills served as Senior Executive Vice President of Performance \& Growth at Archer-Daniels-Midland Company (ADM), a global agricultural commodity processing company, from December 2010 to February 2012. Previously, he served as ADM's Executive Vice President and Chief Financial Officer from March 2008 to December 2010. Mr. Mills joined ADM in 1979 and served in various senior accounting and treasury roles, including 12 years as Controller. He has been a director and a member of the audit committee of Black Hills Corporation, a diversified energy holding company, since October 2011. Mr. Mills also serves on the boards of Illinois College and Hickory Point Bank \& Trust. He holds a Bachelor of Science degree in Mathematics from Illinois College in Jacksonville, Illinois.

## Peter Boynton

Peter Boynton has served as our Chief Commercial Officer since December 2009. Mr. Boynton joined Amyris from Tate \& Lyle Plc., a global food and agricultural ingredients company, where he served in various positions from 1999 to December 2009, most recently as Senior Vice President, Bio-products, and Fermentation. Previously, he held
multiple positions at Cargill, Inc., a privately-held food and agriculture company, from 1980 to 1998, lastly as Vice President NACM. Mr. Boynton holds a Bachelor of Science degree in Economics from the University of Georgia.

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.

Gary Loeb
Gary Loeb joined Amyris in March 2011 as Senior Corporate and Regulatory Counsel and became General Counsel and Corporate Secretary in May 2012. Previously, Mr. Loeb served as Vice President of Intellectual Property from March 2008 to May 2011 and as Head of Litigation, most recently as Associate General Counsel, from 2003 to March 2008 at Genentech, Inc., a biotechnology company. Prior to joining Genentech in 2000, Mr. Loeb practiced general intellectual property law in Los Angeles and San Francisco. Mr. Loeb holds a Doctor of Jurisprudence degree from Columbia Law School and a Bachelor of Science degree in Biological Sciences and Bachelor of Arts degree in English from Stanford University. Mr. Loeb also served as an Adjunct Professor at the University of San Francisco School of Law from 2006 through 2011, where he lectured on biotechnology law.

## Zanna McFerson

Zanna McFerson joined us as our Chief Business Officer in March 2013. Prior to joining Amyris, Ms. McFerson was a Vice President at Cargill, Incorporated, a privately-held international producer and marketer of food, agricultural, financial and industrial products and services, where she served as Business Director, Truvia Enterprise, from August 2008 to February 2013. Previously, Ms. McFerson served as Business Director, Health and Nutrition - Truvia, at Cargill from May 2006 to July 2008. She joined Cargill in 1990 as a commodity trader and held various roles in sales, management, and new product development until joining the leadership team of Cargill Health and Nutrition in May 2005. Ms. McFerson received a Bachelor of Arts degree in Economics from the University of Illinois and a Master of Business Administration degree from the University of Iowa. She served on the Board of Directors for the International Stevia Council, is a member of the Finnish American Chamber of Commerce, and contributes to the American Swedish Institute in Minneapolis.

## 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 space, we use approximately 113,000 square feet for general office purposes and lab space, and approximately 23,000 square feet comprise our pilot plant. 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 month-to-month lease. This lease relates to manufacturing operations through Glycotech, one of our variable interest entities.

Amyris Brasil leases approximately 52,000 square feet of space in Campinas, Brazil, pursuant to two leases that will expire in October 2015 and November 2016. Of this space, approximately 36,000 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.

Our first large-scale Biofene production plant commenced operations in December 2012 in Brotas in the state of São Paulo, Brazil and is adjacent to an existing sugar and ethanol mill, Paraíso Bioenergia. Amyris Brasil leases approximately 800,000 square feet of space for this plant, which has six 200,000 liter production fermenters and was designed to process sugarcane juice, or its equivalent, from up to one million tons of raw sugarcane annually; this lease expires in March 2026. Amyris Brasil also leases approximately 500,000 square feet of space for a future manufacturing site; this lease expires in January 2031.

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 2013. In addition, we have secured a second location for the same purpose in Texas for the use of a Biofene storage tank with an aggregate capacity of 10,000 barrels. Our current agreement in Texas expires in January 2014.

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 we believe 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 eight quarters.

Fiscal 2012
Fourth quarter
Price Range Per Share
High Low

Third quarter
\$3.48
\$2.16
Second quarter
\$4.56
\$2.74
First quarter
\$12.29
\$1.57
\$20.86
\$9.90
Fourth quarter
Third quarter
\$28.75
\$ 17.57
Second quarter
First quarter

## Holders

As of March 1, 2013, there were approximately 121 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, 2012 of cumulative total return on an 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.

COMPARISON OF 27 MONTH CUMULATIVE TOTAL RETURN
Among Amyris, Inc., the S\&P SmallCap 600 Index, and the NASDAQ Clean Edge Green Energy Index


This performance graph shall not be deemed "soliciting material" or to be "filed" with the SEC for purposes of (1) Section 18 of the Securities 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

On February 23, 2012, we sold $10,160,325$ shares of our common stock at a price of $\$ 5.78$ per share for aggregate cash proceeds of approximately $\$ 58.7$ million.

On February 24, 2012, we sold senior unsecured convertible promissory notes in an aggregate principal amount of $\$ 25.0$ million for aggregate cash proceeds of $\$ 25.0$ million. Such notes were $3 \%$ senior unsecured convertible promissory notes with a March 1, 2017 maturity date and a conversion price equal to $\$ 7.0682$ per share of common stock. As of December 31, 2012, the notes were convertible into an aggregate of up to 3,536,968 shares of common stock. The conversion price of the notes is subject to adjustment for proportional adjustments to outstanding common stock and under anti-dilution provisions in case of certain dividends and distributions. The note holders have a right to require repayment of $101 \%$ of the principal amount of the notes in the event of a change of control of Amyris. In addition, if the note holders do not require such repayment upon a change of control, then upon conversion of the notes following such change of control, we are required to pay the interest that would have otherwise accrued through maturity.

On May 18, 2012, we sold $1,736,100$ shares of our common stock at a price of $\$ 2.36$ per share for aggregate cash proceeds of approximately $\$ 4.1$ million.

In July and September 2012, we completed the sale of senior unsecured convertible promissory notes in an aggregate principal amount of $\$ 53.3$ million pursuant to a purchase agreement with Total ("Total Notes"). Under the purchase agreement: (i) on July 30, 2012, we sold a $1.5 \%$ senior unsecured convertible note due 2017 to Total in the face amount of $\$ 38.3$ million, including $\$ 15.0$ million in new funds and repayment by Amyris of $\$ 23.3$ million in previously-provided diesel research and development funding by Total, and (ii) on September 14, 2012, we sold another note (in the same form) for $\$ 15.0$ million in new funds from Total. The purchase agreement provides that additional notes may be sold in subsequent closings in July 2013 (for cash proceeds to Amyris of $\$ 30.0$ million) and July 2014 (for cash proceeds to Amyris of $\$ 21.7$ million, which would be settled in an initial installment of $\$ 10.85$ million payable at such closing and a second installment of $\$ 10.85$ million payable in January 2015).

The Total Notes each have a March 1, 2017 maturity date and a conversion price equal to $\$ 7.0682$ per share of our common stock. The Total Notes bear interest of $1.5 \%$ per year (with a default rate of $2.5 \%$ ), accruing from date of funding and payable at maturity or on conversion or a change of control where Total exercises a right to require us to repay the notes. Accrued interest is canceled if the notes are canceled based on a decision by Total to proceed with the underlying program and joint venture (a "Go" decision as discussed in "Note 9 - Significant Agreements" in Part I, Item 1 of this report). The notes become convertible into our common stock (i) within 10 trading days prior to maturity (if they are not canceled as described above prior to their maturity date), (ii) on a change of control of Amyris, (iii) if Total is no longer the largest stockholder of Amyris following a "No-Go" decision (subject to a six-month lock-up with respect to any shares of common stock issued upon conversion), and (iv) on a default by Amyris. If Total makes a final "Go" decision, then the notes will be exchanged by Total for equity interests in the Fuels JV, after which the notes will not be convertible and any obligation to pay principal or interest on the notes will be extinguished. If Total makes a "No-Go" decision, outstanding notes will remain outstanding and become payable at maturity.

As of September 30, 2012, the Total Notes were convertible into an aggregate of approximately 7,540,817 shares of our common stock. The conversion price of the notes is subject to adjustment for proportional adjustments to outstanding common stock and under anti-dilution provisions in case of certain dividends and distributions. Total has a right to require repayment of $101 \%$ of the principal amount of the notes in the event of a change of control of Amyris and the notes provide for payment of unpaid interest on conversion following such a change of control if Total does not require such repayment.

On December 24, 2012, we sold $14,177,849$ shares common stock at a price of $\$ 2.98$ per share for aggregate cash proceeds of $\$ 37.2$ million and cancellation of $\$ 5.0$ million of an outstanding senior unsecured convertible promissory notes we previously issued to Total. The cash settlement with respect to $5,033,557$ of such shares occurred on January 14, 2013.

No underwriters were involved in the foregoing sales of securities. These securities were issued in private transactions pursuant to Section 4(2) of the Securities Act. The recipients of these securities acquired the securities 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 and notes issued in, these transactions. These security holders had adequate access, through their relationships with us, to information about us.

## ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated statements of operations data for the years ended December 31, 2012, 2011 and 2010 and the selected consolidated balance sheets data as of December 31, 2012 and 2011 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,
$2012 \quad 2010$$\quad 2009$ 2011 2008

Consolidated Statements of Operations Data:
Revenues

| Product sales | \$49,638 | \$129,837 | \$68,664 | \$61,689 | \$ 10,680 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Grants and collaborations revenue | 24,056 | 17,154 | 11,647 | 2,919 | 3,212 |
| Total revenues | 73,694 | 146,991 | 80,311 | 64,608 | 13,892 |
| Cost and operating expenses |  |  |  |  |  |
| Cost of products sold | 77,314 | 155,615 | 70,515 | 60,428 | 10,364 |
| Loss on purchase commitments and write off of production assets | 45,854 | - | - | - | - |
| Research and development ${ }^{(1)}$ | 73,630 | 87,317 | 55,249 | 38,263 | 30,306 |
| Sales, general and administrative ${ }^{(1)}$ | 78,718 | 83,231 | 40,393 | 23,558 | 16,622 |
| Restructuring and asset impairment | - | - | (2,061 | 5,768 | - | (income) charges

Total cost and operating expenses
Net loss from operations
Other income (expense):

| Interest income | 1,472 |  | 1,542 |  | 1,540 |  | 448 |  | 1,378 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest expense | (4,926 | ) | (1,543 | ) | (1,443 | ) | (1,218 | ) | (377 |
| Other income (expense), net | 224 |  | 214 |  | 898 |  | (621 |  | (144 |
| Total other income (expense) | (3,230 | ) | 213 |  | 995 |  | (1,391 | ) | 857 |
| Loss before income taxes | (205,052 | ) | (178,959 | ) | (82,790 | ) | (64,800 | ) | (42,543 |
| Income tax benefit (provision) | (981 | ) | (552 | ) | - |  | - |  | 207 |
| Net loss | \$ 206,033 | ) | \$(179,511 | ) | \$(82,790 | ) | \$(64,800 | ) | \$(42,336 |
| Loss attributable to noncontrolling interest | 894 |  | 641 |  | 920 |  | 341 |  | 472 |
| Net loss attributable to Amyris, Inc | \$ 205,139 | ) | \$(178,870 | ) | \$(81,870 | ) | \$(64,459 | ) | \$(41,864 |
| Deemed dividend related to a | - |  | - |  | (42,009 |  | - |  | - |

beneficial conversion feature
Net loss attributable to Amyris, Inc.
common stockholders
Net loss per share attributable to common stockholders, basic and $\$(3.62 \quad$ ) $\$(3.99 \quad$ ) $\$(8.35 \quad$ ) $\$(13.56 \quad \$(9.91$ diluted

$$
\begin{array}{ccccc}
56,717,869 & 44,799,056 & 14,840,253 & 4,753,085 & 4,223,533
\end{array}
$$

Weighted-average shares of common stock outstanding used in computing net loss per share of common stock, basic and diluted ${ }^{(1)}$ Includes stock-based compensation expense.

As of December 31,

| 2012 | 2011 | 2010 | 2009 |
| :--- | :--- | :--- | :--- |
| (In Thousands) |  |  | 2008 |

Consolidated Balance Sheets Data:

| Cash, cash equivalents, investments and restricted cash | \$31,644 | \$ 103,592 | \$257,933 | \$71,716 | \$52,888 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Working capital | 3,668 | 47,205 | 242,818 | 51,062 | 32,356 |
| Property, plant and equipment, net | 163,121 | 128,101 | 54,847 | 42,560 | 41,565 |
| Total assets | 242,834 | 320,111 | 357,453 | 122,159 | 98,823 |
| Total indebtedness ${ }^{(1)}$ | 106,774 | 47,660 | 12,590 | 20,608 | 6,747 |
| Convertible preferred stock warrant liability |  | - | - | 2,740 | 2,132 |
| Convertible preferred stock | - | - | - | 179,651 | 121,436 |
| Redeemable noncontrolling interest |  | - | - | 5,506 | - |
| Total equity (deficit) | 66,229 | 160,812 | 307,548 | (113,745 | (52,143 |

Total indebtedness as of December 31, 2012, 2011, 2010, 2009 and 2008 includes $\$ 2.6$ million, $\$ 6.3$ million, $\$ 5.9$ million, $\$ 7.2$ million and $\$ 3.6$ million, respectively, in capital lease obligations, $\$ 1.6$ million, $\$ 3.1$ million, $\$ 5.7$ million, $\$ 4.0$ million and zero, respectively, in notes payable, $\$ 26.2$ million, $\$ 19.4$ million, $\$ 1.0$ million, $\$ 1.0$

## (1)

 million and $\$ 3.1$ million, respectively, in loan payable, $\$ 12.4$ million, $\$ 18.9$ million, zero, $\$ 8.3$ million and zero respectively, in credit facility. Total indebtedness as of December 31, 2012 also included $\$ 25.0$ million in convertible notes and $\$ 39.0$ million in related party convertible notes. There was no convertible notes balance outstanding as of December 31, 2011, 2010, 2009 and 2008 (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

Amyris is a renewable products company focused on providing sustainable alternatives to a broad range of petroleum-sourced products. We developed innovative microbial engineering and screening technologies that modify the way microorganisms process sugars. We are using our proprietary synthetic biology platform to design microbes, primarily yeast, and use them as living factories in established fermentation processes to convert plant-sourced sugars into renewable hydrocarbons. We are developing, and, in some cases, already commercializing, products from these hydrocarbons in several target markets, including 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.

We have been applying our industrial synthetic biology platform to provide alternatives to a broad range of petroleum-sourced products. We have focused our development efforts on the production of Biofene, our brand of renewable farnesene, a long-chain, branched liquid hydrocarbon molecule. Using Biofene as a first commercial building block molecule, we are developing a wide range of renewable products for our target markets.

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 have also produced Biofene from other feedstocks such as sugar beets, corn dextrose, sweet sorghum and cellulosic sugars.

Our first purpose-built, large-scale Biofene production plant commenced operations in southeastern Brazil in December 2012. This plant in Brotas, in the state of São Paulo, is adjacent to an existing sugar and ethanol mill, Paraíso Bioenergia. We have also advanced initial construction of a second large-scale production plant in Brazil, located at the Usina São Martinho sugar and ethanol mill also in the state of São Paulo, which we intend to complete when production economics support start-up of that plant. To satisfy initial commercial demand for our products until our own facilities are operating, we have leveraged contract-manufacturing capabilities of established companies.

Our business 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

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to support large-scale production and global distribution for our large-market commodity products. Our initial renewable products efforts have been focused on cosmetics, niche fuel opportunities, fragrance oils, and farnesene for liquid polymers.

## Total Relationship

In June 2010, we entered into a collaboration agreement with Total. This agreement provided 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. In November 2011, we entered into an amendment of the collaboration agreement with Total with respect to development and commercialization of Biofene for diesel. This represented an expansion of the initial collaboration with Total, and established a global, exclusive collaboration for the development of Biofene for diesel and a framework for the creation of a joint venture to manufacture and commercialize Biofene for diesel. In addition, a limited number of other potential products were subject to development for the joint venture on a non-exclusive basis. In July 2012, we entered into a further amendment of the collaboration agreement with Total that expanded Total's investment in the Biofene collaboration, incorporated the development of certain joint venture products for use in diesel and jet fuel into the scope of the collaboration, and changed the structure of the funding from Total to include a convertible debt mechanism. Under the new agreements, we issued senior unsecured convertible notes to Total for an aggregate of $\$ 30.0$ million in new cash in the third quarter of 2012. Total may decide to provide further funding at annual decision points in mid-2013 and 2014. Upon completion of the research and development program, we and Total would form a joint venture company that would have exclusive rights to produce and market renewable diesel and/or jet fuel. Should Total decide not to pursue commercialization, under certain conditions, it is eligible to recover up to $\$ 100$ million, payable in March 2017, in the form of cash or in the form of common stock at a conversion price of $\$ 7.0682$ per share (or, for notes issued in 2013, a lower price as determined under the March 2013 letter agreement as described below).

In connection with a private placement of our common stock that occurred in December 2012, Total elected to participate by exchanging approximately $\$ 5.0$ million of its $\$ 53.3$ million in senior unsecured convertible debt outstanding for $1,677,852$ shares at the purchase price in this private placement of $\$ 2.98$ per share. As such, $\$ 5.0$ million of the outstanding $\$ 53.3$ million in senior unsecured convertible debt was cancelled.

In March 2013, we entered into a letter agreement with Total under which Total agreed to waive its right to cease its participation in our fuels collaboration at the July 2013 decision point referenced above and committed to proceed with the July 2013 funding tranche of $\$ 30.0$ million (subject to our satisfaction of the relevant closing conditions for such funding in the securities purchase agreement). As consideration for this waiver and commitment, we agreed to:

Reduce the conversion price for the senior unsecured convertible promissory notes to be issued in connection with such funding from $\$ 7.0682$ per share to a price per share equal to the greater of (i) the consolidated closing bid price of our common stock on the date of the letter agreement, plus $\$ 0.01$, and (ii) $\$ 3.08$ per share, provided that the conversion price will not be reduced by more than the maximum possible amount permitted under the NASDAQ rules such that the new conversion price would require us to obtain stockholder consent; and

Grant Total a senior security interest in our intellectual property, subject to certain exclusions and subject to release by Total when we and Total enter into final documentation regarding the establishment of the Fuels JV.

In addition to the waiver by Total described above, Total also agreed that, at our request and contingent upon us meeting our obligations described above, it would pay advance installments of the amounts otherwise payable at the July 2013 closing. Specifically, if we request such advance installments, subject to certain closing conditions and delivery of certifications regarding our cash levels, Total is obligated to fund $\$ 10.0$ million no later than May 15 , 2013, and an additional $\$ 10.0$ million no later than June 15,2013 , with the remainder funding on the original July

2013 closing date.
Contract Manufacturing
In 2010 and 2011, to support our initial commercial production of Biofene, we entered into contract manufacturing agreements with various contract manufacturing partners. We also established contract manufacturing relationships to support conversion of Biofene into finished chemical products. Under the terms of the associated contract manufacturing agreements, we provided necessary equipment for the manufacturing of products, over which we retained ownership. During 2012 and 2011, we reimbursed contract manufacturers for an aggregate of $\$ 13.8$ million in expenditures related to the modification of their facilities. We recorded these costs as facility modification costs in other assets and amortized them as an offset against purchases of inventory. Certain of our contract manufacturing agreements have also imposed fixed purchase commitments on us, regardless of production volumes.

In January 2011, we entered into a production service agreement with Glycotech under which Glycotech performs finishing steps to convert Biofene into squalane, diesel, base oils for industrial lubricants, and other products. In addition, in July 2011, we

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entered into a contract manufacturing agreement with Albemarle under which Albemarle is to 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 an amended and restated agreement with Albemarle, which superseded the original contract manufacturing agreement with Albemarle. The term of the new 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 per quarter are payable 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. 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 initially to sell it primarily in the forms of squalane, diesel, base oils for industrial lubricants, and other products.

Beginning in March 2012, we initiated a plan to shift production capacity from the contract manufacturing facilities to Amyris-owned plants that were then under construction. As a result, we evaluated our contract manufacturing agreements and recorded a loss of $\$ 31.2$ million related to $\$ 10.0$ million in facility modification costs and $\$ 21.2$ million of fixed purchase commitments in the first quarter of 2012. We recognized additional charges of $\$ 1.4$ million and $\$ 7.8$ million, respectively, in the third and fourth quarter of 2012 associated with losses on fixed purchase commitments. We computed the loss on facility modification costs and fixed purchase commitments using the same lower of cost or market approach that is used to value inventory. The computation of the loss on firm purchase commitments is subject to several estimates, including cost to complete and the ultimate selling price of any of our products manufactured at the relevant production facilities, and is therefore inherently uncertain. We also recorded a loss on write-off of production assets of $\$ 5.5$ million related to Amyris-owned production equipment at contract manufacturing facilities in the three months ended March 31, 2012. We will continue to evaluate the potential for losses in future periods based on updated production and sales price assumptions.

During the year ended December 31,2012 , we incurred $\$ 38.7$ million of scale-up costs to support our production of Biofene-derived products that are included within cost of products sold. These scale-up costs include the contract manufacturing cost related to production of Biofene-derived products and the finishing of Biofene into finished products. 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. We anticipate that our production costs will decrease as we continue to improve our processes and increase throughput.

## Sales and Revenue

To commercialize our initial Biofene-derived product, squalane, for sale to cosmetics companies for use as a moisturizing ingredient in cosmetics and other personal care products, we have entered into marketing and distribution agreements with a number of distributors since June 2010. As an initial step towards commercialization of Biofene-based diesel, we have entered into agreements with several bus operators in São Paulo, Brazil. Our diesel fuel is supplied to BR Distribudora, a division of Petrobras, which in turn blends our product with petroleum diesel and sells to a number of bus operators including Santa Brigida, the largest bus fleet operator in São Paulo. 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.

We have also entered into agreements to sell Biofene and its derivatives directly to various potential customers, including with M\&G for use in plastics, with Kuraray for use in production of polymers, with Michelin for use in tires, with Firmenich and Givaudan for ingredients for the flavors and fragrances market, and with Method for use in home and personal care products. 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.

Since inception through December 31, 2012, we have recognized $\$ 392.5$ million in revenue, primarily from the sale of ethanol and reformulated ethanol-blended gasoline. We transitioned out of the ethanol and ethanol-blended business during the third quarter ended September 30, 2012. We do not expect to be able to replace much of the revenues lost in the near term as a result of this transition, particularly in 2013 while we continue our efforts to establish our renewable products business.

## Financing

In 2012, we completed multiple financings involving loans and convertible debt and equity offerings. In February 2012, we completed a private placement of 10.2 million shares of common stock for aggregate proceeds of $\$ 58.7$ million and raised $\$ 25.0$ million from an offering of senior unsecured convertible promissory notes. In May 2012, we completed a private placement of 1.7 million shares of common stock for aggregate proceeds of $\$ 4.1$ million. In July 2012, we completed a sale of $\$ 38.3$ million in a senior unsecured convertible promissory note for cash proceeds of $\$ 15.0$ million and our repayment of $\$ 23.3$ million in
previously-provided research and development funds and, in September 2012, we completed a sale of an additional senior unsecured convertible promissory note for additional cash proceeds of $\$ 15.0$ million. In December 2012, we completed a private placement of 14.2 million shares of common stock for aggregate proceeds of $\$ 37.2$ million and the cancellation of $\$ 5.0$ million worth of outstanding senior unsecured convertible promissory notes we previously issued to Total in exchange for approximately 1.7 million shares of common stock. Under the December 2012 purchase agreement and related documents, the purchase of a portion of the shares, representing $\$ 15.0$ million of the proceeds from that transaction, was not settled until January 2013. Cash received as of December 31, 2012 in the December 2012 financing, net of the note conversion and the January 2013 settlement, was $\$ 22.2$ million.

## Liquidity

We have incurred significant losses in each year since our inception and believe that we will continue to incur losses and negative cash flow from operations into at least 2014. As of December 31, 2012, we had an accumulated deficit of $\$ 586.3$ million and had cash, cash equivalents and short term investments of $\$ 30.7$ million. We have significant outstanding debt and contractual obligations related to purchase commitments, as well as capital and operating leases. As of December 31, 2012, our debt totaled $\$ 104.2$ million, of which $\$ 3.3$ million matures within the next twelve months. In addition, our debt agreements contain various covenants, including restrictions on business that could cause us to be at risk of defaults. In March 2013, we signed a collaboration agreement that included a funding component, and obtained a commitment letter from Total with respect to additional convertible note funding (as described above), and we expect to use amounts received under these arrangements to fund our operations. Furthermore, we are expecting additional funding in 2013 from collaborations, equity or debt offerings, or combinations of these sources. Our operating plan contemplates securing a portion of this additional funding in the second quarter of 2013. However, as of the date of this filing, we have not yet secured this additional funding. There can be no assurance that financing will be available on commercially acceptable terms or at all. If we are unable to raise additional financing, or if other expected sources of funding are delayed or not received, we would take actions to support our liquidity needs that could have a material negative impact on our ability to continue our business as currently contemplated. See "Liquidity and Capital Resources" below in this section for additional detail regarding these contingency plans and their potential effects on our business.

## 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 United States. 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 farnesene-derived products, from the delivery of collaborative research services and from government grants. Through the third quarter of 2012, we also sold ethanol and reformulated ethanol-blended gasoline under short-term agreements and in spot transactions at prevailing market prices. 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 collectibility is reasonably assured.

If sales arrangements contain multiple elements, we evaluate whether the components of each arrangement represent separate units 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

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Starting in the second quarter of 2011, we commenced sales of farnesene-derived products. Through the third quarter of 2012, we also sold ethanol and reformulated ethanol-blended gasoline under short-term agreements and in spot transactions at prevailing market prices. 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 products sold. 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 collectibility 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. Under a government contract signed in June 2012, we will receive funding based on achievement of program milestones and accordingly revenues are recognized using the proportionate performance method based upon actual efforts to date relative to the amount of expected effort to be incurred, up to the amount of verified payable milestones.

## 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, plant 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 not to be 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

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charges in the future. We recorded losses on write-off of production assets of $\$ 6.4$ million during the year ended December 31, 2012. There were no such losses on write off of production assets recorded in the years ended December 31, 2011 and 2010.

## Inventories

Inventories, which consist of farnesene-derived products, ethanol and reformulated ethanol-blended gasoline, are stated at the lower of cost or market. In the quarter ended September 30, 2012, we sold our remaining inventory of ethanol and reformulated ethanol-blended gasoline as we transitioned out of this business. We evaluate the recoverability of our inventories based on assumptions about expected demand and net realizable value. If we determine that the cost of inventory exceeds its estimated net realizable value, we record a write-down equal to the difference between the cost of inventory and the estimated net realizable value. If actual net realizable values are lower than those projected by management, additional inventory write-downs may be required that could negatively impact our operating results. If actual net realizable values are more than those projected by management, we may have favorable operating results when products that have been previously written down are sold in the normal course of business. We also evaluate the terms of our agreements with our suppliers and establish accruals for estimated losses on adverse purchase commitments as necessary, applying the same lower of cost or market approach that is used to value inventory.

## 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 have used 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 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 will 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, 2012.

## Stock-Based Compensation

Stock-based compensation cost for RSUs is measured based on the closing fair market value of our common stock on the date of grant. Stock-based compensation cost for stock options and employee stock purchase plan rights is estimated at the grant date and offering date, respectively, based on the fair-value of our common stock using the Black-Scholes option pricing model. 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. The measurement of nonemployee 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.

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In future periods, our stock-based compensation expense is expected to change 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 equity 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, |  |  |
| :--- | :--- | :--- | :--- |
|  | 2012 | 2011 | 2010 |
| Expected dividend yield | $-\%$ | $-\%$ | $-\%$ |
| Risk-free interest rate | $1.1 \%$ | $2.3 \%$ | $2.5 \%$ |
| Expected term (in years) | 6.0 | 5.8 | 6.0 |
| Expected volatility | $77 \%$ | $86 \%$ | $96 \%$ |

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.

Expected volatility is derived from a combination of historical volatility for our stock and the historical volatilities of a 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.

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.

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 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

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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, 2012, 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.

## Embedded Derivatives Related to Convertible Notes

Embedded derivatives that are required to be bifurcated from the underlying debt instrument (i.e. host) are accounted for and valued as a separate financial instrument. We evaluated the terms and features of our convertible notes payable and identified a compound embedded derivative (a conversion option that contains a "make-whole interest" provision) requiring bifurcation and accounting at fair value because the economic and contractual characteristics of the embedded derivative met the criteria for bifurcation and separate accounting due to the conversion option containing a "make-whole interest" provision, that requires cash payment for forgone interest upon a change of control. We estimate the fair value of the compound embedded derivative using a Black-Scholes valuation model that combines expected cash outflows with market-based assumptions regarding risk-adjusted yields, stock price volatility, probability of a change of control and the trading information of our common stock into which the notes are convertible. The change in the fair value of the bifurcated compound derivative is primarily related to the change in price of the underlying common stock and is reflected in our consolidated statements of operations as "other income (expense)."

Results of Operations

Comparison of Year Ended December 31, 2012 to Year Ended December 31, 2011
Revenues

|  | Years Ended December 31, <br> 2012 | Year-to Year <br> Change | Percentage <br> Change |
| :--- | :--- | :--- | :--- | :--- |
| (Dollars in thousands) |  |  |  |

Our total revenues decreased by $\$ 73.3$ million to $\$ 73.7$ million in 2012 with such reduction resulting primarily from decreases in product sales. Revenue from product sales decreased by $\$ 80.2$ million to $\$ 49.6$ million primarily from lower sales of ethanol and reformulated ethanol-blended gasoline purchased from third parties which accounted for $\$ 90.2$ million of the reduction, with a decrease in gallons sold and an increase in average selling price per gallon compared to 2011. We sold 2.3 million gallons of ethanol and 11.2 million gallons of reformulated ethanol-blended gasoline in the 2012 compared to 10.1 million gallons of ethanol and 36.4 million gallons of reformulated ethanol-blended gasoline sales in the prior year. Product sales of our farnesene-derived products increased $\$ 10.0$ million in 2012 compared to the prior year. Grants and collaborations revenue in 2012 increased by $\$ 6.9$ million compared to the prior year primarily due to the revenue recognized upon the amendment of our collaboration agreement with Total as described in more detail in "Financial Statements and Supplementary Data-Note 4-Balance Sheet Components," which resulted in the recognition of approximately $\$ 9.8$ million in collaboration revenue, partially offset by a decline in other collaboration revenue of $\$ 2.9$ million.

Nearly all of our revenues to date have come from the sale of ethanol and reformulated ethanol-blended gasoline with the remainder coming from renewable products as well as from collaborations and government grants. We transitioned out of the ethanol and ethanol-blended gasoline business during the third quarter of 2012. We do not expect to be able to replace much of the revenue lost in the near term as a result of this transition, particularly in 2013 while we continue our efforts to establish a renewable products business.

Cost and Operating Expenses

|  | Years Ended December 31, 20122011 <br> (Dollars in thousands) |  | Year-to Year Change |  | Percentage Change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cost of products sold | \$77,314 | \$155,615 | \$(78,301 | ) | (50 | )\% |
| Loss on purchase commitments and write-off of production assets | 45,854 | - | 45,854 |  | nm |  |
| Research and development | 73,630 | 87,317 | (13,687 | ) | (16 | )\% |
| Sales, general and administrative | 78,718 | 83,231 | (4,513 |  | (5 | ) \% |
| Total cost and operating expenses | \$275,516 | \$326,163 | \$ 50,647 |  | (16 | )\% |

nm= not meaningful

Cost of Products Sold
Cost of products sold consists primarily of cost of purchased ethanol and reformulated ethanol-blended gasoline, terminal fees paid for storage and handling, transportation costs between terminals and changes in the fair value of derivative commodity instruments. Starting in the second quarter of 2011, our cost of products sold also included production costs of farnesene-derived products, which included cost of raw materials, amounts paid to contract manufacturers and period costs including inventory write-

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downs resulting from applying lower-of-cost-or-market inventory valuations. Cost of farnesene-derived products sold also includes certain costs related to the scale-up in production of such products. Our cost of products sold decreased by $\$ 78.3$ million to $\$ 77.3$ million in 2012 compared to the prior year. We had a decrease of $\$ 91.5$ million in costs of ethanol and reformulated ethanol-blended gasoline purchased from third parties primarily due to a decline in product volume partially offset by an increase in average unit cost. This decrease in cost of products sold for ethanol and reformulated ethanol-blended gasoline was partially offset by an increase in product costs of farnesene-derived products of $\$ 13.2$ million compared to the prior year as we scale up our renewable operations.

We transitioned out of our ethanol and gasoline business in the quarter ended September 30, 2012, which resulted in a reduction of cost of products sold. As we are now operating our own large-scale Biofene production plant in Brotas, in the state of São Paulo, Brazil as of December 2012, we will have a scale-up of production from this facility and the associated manufacturing costs. As we develop cost efficient manufacturing in our first production facility, we expect to seek to work selectively with other Brazilian sugar and ethanol producers to build additional facilities adjacent to their existing mills, thereby reducing the capital required to establish and scale our production operations.

We expect our cost per unit of products sold associated with farnesene-derived products to decline if and when we achieve full-scale commercial production at our large-scale manufacturing facility. We are not able to predict when or if this will occur.

## Cost of Products Sold Associated with Loss on Purchase Commitments and Write-Off of Production Assets

Beginning in March 2012, we initiated a plan to shift a portion of our production capacity from contract manufacturing facilities to Amyris-owned plants that were then under construction. As a result, we evaluated our contract manufacturing agreements and, in the first quarter of 2012, recorded a loss of $\$ 31.2$ million related to facility modification costs and fixed purchase commitments. We also recorded an impairment charge of $\$ 5.5$ million in the three months ended March 31, 2012 related to Amyris-owned equipment at contract manufacturing facilities, based on the excess of the carrying value of the assets over their fair value. We recognized additional charges of $\$ 1.4$ million and $\$ 7.8$ million, respectively, in the third and fourth quarter of 2012 associated with losses on fixed purchase commitments. We computed the loss on facility modification costs and fixed purchase commitments using the same approach that is used to value inventory-the lower of cost or market value. The computation of the loss on firm purchase commitments is subject to several estimates, including the ultimate selling price of any of our products manufactured at the relevant production facilities, and is therefore inherently uncertain.

## Research and Development Expenses

Our research and development expenses decreased by $\$ 13.7$ million in 2012 over the prior year, primarily as a result of overall lower spending. The decreases were attributable to a $\$ 5.7$ million reduction in expenses associated with completions of certain outsourced process development projects, a $\$ 2.5$ million decrease in outsourced services resulting from completion of certain phases of our government grants project, $\$ 2.2$ million reduction in outside consulting expenses, a $\$ 1.9$ million decrease in personnel-related expenses associated with lower headcount, and a $\$ 0.9$ million decrease in travel-related expenses and other overhead expenses. Research and development expenses included stock-based compensation expense of $\$ 6.5$ million in 2012 compared to $\$ 6.3$ million in 2011.

## Sales, General and Administrative Expenses

Our sales, general and administrative expenses decreased by $\$ 4.5$ million in 2012 compared to the same period of the prior year. The decrease is attributed primarily to a $\$ 7.3$ million reduction in spend for consulting and professional service fees and a $\$ 0.9$ million decrease in travel-related expenses partially offset by a $\$ 3.6$ million increase in personnel-related expenses associated with severance and transition costs and higher stock-based compensation. Sales,
general and administrative expenses included stock-based compensation expense of $\$ 21.0$ million and $\$ 19.1$ million during 2012 and 2011, respectively.

Other Income (Expense)

|  | Years Ended December 31, <br> 2012 <br> (Dollars in thousands) |  | Year-to Year <br> Change | Percentage <br> Change |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Other income (expense): | $\$ 1,472$ | $\$ 1,542$ | $\$(70$ | $)$ | $(5)$ |

Total other expense increased by approximately $\$ 3.4$ million to $\$ 3.2$ million in 2012 compared to the prior year. The increase in total other expense was related primarily to higher interest expense of $\$ 3.4$ million associated with increased borrowings to fund our operations including capital expenditures for the coming year. Other income, net for the year ended December 31, 2012 included a gain of $\$ 3.1$ million attributable to the change in fair value of a compound embedded derivative liability associated with our senior unsecured convertible promissory notes issued to Total which was partially offset by a $\$ 1.4$ million expense recognized for the fair market value of a currency interest swap derivative liability, a $\$ 0.9$ million loss on the extinguishment of the $\$ 5.0$ million debt associated with the December 2012 private placement and a $\$ 0.5$ million realized loss on foreign currency transactions. No corresponding amounts related to these transactions were recognized during the year ended December 31, 2011.

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

|  | Years Ended December 31, <br> 2011 |  | Year-to Year <br> Change | Percentage <br> Change |
| :--- | :--- | :--- | :--- | :--- | :--- |
| (Dollars in thousands) |  |  |  |  |

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 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 | Percentage |
| :--- | :--- | :--- |
| 2011 | 2010 | Change |$\quad$ Change

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| Cost of products sold | $\$ 155,615$ | $\$ 70,515$ | $\$ 85,100$ | 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) <br> charges | - | $(2,061$ | $)$ | 2,061 | $(100$ |
| Total cost and operating expenses | $\$ 326,163$ | $\$ 164,096$ | $\$ 162,067$ | 99 | $\%$ |

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## Cost of Products Sold

Our cost of products sold 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 downs resulting from applying the lower-of-cost-or-market inventory valuation. 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 as a 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 a 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 | Percentage |
| :--- | :--- | :--- |
| 2011 | 2010 | Change | Change

(Dollars in thousands)
Other income (expense):
Interest income

| $\$ 1,542$ | $\$ 1,540$ | $\$ 2$ | - | $\%$ |
| :--- | :--- | :--- | :--- | :--- |
| $(1,543$ | $)$ | $(1,443$ | $)(100$ | $)$ |
| 214 | 898 | $(684$ | $)$ | $(76$ |
| $\$ 213$ | $\$ 995$ | $\$(782$ | $)(79$ | $) \%$ |

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. 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 upon 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.

## Liquidity and Capital Resources

|  |  | $\begin{aligned} & \text { December 31, } \\ & 2012 \\ & \text { (Dollars in thousands) } \end{aligned}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Working capital |  |  | \$3,668 |  | \$47,205 |
| Cash and cash equivalents and short-term investments |  |  | \$30,689 |  | \$ 103,592 |
| Debt and capital lease obligations |  |  | \$ 106,774 |  | \$47,660 |
| Accumulated deficit |  |  | \$(586,327 |  | ) $\$(381,188$ |
|  | Years Ended December 31, |  |  |  | 2010 |
| Net cash used in operating activities | \$(150,872 | ) | \$(92,496 | ) | \$(64,577 |
| Net cash provided by (used in) investing activities | (49,644 | ) | 5,853 |  | (79,405 |
| Net cash provided by financing activities | 138,117 |  | 41,052 |  | 266,687 |

Working Capital. Working capital was $\$ 3.7$ million at December 31, 2012, a decrease of $\$ 43.5$ million from working capital as of December 31, 2011. This decrease was principally attributable to a reduction in net cash and investment balances of $\$ 72.9$ million due primarily to our investment in large scale production plants, and a decline of $\$ 10.9$ million in other current assets largely related to the write off of facility modification costs at one of our contract manufacturing facilities. This decrease was offset in part by a reduction of $\$ 24.7$ million in short term debt balances and a reduction of $\$ 17.6$ million in accounts payable and accrued and other current liabilities.

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. We plan to continue to seek external debt financing from U.S. and Brazilian sources to help fund our investment in these contract manufacturing and dedicated production facilities.

We expect to fund our operations for the foreseeable future with cash and investments currently on hand, with cash inflows from collaboration and grant funding, cash contributions from product sales, and with new debt and equity financing. Our planned 2013 working capital needs and our planned operating and capital expenditures for 2013 are dependent on significant inflows of cash from existing collaboration partners, as well as additional funding from new collaborations, equity or debt offerings, credit facilities or loans, or combinations of these sources. We will continue to need to fund our research and development and related activities and to provide working capital to fund production, storage, distribution and other aspects of its business. Our operating plan contemplates capital expenditures of approximately $\$ 10.0$ million in 2013 and we expect to continue to incur costs in connection with our existing contract
manufacturing arrangements.
Liquidity. We have incurred significant losses in each year since our inception and believe that we will continue to incur losses and negative cash flow from operations into at least 2014. As of December 31, 2012, we had an accumulated deficit of $\$ 586.3$ million and had cash, cash equivalents and short term investments of $\$ 30.7$ million. We have significant outstanding debt and contractual obligations related to purchase commitments, as well as capital and operating leases. As of December 31, 2012, our debt totaled $\$ 104.2$ million, of which $\$ 3.3$ million matures within the next twelve months. In addition, our debt agreements contain various covenants, including restrictions on business that could cause us to be at risk of defaults. In March 2013, we signed
a collaboration agreement that included a funding component, and obtained a commitment letter from Total with respect to additional convertible note funding (as described above under "Overview-Total Relationship"), and we expect to use amounts received under these arrangements to fund our operations. Furthermore, we are expecting additional funding in 2013 from collaborations, equity or debt offerings, or combinations of these sources. Our operating plan contemplates securing a portion of this additional funding in the second quarter of 2013. However, as of the date of this filing, we have not yet secured this additional funding. There can be no assurance that financing will be available on commercially acceptable terms or at all.

If we are unable to raise additional financing, or if other expected sources of funding are delayed or not received, we would take the following actions as early as the second quarter of 2013 to support our liquidity needs through the remainder of 2013 and into 2014:

Effect significant headcount reductions in the U.S. and in Brazil, particularly with respect to both general and administrative employees and other employees not connected to critical or contracted activities.

Shift our focus to existing products and customers with significantly reduced investment in new product and commercial development efforts.

Reduce our expenditures for third party contractors, including consultants, professional advisors and other vendors.
Suspend operations at our pilot plants and demonstration facilities.
Reduce or delay uncommitted capital expenditures, including non-essential lab equipment and information technology projects.

The contingency cash plan contemplating these actions is designed to save us an estimated $\$ 35$ million to $\$ 40$ million over the next twelve months. Implementing this plan could have a material negative impact on our ability to continue our business as currently contemplated, including, without limitation, delays or failures in our ability to:

Achieve planned production levels;
Develop and commercialize products within planned timelines or at planned scales; and
Continue other core activities.
Furthermore, any inability to scale-back operations as necessary, and any unexpected liquidity needs, could create pressure to implement more severe measures. Such measures could have a material adverse effect on our ability to meet contractual requirements, including obligations to maintain manufacturing operations, and increase the severity of the consequences described above.

Convertible Note Offering. In February 2012, we sold $\$ 25.0$ million in principal amount of senior unsecured convertible promissory notes due March 1,2017 . The notes have a $3.0 \%$ annual interest rate and are convertible into shares of our common stock at a conversion price of $\$ 7.0682$ per share, 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 Amyris, 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.

In July and September of 2012, we issued $\$ 53.3$ million worth of senior unsecured convertible notes to Total for an aggregate of $\$ 30.0$ million in cash proceeds and our repayment of $\$ 23.3$ million in previously-provided research and development funds as described in more detail under "Overview - Total Relationship" above. As part of the December 2012 private placement, $1,677,852$ shares of the Company's common stock were issued in exchange for the cancellation of $\$ 5.0$ million worth of an outstanding senior unsecured convertible promissory note held by Total.

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

In May 2012, we completed a private placement of $1,736,100$ shares of our common stock for aggregate cash proceeds of $\$ 4.1$ million.

In December 2012, we completed a private placement of $14,177,849$ shares common stock for aggregate proceeds of $\$ 37.2$ million, of which $\$ 22.2$ million in cash was received in December 2012 and $\$ 15.0$ million in cash was received in January 2013. As part of this private placement, $1,677,852$ of such shares were issued to Total in exchange for the cancellation of $\$ 5.0$ million worth of an outstanding senior unsecured convertible promissory note we previously issued to Total.

Banco Pine Loans. In December 2011, we received a loan of $\mathrm{R} \$ 35.0$ million (approximately US $\$ 17.1$ million based on the exchange rate as of December 31, 2012) from Banco Pine. Such loan was an advance on an anticipated 2012 financing from Nossa Caixa, the Sao Paulo State development bank, and Banco Pine, under which Banco Pine and Nossa Caixa would provide us with loans of up to approximately R $\$ 52.0$ million (approximately $\$ 25.4$ million based on the exchange rate at December 31, 2012) as financing for capital expenditures relating to our manufacturing facility in Brotas. The maturity date for this loan was originally February 17, 2012; however, in February 2012, we entered into a supplemental agreement with Banco Pine under which the parties agreed to extend the maturity date for the repayment of the original loan from February 17, 2012 to May 17, 2012, and in May 2012, we entered into an additional supplemental extending the maturity date to August 15, 2012. This loan was repaid in July 2012.

In June 2012, we entered into a separate loan agreement with Banco Pine under which Banco Pine provided a bridge loan of $\mathrm{R} \$ 52.0$ million (approximately US $\$ 25.4$ million based on the exchange rate as of December 31, 2012). The bridge loan was an additional advance on the anticipated Banco Pine and Nossa Caixa financing described above. The interest rate for the bridge loan was $0.4472 \%$ monthly (approximately $5.5 \%$ on an annualized basis). The principal and interest of this bridge loan matured and were required to be repaid on September 19, 2012, subject to extension by Banco Pine. This bridge loan was repaid in July 2012.

We secured these loans to allow us to continue construction and process development at our manufacturing facility in Brotas, and we expect to seek additional loans from this bank and others in order to be able to fund the establishment of other plants in Brazil and elsewhere.

Banco Pine/Nossa Caixa Financing. In July 2012, we entered into a Note of Bank Credit and a Fiduciary Conveyance of Movable Goods agreement with each of Nossa Caixa and Banco Pine. Under such instruments, we borrowed an aggregate of
$\mathrm{R} \$ 52.0$ million (approximately US $\$ 25.4$ million based on the exchange rate as of December 31, 2012) as financing for capital expenditures relating to our manufacturing facility in Brotas. Under the loan agreements, Banco Pine agreed to lend $\mathrm{R} \$ 22.0$ million and Nossa Caixa agreed to lend $\mathrm{R} \$ 30.0$ million. The funds for these loans are provided by Banco Nacional de Desenvolvimento Econômico e Social, or BNDES, a government owned bank headquartered in Brazil, but are guaranteed by the lenders. The loans have a final maturity date of July 15, 2022 and bear a fixed interest rate of $5.5 \%$ per year. The loans are secured by certain of our farnesene production assets at the manufacturing facility in Brotas, and we were required to provide parent guarantees to each of the lenders.

BNDES Credit Facility. In December 2011, we entered into a credit facility in the amount of $\mathrm{R} \$ 22.4$ million (approximately US $\$ 11.0$ million based on the exchange rate as of December 31, 2012) with BNDES. 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 $\mathrm{R} \$ 19.1$ million and an additional tranche of approximately $\mathrm{R} \$ 3.3$ million 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 was initially due 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 facility is collateralized by first priority security interest in certain of our equipment and other tangible assets with an original purchase price of $\mathrm{R} \$ 24.9$ million. 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 the total approved amount ( $\mathrm{R} \$ 22.4$ million in total debt) available under the credit facility. For advances in the second tranche (above R $\$ 19.1$ million ), 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, 2012 we had R $\$ 19.1$ million (approximately US $\$ 9.3$ million based on the exchange rate as of December 31, 2012) 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 biodiesel, or the FINEP Project, and provided for loans of up to an aggregate principal amount of R $\$ 6.4$ million (approximately US $\$ 3.1$ million based on the exchange rate at December 31, 2012) which are guaranteed by a chattel mortgage on certain of our equipment as well as bank letters of guarantee. The first disbursement of approximately $\mathrm{R} \$ 1.8$ million(approximately US $\$ 0.9$ million based on the exchange rate at December 31, 2012) was received in February 2011 and an additional disbursement of approximately R $\$ 4.6$ million (approximately US $\$ 2.2$ million based on the exchange rate at December 31, 2012) was received in December 2012.

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 commenced in July 2012 and extends through March 2019. Interest on loans drawn and other charges are paid on a monthly basis and commenced in March 2011. As of December 31, 2012, total outstanding loan balance under this credit facility was R $\$ 6.4$ million (approximately US $\$ 3.1$ million based on the exchange rate as of December 31, 2012).

The FINEP Credit Facility contains the following significant terms and conditions:
We are required to share with FINEP the costs associated with the FINEP Project. At a minimum, we are required to contribute approximately R $\$ 14.5$ million (US $\$ 7.1$ million based on the exchange rate at December 31, 2012) of which $\mathrm{R} \$ 11.1$ million was contributed prior to the release of the second disbursement;
After the release of the first disbursement, prior to any subsequent drawdown from the FINEP Credit Facility, we awere required to provide bank letters of guarantee of up to $\mathrm{R} \$ 3.3$ million in aggregate (approximately US $\$ 1.6$ million based on the exchange rate at December 31, 2012) before receiving the second installment in December 2012; 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 with a financial institution that provided 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 standby letters of credit. Interest on loans drawn under this revolving credit facility was equal to, at our option, (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 was Prime Rate plus $2.0 \%$. The credit facility was collateralized by a first priority security interest in certain of our present and future assets. In April 2012, we paid $\$ 7.7$ million of outstanding loans under this credit facility. In May 2012, we entered into a letter agreement with the bank amending the credit facility agreement to reduce the committed amount under the credit facility from $\$ 10.0$ million to approximately $\$ 2.3$ million, and the letters of credit sublimit from $\$ 5.0$ million to approximately $\$ 2.3$ million. The amendment also modified the current ratio covenant to require a ratio of current assets to current liabilities of at least 1.3:1 (as compared to $2: 1$ in the credit facility), and required us to maintain unrestricted cash of at least $\$ 15.0$ million in its account with the bank. In June 2012, the credit facility was terminated and, as of December 31, 2012, no loans or letters of credit were outstanding.

Amyris Fuels Credit Agreement. We had an uncommitted facility letter with a financial institution to finance the purchase and sale of fuel and for working capital requirements, as needed. We were a parent guarantor for the payment of the outstanding balance under the credit agreement. The agreement was collateralized by a first priority security interest in certain of our present and future assets. The agreement was terminated as of June 30, 2012 and, as of December 31, 2012, we had zero in outstanding letters of credit under the Credit Agreement.

The fair values of the notes payable, loan payable, convertible notes and credit facility are based on the present value of expected future cash flows and assumptions about current interest rates and the creditworthiness of the Company that market participants would use in pricing the debt.

Joint Venture Agreement. In 2010, we established SMA, a joint venture with Usina São Martinho. Under the terms of the agreement, if the SMA fails to commence operations by the end of 2013, Usina São Martinho has the right to terminate the joint venture and to require us to buy Usina São Martinho's equity in SMA at its acquisition cost and transfer SMA's assets at the Usina São Martinho site to another location. In that event, we would incur significant costs beginning in mid-2014 and be required to find alternative locations for the facility. In March 2013, we met with Usina São Martinho and the parties agreed in principle to a revised business plan for the joint venture with the plant becoming operational in 2016, and, while we are in the process of documenting that revised business plan as an amendment to the agreement, we may not be able to reach final agreement on the revised terms.

As of December 31, 2012, we delayed further construction of and commissioning of the SMA plant and we expect to continue to defer the project in the near term based on economic considerations and to allow us to focus on the successful implementation of our plant in Brotas.

Government Contracts. 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 were 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. As of December 31, 2012, the cash requirement is approximately $\$ 0.4$ million. 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. Through December 31, 2012, we have recognized $\$ 23.4$ million in revenue under this grant, of which $\$ 6.4$ million was received in cash during the year ended December 31, 2012.

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 $\$ 3.6$ million, and are required to fund an additional $\$ 1.4$ million, in cost sharing expenses. Through December 31, 2012, we had recognized $\$ 1.5$ million in revenue under this grant, of which $\$ 0.8$ million was received in cash during the year ended December 31, 2012.

In June 2012, we entered into a Technology Investment Agreement with The Defense Advanced Research Projects Agency (DARPA), under which we will perform certain research and development activities funded in part by DARPA. The work is to be performed on a cost-share basis, where DARPA funds $90 \%$ of the work and we fund the remaining $10 \%$ (primarily by providing specified labor). Under the agreement, we could receive funding of up to approximately $\$ 8.0$ million over two years based on achievement of program milestones, and, accordingly, would be responsible for contributions equivalent to approximately $\$ 900,000$. The agreement has an initial term of one year and, at DARPA's option, may be renewed for an additional year. Through December 31, 2012, we had recognized $\$ 0.4$ million in revenue under this agreement, of which $\$ 0.4$ million was received in cash during the year ended December 31, 2012.

Cash Flows during the Years Ended December 31, 2012, 2011, and 2010

## Cash Flows from Operating Activities

Our primary uses of cash from operating activities are cost of products sold and personnel related expenditures offset by cash received from product sales. Cash used in operating activities was $\$ 150.9$ million, $\$ 92.5$ million and $\$ 64.6$ million for the years ended December 31, 2012, 2011 and 2010.

Net cash used in operating activities was $\$ 150.9$ million during the year ended December 31, 2012. The largest component of our cash used in operations during this period related to our net loss of $\$ 206.0$ million, which included non-cash charges of $\$ 45.9$ million related to losses from fixed purchase commitments and write-off of production
assets at contract manufacturers, $\$ 27.5$ million of stock-based compensation, and $\$ 14.6$ million of depreciation and amortization expenses. In addition, significant operating cash outflows were primarily related to a $\$ 35.8$ million decrease in accrued and other long term liabilities, an $\$ 11.8$ million decrease in accounts payable, a $\$ 1.6$ million decrease in deferred revenue and a $\$ 1.3$ million decrease in deferred rent. Accrued and other long term liabilities decreased primarily due to the release of the contingently repayable advance from related party collaborator (Total) of $\$ 31.9$ million as a result of the July 2012 amendment of the collaboration agreement with Total. Accounts payable decreased primarily due to payments for production and contract manufacturing costs that were accrued for in the prior year but paid in the current year.

Significant operating cash inflows during the year ended December 31, 2012 were derived primarily from sales of ethanol and reformulated ethanol-blended gasoline purchased from third parties and from collaborative research services. In addition, operating cash inflows were comprised primarily of an $\$ 11.2$ million decrease in prepaid expenses and other assets, a $\$ 2.8$ million
decrease in accounts receivable and a $\$ 2.9$ million decrease in net inventory. The decrease in prepaid expenses and other assets was primarily related to the reduction of $\$ 18.8$ million in deferred charge asset related to Total as a result of the July 2012 amendment of the collaboration agreement with Total. The decrease in accounts receivable was primarily due to our transition out of the ethanol and ethanol-blended gasoline business during the third quarter of 2012.

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 $\$ 37.5$ million and a $\$ 49.5$ million net change in our operating assets and liabilities. Net change in operating assets and liabilities of $\$ 49.5$ million primarily consisted of a $\$ 53.9$ million increase in accrued and other long term liabilities of which $\$ 31.9$ million was 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 $\$ 5.3$ 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 and $\$ 11.1$ 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 Flows from Investing Activities

Our investing activities consist primarily of capital expenditures, net investment purchases, maturities and sales.
For the year ended December 31, 2012, cash used in investing activities was $\$ 49.6$ million as a result of $\$ 56.9$ million of capital expenditures and deposits on plant, property and equipment due to the construction of our first owned production facility in Brotas and $\$ 1.0$ million of restricted cash, offset by net sales of short term investments of $\$ 8.2$ million.

For the year ended December 31, 2011, cash provided by investing activities was $\$ 5.9$ million $\$$ as a result of $\$ 105.0$ 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, plant and equipment and a $\$ 2.9$ million payment to Draths Corporation in relation to a business acquisition.

For the year ended December 31, 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, plant and equipment, offset by the release of $\$ 4.5$ million in restricted cash.

## Cash Flows from Financing Activities

For the year ended December 31, 2012, cash provided by financing activities was $\$ 138.1$ million, primarily the result of the net receipt of $\$ 108.9$ million from debt financing, of which $\$ 30.0$ million is debt financing from a related party, the receipt of $\$ 84.7$ million in proceeds from sales of common stock in private placements net of issuance cost, and the receipt of $\$ 0.9$ million in proceeds from option exercises. These cash inflows were offset in part by principal payments on debt of $\$ 52.6$ million and principal payments on capital leases of $\$ 3.7$ million.

For the year ended December 31, 2011, cash provided by financing activities was $\$ 41.1$ million, as a 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.

For the year ended December 31, 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.

## 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, 2012 (in thousands):

|  | Total | 2013 | 2014 | 2015 | 2016 | 2017 | Thereafter |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Principal payments on long-term debt | \$113,432 | \$3,325 | \$3,962 | \$5,846 | \$5,875 | \$79,131 | \$ 15,293 |
| Interest payments on long-term debt, fixed rate ${ }^{(1)}$ | 17,102 | 2,919 | 3,073 | 2,528 | 2,175 | 4,508 | 1,899 |
| Operating leases | 38,289 | 6,624 | 6,772 | 6,900 | 6,891 | 6,760 | 4,342 |
| Principal payments on capital leases | 2,610 | 1,366 | 957 | 287 | - | - | - |
| Interest payments on capital leases | 175 | 123 | 50 | 2 | - | - | - |
| Terminal storage costs | 157 | 148 | 9 | - | - | - | - |
| Purchase obligations ${ }^{(2)}$ | 53,113 | 16,275 | 17,706 | 10,243 | 8,623 | 218 | 48 |
| Total | \$224,878 | \$30,780 | \$32,529 | \$25,806 | \$23,564 | \$90,617 | \$21,582 |

${ }^{(1)}$ The fixed interest rates are more fully described in Note 6 of our consolidated financial statements.
${ }_{(2)}$ Purchase obligations include non-cancelable contractual obligations and construction commitments of \$52.7 million, of which $\$ 13.9$ million have been accrued as loss on purchase commitments.

This table does not reflect non-reimbursable expenses that we expect to incur in 2013 in connection with research activities under the DOE Integrated Bio-Refinery grant and the NREL subcontract discussed above under the caption "Liquidity and Capital Resources - Government Contracts." 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 $\$ 3.6$ million of a total of $\$ 5.0$ million of expenses for research activities that we undertake under the NREL grant.

Additionally, this table does not reflect the expenses that we expect to incur in 2013 and 2014 in connection with research activities under DARPA under which we will perform certain research and development activities funded in part by DARPA. The work is to be performed on a cost-share basis, where DARPA funds $90 \%$ of the work and we fund the remaining $10 \%$ (primarily by providing specified labor). Under the agreement, we could receive funding of up to approximately $\$ 8.0$ million over two years based on achievement of program milestones, and, accordingly, we would be responsible for contributions equivalent to approximately $\$ 900,000$.

## 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.

The market risk inherent in our market risk sensitive instruments and positions is the potential loss arising from adverse changes in: commodity market prices, foreign currency exchange rates, and interest rates as described below.

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, 2012, 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, 2012, 100\% of our outstanding debt is in fixed rate instruments.

## 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. The functional currency of our wholly-owned consolidated subsidiary in Brazil is the local currency (Brazilian real) in which recurring business transactions occur. We do not use currency exchange contracts as hedges against amounts permanently invested in our foreign subsidiary. The amount we consider permanently invested in our foreign subsidiary and translated into U.S. dollars using the year end exchange rate is $\$ 76.7$ million at December 31, 2012 and $\$ 62.8$ million at December 31, 2011. This increase between 2012 and 2011 is due to additional capital contributions made during 2012, which are partially offset by the depreciation of the Brazilian real versus the U.S. dollar and an increase in accumulated deficit of our wholly-owned consolidated subsidiary in Brazil. The potential loss in fair value, which would principally be recognized in Other Comprehensive Income (Loss), resulting from a hypothetical $10 \%$ adverse change in quoted Brazilian real exchange rates is $\$ 7.7$ million and $\$ 6.3$ million for 2012 and 2011, respectively. Actual results may differ.

We make limited use of derivative instruments, which includes currency interest swap agreements to manage the Company's exposure to foreign currency exchange rate and interest rate related to the Company's Banco Pine S.A. loan. In June 2012, we entered into a currency interest rate swap arrangement with Banco Pine for $\mathrm{R} \$ 22.0$ million (approximately US $\$ 10.8$ million based on the exchange rate of December 31, 2012). The swap arrangement exchanges the principal and interest payments under the Banco Pine loan entered into in July 2012 for alternative principal and interest payments that are subject to adjustment based on fluctuations in the foreign exchange rate between the U.S. dollar and Brazilian real. The swap has a fixed interest rate of $3.94 \%$. This arrangement hedges the fluctuations in the foreign exchange rate between the U.S. dollar and Brazilian real.

## Commodity Price Risk

Our primary exposure to market risk for changes in commodity prices currently relates to our purchases of sugar feedstocks. When possible, we managed our exposure to this risk primarily through the use of supplier pricing agreements. Through the third quarter of 2012, we also had commodity market risk related to our purchases of ethanol and reformulated ethanol-blended gasoline in which we used standard derivative commodity instruments to hedge the price volatility of ethanol and reformulated ethanol-blended gasoline, principally through futures contracts. However, as of September 30, 2012, we transitioned out of that business and no longer purchase any ethanol and reformulated ethanol-blended gasoline or use standard derivative commodity instruments. The changes in fair value of these contracts are recorded on the balance sheet and recognized immediately in cost of products sold. We recognized a loss of $\$ 0.3$ million, $\$ 2.4$ million and $\$ 2.2$ million, as the change in fair value for the years ended December 31, 2012, 2011 and 2010, respectively (see Note 3 to our Consolidated Financial Statements).
ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA AMYRIS, INC.
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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, 2012 and December 31, 2011, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2012 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, 2012, 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 Item 9A. 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 were integrated audits in 2012 and 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.

PricewaterhouseCoopers LLP
San Jose, California
March 28, 2013

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

|  | $\begin{aligned} & \text { December 31, } \\ & 2012 \end{aligned}$ | 2011 |
| :---: | :---: | :---: |
| Assets |  |  |
| Current assets: |  |  |
| Cash and cash equivalents | \$30,592 | \$95,703 |
| Short-term investments | 97 | 7,889 |
| Accounts receivable, net of allowance of \$481 and \$245, respectively | 3,846 | 6,936 |
| Inventories, net | 6,034 | 9,070 |
| Prepaid expenses and other current assets | 8,925 | 19,873 |
| Total current assets | 49,494 | 139,471 |
| Property, plant and equipment, net | 163,121 | 128,101 |
| Restricted cash | 955 | - |
| Other assets | 20,112 | 43,001 |
| Goodwill and intangible assets | 9,152 | 9,538 |
| Total assets | \$242,834 | \$320,111 |
| Liabilities and Equity |  |  |
| Current liabilities: |  |  |
| Accounts payable | \$ 15,392 | \$ 26,379 |
| Deferred revenue | 1,333 | 3,139 |
| Accrued and other current liabilities | 24,410 | 30,982 |
| Capital lease obligation, current portion | 1,366 | 3,717 |
| Debt, current portion | 3,325 | 28,049 |
| Total current liabilities | 45,826 | 92,266 |
| Capital lease obligation, net of current portion | 1,244 | 2,619 |
| Long-term debt, net of current portion | 61,806 | 13,275 |
| Related party debt | 39,033 | - |
| Deferred rent, net of current portion | 8,508 | 9,957 |
| Deferred revenue, net of current portion | 4,255 | 4,097 |
| Other liabilities | 15,933 | 37,085 |
| Total liabilities | 176,605 | 159,299 |
| 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, 2012 and 2011; 68,709,660 and 45,933,138 shares issued and outstanding as of December 31, 2012 and 2011, respectively | 7 | 5 |
| Additional paid-in capital | 666,233 | 548,159 |
| Accumulated other comprehensive loss | (12,807 ) | ) $(5,924$ |
| Accumulated deficit | (586,327 ) | ) $(381,188$ |
| Total Amyris, Inc. stockholders' equity | 67,106 | 161,052 |
| Noncontrolling interest | (877 ) | ) $(240$ |
| Total stockholders' equity | 66,229 | 160,812 |
| Total liabilities and stockholders' equity | \$242,834 | \$320,111 |

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, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  | 2010 |  |
| Revenues |  |  |  |  |  |  |
| Product sales | \$49,638 |  | \$ 129,837 |  | \$68,664 |  |
| Grants and collaborations revenue | 24,056 |  | 17,154 |  | 11,647 |  |
| Total revenues | 73,694 |  | 146,991 |  | 80,311 |  |
| Cost and operating expenses |  |  |  |  |  |  |
| Cost of products sold | 77,314 |  | 155,615 |  | 70,515 |  |
| Loss on purchase commitments and write off of production assets | 45,854 |  | - |  | - |  |
| Research and development | 73,630 |  | 87,317 |  | 55,249 |  |
| Sales, general and administrative | 78,718 |  | 83,231 |  | 40,393 |  |
| Restructuring and asset impairment (income) charges | - |  | - |  | (2,061 | ) |
| Total cost and operating expenses | 275,516 |  | 326,163 |  | 164,096 |  |
| Loss from operations | (201,822 | ) | (179,172 | ) | (83,785 | ) |
| Other income (expense): |  |  |  |  |  |  |
| Interest income | 1,472 |  | 1,542 |  | 1,540 |  |
| Interest expense | (4,926 | ) | (1,543 | ) | (1,443 | ) |
| Other income, net | 224 |  | 214 |  | 898 |  |
| Total other income (expense) | (3,230 | ) | 213 |  | 995 |  |
| Loss before income taxes | (205,052 | ) | (178,959 | ) | (82,790 | ) |
| Provision for income taxes | (981 | ) | (552 | ) | - |  |
| Net loss | \$ 206,033 | ) | \$ 179,511 | ) | \$(82,790 | ) |
| Net loss attributable to noncontrolling interest | 894 |  | 641 |  | 920 |  |
| Net loss attributable to Amyris, Inc. | \$ 205,139 | ) | \$ 178,870 | ) | \$(81,870 | ) |
| Deemed dividend related to a beneficial conversion feature | - |  | - |  | (42,009 | ) |
| Net loss attributable to Amyris, Inc. common stockholders | \$ 205,139 | ) | \$ 178,870 | ) | \$ 123,879 | ) |
| Net loss per share attributable to common stockholders, basic and diluted | \$(3.62 | ) | \$(3.99 | ) | \$(8.35 | ) |
| Weighted-average shares of common stock outstanding used in computing net loss per share of common stock, basic and diluted | 56,717,869 |  | 44,799,056 |  | 14,840,253 |  |

See the accompanying notes to the consolidated financial statements.

Amyris, Inc.
Consolidated Statements of Comprehensive Loss (In Thousands)

|  | Years Ended December 31, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  | 2010 |  |
| Comprehensive loss: |  |  |  |  |  |  |
| Net loss | \$(206,033 | ) | \$(179,511 | ) | \$(82,790 | ) |
| Change in unrealized loss on investments | - |  | (5 | ) | 2 |  |
| Foreign currency translation adjustment, net of tax | (6,626 | ) | (8,761 | ) | 1,751 |  |
| Total comprehensive loss | (212,659 | ) | (188,277 | ) | (81,037 | ) |
| Loss attributable to noncontrolling interest | 894 |  | 641 |  | 920 |  |
| Foreign currency translation adjustment attributable to noncontrolling interest | (257 | ) | (30 | ) | (217 |  |
| Comprehensive loss attributable to Amyris, Inc. | \$(212,022 | ) | \$(187,666 | ) | \$ 80,334 |  |

See the accompanying notes to the consolidated financial statements.

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Amyris, Inc.
Consolidated Statements of Convertible Preferred Stock, Redeemable Noncontrolling Interest and Equity (Deficit)

options, net of restricted stock
Repurchase of $\qquad$ common stock $\qquad$ Shares issued from restricted stock unit settlement

Stock-based compensation Proceeds from noncontrolling interest
Common stock
issuance in
public offering, — - $\quad$ - $\quad 095,000 \quad-85,534 \quad-\quad-\quad 85,534$
net of issuance
costs (Note 11)
Conversion of
convertible
preferred stock $(28,487,517)(391,411)-\quad 31,550,277 \quad 3 \quad 391,408 \quad-\quad$ - 391,411
to common
stock
Conversion of convertible
 warrants to
common stock
warrants
Conversion of shares of
Amyris Brasil
S.A. shares
into common
stock
Beneficial
conversion
feature on


Series D
convertible
preferred stock
Deemed
dividend
related to the
beneficial

feature of
Series D
convertible
preferred stock

Beneficial conversion
 conversion of Amyris Brasil
S.A. shares

Deemed
dividend
related to the
beneficial conversion
feature of
Amyris Brasil
S.A. shares

Change in unrealized loss on investments
Foreign
currency

| translation | - | 217 | - | - | - |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

adjustment, net
of tax

| Net loss | - | - | $(894$ | $)$ | - | - | $(81,870$ | $)$ | - | $(26)$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| December 31, | - | $\$-$ | $\$-$ | $43,847,425$ | $\$ 4$ | $\$ 506,988$ | $\$(202,318)$ | $\$ 2,872$ | $\$ 2$ | $\$ 307,548$ |

2010
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Amyris, Inc.
Consolidated Statements of Convertible Preferred Stock, Redeemable Noncontrolling Interest and Equity (Deficit)-(Continued)


Amyris, Inc.
Consolidated Statements of Convertible Preferred Stock, Redeemable Noncontrolling Interest and Equity (Deficit)-(Continued)
Convertible $\quad$ Common Stock
Preferred

Prefer

Accumulated
(In Thousands,

| Except Share and | Redeemable |
| :--- | :---: |
| Per Share | SharemoNancont |
| Ambidineg |  |
| Amounts) | Interest |

December 31, ————45,933,138 $\quad \$ 5 \quad \$ 548,159 \quad \$(381,188) \$(5,924) \$(240) \$ 160,812$
Issuance of
common stock
upon exercise of — - $\quad 1,441,676 \quad-\quad 1,509 \quad-\quad-\quad-\quad 1,509$
stock options, net
of restricted stock
Issuance of
common stock in
$\begin{array}{llll}\text { a private } \\ \text { placement, net of } & 21,040,717 & 2 & 89,680\end{array} \quad 89,682$
placement, net of
issuance cost of
\$392
Recovery of

shares from $\quad-\quad-\quad$|  | $(5,402$ | $)$ | - | - | - | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Draths escrow
Shares issued $\begin{array}{llllllllll}\text { from restricted } \\ \text { stock unit }\end{array} \quad-\quad-\quad 299,584 \quad-\quad(588 \quad) \quad-\quad-\quad$ (588) settlement


See the accompanying notes to the consolidated financial statements

Amyris, Inc.
Consolidated Statements of Cash Flows
(In Thousands)

Operating activities
Net loss
Adjustments to reconcile net loss to net cash used in operating activities:
Depreciation and amortization
Loss on disposal of property, plant and equipment
Stock-based compensation
Amortization of premium on investments
Amortization of debt discount
Provision for doubtful accounts

| Years Ended December 31, <br> 2012 |  |  |
| :--- | :---: | :---: |
| 2011 | 2010 |  |
| $\$(206,033$ | $\$(179,511$ | $\$(82,790$ |

Loss on purchase commitments and write-off of production assets
Change in fair value of convertible preferred stock warrant liability
Change in fair value of derivative instruments
Restructuring and asset impairment (income) charges
Other noncash expenses

| 14,570 | 11,077 | 7,280 |
| :--- | :--- | :--- |
| 370 | 52 | 205 |
| 27,473 | 25,492 | 10,432 |
| - | 630 | 1,557 |
| 1,758 | - | - |
| 236 | 245 | - |
| 45,854 | - | - |
| - | - | $(929$ |

Changes in assets and liabilities:
Accounts receivable
Inventories, net
Prepaid expenses and other assets
Accounts payable
Accrued and other long-term liabilities and restructuring
Deferred revenue
Deferred rent
Net cash used in operating activities
$(1,764$
-159

| 2,837 | $(1,975$ | $)$ | $(3,565$ |
| :--- | :--- | :--- | :--- |
| 2,919 | $(5,327$ | $)$ | $(1,708$ |
| 11,239 | $(17,250$ | $)$ | 1,133 |

Investing activities
Purchase of short-term investments
Maturities of short-term investments
Sales of short-term investments
Purchases of long-term investments
Change in restricted cash
Payments for business acquisitions
Acquisition of cash in noncontrolling interest
Investment in unconsolidated joint venture
Purchase of property, plant and equipment, net of disposals
Deposits on property, plant and equipment
Net cash provided by (used in) investing activities
Financing activities
Proceeds from issuance of convertible preferred stock, net
Proceeds from issuance of common stock, net of repurchases
Proceeds from issuance of common stock in private placements, net of issuance costs
Proceeds from equipment financing
84,682
— $3,000 \quad 1,445$

| Principal payments on capital leases | $(3,727$ | $)(2,835$ | $)(2,728$ |
| :--- | :--- | :--- | :--- |
| Proceeds from debt issued | 78,904 | 37,957 | - |
| Proceeds from debt issued to related party | 30,000 | - | - |
| Principal payments on debt | $(52,633$ | $)(5,018$ | $)(9,722$ |
| Proceeds from issuance of common stock in initial public | - | $(497$ | $) 86,032$ |
| offering, net | - | - | 7,069 |
| Proceeds from sale of noncontrolling interest | 138,117 | 41,052 | 266,687 |
| Net cash provided by financing activities | $(2,712$ | $)(1,766$ | $) 1,167$ |
| Effect of exchange rate changes on cash and cash equivalents |  |  |  |
| Net increase (decrease) in cash and cash equivalents | $(65,111$ | $)(47,357$ | $) 123,872$ |
| Cash and cash equivalents at beginning of period | 95,703 | 143,060 | 19,188 |
| Cash and cash equivalents at end of period | $\$ 30,592$ | $\$ 95,703$ | $\$ 143,060$ |

Amyris, Inc.
Consolidated Statements of Cash Flows-(Continued) (In Thousands)

|  | Years Ended December 31, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  | 2010 |  |
| Supplemental disclosures of cash flow information: |  |  |  |  |  |  |
| Cash paid for interest | \$3,399 |  | \$ 1,412 |  | \$ 1,378 |  |
| Cash paid for income taxes, net of refunds | \$- |  | \$- |  | \$- |  |
| Supplemental disclosures of noncash investing and financing activities: |  |  |  |  |  |  |
| Acquisitions of property, plant and equipment under accounts payable, accrued liabilities and notes payable | \$2,538 |  | \$3,177 |  | \$8,278 |  |
| Financing of equipment | \$- |  | \$3,420 |  | \$- |  |
| Warrants issued in connection with equipment financing | \$- |  | \$ 193 |  | \$- |  |
| Financing of insurance premium under notes payable | \$- |  | \$- |  | \$ 101 |  |
| Change in unrealized gain (loss) on investments | \$- |  | \$(5 | ) | \$3 |  |
| Change in unrealized gain (loss) on foreign currency | \$(6,366 | ) | \$(7,905 | ) | \$(623 | ) |
| Asset retirement obligation | \$- |  | \$174 |  | \$ 115 |  |
| Warrants issued in connection with the issuance of convertible preferred stock | \$- |  | \$- |  | \$507 |  |
| Accrued deferred offering costs | \$- |  | \$- |  | \$496 |  |
| Financing of rent payments under notes payable | \$- |  | \$- |  | \$239 |  |
| Deferred charge asset related to the issuance of Series D preferred stock | \$- |  | \$- |  | \$27,909 |  |
| Issuance of common stock upon exercise of warrants | \$- |  | \$3,554 |  | \$- |  |
| Issuance of common stock related to business acquisition | \$- |  | \$7,000 |  | \$- |  |
| Conversion of convertible preferred stock to common stock | \$- |  | \$- |  | \$391,411 |  |
| Conversion of preferred stock warrants to common stock warrants | \$- |  | \$- |  | \$2,318 |  |
| Conversion of shares of Amyris Brasil S.A. held by third parties into Amyris, Inc. common stock | \$- |  | \$- |  | \$ 11,653 |  |
| Conversion of other liability to related party debt | \$ 23,300 | ) | \$- |  | \$- |  |
| Conversion of related party debt to common stock | \$5,000 |  | \$- |  | \$- |  |
| Deemed dividend related to a beneficial conversion feature | \$- |  | \$- |  | \$42,009 |  |
| Transfer of property, plant and equipment to current assets | \$- |  | \$886 |  | \$- |  |
| Transfer of long term deposits to property, plant and equipment | \$ 12,218 |  | \$50 |  | \$- |  |
| Acquisition of net assets in noncontrolling interest | \$- |  | \$25 |  | \$- |  |
| Reclassification of long-term investments to short-term | \$- |  | \$- |  | \$7,998 |  |

See the accompanying notes to the consolidated financial statements.

Amyris, Inc.
Notes to Consolidated Financial Statements

## 1. The Company

Amyris, Inc. (the "Company") was incorporated in California on July 17, 2003 and reincorporated in Delaware on June 10, 2010 for the purpose of leveraging breakthroughs in synthetic biology to develop and provide renewable compounds for a variety of markets. The Company is currently building and applying its industrial synthetic biology platform to provide alternatives to select petroleum-sourced products used in specialty chemical and transportation fuel markets worldwide. The Company's first commercialization efforts have been focused on a renewable hydrocarbon molecule called farnesene (Biofene ${ }^{\circledR}$ ), which forms the basis for a wide range of products varying from specialty chemical applications to transportation fuels, such as diesel. While the Company's platform is able to use a wide variety of feedstocks, the Company is focused initially on Brazilian sugarcane. In addition, the Company has entered into various contract manufacturing agreements to support commercial production. The Company has established two principal operating subsidiaries, Amyris Brasil Ltda. (formerly Amyris Brasil S.A., "Amyris Brasil") for production in Brazil, and Amyris Fuels, LLC ("Amyris Fuels"). Nearly all of the Company's revenues to date have come from the sale of ethanol and reformulated ethanol-blended gasoline with substantially all of the remaining revenues coming from collaborations, government grants and sales of renewable products. In the third quarter of 2012, the Company transitioned out of the ethanol and reformulated ethanol-blended gasoline business. The Company does not expect to be able to replace much of the revenue lost in the near term as a result of this transition, particularly in 2013 while it continues its efforts to establish a renewable products business.

Beginning in March 2012, the Company initiated a plan to shift a portion of its production capacity from contract manufacturing facilities to a Company-owned plant that was then under construction. As a result, the Company evaluated its contract manufacturing agreements and recorded a loss of $\$ 30.4$ million related to adverse purchase commitments, $\$ 10.0$ million related to the write-off of facility modification costs and $\$ 5.5$ million related to Company-owned equipment at contract manufacturing facilities in the year ended December 31, 2012. The Company regularly monitors its plan related to production capacity, sales requirements and related cost structure. Changes to this plan may result in additional losses and impairment charges.

The Company's renewable products business strategy is to focus on direct commercialization of higher-value, lower-volume markets while moving lower-margin, higher-volume commodity products into joint venture arrangements with established industry partners. To commercialize its products, the Company must be successful in using its technology to manufacture its products at commercial scale and on an economically viable basis (i.e., low per unit production costs). The Company is building its experience producing renewable products at commercial scale. The Company's prospects are subject to risks, expenses and uncertainties frequently encountered by companies in this stage of development.

The Company expects to fund its operations for the foreseeable future with cash and investments currently on hand, with cash inflows from collaboration and grant funding, cash contributions from product sales, and with new debt and equity financing. The Company's planned 2013 working capital needs and its planned operating and capital expenditures for 2013 are dependent on significant inflows of cash from existing collaboration partners, as well as additional funding from new collaborations, equity or debt offerings, credit facilities or loans, or combinations of these sources. The Company will continue to need to fund its research and development and related activities and to provide working capital to fund production, storage, distribution and other aspects of its business. The Company's operating plan contemplates capital expenditures of approximately $\$ 10.0$ million in 2013 and the Company expects to continue to incur costs in connection with its existing contract manufacturing arrangements. During 2012, the Company completed multiple debt and equity financings, raising aggregate cash proceeds of $\$ 193.6$ million. (See Note 6 - "Debt" and Note 11 - "Stockholders' Equity"). The Company's most recent financing of R $\$ 5.0$ million reais
(approximately US $\$ 2.5$ million) was completed in March 2013. (See Note 18 - "Subsequent Events").

## Liquidity

The Company has incurred significant losses in each year since its inception and believes that it will continue to incur losses and negative cash flow from operations into at least 2014. As of December 31, 2012, the Company had an accumulated deficit of $\$ 586.3$ million and had cash, cash equivalents and short term investments of $\$ 30.7$ million. The Company has significant outstanding debt and contractual obligations related to purchase commitments, as well as capital and operating leases. As of December 31, 2012, the Company's debt totaled $\$ 104.2$ million, of which $\$ 3.3$ million matures within the next twelve months. In addition, the Company's debt agreements contain various covenants, including restrictions on business that could cause the Company to be at risk of defaults. Please refer to Note 5 "Commitments and Contingencies" and Note 6 "Debt" for further details regarding the Company's obligations and commitments.

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As of December 31, 2012, the Company had cash, cash equivalents and short-term investments of $\$ 30.7$ million. In March 2013, the Company signed a collaboration agreement that included a funding component, and obtained a commitment letter from an existing stockholder with respect to additional convertible note funding (see Note 18 "Subsequent Events"), and the Company expects to use amounts received under these arrangements to fund its operations. Furthermore, the Company is expecting additional funding in 2013 from collaborations, equity or debt offerings, or combinations of these sources. The Company's operating plan contemplates securing a portion of this additional funding in the second quarter of 2013. However, as of the date of this filing, the Company has not yet secured this additional funding. There can be no assurance that financing will be available on commercially acceptable terms or at all.

If the Company is unable to raise additional financing, or if other expected sources of funding are delayed or not received, the Company would take the following actions as early as the second quarter of 2013 to support its liquidity needs through the remainder of 2013 and into 2014:

Effect significant headcount reductions in the U.S. and in Brazil, particularly with respect to both general and administrative employees and other employees not connected to critical or contracted activities.

Shift its focus to existing products and customers with significantly reduced investment in new product and commercial development efforts.

Reduce its expenditures for third party contractors, including consultants, professional advisors and other vendors.
Suspend operations at its pilot plants and demonstration facilities.
Reduce or delay uncommitted capital expenditures, including non-essential lab equipment and information technology projects.

The contingency cash plan contemplating these actions is designed to save the Company an estimated $\$ 35$ million to $\$ 40$ million over the next twelve months. Implementing this plan could have a material negative impact on the Company's ability to continue its business as currently contemplated, including, without limitation, delays or failures in its ability to:

Achieve planned production levels;
Develop and commercialize products within planned timelines or at planned scales; and
Continue other core activities.
Furthermore, any inability to scale-back operations as necessary, and any unexpected liquidity needs, could create pressure to implement more severe measures. Such measures could have a material adverse effect on the Company's ability to meet contractual requirements, including obligations to maintain manufacturing operations, and increase the severity of the consequences described above.

[^0]The accompanying consolidated financial statements have been prepared in accordance with the accounting principles generally accepted in the United States of America ("GAAP") and with the instructions for Form 10-K and Regulations S-X statements. The consolidated financial statements include the accounts of the Company and its consolidated subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Principles of Consolidations
The Company has interests in joint venture entities that are variable interest entities ("VIEs"). Determining whether to consolidate a variable interest entity requires judgment in assessing (i) whether an entity is a VIE and (ii) if the Company is the entity's primary beneficiary and thus required to consolidate the entity. To determine if the Company is the primary beneficiary of a VIE, the Company evaluates whether it has (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. The Company's evaluation includes identification of significant activities and an assessment of its 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. The Company's assessment of whether it is the primary beneficiary of its VIEs requires significant assumptions and judgment.

The consolidated financial statements of the Company include the accounts of Amyris, Inc., its subsidiaries and two consolidated VIEs with respect to which the Company is considered the primary beneficiary, after elimination of intercompany accounts and transactions. Disclosure regarding the Company's participation in the VIEs is included in Note 8.

## Use of Estimates

In preparing the consolidated financial statements, management must make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

## Concentration of Credit Risk

Financial instruments that potentially subject the Company to a concentration of credit risk consist primarily of cash and cash equivalents and accounts receivable. The Company places its cash equivalents and investments with high credit quality financial institutions and, by policy, limits the amount of credit exposure with any one financial institution. Deposits held with banks may exceed the amount of insurance provided on such deposits. The Company has not experienced any losses on its deposits of cash and cash equivalents and short-term investments.

The Company performs ongoing credit evaluation of its customers, does not require collateral, and maintains allowances for potential credit losses on customer accounts when deemed necessary.

Customers representing $10 \%$ or greater of accounts receivable were as follows:

|  | December 31, |  |  |
| :--- | :--- | :--- | :--- |
| Customers | 2012 | 2011 | $\%$ |
| Customer A | $*$ | 20 | $\%$ |
| Customer B | $*$ | 10 | $\%$ |
| Customer C | 44 | $\%$ | $* *$ |
| Customer D | 22 | $\%$ |  |
| Customer E | 14 | $\%$ | $* *$ |

[^1]Customers representing $10 \%$ or greater of revenues were as follows:
Years Ended December 31,

| Customers | 2012 | 2011 | 2010 |  |
| :--- | :--- | :--- | :--- | :--- |
| Customer A | 13 | $\%$ | 11 | $\%^{* *}$ |

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| Customer D | $* *$ | $* *$ | 12 | $\%$ |
| :--- | :--- | :--- | :--- | :--- |
| Customer F | $* *$ | $* *$ | 10 | $\%$ |
| Customer G | $* *$ | 14 | $\%$ | 23 |
| Customer H | 13 | $\%$ | $*$ | $\%$ |
| Customer I | $* *$ | $*$ | 10 | $\%$ |

[^2]** Less than $10 \%$

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## Fair Value of Financial Instruments

The Company measures certain financial assets and liabilities at fair value based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. Where available, fair value is based on or derived from observable market prices or other observable inputs. Where observable prices or inputs are not available, valuation models are applied. These valuation techniques involve some level of management estimation and judgment, the degree of which is dependent on the price transparency for the instruments or market and the instruments' complexity.

The carrying amounts of certain financial instruments, such as cash equivalents, accounts receivable, accounts payable and accrued liabilities, approximate fair value due to their relatively short maturities, and low market interest rates if applicable. The fair values of the notes payable, loan payable, convertible notes and credit facility are based on the present value of expected future cash flows and assumptions about current interest rates and the creditworthiness of the Company.

The Company estimates the fair value of its embedded derivative related to Total senior unsecured convertible notes using a Black-Scholes valuation model that combines expected cash outflows with market-based assumptions regarding risk-adjusted yields, stock price volatility, probability of a change of control and the trading information of the Company's common stock into which the notes are convertible. The Company will continue to mark the bifurcated compound derivative to market due to the conversion price not being indexed to the Company's own stock because of the feature requiring the Company to redeem foregone interest upon conversion by the holder. The change in the fair value of the bifurcated compound derivative is primarily related to the change in price of the underlying common stock and is reflected in the Company's consolidated statements of operations as "other income (expense)".

## Cash and Cash Equivalents

All highly liquid investments purchased with an original maturity date of 90 days or less at the date of purchase are considered to be cash equivalents. Cash and cash equivalents consist of money market funds and certificates of deposit.

## Accounts Receivable

The Company maintains an allowance for doubtful accounts receivable for estimated losses resulting from the inability of its customers to make required payments. The Company determines this allowance based on specific doubtful account identification and management judgment on estimated exposure. The Company writes off accounts receivable against the allowance when it determines a balance is uncollectible and no longer actively pursues collection of the receivable.

## Investments

Investments with original maturities greater than 90 days that mature less than one year from the consolidated balance sheet date are classified as short-term investments. The Company classifies investments as short-term or long-term based upon whether such assets are reasonably expected to be realized in cash or sold or consumed during the normal cycle of business. The Company invests its excess cash balances primarily in certificates of deposit. Certificates of deposits that have maturities greater than 90 days that mature less than one year from the consolidated balance sheet date are classified as short term investments. The Company classifies all of its investments as available-for-sale and records such assets at estimated fair value in the consolidated balance sheets, with unrealized gains and losses, if any,
reported as a component of accumulated other comprehensive income (loss) in stockholders' equity. Debt securities are adjusted for amortization of premiums and accretion of discounts and such amortization and accretion are reported as a component of interest income. Realized gains and losses and declines in value that are considered to be other-than-temporary are recognized in the statements of operations. The cost of securities sold is determined on the specific identification method. There were no significant realized gains or losses from sales of debt securities during the years ended December 31, 2012, 2011 and 2010. As of December 31, 2012 and 2011, the Company did not have any other-than-temporary declines in the fair value of its debt securities.

## Restricted Cash

Cash accounts that are restricted to withdrawal or usage are presented as restricted cash. As of December 31, 2012 and 2011, the Company had $\$ 955,000$ and zero, respectively, of restricted cash held by a bank in a certificate of deposit as collateral under a facility lease.

Inventories

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Inventories, which consist of farnesene-derived products, as well as ethanol and reformulated ethanol-blended gasoline, are stated at the lower of cost or market and categorized as finished goods, work-in-process or raw material inventories. During the quarter ended September 30, 2012, the Company sold its remaining inventory of ethanol and reformulated ethanol-blended gasoline as it transitioned out of this business. The Company evaluates the recoverability of its inventories based on assumptions about expected demand and net realizable value. If the Company determines that the cost of inventories exceeds its estimated net realizable value, the Company records a write-down equal to the difference between the cost of inventories and the estimated net realizable value. If actual net realizable values are less favorable than those projected by management, additional inventory write-downs may be required that could negatively impact the Company's operating results. If actual net realizable values are more favorable, the Company may have favorable operating results when products that have been previously written down are sold in the normal course of business. The Company also evaluates the terms of its agreements with its suppliers and establishes accruals for estimated losses on adverse purchase commitments as necessary, applying the same lower of cost or market approach that is used to value inventory. Cost is computed on a first-in, first-out basis. Inventory costs include transportation costs incurred in bringing the inventory to its existing location.

## Derivative Instruments

The Company makes limited use of derivative instruments, which includes currency interest rate swap agreements to manage the Company's exposure to foreign currency exchange rate fluctuations and interest rate fluctuations related to the Company's Banco Pine S.A. loan (discussed below under Note 6). Through the third quarter of 2012, the Company held futures positions on the New York Mercantile Exchange and the CME/Chicago Board of Trade to mitigate the risks related to the price volatility of ethanol and reformulated ethanol-blended gasoline but, as of September 30, 2012, the Company had transitioned out of that business and no longer held such derivative instruments. The Company does not engage in speculative derivative activities, and the purpose of its activity in derivative commodity instruments is to manage the financial risk posed by physical transactions and inventory. Changes in the fair value of the derivative contracts are recognized currently in the consolidated statements of operations.

## Asset Retirement Obligations

The fair value of an asset retirement obligation is recognized in the period in which it is incurred if a reasonable estimate of fair value can be made. In addition, asset retirement cost is added to the carrying amount of the associated asset and this additional carrying amount is amortized over the life of the asset. The Company's asset retirement obligations were associated with its commitment to return property subject to an operating lease in Brazil to its original condition upon lease termination. In October 2012, this operating lease was amended which included an amendment to the terms of restitution of the property under lease. As a result of this amendment, the Company no longer has asset retirement obligations and therefore reversed the previously accrued liabilities.

As of December 31, 2012 and 2011, the Company had asset retirement obligations of zero and $\$ 1.1$ million, respectively. The related leasehold improvements are being amortized to depreciation expense over the term of the lease or the useful life of the assets, whichever is shorter. Related amortization expense was $\$ 188,000, \$ 193,000$ and $\$ 229,000$ for the years ended December 31, 2012, 2011 and 2010, respectively.

The change in the asset retirement obligation is summarized below (in thousands):
Balance at December 31, $2010 \quad \$ 984$
Additions
166
Foreign currency impacts and other adjustments
(133
Accretion expenses recorded during the period

| Balance at December 31, 2011 | $\$ 1,129$ |
| :--- | :--- |
| Additions | - |
| Foreign currency impacts and other adjustments | $(98$ |
| Accretion expenses recorded during the period | 91 |
| Reversals | $(1,122$ |
| Balance at December 31, 2012 | $\$-$ |

Property, Plant and Equipment, net

Property, plant and equipment, net are stated at cost less accumulated depreciation and amortization. Depreciation and amortization is computed using the straight-line method over the estimated useful lives of the related assets.
Maintenance and repairs are charged to expense as incurred, and improvements and betterments are capitalized. When assets are retired or otherwise disposed of, the cost and accumulated depreciation are removed from the balance sheet and any resulting gain or loss is reflected in operations in the period realized.

Depreciation and amortization periods for the Company's property, plant and equipment are as follows:

Machinery and equipment
Buildings
Computers and software
Furniture and office equipment
Vehicles

$$
\begin{aligned}
& 7-15 \text { years } \\
& 15 \text { years } \\
& 3-5 \text { years } \\
& 5 \text { years } \\
& 5 \text { years }
\end{aligned}
$$

Buildings and leasehold improvements are amortized on a straight-line basis over the terms of the lease, or the useful life of the assets, whichever is shorter.

Computers and software includes internal-use software that is acquired to meet the Company's needs. Amortization commences when the software is ready for its intended use and the amortization period is the estimated useful life of the software, generally 3 to 5 years. Capitalized costs primarily include contract labor and payroll costs of the individuals dedicated to the installation of internal-use software. Capitalized software additions totaled approximately $\$ 1.4$ million, $\$ 1.1$ million, and $\$ 1.3$ million for the years ended December 31, 2012, 2011 and 2010, respectively, related to software costs pertaining to the installation of new financial reporting systems. For the years ended December 31, 2012, 2011 and 2010, $\$ 0.7$ million, $\$ 0.4$ million and $\$ 0.3$ million, respectively, of amortization expense was recorded and as of December 31, 2012 the total unamortized cost of capitalized software was $\$ 2.6$ million. During the year ended December 31, 2012, the Company wrote-off capitalized software with a net book value of $\$ 0.9$ million.

## Impairment of Long-Lived Assets

Long-lived assets to be held and used are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable or the estimated useful life is no longer appropriate. If indicators of impairment exist and the undiscounted projected cash flows associated with such assets are less than the carrying amount of the asset, an impairment loss is recorded to write the asset down to their estimated fair values. Fair value is estimated based on discounted future cash flows. There were $\$ 6.4$ million, zero and zero, respectively, of impairment charges recorded during the years ended December 31, 2012, 2011 and 2010, respectively. The impairment charges of $\$ 6.4$ million in 2012 included the write-off of capitalized software with a net book value of $\$ 0.9$ million.

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"). The Company makes significant judgments in relation to the valuation of goodwill and intangible assets resulting from business combinations.

There are several methods that can be used to determine the estimated fair value of the IPR\&D acquired in a business combination. We used 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.

The Company evaluates its 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

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and are amortized on a straight-line basis over their estimated useful lives. Amortization of intangible assets was $\$ 0.4$ million, $\$ 0.4$ million and zero for the years ended December 31, 2012, 2011 and 2010, respectively. 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. The Company has not recognized any impairment charges on our intangible assets through December 31, 2012.

## In-Process Research and Development

During 2011, the Company recorded IPR\&D of $\$ 8.6$ million related to the acquisition of Draths. Amounts recorded as IPR\&D will begin being amortized upon first sales of the product over the estimated useful life of the technology. In accordance with authoritative guidance, as the technology has not yet been proven, the amortization of the acquired IPR\&D has not begun. The Company estimates that it could take up to three years before it will have viable products resulting from the acquired technology.

## Noncontrolling Interest and Redeemable Noncontrolling Interest

Changes in noncontrolling interest ownership that do not result in a change of control and where there is a difference between fair value and carrying value are accounted for as equity transactions. On April 14, 2010, the Company entered into a joint venture with Usina São Martinho. The carrying value of the noncontrolling interest from this joint venture is recorded in the equity section of the consolidated balance sheets (see Note 8). On January 3, 2011, the Company entered into a production service agreement with Glycotech, Inc. ("Glycotech"). The Company has determined that the arrangement with Glycotech qualifies as a VIE. The Company determined that it is the primary beneficiary. The carrying value of the noncontrolling interest from this VIE is recorded in the equity section of the consolidated balance sheets (see Note 8).

## Revenue Recognition

The Company recognizes revenue from the sale of farnesene-derived products, delivery of research and development services, and from governmental grants. Through the third quarter of 2012, the Company also sold ethanol and reformulated ethanol-blended gasoline under short-term agreements at prevailing market prices. As of September 30, 2012, the Company had transitioned out of that business. Revenue is 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 collectibility is reasonably assured.

If sales arrangements contain multiple elements, the Company evaluates whether the components of each arrangement represent separate units of accounting.

## Product Sales

Beginning in the second quarter of 2011, the Company began to sell farnesene-derived products, which were produced by contracted third parties. Through the third quarter of 2012, the Company also sold ethanol and reformulated ethanol-blended gasoline under short-term agreements at prevailing market prices. As of September 30, 2012, the

Company had transitioned out of that business. Ethanol and reformulated ethanol-blended gasoline sales consisted of sales to customers through purchases from third-party suppliers in which the Company took physical control of the ethanol and reformulated ethanol-blended gasoline and accepted risk of loss. The Company's renewable product sales do not include rights of return. Returns are only accepted if the product does not meet product specifications and such nonconformity is communicated to the Company within a set number of days of delivery. Commencing April 1, 2012, the Company began offering a two year standard warranty provision for squalane products sold after March 31, 2012, if the products do not meet Company-established criteria as set forth in the Company's trade terms. The Company bases its return reserve on a combination of historical rate of return for the Company's squalane products and historical returns for companies in the cosmetics industry since the Company did not have a full two years of historical return data. Revenues are recognized, net of discounts and allowances, once passage of title and risk of loss has occurred and contractually specified acceptance criteria have been met, provided all other revenue recognition criteria have also been met.

Grants and Collaborative Revenue

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Revenue from collaborative research services is 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, the Company recognizes revenue using the proportionate performance method based upon actual efforts to date relative to the amount of expected effort to be incurred by the Company. When up-front payments are received and the planned levels of research services do not fluctuate over the research term, revenue is 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, revenue is 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, revenue is recognized upon achievement of the milestone and is limited to those amounts whereby collectibility is reasonably assured.

Government grants are 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. Under the Defense Advanced Research Projects Agency (DARPA) contract signed in June 2012, the Company will receive funding based on achievement of program milestones. Accordingly, the Company will recognize revenue using the proportionate performance method based upon actual efforts to date relative to the amount of expected effort to be incurred, up to the amount of verified payable milestones.

## Cost of Products Sold

Starting in the second quarter of 2011, cost of products sold includes production costs of farnesene-derived products, which include cost of raw materials, amounts paid to contract manufacturers and period costs including inventory write-downs resulting from applying lower-of-cost-or-market inventory valuation. Cost of farnesene-derived products sold also includes certain costs related to the scale-up in production of such products. Through the third quarter of 2012, cost of products sold consisted primarily of cost of purchased ethanol and reformulated ethanol-blended gasoline, terminal fees paid for storage and handling, transportation costs between terminals and changes in the fair value of derivative commodity instruments. The Company transitioned out of its ethanol and gasoline business in the quarter ended September 30, 2012.

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

## Costs of Start-Up Activities

Start-up activities are defined as those one-time activities related to opening a new facility, introducing a new product or service, conducting business in a new territory, conducting business with a new class of customer or beneficiary, initiating a new process in an existing facility, commencing some new operation or activities related to organizing a new entity. All the costs associated with start-up activities related to a potential facility are expensed and recorded within selling, general and administrative expenses until the facility is considered viable by management, at which time costs would be considered for capitalization based on authoritative accounting literature.

## Research and Development

Research and development costs are expensed as incurred and include costs associated with research performed pursuant to collaborative agreements and government grants. Research and development costs consist of direct and indirect internal costs related to specific projects as well as fees paid to others that conduct certain research activities on the Company's behalf.

Income Taxes
The Company accounts for income taxes under the asset and liability method, which requires, among other things, that deferred income taxes be provided for temporary differences between the tax basis of the Company's assets and liabilities and their financial statement reported amounts. In addition, deferred tax assets are recorded for the future benefit of utilizing net operating losses and research and development credit carryforwards. A valuation allowance is provided against deferred tax assets unless it is more likely than not that they will be realized.

The Company recognizes and measures uncertain tax positions in accordance with Income Taxes subtopic 05-6 of ASC 740, which prescribes a recognition threshold and measurement process for recording uncertain tax positions taken, or expected to be taken in a tax return, in the consolidated financial statements. Additionally, the guidance also prescribes treatment for the derecognition, classification, accounting in interim periods and disclosure requirements for uncertain tax positions. The Company accrues for the estimated amount of taxes for uncertain tax positions if it is more likely than not that the Company would be
required to pay such additional taxes. An uncertain tax position will not be recognized if it has a less than $50 \%$ likelihood of being sustained.

## Currency Translation

The Brazilian real is the functional currency of the Company's wholly-owned subsidiary in Brazil and of the Company's joint venture with Usina São Martinho. Accordingly, asset and liability accounts of those operations are translated into United States dollars using the current exchange rate in effect at the balance sheet date and equity accounts are translated into United States dollars using historical rates. The revenues and expenses are translated using the exchange rates in effect when the transactions occur. Gains and losses from foreign currency translation adjustments are included as a component of accumulated other comprehensive income (loss) in the consolidated balance sheets.

## Stock-Based Compensation

The Company accounts for stock-based compensation arrangements with employees using a fair value method which requires the recognition of compensation expense for costs related to all stock-based payments including stock options. The fair value method requires the Company to estimate the fair value of stock-based payment awards on the date of grant using an option pricing model. The Company uses the Black-Scholes option pricing model to estimate the fair value of options granted, which is expensed on a straight-line basis over the vesting period. The Company accounts for restricted stock unit awards issued to employees based on the fair market value of the Company's common stock.

The Company accounts for stock options issued to nonemployees based on the estimated fair value of the awards using the Black-Scholes option pricing model. The Company accounts for restricted stock units issued to nonemployees based on the fair market value of the Company's 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 the Company's consolidated statements of operations during the period the related services are rendered.

## Comprehensive Income (Loss)

Comprehensive income (loss) represents all changes in stockholders' equity except those resulting from investments or contributions by stockholders. The Company's foreign currency translation adjustments represent the components of comprehensive income (loss) excluded from the Company's net loss and have been disclosed in the consolidated statements of comprehensive loss for all periods presented.

The components of accumulated other comprehensive loss are as follows (in thousands):
$\left.\begin{array}{lll} & \text { December } 31, \\ & 2012 & \\ & 2011 \\ \text { Foreign currency translation adjustment, net of tax } & \$(12,807 & ) \\ \text { Total accumulated other comprehensive loss } & \$(12,807 & ) \\ \hline(5,924,\end{array}\right)$

Net Loss Attributable to Common Stockholders and Net Loss per Share
The Company computes net loss per share in accordance with ASC 260, "Earnings per Share." Basic net loss per share of common stock is computed by dividing the Company's net loss attributable to Amyris, Inc. common stockholders by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share
of common stock is computed by giving effect to all potentially dilutive securities, including stock options, restricted stock units, common stock warrants, using the treasury stock method or the as converted method, as applicable. For all periods presented, basic net loss per share was the same as diluted net loss per share because the inclusion of all potentially dilutive securities outstanding was anti-dilutive. As such, the numerator and the denominator used in computing both basic and diluted net loss are the same for each period presented.

The following table presents the calculation of basic and diluted net loss per share of common stock attributable to Amyris, Inc. common stockholders (in thousands, except share and per share amounts):

## Numerator:

Net loss attributable to Amyris, Inc. common stockholders Denominator:
Weighted-average shares of common stock outstanding used in computing net loss per share of common stock, basic and diluted Net loss per share attributable to common stockholders, basic and diluted

Years Ended December 31, 2012201120
$\$(205,139) \$(178,870) \$(123,879)$ 56,717,869 44,799,056 14,840,253 $\$(3.62) \$(3.99) \$(8.35$

The following outstanding shares of potentially dilutive securities were excluded from the computation of diluted net loss per share of common stock for the periods presented because including them would have been anti-dilutive:

|  | Years Ended December 31, |  | 2011 |
| :--- | :--- | :--- | :--- |
| Period-end stock options to purchase common stock | 2012 | 2010 |  |
| Convertible promissory notes | $8,946,592$ | $8,377,016$ | $7,274,637$ |
| Period-end common stock subject to repurchase | $10,370,391$ | - | - |
| Period-end common stock warrants* | 51 | 7,929 | 33,396 |
| Period-end restricted stock units | 21,087 | 26,223 | 195,604 |
| Total | $2,550,799$ | 375,189 | - |
|  | $21,888,920$ | $8,786,357$ | $7,503,637$ |

The common stock warrants at December 31, 2011 includes 21,087 warrants issued in 2011 and 5,136 common stock warrants converted from preferred stock warrants computed on an as converted basis using the conversion ratios in effect as of September 30, 2010, the date of the IPO Closing. The common stock warrants at December 31, 2010 were converted from preferred stock warrants computed on an as converted basis using the conversion ratios in effect as of September 30, 2010.

## Recent Accounting Pronouncements

In December 2011, the International Accounting Standards Board ("IASB") and the FASB issued common disclosure requirements that are intended to enhance comparability between financial statements prepared on the basis of U.S. GAAP and those prepared in accordance with IFRS. In January 2013, the FASB issued an accounting standard update to limit the scope of the new balance sheet offsetting disclosures to derivative instruments, repurchase agreements, and securities lending transactions to the extent that they are offset in the financial statement or subject to an enforceable master netting arrangement or similar arrangement. While this guidance does not change existing offsetting criteria in U.S. GAAP or the permitted balance sheet presentation for items meeting the criteria, it requires an entity to disclose both net and gross information about assets and liabilities that have been offset and the related arrangements. Required disclosures under this new guidance should be provided retrospectively for all comparative periods presented. This new guidance is effective for fiscal years beginning on or after January 1, 2013, and interim periods within those years, which would be the Company's first quarter of fiscal 2013. The adoption of this guidance will require expanded disclosure in the Company's consolidated financial statements but will not impact financial results.

In July 2012, the FASB issued an amended accounting standard update to simplify how entities test indefinite-lived intangible assets for impairment which improve consistency in impairment testing requirements among long-lived asset categories. The amended guidance permits an assessment of qualitative factors to determine whether it is more
likely than not that the fair value of an indefinite-lived intangible asset is less than its carrying value. For assets in which this assessment concludes it is more likely than not that the fair value is more than its carrying value, then the amended guidance eliminates the requirement to perform quantitative impairment testing as outlined in the previously issued standards. The amended guidance is effective for fiscal years beginning after September 15, 2012; however, early adoption is permitted. The Company does not expect this amended guidance to have an impact on the Company's financial results.

In February 2013, in connection with the accounting standard related to the presentation of the Statement of Comprehensive Income, the FASB issued an accounting standard update to improve the reporting of reclassifications out of accumulated other comprehensive income of various components. This guidance requires companies to present either parenthetically on the face of the financial statements or in the notes, significant amounts reclassified from each component of accumulated other comprehensive
income and the income statement line items affected by the reclassification. This standard is effective for interim periods and fiscal years beginning after December 15, 2012, which would be the Company's first quarter of fiscal 2013. The adoption of this guidance will require expanded disclosure in the Company's consolidated financial statements but will not impact financial results.

## 3. Fair Value of Financial Instruments

The inputs to the valuation techniques used to measure fair value are classified into the following categories:
Level 1: Quoted market prices in active markets for identical assets or liabilities.
Level 2: Observable market-based inputs or unobservable inputs that are corroborated by market data.
Level 3: Unobservable inputs that are not corroborated by market data.
As of December 31, 2012, the Company's financial assets and financial liabilities are presented below at fair value and were classified within the fair value hierarchy as follows (in thousands):

|  | Level 1 | Level 2 | Level 3 | Balance as of December 31, 2012 |
| :---: | :---: | :---: | :---: | :---: |
| Financial Assets |  |  |  |  |
| Money market funds | \$ 15,847 | \$- | \$- | \$ 15,847 |
| Certificates of deposit | 757 | - | - | 757 |
| Total financial assets | \$16,604 | \$- | \$- | \$ 16,604 |
| Financial Liabilities |  |  |  |  |
| Notes payable | \$- | \$1,676 | \$- | \$ 1,676 |
| Loans payable | - | 20,707 | - | 20,707 |
| Credit facilities | - | 11,503 | - | 11,503 |
| Convertible notes | - | - | 62,522 | 62,522 |
| Compound embedded derivative liability | - | - | 7,894 | 7,894 |
| Currency interest rate swap derivative liability | - | 1,367 | - | 1,367 |
| Total financial liabilities | \$- | \$35,253 | \$70,416 | \$ 105,669 |

The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgments and consider factors specific to the asset or liability. The fair values of money market funds are based on fair values of identical assets. The fair values of the notes payable, loan payable, convertible notes, credit facility and currency interest rate swaps are based on the present value of expected future cash flows and assumptions about current interest rates and the creditworthiness of the Company. Market risk associated with our fixed and variable rate long-term debt relates to the potential reduction in fair value and negative impact to future earnings, respectively, from an increase in interest rates.

The following table provides a reconciliation of the beginning and ending balances for the compound embedded derivative liability measured at fair value using significant unobservable inputs (Level 3) (in thousands):

Compound Embedded Derivative Liability
Balance at December 31, 2011
\$-
Transfers in to Level 3
11,025
Total (gain) losses included in other income (expense), net

The compound embedded derivative liability, which is included in other liabilities, represents the value of the equity conversion option and a "make-whole" provision of outstanding senior unsecured convertible promissory notes issued to Total Gas \& Power USA SAS (see Note 6). There is no current observable market for this type of derivative and, as such, the Company determined the value of the embedded derivative using a Black-Scholes valuation model that combines expected cash outflows with market-based assumptions regarding risk-adjusted yields, stock price volatility, probability of a change of control and the
trading information of the Company's common stock into which the notes are convertible. The Company marks the embedded derivative to market due to the conversion price not being indexed to the Company's own stock. Except for the "make-whole interest" provision included in the conversion option, which is only required to be settled in cash upon a change of control at the noteholder's option, the embedded derivative will be settled in either cash or shares. As of December 31, 2012, the Company had enough common shares to settle the conversion option in shares.

The Company's financial assets and financial liabilities as of December 31, 2011 are presented below at fair value and were classified within the fair value hierarchy as follows (in thousands):


## Derivative Instruments

The Company's derivative instruments included Chicago Board of Trade (CBOT) ethanol futures and Reformulated Blendstock for Oxygenate Blending (RBOB) gasoline futures. All derivative commodity instruments were recorded at fair value on the consolidated balance sheets. None of the Company's derivative instruments were designated as a hedging instrument. Changes in the fair value of these non-designated hedging instruments were recognized in cost of products sold in the consolidated statements of operations. As of December 31, 2012, the Company had no outstanding derivative commodity instruments resulting from the Company's transition out of of its ethanol and gasoline business in the quarter ended September 30, 2012.

In June 2012, the Company entered into a loan agreement with Banco Pine S.A. under which the bank provided the Company with a short term loan of $\mathrm{R} \$ 52.0$ million (approximately US $\$ 25.4$ million based on the exchange rate as of December 31, 2012) (the "Bridge Loan"). At the time of the Bridge Loan, the Company also entered into a currency interest rate swap arrangement with Banco Pine with respect to the repayment of $\mathrm{R} \$ 22.0$ million (approximately US $\$ 10.8$ million based on the exchange rate of as of December 31, 2012). The swap arrangement exchanges the principal and interest payments under the Banco Pine loan of R $\$ 22.0$ million entered into in July 2012 for alternative principal and interest payments that are subject to adjustment based on fluctuations in the foreign exchange rate between the U.S. dollar and Brazilian real. The swap has a fixed interest rate of $3.94 \%$. Changes in the fair value of the swap are recognized in other income (expense), net in the consolidated statements of operations.

As of December 31, 2012, the Company recognized compound embedded derivative liability of $\$ 7.9$ million which was included in other liabilities and represents the value of the equity conversion option and a "make-whole" provision of outstanding senior unsecured convertible promissory notes issued to Total Gas \& Power USA SAS (see

Note 6).
Derivative instruments measured at fair value as of December 31, 2012 and 2011, and their classification on the consolidated balance sheets and consolidated statements of operations, are presented in the following tables (in thousands except contract amounts):

|  | Asset/Liability as of December 31, 2012 | December 31, 2011 |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Quantity of | Quantity of |  |  |
| Type of Derivative Contract | Short Fair Value | Short | Fair | Value |
|  | Contracts | Contracts |  |  |
| Regulated fixed price futures contracts, included as liability in accounts payable | \$- | 22 | \$ 18 |  |
| Currency interest rate swap, included as net liability in other long term liability | 1 \$ 1,367 | - | \$- |  |
| Type of Derivative Contract | Income | Years Ended December 31, |  |  |
|  | Statement Classification | 2012 | 2011 | 2010 |
|  |  | Gain (Los | ) Recognize |  |
| Regulated fixed price futures contracts | Cost of products sold | \$(288 | \$ 2,365 ) | \$(2,225 |
| Currency interest rate swap | Other income (expense), net | \$(1,367 | \$- | \$- |

## 4. Balance Sheet Components

Investments

The following table summarizes the Company's investments as of December 31, 2012 (in thousands):
December 31, 2012

| Amortized <br> Cost | Unrealized Gain <br> (Loss) | Fair Value |
| :--- | :--- | :--- |
| $\$ 97$ | $\$-$ | $\$ 97$ |
| $\$ 97$ | $\$-$ | $\$ 97$ |

The following table summarizes the Company's investments as of December 31, 2011 (in thousands):
December 31, 2011

| Amortized <br> Cost | Unrealized Gain <br> (Loss) | Fair Value |
| :--- | :--- | :--- |
| $\$ 7,889$ | $\$-$ | $\$ 7,889$ |
| $\$ 7,889$ | $\$-$ | $\$ 7,889$ |

Inventories

Inventories, net is comprised of the following (in thousands):

|  | December 31, |  |
| :--- | :--- | :--- |
|  | 2012 | 2011 |
| Raw materials | $\$ 1,574$ | $\$ 2,191$ |
| Work-in-process | 1,771 | 1,237 |
| Finished goods | 2,689 | 5,642 |
| Inventories, net | $\$ 6,034$ | $\$ 9,070$ |

## Prepaid and Other Current Assets

Prepaid and other current assets is comprised of the following (in thousands):

|  | December 31, |  |
| :--- | :--- | :--- |
|  | 2012 | 2011 |
| Advances to contract manufacturers ${ }^{(1)}$ | $\$ 784$ | $\$ 10,748$ |
| Manufacturing catalysts | 1,895 | 3,929 |
| Recoverable VAT and other taxes | 4,167 | 2,193 |
| Other | 2,079 | 3,003 |
| Prepaid and other current assets | $\$ 8,925$ | $\$ 19,873$ |

At December 31, 2012 and 2011, the amount of $\$ 784,000$ and $\$ 748,000$, respectively, relates to the current ${ }^{(1)}$ unamortized portion of equipment costs funded by the Company to a contract manufacturer. The related amortization is being offset against purchases of inventory.

Property, Plant and Equipment, net
Property, plant and equipment, net is comprised of the following (in thousands):

|  | December 31, |  |
| :--- | :--- | :--- |
|  | 2012 | 2011 |
| Leasehold improvements | $\$ 39,290$ | $\$ 40,011$ |
| Machinery and equipment | 105,162 | 59,657 |
| Computers and software | 8,232 | 6,491 |
| Furniture and office equipment | 2,467 | 2,223 |
| Buildings | 5,888 | - |
| Vehicles | 575 | 596 |
| Construction in progress | 45,372 | 45,318 |
|  | $\$ 206,986$ | 154,296 |
| Less: accumulated depreciation and amortization | $(43,865$ | $(26,195$ |
| Property, plant and equipment, net | $\$ 163,121$ | $\$ 128,101$ |

Property, plant and equipment, net includes $\$ 9.1$ million and $\$ 13.7$ million of machinery and equipment and furniture and office equipment under capital leases as of December 31, 2012 and 2011, respectively. Accumulated amortization of assets under capital leases totaled $\$ 4.1$ million and $\$ 4.7$ million as of December 31, 2012 and 2011, respectively.

Depreciation and amortization expense, including amortization of assets under capital leases, was $\$ 14.2$ million, $\$ 10.7$ million and $\$ 7.3$ million for the years ended December 31, 2012, 2011 and 2010, respectively.

The Company capitalizes interest costs incurred to construct plant and equipment. The capitalized interest is recorded as part of the depreciable cost of the asset to which it relates to and is amortized over the asset's estimated useful life. Interest cost capitalized as of December 31, 2012 and 2011was $\$ 0.6$ million and zero, respectively.

## Other Assets

Other assets are comprised of the following (in thousands):

|  | December 31, |  |
| :--- | :--- | :--- |
|  | 2012 | 2011 |
| Deferred charge asset ${ }^{(1)}$ | $\$-$ | $\$ 18,792$ |
| Deposits on property and equipment, including taxes | 2,363 | 17,455 |
| Advances to contract manufacturers, net of current portion $^{(2)}$ | 2,222 | 2,866 |
| Recoverable taxes on purchased property, plant and equipment ${ }^{(3)}$ | 13,597 | 2,075 |
| Other | 1,930 | 1,813 |
| Total other assets | $\$ 20,112$ | $\$ 43,001$ |

${ }^{(1)}$ The deferred charge asset relates to the collaboration agreement between the Company and Total (see Note 9). At December 31, 2012 and 2011, $\$ 2.2$ million and $\$ 2.9$ million, respectively, relates to the non-current
${ }^{(2)}$ unamortized portion of equipment costs funded by the Company to a contract manufacturer. The related amortization is being offset against purchases of inventory.
(3) At December 31, 2012 and December 31, 2011, $\$ 13.6$ million and $\$ 2.1$ million, respectively, are recoverable taxes from the Brazilian government.

Accrued and Other Current Liabilities
Accrued and other current liabilities are comprised of the following (in thousands):

|  | December 31, |  |
| :--- | :--- | :--- |
|  | 2012 | 2011 |
| Professional services | $\$ 824$ | $\$ 4,384$ |
| Accrued vacation | 2,673 | 2,761 |
| Payroll and related expenses | 5,809 | 6,343 |
| Construction in progress | - | 4,992 |
| Tax-related liabilities | 851 | 2,180 |
| Deferred rent, current portion | 1,448 | 1,274 |
| Contractual obligations to contract manufacturers | 9,952 | - |
| Customer advances | 970 | 3,667 |
| Other | 1,883 | 5,381 |
| Total accrued and other current liabilities | $\$ 24,410$ | $\$ 30,982$ |

Other Liabilities
Other liabilities are comprised of the following (in thousands):

|  | December 31, |  |
| :--- | :--- | :--- |
|  | 2012 | 2011 |
| Contingently repayable advance from related party collaborator ${ }^{(1)}$ | $\$-$ | $\$ 31,922$ |
| Bonus payable to contract manufacturer, non-current | - | 2,500 |
| Contractual obligations to contract manufacturers, non-current | 4,000 | - |
| Fair market value of swap obligations | 1,367 | - |
| Asset retirement obligations | - | 1,129 |
| Fair value of compound embedded derivative liability ${ }^{(2)}$ | 7,894 | - |
| Other | 2,672 | 1,534 |
| Total other liabilities | $\$ 15,933$ | $\$ 37,085$ |

(1) The contingently repayable advance from related party collaborator as of December 31, 2011 relates to the collaboration agreement between the Company and Total.
(2) The compound embedded derivative liability represents the fair value of the equity conversion feature and a "make-whole" feature of the outstanding senior unsecured convertible promissory notes issued to Total.

In November 2011, the Company and Total entered into an amendment of their Technology License, Development, Research and Collaboration Agreement (the "Amendment"). The Amendment provided for an exclusive strategic collaboration for the development of renewable diesel products and contemplated that the parties would establish a joint venture (the "JV") for the production and commercialization of such renewable diesel products on an exclusive, worldwide basis. In addition, the Amendment contemplated providing the JV with the right to produce and commercialize certain other chemical products on a non-exclusive basis. The amendment further provided that definitive agreements to form the JV had to be in place by March 31, 2012 or such other 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, would terminate. In the second quarter of 2012, the parties extended the deadline to June 30, 2012, and, through June 30, 2012 the parties were engaged in discussions regarding the structure of future payments related to the program, until the amendment was superseded by a further amendment in July 2012 (as discussed in Note 9).

Pursuant to the Amendment, Total agreed to fund the following amounts: (i) the first $\$ 30$ million in research and development costs related to the renewable diesel program which have been incurred since August 1, 2011, which amount would be in addition to the $\$ 50$ million in research and development funding contemplated by the Collaboration Agreement, and (ii) for any research and development costs incurred following the JV formation date that were not covered by the initial $\$ 30$ million, an additional $\$ 10$ million in 2012 and up to an additional $\$ 10$ million in 2013, which amounts would be considered part of the $\$ 50$ million contemplated by the Collaboration Agreement. In addition to these payments, Total further agreed to fund $50 \%$ of all remaining research and development costs for the renewable diesel program under the Amendment.

Under the Amendment,Total had an option for a period of 90 days following the completion of the renewable diesel program on December 31, 2013 (or any other date as determined by the management committee to achieve the end-project milestone), to notify the Company that it did not wish to pursue production or commercialization of renewable diesel under the Amendment. If Total exercised this right, all of Total's intellectual property rights that were developed during the renewable diesel program would terminate and would be assigned to the Company, and the Company would be obligated to pay Total specified royalties based on the Company's net income in consideration of the benefits the Company derived from the technology and intellectual property developed during the renewable diesel development project. Such royalty payments would commence on the royalty notification date and end on the date
when the Company had paid Total an aggregate amount equal to $\$ 150$ million. Such royalty payments would be equal to (20\%) of the Company and Company-affiliate (i) net income on a yearly basis derived from licenses or sales of intellectual property developed under the collaboration other than to the extent such licenses or sales relate to the use of such intellectual property for the non-exclusive JV products, and (ii) net income of the Company on a consolidated basis other than that derived from the jet fuel development program with Total or from the non-exclusive JV products.

In addition, under the Amendment, if the Company sold all or substantially all of its renewable diesel business prior to the time the aggregate royalty amount has been paid, the Company would be required to pay Total fifty percent ( $50 \%$ ) of the net proceeds from such sale up to the then-remaining unpaid amount of the aggregate royalty amount. Net income was to be calculated

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in accordance with generally accepted accounting principles consistently applied by the Company and in the event that the foregoing net income was negative for a given fiscal quarter, the Company would not be required to pay any royalty for such fiscal quarter). Beginning on the sixth year from the royalty notification date, the aforementioned royalty would be additionally derived from the non-exclusive JV products.

The Company concluded that there was a significant amount of risk associated with the development of these products and therefore the arrangement is within the scope of ASC 730-20 Research and Development. The Company also determined that until Total exercised its royalty option under the Amendment, it would be uncertain that financial risk involved with research and development was transferred from the Company to Total. Accordingly, the funds received from Total for the diesel product research and development activities were recorded as a contingently repayable advance from the collaborator as part of other liabilities in the Company's consolidated balance sheets. Depending on the resolution of Total's royalty option contingency, the Company will record this arrangement as a contract to perform research and development services or as an obligation to repay the funds.

In July 2012, the Company entered into a further amendment of the collaboration agreement with Total that expanded Total's investment in the biofene collaboration, incorporated the development of certain joint venture products for use in diesel and jet fuel into the scope of the collaboration, and changed the structure of the funding from Total to include a convertible debt mechanism (see Note 9). As a part of the July 2012 amendment agreements, Total's royalty option contingency related to diesel was removed and the jet fuel collaboration was combined with the expanded biofene collaboration. As a result, $\$ 46.5$ million of payments received from Total that had been recorded as an advance from the collaborator were no longer contingently repayable. Of this amount, $\$ 23.3$ million was treated as a repayment by the Company and included as part of the senior unsecured convertible promissory note issued to Total in July 2012 and the remaining $\$ 23.2$ million was recorded as a contract to perform research and development services, which was offset by the reduction of the capitalized deferred charge asset of $\$ 14.4$ million resulting in the Company recording revenue from a related party of $\$ 8.9$ million.

## 5. Commitments and Contingencies

## Capital Leases

In March 2008, the Company executed an equipment financing agreement intended to cover certain qualifying research and laboratory hardware and software. In January 2009, the agreement was amended to increase the financing amount. During the years ended December 31, 2012, 2011 and 2010, the Company financed certain purchases of hardware equipment and software of approximately zero, zero and $\$ 1.4$ million, respectively. Pursuant to the equipment financing agreement, the Company financed the equipment with the transactions representing capital leases. Accordingly, fixed assets and capital lease liabilities were recorded at the present values of the future lease payments of $\$ 0.4$ million and $\$ 3.1$ million at December 31, 2012 and 2011. The incremental borrowing rates used to determine the present values of the future lease payments was $9.5 \%$. The capital lease obligations expire at various dates, with the latest maturity in March 2013. In connection with the agreement entered into in 2008, the Company issued a warrant to purchase shares of the Company's convertible preferred stock (see Note 11).

In December 2011, the Company executed an equipment financing agreement for $\$ 3.0$ million for certain qualifying manufacturing and laboratory equipment. Pursuant to the equipment financing agreement, the Company financed the equipment with transactions representing capital leases. This sales/leaseback transaction resulted in a $\$ 1.3$ million unrealized loss which is being amortized over the life of the assets under lease. Accordingly, a capital lease liability was recorded at the present value of the future lease payments of $\$ 2.2$ million and $\$ 3.4$ million during the years ended December 31, 2012 and 2011, respectively. The incremental borrowing rate used to determine the present values of
the future lease payments was $6.5 \%$. The lease obligations expire on January 1, 2015. In connection with the capital lease entered into in 2011, the Company issued a warrant to purchase shares of the Company's common stock (see Note 11). Future minimum payments under this sales/leaseback agreement as of December 31, 2012 are as follows (in thousands):

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| Years ending December 31: | Sales/Leaseback |
| :--- | :--- |
| 2013 | $\$ 1,098$ |
| 2014 | 1,007 |
| 2015 | 289 |
| 2016 | - |
| 2017 | - |
| Thereafter | 2,394 |
| Total future minimum lease payments | $(168$ |
| Less: amount representing interest | 2,226 |
| Present value of minimum lease payments | $(982$ |
| Less: current portion | $\$ 1,244$ |
| Long-term portion | ) |
| The Company recorded interest expense in connection with its capital leases of \$382,000, $\$ 559,000$ and $\$ 821,000$ for |  |
| the years ended December 31, 2012, 2011 and 2010, respectively. Future minimum payments under capital leases, |  |
| including the sales/leaseback, as of December 31, 2012 are as follows (in thousands): |  |
|  |  |
| Years ending December 31: | Capital Leases |
| 2013 | $\$ 1,489$ |
| 2014 | 1,007 |
| 2015 | 289 |
| 2016 | - |
| 2017 | - |
| Thereafter | - |
| Total future minimum lease payments | 2,785 |
| Less: amount representing interest | $(175$ |
| Present value of minimum lease payments | 2,610 |
| Less: current portion | $(1,366$ |
| Long-term portion | $\$ 1,244$ |

Operating Leases
The Company has noncancelable operating lease agreements for office, research and development, and manufacturing space in the United States that expire at various dates, with the latest expiration in May 2018 with an estimated annual rent payment of approximately $\$ 6.2$ million. In addition, the Company leases facilities in Brazil pursuant to noncancelable operating leases that expire at various dates, with the latest expiration in November 2016 and with an estimated annual rent payment of approximately $\$ 0.6$ million.

In 2007, the Company entered into an operating lease for its headquarters in Emeryville, California, with a term of ten years commencing in May 2008. As part of the operating lease agreement, the Company received a tenant improvements allowance of $\$ 11.4$ million. The Company recorded the allowance as deferred rent and associated expenditures as leasehold improvements that are being amortized over the shorter of their estimated useful life or the term of the lease. In connection with the operating lease, the Company elected to defer a portion of the monthly base rent due under the lease and entered into notes payable agreements with the lessor for the purchase of certain tenant improvements. In October 2010, the Company amended its lease agreement with the lessor of its headquarters, to lease up to approximately 22,000 square feet of research and development and office space. In return for the removal of the early termination clause in its amended lease agreement, the Company received approximately $\$ 1.0$ million from the lessor in December 2010.

The Company recognizes rent expense on a straight-line basis over the noncancelable lease term and records the difference between cash rent payments and the recognition of rent expense as a deferred rent liability. Where leases contain escalation clauses, rent abatements, and/or concessions, such as rent holidays and landlord or tenant incentives or allowances, the Company applies them in the determination of straight-line rent expense over the lease term. Rent expense was $\$ 4.9$ million, $\$ 4.8$ million and $\$ 3.3$ million, respectively, for the years ended December 31, 2012, 2011 and 2010, respectively.

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In January 2011, the Company entered into a right of first refusal agreement with respect to a facility and site in Leland, North Carolina leased by Glycotech covering a two year period commencing in January 2011. Under the right of first refusal agreement, the lessor agrees not to sell the facility and site leased by Glycotech during the term of the production service agreement. If the lessor is presented with an offer to sell, or decides to sell, an adjacent parcel, the Company has a right of first refusal to acquire the adjacent parcel or leased property.

In February 2011, the Company commenced payment of rent related to an operating lease on real property owned by Usina São Martinho in Brazil. In conjunction with a joint venture agreement (see Note 7) with the same entity, the real property will be used by the joint venture entity, SMA Indústria Química S.A. ("SMA"), for the construction of a production facility. This lease has a term of 20 years commencing in February 2011 with an estimated annual rent payment of approximately $\$ 46,000$.

In February 2011, the Company entered into an operating lease for certain equipment owned by GEA Engenharia de Processos e Sistemas Industriais Ltda ("GEA") in Brazil. The equipment under this lease was used by the Company in its production activities in Brazil. This lease had a term of one year commencing in March 2011 and was terminated in June 2012 and the equipment was returned to GEA.

In March 2011, the Company entered into an operating lease on real property owned by Paraíso Bioenergia S.A. ("Paraíso Bioenergia") in Brazil. In conjunction with a supply agreement (see Note 9) with the same entity, the real property is being used by the Company for its Biofene production plant in Brotas. This lease has a term of 15 years commencing in March 2011 with an estimated annual rent payment of approximately $\$ 116,000$.

In August 2011, the Company notified the lessor of its leased office facilities in Brazil of the Company's termination of its existing lease effective November 30, 2011. At the same time, the Company entered into an operating lease for new office facilities in Campinas, Brazil. The new lease has a term of 5 years commencing in November 2011 with an estimated annual rent payment of approximately $\$ 367,000$.

In October 2012, an operating lease associated with the Company's pilot plant in Brazil was amended. As a result of this amendment, the Company's operating lease was extended and the new expiration is October 2015 and included an amendment to the terms of restitution of the property under lease. As a result of this amendment, the Company no longer has asset retirement obligations and therefore reversed the previously accrued liabilities.

Future minimum payments under operating leases as of December 31, 2012, are as follows (in thousands):

| Years ending December 31: | Operating <br> Leases - | Operating <br> Leases - | Total <br> Operating |
| :--- | :--- | :--- | :--- |
| 2013 | Facilities | Land | Leases |
| 2014 | $\$ 6,463$ | $\$ 161$ | $\$ 6,624$ |
| 2015 | 6,610 | 162 | 6,772 |
| 2016 | 6,738 | 162 | 6,900 |
| 2017 | 6,729 | 162 | 6,891 |
| Thereafter | 6,598 | 162 | 6,760 |
| Total future minimum lease payments | 2,786 | 1,556 | 4,342 |
|  | $\$ 35,924$ | $\$ 2,365$ | $\$ 38,289$ |

Guarantor Arrangements

The Company has agreements whereby it indemnifies its officers and directors for certain events or occurrences while the officer or director is, or was, serving at the Company's request in such capacity. The term of the indemnification period is for the officer or director's lifetime. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited; however, the Company has a director and officer insurance policy that limits its exposure and enables the Company to recover a portion of any future amounts paid. As a result of its insurance policy coverage, the Company believes the estimated fair value of these indemnification agreements is minimal. Accordingly, the Company had no liabilities recorded for these agreements as of December 31, 2012 and 2011.

The Company has a facility ("FINEP Credit Facility") with a financial institution to finance a research and development project on sugarcane-based biodiesel (see Note 6). The FINEP Credit Facility provides for loans of up to an aggregate principal amount of R $\$ 6.4$ million (approximately US $\$ 3.1$ million based on the exchange rate as of December 31, 2012) which is guaranteed by a chattel mortgage on certain equipment of the Company. The Company's total acquisition cost for the equipment under this guarantee is approximately $\mathrm{R} \$ 6.0$ million (approximately US $\$ 2.9$ million based on the exchange rate as of December 31, 2012). Through December 31, 2012, the Company received all four disbursements after compliance with certain terms and conditions under the FINEP Credit Facility as described in more detail in Note 6. After the release of the first disbursement and prior to any subsequent drawdown from the FINEP Credit Facility, the Company provided bank letters of guarantee of R\$3.3 million (approximately US $\$ 1.6$ million based on the exchange rate as of December 31, 2012) through Banco ABC Brasil S.A. As of December 31, 2012, all available credit under this facility was fully drawn.

The Company has a credit facility ("BNDES Credit Facility") with a financial institution to finance a production site in Brazil. This credit facility is collateralized by a first priority security interest in certain of the Company's equipment and other tangible assets totaling R $\$ 24.9$ million (approximately US $\$ 12.2$ million based on the exchange rate at December 31, 2012). The Company is a parent guarantor for the payment of the outstanding balance under the BNDES Credit Facility. Additionally, the Company is required to provide a bank guarantee under the BNDES Credit Facility.

The Company has signed loan agreements and a security agreement where the Company pledged certain farnesene production assets as collateral (the fiduciary conveyance of movable goods) with each of Nossa Caixa and Banco Pine. Under the loan agreements, Banco Pine, agreed to lend $\mathrm{R} \$ 22.0$ million and Nossa Caixa agreed to lend $\mathrm{R} \$ 30.0$ million as financing for capital expenditures relating to the Company's production facility in Brotas. The Company's total acquisition cost for the farnesene production assets pledged as collateral under these agreements is approximately $\mathrm{R} \$ 68.0$ million (approximately US $\$ 33.3$ million based on the exchange rate as of December 31, 2012). The Company is a also a parent guarantor for the payment of the outstanding balance under these loan agreements.

Under an operating lease agreement for its office facilities in Brazil, which commenced on November 15, 2011, the Company is required to maintain restricted cash or letters of credit equal to 3 months of rent of approximately R $\$ 0.2$ million (approximately US $\$ 0.1$ million based on the exchange rate as of December 31, 2012) in the aggregate as a guarantee that the Company will meet its performance obligations under such operating lease agreement.

## Purchase Obligations

As of December 31, 2012, the Company had $\$ 53.1$ million in purchase obligations which included $\$ 52.7$ million in non-cancelable contractual obligations and construction commitments, of which $\$ 13.9$ million have been accrued as loss on purchase commitments.

## Other Matters

Certain conditions may exist as of the date the financial statements are issued, which may result in a loss to the Company but which will only be resolved when one or more future events occur or fail to occur. The Company's management assesses such contingent liabilities, and such assessment inherently involves an exercise of judgment. In assessing loss contingencies related to legal proceedings that are pending against and by the Company or unasserted claims that may result in such proceedings, the Company's management evaluates the perceived merits of any legal proceedings or unasserted claims as well as the perceived merits of the amount of relief sought or expected to be sought.
If the assessment of a contingency indicates that it is probable that a material loss has been incurred and the amount of the liability can be estimated, then the estimated liability would be accrued in the Company's financial statements. If
the assessment indicates that a potential material loss contingency is not probable but is reasonably possible, or is probable but cannot be estimated, then the nature of the contingent liability, together with an estimate of the range of possible loss if determinable and material would be disclosed. Loss contingencies considered to be remote by management are generally not disclosed unless they involve guarantees, in which case the guarantee would be disclosed.
The Company is subject to disputes and claims that arise or have arisen in the ordinary course of business and that have not resulted in legal proceedings or have not been fully adjudicated. For example, as of December 31, 2012, the Company had accrued approximately R $\$ 2.5$ million (approximately US $\$ 1.2$ million based on the exchange rate as of December 31, 2012) for losses it deemed to be probable arising from a potential claim relating to a contract manufacturing arrangement. Such matters that may arise in the ordinary course of business are subject to many uncertainties and outcomes are not predictable with assurance. Therefore, if one or more of these legal disputes or claims resulted in settlements or legal proceedings that were resolved against the Company
for amounts in excess of management's expectations, the Company's consolidated financial statements for the relevant reporting period could be materially adversely affected.
6. Debt

Debt is comprised of the following (in thousands):

|  | December 31, |  |
| :--- | :--- | :--- |
|  | 2012 | 2011 |
| Credit facilities | $\$ 12,409$ | $\$ 18,852$ |
| Notes payable | 1,572 | 3,113 |
| Convertible notes | 25,000 | - |
| Related party convertible notes | 39,033 | - |
| Loans payable | 26,150 | 19,359 |
| Total debt | 104,164 | 41,324 |
| Less: current portion | $(3,325$ | $(28,049$ |
| Long-term debt | $\$ 100,839$ | $\$ 13,275$ |

## FINEP Credit Facility

In November 2010, the Company entered into a credit facility with Financiadora de Estudos e Projetos ("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 the Company's research and development project on sugarcane-based biodiesel ("FINEP Project") and provides for loans of up to an aggregate principal amount of R\$6.4 million (approximately US $\$ 3.1$ million based on the exchange rate as of December 31, 2012) which is secured by a chattel mortgage on certain equipment of the Company as well as by bank letters of guarantee. Through December 31, 2012, the Company received all four disbursements after compliance with certain terms and conditions under the FINEP Credit Facility. The first disbursement of approximately R $\$ 1.8$ million (approximately US $\$ 0.9$ million based on the exchange rate as of December 31, 2012) was received in February 2011. The remaining balance totaling approximately R $\$ 4.6$ million (approximately US $\$ 2.2$ million based on exchange rate as December 31, 2012) was received in December 2012 in three equal disbursements of approximately R $\$ 1.6$ million (approximately US $\$ 0.8$ million based on exchange rate as of December 31, 2012). As of December 31, 2012, all available credit under this facility was fully drawn.

Interest on loans drawn under this credit facility is fixed at 5\% 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 ("TJLP"). If the TJLP at the time of default is greater than $6 \%$, then the interest will be $5 \%$ plus a TJLP adjustment factor, otherwise the interest will be at $11 \%$ per annum. In addition, a fine of up to $10 \%$ shall apply to the amount of any obligation in default. Interest on late balances will be $1 \%$ interest per month, levied on the overdue amount. Payment of the outstanding loan balance is being made in 81 monthly installments, which commenced in July 2012 and extends through March 2019. Interest on loans drawn and other charges are paid on a monthly basis and commenced in March 2011. As of December 31, 2012, the total outstanding loan balance under this credit facility was R $\$ 6.4$ million (approximately US $\$ 3.1$ million based on exchange rate as of December 31, 2012).

The FINEP Credit Facility contains the following significant terms and conditions:
The Company would share with FINEP the costs associated with the FINEP Project. At a minimum, the Company would contribute from its own funds approximately R $\$ 14.5$ million (approximately US $\$ 7.1$ million based on the exchange rate as of December 31, 2012) of which $\mathrm{R} \$ 11.1$ million was to be contributed prior to the release of the
second disbursement. As of December 31, 2012, all four disbursements were completed and for its part, the Company has fulfilled all of its cost sharing obligations;
After the release of the first disbursement, prior to any subsequent drawdown from the FINEP Credit Facility, the Company was required to provide bank letters of guarantee of up to $\mathrm{R} \$ 3.3$ million in aggregate (approximately US $\$ 1.6$ million based on the exchange rate as of December 31, 2012). On December 17, 2012 and prior to release of the second disbursement on December 26, 2012, the Company obtained the required bank letter of guarantees from Banco ABC Brasil, S.A.

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Amounts released from the FINEP Credit Facility must be completely used by the Company towards the FINEP Project within 30 months after the contract execution.

## Revolving Credit Facility

In December 2010, the Company established a revolving credit facility with a financial institution that provided 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 standby letters of credit. Interest on loans drawn under this revolving credit facility was 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 was Prime Rate plus $2.0 \%$. The credit facility was collateralized by a first priority security interest in certain of the Company's present and future assets. In April 2012, the Company repaid $\$ 7.7$ million of its outstanding loans under the Credit Facility. In May 2012, the Company entered into a letter agreement with the bank amending the credit facility agreement to reduce the committed amount under the credit facility from $\$ 10.0$ million to approximately $\$ 2.3$ million, and the letters of credit sublimit from $\$ 5.0$ million to approximately $\$ 2.3$ million. The amendment also modified the current ratio covenant to require a ratio of current assets to current liabilities of at least $\$ 1.3: 1$ (as compared to 2:1 in the Credit Facility), and required the Company to maintain unrestricted cash of at least $\$ 15.0$ million in its account with the Bank. In June 2012, the credit facility was terminated and, as of December 31, 2012, no loans or letters of credit were outstanding.

## BNDES Credit Facility

In December 2011, the Company entered into a credit facility ("BNDES Credit Facility") in the amount of R\$22.4 million (approximately US $\$ 11.0$ million based on the exchange rate at December 31, 2012) with Banco Nacional de Desenvolvimento Econômico e Social ('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 $\mathrm{R} \$ 19.1$ million reais and an additional tranche of approximately $\mathrm{R} \$ 3.3$ million that becomes available upon delivery of additional guarantees. The credit line is available for 12 months from the date of the Credit Facility, subject to extension by the lender.
The principal of the 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 annum. Additionally, there is 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 BNDES Credit Facility is denominated in Brazilian reais. The BNDES Credit Facility is collateralized by a first priority security interest in certain of the Company's equipment and other tangible assets totaling R $\$ 24.9$ million (approximately US $\$ 12.2$ million based on the exchange rate as of December 31, 2012). The Company is a parent guarantor for the payment of the outstanding balance under the BNDES Credit Facility. Additionally, the Company is required to provide a bank guarantee equal to $10.0 \%$ of the total approved amount ( $\mathrm{R} \$ 22.4$ million in total debt) available under this Credit Facility. For advances of the second tranche (above $\mathbf{R} \$ 19.1$ million), the Company is required to provide additional bank guarantees equal to $90.0 \%$ of each such advance, plus additional Company guarantees equal to at least $130.0 \%$ of such advance. The BNDES Credit Facility contains customary events of default, including payment failures, failure to satisfy other obligations under this credit facility 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 occurs, the Lender may terminate its commitments and declare immediately due all borrowings under the facility. As of December 31, 2012 the Company had $\mathrm{R} \$ 19.1$ million (approximately US $\$ 9.3$ million based on the exchange rate as of December 31, 2012) in outstanding advances under the BNDES Credit Facility.

Notes Payable
During the period between May 2008 and October 2008, the Company entered into notes payable agreements with the lessor of its headquarters under which it borrowed a total of $\$ 3.3$ million for the purchase of tenant improvements, bearing an interest rate of $9.5 \%$ per annum and to be repaid over a period of 55 to 120 months. As of December 31, 2012 and 2011, a principal amount of $\$ 1.6$ million and $\$ 2.0$ million, respectively, was outstanding under these notes payable.

In connection with the operating lease for its headquarters (see Note 5) in Emeryville, California, the Company elected to defer a portion of it's monthly base rent due under the lease. In June 2011, a deferred rent obligation of $\$ 1.5$ million resulting from this election became due and payable in 24 equal monthly installments of approximately $\$ 63,000$. As such, the Company reclassified this obligation from Other Liabilities to Notes Payable. In June 2012, the Company paid off the outstanding notes payable balance.

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As of December 31, 2012 and 2011, a principal amount of zero and $\$ 1.1$ million, respectively, was outstanding under this note payable.

## Convertible Notes

In February 2012, the Company completed the sale of senior unsecured convertible promissory notes in an aggregate principal amount of $\$ 25.0$ million pursuant to a Securities Purchase Agreement, between the Company and certain investment funds affiliated with Fidelity Investments Institutional Services Company, Inc. The offering consisted of the sale of $3.0 \%$ senior unsecured convertible promissory notes with a March 1, 2017 maturity date and an initial conversion price equal to $\$ 7.0682$ per share of the Company's common stock, subject to adjustment for proportional adjustments to outstanding common stock and anti-dilution provisions in case of dividends and distributions. As of December 31, 2012, the notes were convertible into an aggregate of up to $3,536,968$ shares of common stock. 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 the Company's 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, material adverse effect clauses 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. Furthermore, the senior unsecured convertible notes include restrictions on the amount of debt the Company is permitted to incur. The Company's total outstanding debt at any time can not exceed the greater of $\$ 200.0$ million or $50 \%$ of its consolidated total assets and its secured debt cannot exceed the greater of $\$ 125$ million or $30 \%$ of its consolidated total assets.

## Related Party Convertible Notes

In July 30, 2012, the Company entered into a further amendment of the collaboration agreement with Total that expanded Total's investment in the biofene collaboration, incorporated the development of certain joint venture products for use in diesel and jet fuel into the scope of the collaboration, and changed the structure of the funding from Total to include a convertible debt mechanism (see Note 9).

The purchase agreement for the notes related to the funding from Total provides for the sale of an aggregate of $\$ 105.0$ million in notes as follows:

As part of an initial closing under the purchase agreement (which initial closing was completed in two installments), (i) on July 30, 2012, the Company sold a $1.5 \%$ Senior Unsecured Convertible Note Due 2017 to Total in the face amount of $\$ 38.3$ million, including $\$ 15.0$ million in new funds and $\$ 23.3$ million in previously-provided diesel research and development funding by Total, and (ii) on September 14, 2012, the Company sold another note (in the same form) for $\$ 15.0$ million in new funds from Total.

The purchase agreement provides that additional notes may be sold in subsequent closings in July 2013 (for - cash proceeds to the Company of $\$ 30.0$ million) and July 2014 (for cash proceeds to the Company of $\$ 21.7$ million, which would be settled in an initial installment of $\$ 10.85$ million payable at such closing and a second installment of $\$ 10.85$ million payable in January 2015).

The notes each have a March 1, 2017 maturity date and an initial conversion price equal to $\$ 7.0682$ per share of the Company's common stock. The notes bear interest of $1.5 \%$ per annum (with a default rate of $2.5 \%$ ), accruing from the date of funding and payable at maturity or on conversion or a change of control where Total exercises the right to require the Company to repay the notes. Accrued interest is canceled if the notes are canceled based on a "Go" decision.

The notes become convertible into the Company's common stock (i) within 10 trading days prior to maturity (if they are not canceled as described above prior to their maturity date), (ii) on a change of control of the Company, (iii) if Total is no longer the largest stockholder of the Company following a "No-Go" decision (subject to a six-month lock-up with respect to any shares of common stock issued upon conversion), and (iv) on a default by the Company. If Total makes a final "Go" decision, then the notes will be exchanged by Total for equity interests in the Fuels JV, after which the notes will not be convertible and any obligation to pay principal or interest on the notes will be extinguished. If Total makes a "No-Go" decision, outstanding notes will remain outstanding and become payable at maturity.

In connection with the Private Placement that occurred on December 24, 2012, Total elected to participate in the Private Placement by exchanging approximately $\$ 5.0$ million of its $\$ 53.3$ million in senior unsecured convertible promissory notes into $1,677,852$ of the Company's common stock at $\$ 2.98$ per share. As such, $\$ 5.0$ million of the outstanding $\$ 53.3$ million in senior unsecured convertible promissory notes was cancelled. The cancellation of the debt was treated as an extinguishment of debt in accordance with the guidance outlined in AS 470-50.

The conversion price of the notes is subject to adjustment for proportional adjustments to outstanding common stock and under anti-dilution provisions in case of certain dividends and distributions. Total has a right to require repayment of $101 \%$ of the principal amount of the notes in the event of a change of control of the Company and the notes provide for payment of unpaid interest on conversion following such a change of control if Total does not require such repayment. The purchase agreement and notes include covenants regarding payment of interest, maintenance of the Company's 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 purchase agreement and notes, with added default interest rates and associated cure periods applicable to the covenant regarding SEC reporting. Furthermore, the senior unsecured convertible notes include restrictions on the amount of debt the Company is permitted to incur. The Company's total outstanding debt at any time can not exceed the greater of $\$ 200.0$ million or $50 \%$ of its consolidated total assets and its secured debt cannot exceed the greater of $\$ 125.0$ million or $30 \%$ of its consolidated total assets.

## Loans Payable

In December 2009, the Company entered into a loans payable agreement with the lessor of its Emeryville pilot plant under which it borrowed a total of $\$ 250,000$, bearing an interest rate of $10.0 \%$ per annum and to be repaid over a period of 96 months. As of December 31, 2012 and 2011, a principal amount of $\$ 177,000$ and $\$ 204,000$, respectively, was outstanding under the loan.
In December 2011, the Company entered into a loan agreement with Banco Pine under which Banco Pine provided the Company with a short term loan of R $\$ 35.0$ million (approximately US $\$ 17.1$ million based on the exchange rate as of December 31, 2012). Such loan was an advance on an anticipated July 2012 financing from Nossa Caixa Desenvolvimento, ("Nossa Caixa"), the Sao Paulo State development bank, and Banco Pine, under which Banco Pine and Nossa Caxia would provide the Company with loans of up to approximately R $\$ 52.0$ million (approximately US $\$ 25.4$ million based on the exchange rate as of December 31, 2012) as financing for capital expenditures relating to the Company's manufacturing facility in Brotas. The interest rate for the loan was $119.2 \%$ of the Brazilian interbank lending rate (approximately $12.3 \%$ on an annualized basis). The principal and interest due on the principal under the loan agreement, as amended, matured and was repaid on August 15, 2012.
In June 2012, the Company entered into a separate loan agreement with Banco Pine under which Banco Pine provided the Company with a short-term bridge loan of $\mathrm{R} \$ 52.0$ million (approximately US $\$ 25.4$ million based on the exchange rate as of December 31, 2012). The bridge loan was an additional advance on the anticipated Banco Pine and Nossa Caixa financing described above. The interest rate for the bridge loan was $0.4472 \%$ monthly (approximately $5.5 \%$ on an annualized basis). The principal and interest due under the bridge loan matured and were required to be repaid on September 19, 2012, subject to extension by Banco Pine. The bridge loan was in addition to the R $\$ 35.0$ million short term loan to the Company described above. At the time of this bridge loan, the Company entered into a currency interest rate swap arrangement with the lender for R $\$ 22.0$ million (approximately US $\$ 10.8$ million based on the exchange rate as of December 31, 2012). The interest rate swap arrangement exchanged the principal and interest payments under the Banco Pine loan of R $\$ 22.0$ million entered into in July 2012 for alternative principal and interest payments that were subject to adjustment based on fluctuations in the foreign exchange rate between the U.S. dollar and Brazilian real. The swap had a fixed interest rate of $3.94 \%$.
In July 2012, the Company entered into a Note of Bank Credit and a Fiduciary Conveyance of Movable Goods agreements with each of Nossa Caixa and Banco Pine. Under these agreements, the Company's total acquisition cost for the farnesene production assets pledged as collateral is approximately $\mathrm{R} \$ 68.0$ million (approximately US $\$ 33.3$
million based on the exchange rate as of December 31, 2012). The Company is a also a parent guarantor for the payment of the outstanding balance under these loan agreements.
Under such instruments, the Company could borrow an aggregate of R $\$ 52.0$ million (approximately US $\$ 25.4$ million based on the exchange rate as of December 31, 2012) as financing for capital expenditures relating to the Company's manufacturing facility in Brotas. Under the loan agreements, Banco Pine, agreed to lend R $\$ 22.0$ million and Nossa Caixa agreed to lend $\mathrm{R} \$ 30.0$ million. The funds for the loans are provided by Banco Nacional de Desenvolvimento Econômico e Social ("BNDES"), but are guaranteed by the lenders. The loans have a final maturity date of July 15, 2022 and bear a fixed interest rate of $5.5 \%$ per year. For the first two years that the loans are outstanding, the Company is required to pay interest only on a quarterly basis. After August 15, 2014, the Company is required to pay equal monthly installments of both principal and interest for the remainder of the term of the loans. In July 2012, the Company repaid the outstanding bridge loans of $\mathrm{R} \$ 52.0$ million and $\mathrm{R} \$ 35.0$ million from Banco Pine.

In October 2012, the Company entered into a loans payable agreement with a lender under which it borrowed $\$ 0.6$ million to pay the insurance premiums of certain schedule of policies. The loan is payable in nine monthly installments of principal and interest. Interest accrues at a rate of $3.24 \%$ per annum. As of December 31, 2012, the outstanding unpaid loan balance was $\$ 0.4$ million.

## Letters of Credit

In November 2008, the Company entered into the Credit Agreement with a financial institution to finance the purchase and sale of fuel and for working capital requirements, as needed. In October 2009, the agreement was amended to decrease the maximum amount that the Company may borrow under such facility. The Credit Agreement, as amended, provided, as of March 31, 2012, for an aggregate maximum availability up to the lower of $\$ 20.0$ million and the borrowing base as defined in the agreement, and was subject to a sub-limit of $\$ 5.7$ million for the issuance of letters of credit and a sub-limit of $\$ 20.0$ million for short-term cash advances for product purchases. The Credit Agreement was collateralized by a first priority security interest in certain of the Company's present and future assets. The Company was a parent guarantor for the payment of the outstanding balance under the Credit Agreement. Outstanding advances bore an interest rate at the Company's option of the bank's prime rate plus $1.0 \%$ or the bank's cost of funds plus 3.5\%. In April 2012, the Company, entered into an Amendment to the credit agreement, effective as of April 14, 2012 to extend the maturity date pending the Company's transition out of its ethanol and reformulated ethanol-blended gasoline business, and its plan to repay all amounts remaining outstanding under the Credit Agreement, and terminate the Credit Agreement as of the new maturity date. As of December 31, 2012, the Credit Agreement was terminated. As of December 31, 2012 and 2011, the Company had no outstanding advances and had zero and $\$ 5.0$ million, respectively, in outstanding letters of credit under the Credit Agreement.

In June 2012, the Company entered into a letter of credit agreement for $\$ 1.0$ million under which it provided a letter of credit to the landlord for its headquarters in Emeryville, California in order to cover the security deposit on the lease. The letter of credit is secured by a certificate of deposit. Accordingly, the Company recorded $\$ 1.0$ million as restricted cash as of December 31, 2012.

Future minimum payments under the debt agreements as of December 31, 2012 are as follows (in thousands):

|  | Related <br> Party <br> Convertible <br> Debt | Convertible <br> Debt | Notes Payable Loans Payable | Credit <br> Facility |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Years ending December 31: | $\$-$ | $\$ 760$ | $\$ 351$ | $\$ 1,958$ | $\$ 3,175$ |
| 2013 | - | 760 | 379 | 2,970 | 2,926 |
| 2014 | - | 765 | 379 | 4,456 | 2,774 |
| 2015 | - | 760 | 381 | 4,286 | 2,623 |
| 2016 | 51,627 | 25,125 | 384 | 4,110 | 2,393 |
| 2017 | - | - | 154 | 16,426 | 612 |
| Thereafter | 51,627 | 28,170 | 2,028 | 34,206 | 14,503 |
| Total future minimum payments | $(12,594$ | $)(3,170$ | $(456$ | $)$ | $(8,056$ |
| Less: amount representing interest | 39,033 | 25,000 | 1,572 | 2,150 | 12,409 |
| Present value of minimum debt payments | - | - | $(311$ | $)$ | $(556$ |
| Less: current portion | $\$ 39,033$ | $\$ 25,000$ | $\$ 1,261$ | $\$ 25,594$ | $\$ 9,951$ |
| Noncurrent portion of debt |  |  |  |  |  |

## 7. Joint Ventures

SMA Indústria Química S.A.
On April 14, 2010, the Company established SMA, a joint venture with Usina São Martinho, to build the first facility in Brazil fully dedicated to the production of Amyris renewable products. The new company is located at the Usina São Martinho mill in Pradópolis, São Paulo state. SMA has a 20 year initial term.

SMA is managed by a three member executive committee, of which the Company appoints two members, one of whom is the plant manager who is the most senior executive responsible for managing the construction and operation of the facility. SMA is governed by a four member board of directors, of which the Company and Usina São Martinho each appoint two members. The
board of directors has certain protective rights which include final approval of the engineering designs and project work plan developed and recommended by the executive committee.

The joint venture agreements require the Company to fund the construction costs of the new facility and Usina São Martinho would reimburse the Company up to RS $\$ 61.8$ million (approximately US $\$ 30.2$ million based on the exchange rate as of December 31, 2012) of the construction costs after SMA commences production. Post commercialization, the Company would market and distribute Amyris renewable products and Usina São Martinho would sell feedstock and provide certain other services to SMA. The cost of the feedstock to SMA would be a price that is based on the average return that Usina São Martinho could receive from the production of its current products, sugar and ethanol. The Company would be required to purchase the output of SMA for the first four years at a price that guarantees the return of Usina São Martinho's investment plus a fixed interest rate. After this four year period, the price would be set to guarantee a break-even price to SMA plus an agreed upon return.

Under the terms of the joint venture agreements, if the Company becomes controlled, directly or indirectly, by a competitor of Usina São Martinho, then Usina São Martinho has the right to acquire the Company's interest in SMA. If Usina São Martinho becomes controlled, directly or indirectly, by a competitor of the Company, then the Company has the right to sell its interest in SMA to Usina São Martinho. In either case, the purchase price shall be determined in accordance with the joint venture agreements, and the Company would continue to have the obligation to acquire products produced by SMA for the remainder of the term of the supply agreement then in effect even though the Company would no longer be involved in SMA's management.

Amyris has a 50\% ownership interest in SMA. The Company has identified SMA as a VIE. The Company is the primary beneficiary and consequently consolidates SMA's operations in its financial statements.

Joint Venture with Cosan
In June 2011, the Company entered into joint venture agreements with Cosan Combustíveis e Lubrificantes S.A. and Cosan S.A. Industria e Comércio (such Cosan entities, collectively or individually, "Cosan"), related to the formation of a joint venture (the "Novvi JV"), to focus on the worldwide development, production and commercialization of base oils made from Biofene for the automotive, commercial and industrial lubricants markets (the "Original JV Agreement"). The parties originally envisioned operating their joint venture through Novvi S.A., a Brazilian entity jointly owned by Cosan and Amyris Brasil.

Under the Original JV Agreement and related agreements (including a Shareholders' Agreement and Joint Venture Implementation Agreement), the Company and Cosan each owned $50 \%$ of the Novvi JV and each party would share equally in any costs and any profits ultimately realized by the JV. The joint venture agreement had an initial term of 20 years from the date of the Original JV Agreement, subject to earlier termination by mutual written consent or by a non-defaulting party in the event of specified defaults by the other party (including breach by a party of any material obligations under the joint venture agreements). The Shareholders' Agreement had an initial term of 10 years from the date of the agreement, subject to earlier termination if either the Company or Cosan ceases to own at least $10 \%$ of the voting stock of the Novvi JV.

The Company identified Novvi S.A. as a VIE. The power to direct activities, which most significantly impact the economic success of the joint venture, is equally shared between the Company and Cosan who are not related parties. Accordingly, the Company is not the primary beneficiary and therefore accounts for its investment in the JV entity using the equity method. The Company periodically reviews its consolidation analysis on an ongoing basis. As of December 31, 2012, the carrying amounts of the unconsolidated JV entity's assets and liabilities were not material to the Company's consolidated financial statements.

In September 2011, a U.S. JV entity, Novvi LLC, was formed. Novvi LLC is jointly owned by the Company and Cosan US, Inc. ("Cosan US"). For the years ended December 31, 2012, 2011 and 2010, the Company recorded $\$ 0.9$ million, $\$ 3.6$ million and zero, respectively, of revenue from the research and development activities that it has performed on behalf of the joint venture.

## 8. Noncontrolling Interest

## Redeemable Noncontrolling Interest

In December 2009, Amyris Brasil sold 1,111,111 of its shares representing a 4.8\% interest in Amyris Brasil for $\mathrm{R} \$ 10.0$ million. The redeemable noncontrolling interest was reported in the mezzanine equity section of the consolidated balance sheet because the Company was then subject to a contingent put option under which it could have been required to repurchase an interest in Amyris Brasil from the noncontrolling interest holder.

In March 2010, Amyris Brasil sold an additional 853,333 shares of its stock, an incremental 3.4\% interest, for R\$3.0 million. In May 2010, Amyris Brasil sold an additional 1,111,111 shares of its stock, an incremental $4.07 \%$ interest, for $\mathrm{R} \$ 10.0$ million.

Under the terms of the agreements with these Amyris Brasil investors, the Company had the right to require the investors to convert their shares of Amyris Brasil into shares of the Company's common stock at a 1:0.28 conversion ratio. On September 30, 2010, in connection with the Company's IPO, shares of Amyris Brasil held by these investors were converted into 861,155 shares of the Company's common stock. The remaining noncontrolling interest as of September 30, 2010 was converted to common stock and additional paid-in capital.

At the closing of the IPO, the Company recorded a one-time beneficial conversion feature charge of $\$ 2.7$ million associated with the conversion of the shares of Amyris Brasil held by investors into shares of Amyris, Inc. common stock, which impacted earnings per share for the year ended December 31, 2010.

The following table provides a roll forward of the redeemable noncontrolling interest (in thousands):
Balance as of December 31, $2009 \quad \$ 5,506$

Proceeds from redeemable noncontrolling interest 7,041
Conversion of shares of Amyris Brasil S.A. subsidiary held by third parties into common stock (11,870
Foreign currency translation adjustment
Net loss
Balance as of December 31, 2010

## Noncontrolling Interest

## SMA Indústria Química

The joint venture, SMA (see Note 7), is a VIE pursuant to the accounting guidance for consolidating VIEs because the amount of total equity investment at risk is not sufficient to permit SMA to finance its activities without additional subordinated financial support, as well as because the related commercialization agreement provides a substantive minimum price guarantee. Under the terms of the joint venture agreement, Amyris directs the design and construction activities, as well as production and distribution. In addition, Amyris has the obligation to fund the design and construction activities until commercialization is achieved. Subsequent to the construction phase, both parties equally fund SMA for the term of the joint venture. Based on those factors, the Company was determined to have the power to direct the activities that most significantly impact SMA's economic performance and the obligation to absorb losses and the right to receive benefits. Accordingly, the financial results of SMA are included in the Company's consolidated financial statements and amounts pertaining to Usina São Martinho's interest in SMA are reported as noncontrolling interests in subsidiaries.

## Glycotech

In January 2011, the Company entered into a production service agreement with Glycotech, whereby Glycotech is to provide process development and production services for the manufacturing of various Company products at its leased facility in Leland, North Carolina. The Company products to be manufactured by Glycotech will be owned and distributed by the Company. Pursuant to the terms of the agreement, the Company is required to pay the manufacturing and operating costs of the Glycotech facility which is dedicated solely to the manufacture of Amyris products. The initial term of the agreement is for a two year period commencing on February 1, 2011 and will renew automatically for successive one-year terms, unless terminated by the Company. On the same date as the production service agreement, the Company also entered into a right of first refusal agreement with the lessor of the facility and site leased by Glycotech covering a two year period commencing in January 2011. Per the terms of the
right of first refusal agreement, the lessor agreed not to sell the facility and site leased by Glycotech during the term of the production service agreement. In the event that the lessor is presented with an offer to sell or decides to sell an adjacent parcel, the Company has the right of first refusal to acquire it.

The Company has determined that the arrangement with Glycotech qualifies as a VIE. The Company determined that it is the primary beneficiary of this arrangement since it has the power through the management committee over which it has majority control to direct the activities that most significantly impact Glycotech's economic performance. In addition, the Company is required to fund $100 \%$ of Glycotech's actual operating costs for providing services each month while the facility is in operation under the production service agreement. Accordingly, the Company consolidates the financial results of Glycotech. As of December 31, 2012, the carrying amounts of the consolidated VIE's assets and liabilities were not material to the Company's consolidated financial statements.

The table below reflects the carrying amount of the assets and liabilities of the two consolidated VIEs for which the Company is the primary beneficiary. The assets include $\$ 24.7$ million in property, plant and equipment and $\$ 4.5$ million in other assets, and $\$ 0.4$ million in current assets. The liabilities include $\$ 0.3$ million in accounts payable and accrued current liabilities and $\$ 0.1$ million in loan obligations by Glycotech to its shareholders that are non-recourse to the Company. The creditors of each consolidated VIE have recourse only to the assets of that VIE.

|  | December 31, |  |
| :--- | :--- | :--- |
| (In thousands) | 2012 | 2011 |
| Assets | $\$ 29,564$ | $\$ 22,094$ |
| Liabilities | $\$ 355$ | $\$ 2,873$ |

The change in noncontrolling interest for the years ended December 31, 2012 and 2011 is summarized below (in thousands):

|  | 2012 | 2011 |
| :--- | :--- | :--- |
| Balance at January 1 | $\$(240$ | $) \$ 2$ |
| Addition to noncontrolling interest | - | 369 |
| Foreign currency translation adjustment | 257 | 30 |
| Loss attributable to noncontrolling interest | $(894$ | $(641$ |
| Balance at December 31 | $\$(877$ | $)$ |

## 9. Significant Agreements

Research and Development Activities
Total Collaboration Agreement
In June 2010, the Company entered into a technology license, development, research and collaboration agreement ("collaboration agreement") with Total Gas \& Power USA Biotech, Inc., an affiliate of Total S.A. (Total S.A. and its relevant affiliates, collectively, "Total"). The collaboration agreement sets forth the terms for the research, development, production and commercialization of certain to-be-determined chemical and/or fuel products made through the use of the Company's synthetic biology platform. The collaboration agreement establishes a multiphased process through which projects are identified, screened, studied for feasibility, and ultimately selected as a project for development of an identified lead compound using an identified microbial strain. Under the terms of the collaboration agreement, Total will fund up to the first $\$ 50.0$ million in research and development costs for the selected projects; thereafter the parties will share such costs equally. Amyris has agreed to dedicate the laboratory resources needed for collaboration
projects. Total also plans to second employees at Amyris to work on the projects. Once a development project has commenced, the parties are obligated to work together exclusively to develop the lead compound during the project development phase. After a development project is completed, the Company and Total expect to form one or more joint ventures to commercialize any products that are developed, with costs and profits to be shared on an equal basis, provided that if Total has not achieved profits from sales of a joint venture product equal to the amount of funding it provided for development plus an agreed upon rate of return within three years of commencing sales, then Total will be entitled to receive all profits from sales until this rate of return has been achieved. Each party has certain rights to independently produce commercial quantities of these products under certain circumstances, subject to paying royalties to the other party. Total has the right of first

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negotiation with respect to exclusive commercialization arrangements that the Company would propose to enter into with certain third parties, as well as the right to purchase any of the Company's products on terms no less favorable than those offered to or received by the Company from third parties in any market where Total or its affiliates have a significant market position.

The collaboration agreement has an initial term of twelve years and is renewable by mutual agreement by the parties for additional three year periods. Neither the Company nor Total has the right to terminate the agreement voluntarily. The Company and Total each have the right to terminate the agreement in the event the other party commits a material breach, is the subject of certain bankruptcy proceedings or challenges a patent licensed to it under the collaboration agreement. Total also has the right to terminate the collaboration agreement in the event the Company undergoes a sale or change of control to certain entities. If the Company terminates the collaboration agreement due to a breach, bankruptcy or patent challenge by Total, all licenses the Company has granted to Total terminate except licenses related to products for which Total has made a material investment and licenses related to products with respect to which binding commercialization arrangements have been approved, which will survive subject, in most cases, to the payment of certain royalties by Total to the Company. Similarly, if Total terminates the collaboration agreement due to a breach, bankruptcy or patent challenge by the Company, all licenses Total has granted to the Company terminate except licenses related to products for which the Company has made a material investment, certain grant-back licenses and licenses related to products with respect to which binding commercialization arrangements have been approved, which will survive subject, in most cases, to the payment of certain royalties to Total by the Company. On expiration of the collaboration agreement, or in the event the collaboration agreement is terminated for a reason other than a breach, bankruptcy or patent challenge by one party, licenses applicable to activities outside the collaboration generally continue with respect to intellectual property existing at the time of expiration or termination subject, in most cases, to royalty payments. There are circumstances under which certain of the licenses granted to Total will survive on a perpetual, royalty-free basis after expiration or termination of the collaboration agreement. Generally these involve licenses to use the Company's synthetic biology technology and core metabolic pathway for purposes of either independently developing further improvements to marketed collaboration technologies or products or the processes for producing them within a specified scope agreed to by the Company and Total prior to the time of expiration or termination, or independently developing early stage commercializing products developed from collaboration compounds that met certain performance criteria prior to the time the agreement expired or was terminated and commercializing products related to such compounds. After the collaboration agreement expires, the Company may be obligated to provide Total with ongoing access to Amyris laboratory facilities to enable Total to complete research and development activities that commenced prior to termination.

In June 2010, concurrent with the collaboration agreement, the Company issued 7,101,548 shares of Series D preferred stock to Total for aggregate proceeds of approximately $\$ 133.0$ million at a per share price of $\$ 18.75$, which was lower than the per share fair value of common stock as determined by management and the Board of Directors. Due to the fact the collaboration agreement and the issuance of shares to Total occurred concurrently, the terms of both the collaboration agreement and the issuance of preferred stock were evaluated to determine whether their separately stated pricing was equal to the fair value of services and preferred stock. The Company determined that the fair value of Series D preferred stock was $\$ 22.68$ at the time of issuance, and therefore, the Company measured the preferred stock initially at its fair value with a corresponding reduction in the consideration for the services under the collaboration agreement. As revenue from the collaboration agreement will be generated over a period of time based on the performance requirements, the Company recorded the difference between the fair value and consideration received for the Series D preferred stock of $\$ 27.9$ million as a Deferred Charge Asset within Other Assets on the balance sheet at the time of issuance which will be recognized as a reduction to revenue in proportion to the total estimated revenue under the collaboration agreement. As of December 31, 2012 and 2011, the Company has recognized a cumulative reduction of $\$ 27.9$ million and $\$ 9.1$ million, respectively, against the deferred charge asset.

As a result of recording the Series D preferred stock at its fair value, the effective conversion price was greater than the fair value of common stock as determined by management and the Board of Directors. Therefore, no beneficial conversion feature was recorded at the time of issuance. The Company further determined that the conversion option with a contingent reduction in the conversion price upon a qualified IPO was a potential contingent beneficial feature and, as a result, the Company calculated the intrinsic value of such conversion option upon occurrence of the qualified IPO. The Company determined that a contingent beneficial conversion feature existed and the Company recorded a charge within the equity section of its balance sheet, which impacted earnings per share for the year ended December 31, 2010, based upon the price at which shares were offered to the public in the IPO in relation to the adjustment provisions provided for the Series D preferred stock. Based on the IPO price of $\$ 16.00$ per share, the charge to net loss attributable to Amyris' common stockholders was $\$ 39.3$ million.

In connection with Total's equity investment, the Company agreed to appoint a person designated by Total to serve as a member of the Company's Board of Directors in the class subject to the latest reelection date, and to use reasonable efforts, consistent with the Board of Directors' fiduciary duties, to cause the director designated by Total to be re-nominated by the Board of Directors in the future. These membership rights terminate upon the earlier of Total holding less than half of the shares of common stock originally issuable upon conversion of the Series D preferred stock or a sale of the Company.

The Company also agreed with Total that, so long as Total holds at least $10 \%$ of the Company's voting securities, the Company will notify Total if the Company's Board of Directors seeks to cause the sale of the Company or if the Company receives an offer to be acquired. In the event of such decision or offer, the Company must provide Total with all information given to an offering party and certain other information, and Total will have an exclusive negotiating period of fifteen business days in the event the Board of Directors authorizes the Company to solicit offers to buy the Company, or five business days in the event that the Company receives an unsolicited offer to be acquired. This exclusive negotiation period will be followed by an additional restricted negotiation period of ten business days, during which the Company will be obligated to negotiate with Total and will be prohibited from entering into an agreement with any other potential acquirer. Total has also entered into a standstill agreement pursuant to which it agreed for a period of three years not to acquire in excess of the greater of $20 \%$ of the number of shares of Series D preferred stock purchased by Total (during the initial two years) or $30 \%$ (during the third year) of the Company's common stock without the prior consent of our Board of Directors, except that, among other things, if another person acquires more than Total's then current holdings of the Company's common stock, then Total may acquire up to that amount plus one share.

In November 2011, the Company and Total entered into an amendment of the collaboration agreement as described above in Note 4 under "Other Liabilities".

In July 2012, the Company entered into an amendment of its collaboration agreement with Total and related agreements. Under such July agreements, the scope of the collaboration initially contemplated by the parties under the November 2011 amendment described in Note 4, was expanded to encompass certain joint venture products for use in diesel and jet fuel on a worldwide basis and to provide a new structure for the research and development program and formation of the joint venture (the "Fuels JV") to commercialize the products encompassed by the diesel and jet fuel research and development program (the "Program").

Under the new agreements, the Company controls operations and execution of the Program subject to strategic and ultimate decision-making authority by a management committee composed of Company and Total representatives, and Total participates in the ultimate Fuels JV, or receives rights to recover its investment if, at a series of decision points, it decides not to proceed with the project. The agreements contemplate that the parties would grant exclusive manufacturing and commercial licenses to the Fuels JV for the Fuels JV products when the Fuels JV is formed (subject to requirements for the Company to grant the license to Total in the event the Fuels JV is not formed because of a deadlock, followed by an election by the Company to sell to Total the assets it otherwise would have contributed to the Fuels JV, or earlier under certain circumstances), and that the Company would retain the right to make and sell products other than the Fuels JV products. Under the agreements, the Fuels JV licenses would be consistent with the principle that development, production and commercialization of the Fuels JV products in Brazil will remain with the Company unless Total elects, after formation of the Fuels JV, to have such business contributed to the Fuels JV. The agreements also provide that certain Fuels JV non-exclusive products that were contemplated by the November 2011 amendment to the collaboration agreement are no longer to be included in the Fuels JV, but that the parties will explore potential development and commercialization of such products at a later date.

The agreements contemplate that the research and development efforts under the Program may extend through 2016, with a series of "Go/No Go" decisions by Total through such date tied to funding by Total. Each funding tranche involves the issuance of senior unsecured convertible promissory notes by the Company to Total (see Note 6). The agreements provided for cash funding by Total of $\$ 15.0$ million in July 2012 and an additional $\$ 15.0$ million in September 2012. (Such funding occurred in July and September as contemplated by the agreements.) Further, Total will fund $\$ 30.0$ million by July 2013, and, if it chooses to proceed with the Program, fund an additional $\$ 10.85$ million in July 2014 and $\$ 10.85$ million in January 2015. Thirty days following the earlier of the completion of the research and development program or December 31, 2016, Total has a final opportunity to decide whether or not to proceed with the Program.

At either of the decision points tied to the funding described above (in July 2013 or July 2014), if Total decides not to continue to fund the Program (or, at any funding date does not provide funding based on (i) the Company's failure to satisfy a closing condition under the purchase agreement for the notes, or (ii) Total's breach of the purchase agreement), the notes previously issued under the purchase agreement would remain outstanding and become payable by the Company at the maturity date in March 2017, the Program and associated agreements would terminate, all Company rights granted for use in farnesene-based diesel and farnesene-based jet fuel would revert to the Company, and no Fuels JV would be formed to commercialize the Fuels JV products.

In the final "Go/No Go" decision described above, Total may elect to (i) go forward with the full Program (diesel and jet fuel) (a "Go" decision), (ii) not continue its participation in the full Program, or (iii) go forward only with the jet fuel component of the Program, with the following outcomes:

For a "Go" decision by Total with respect to the whole Program, the parties would form the Fuels JV and the notes would be canceled.

For a "No-Go" decision by Total with respect to the whole Program, the consequences would be as described in the paragraph above regarding a decision by Total not to continue to fund the Program.

For a decision by Total to proceed with the jet fuel component of the Program and not the diesel component of the Program, $70 \%$ of the principal amount outstanding under the notes would remain outstanding and become payable by the Company and $30 \%$ of the outstanding principal of such notes would be canceled, the diesel product would no longer be included in the collaboration, the Fuels JV would not receive rights to products for use in diesel fuels, and the Fuels JV would be formed by the parties to commercialize products for use in jet fuels.

The agreements contemplate that the parties will finalize the structure for the Fuels JV in the future as set forth in the agreements and that the Fuels JV, if and when it is formed, would, subject to the conditions described below and absent other agreement, be owned equally ( $50 \% / 50 \%$ ) by the Company and Total. Under the agreements, the parties will, prior to the projected completion date, enter into a shareholders' agreement governing the Fuels JV, agree on the budget and business plan for the Fuels JV, and form the Fuels JV. In addition, following a final "Go" decision, the parties would enter into the Fuels JV license agreements, contribution agreements and other agreements required to establish the Fuels JV and enable it to operate.

Within thirty days prior to the final "Go" decision, Total may declare a "deadlock" if the parties fail to come to agreement on various matters relating to the formation of the Fuels JV, at which point Total may (i) elect to declare a "No-Go" decision, which has the consequences described above, or (ii) initiate a process whereby the fair value of the proposed Fuels JV would be determined and the Company would then have the option to: (i) elect to sell to Total the assets that the Company would have been required to contribute to the Fuels JV for an amount equal to $50 \%$ of such fair value; (ii) proceed with the formation of the Fuels JV (accepting Total's position with respect to the funding requirement of the Fuels JV) and becoming a $50 \%$ owner of the Fuels JV; or (iii) proceed with the formation of the Fuels JV (accepting Total's position with respect to the funding requirements of the Fuels JV), and then sell all or a portion of its $50 \%$ interest in the Fuels JV to Total for a price equal to the fair value multiplied by the percentage ownership of the Fuels JV sold to Total.

The agreements provide that the Company would initially retain its ability to develop its diesel and jet fuel business in Brazil, and that Total has an option to require the Company to contribute its Brazil diesel and jet fuel business to the Fuels JV at a price determined pursuant to the agreements. Such option terminates if the Fuels JV is not formed or if Total subsequently buys out the Company's Fuels JV contribution. Furthermore, the option is limited to the jet fuel business if Total opts out of the diesel component of the Program as described above.

Under the agreements, Total has a right to participate in future equity or convertible debt financings of the Company through December 31, 2013 to preserve its pro rata ownership of the Company and thereafter in limited circumstances. The purchase price for the first $\$ 30$ million of purchases under this pro rata right would be paid by cancellation of outstanding notes held by Total.

In connection with the purchase agreement and sale of the Notes, the Company entered into a registration rights agreement. Under such agreement, the Company is obligated to file a registration statement on Form S-3 with the SEC registering the resale of all of the shares of the Company's common stock issuable upon conversion of the notes within twenty days prior to the maturity date of the notes or within 30 days following optional conversion. In addition, the Company is obligated to have the registration statement declared effective within 70-100 days following the filing depending on whether the Company receives comments from the SEC. If the registration statement filing is delayed or the registration statement is not declared effective within the foregoing time frames, the Company is required to make
certain monthly payments to the Total.
As a result, $\$ 46.5$ million of payments received from Total that had been recorded as an advance from the collaborator were no longer contingently repayable. Of this amount, $\$ 23.3$ million was treated as a repayment by the Company and included as part of the senior unsecured convertible promissory note issued to Total in July 2012 and the remaining $\$ 23.2$ million was recorded as a contract to perform research and development services, which was offset by the reduction of the capitalized deferred charge asset of $\$ 14.4$ million resulting in the Company recording revenue from a related party of $\$ 8.9$ million.

In December 2012, Total elected to participate in a private placement of the Company's common stock by exchanging approximately $\$ 5.0$ million of its $\$ 53.3$ million in senior unsecured convertible promissory notes into $1,677,852$ shares of the Company's common stock at $\$ 2.98$ per share. As such, $\$ 5.0$ million of the outstanding $\$ 53.3$ million in senior unsecured convertible debt was cancelled.

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## M\&G Finanziaria Collaboration Agreement

In June 2010, the Company entered into a collaboration agreement with M\&G Finanziaria S.R.L. ("M\&G") to incorporate Biofene as an ingredient in M\&G's polyethylene terephthalate, or PET, resins to be incorporated into containers for food, beverages and other products. In April 2011, Amyris and M\&G entered into an Amended and Restated Collaboration Agreement to amend certain portions of the original agreement entered into in June 2010 and adding Chemtex Italia S.R.L. and Chemtex International Inc. (both wholly owned subsidiaries of M\&G) to the collaboration agreement. Under the terms of the amended agreement, the Company and Chemtex International Inc. will share the costs incurred associated with the PET collaboration on a $50 / 50$ basis. In addition, the amended agreement expanded the collaboration arrangement between the Company and $\mathrm{M} \& \mathrm{G}$ to include a Cellulosic feasibility study with each party bearing its own costs associated with such feasibility study. The collaboration agreement also establishes the terms under which M\&G may purchase Biofene from the Company upon successful completion of product integration.

## Firmenich Collaboration and Joint Development Agreements

In November 2010, the Company entered into collaboration and joint development agreements with Firmenich SA ("Firmenich"), a flavors and fragrances company based in Geneva, Switzerland. Under the agreements, Firmenich will fund technical development at the Company to produce an ingredient for the flavors and fragrances market. The Company will manufacture the ingredient and Firmenich will market it, and the parties will share in any resulting economic value. The agreement also grants exclusive worldwide flavors and fragrances commercialization rights to Firmenich for the ingredient. In addition, Firmenich has an option to collaborate with the Company to develop a second ingredient. In July 2011, the Company and Firmenich expanded their collaboration agreement to include a third ingredient. The collaboration and joint development agreements will continue in effect unit the later of the expiration or termination of the development agreements or the supply agreements. The Company is also eligible to receive potential total payments of $\$ 6.0$ million upon the achievement of certain performance milestones towards which the Company will be required to make a contributory performance. These milestones are accounted for under the guidance in the FASB accounting standard update related to revenue recognition under the milestone method. The Company concluded that these milestone payments are substantive.

For the years ended December 31, 2012 and 2011, the Company recorded $\$ 4.8$ million and $\$ 5.2$ million, respectively, of revenue from the collaboration agreement with Firmenich. Included in these collaboration revenues were the first milestone payment of $\$ 2.0$ million which was recognized as revenue during the year ended December 31, 2011 and the second milestone payment of $\$ 2.0$ million which was recognized as revenue during the year ended December 31, 2012.

In March 2013, the Company and Firmenich entered into a collaboration agreement as described in Note 18-"Subsequent Events."

## Michelin Collaboration Agreement

In September 2011, the Company entered into a collaboration agreement with Manufacture Francaise des Pneumatiques Michelin ("Michelin"). Under the terms of the collaboration agreement, the Company and Michelin will collaborate on the development, production and worldwide commercialization of isoprene or isoprenol, generally for tire applications, using the Company's technology. Under the agreement, Michelin has agreed to pay an upfront payment to the Company of $\$ 5.0$ million, subject to a reimbursement provision under which the Company would have to repay $\$ 1.0$ million if it fails to achieve specified future technical milestones. The agreement provides that, subject to achievement of technical milestones, Michelin can notify the Company of its desired date for initial delivery, and the parties will either collaborate to establish a production facility or use an existing Company facility for production. The
agreement also includes a term sheet for a supply agreement that would be negotiated at the time the decision regarding production facilities is made. The agreement has an initial term that will expire upon the earlier of 42 months from the effective date and the completion of a development work plan. As of December 31, 2012, the Company recorded the upfront payment of $\$ 5.0$ million from Michelin as deferred revenue.

## Manufacturing Agreements

In 2010 and 2011, the Company entered into contract manufacturing agreements with various contract manufacturing partners to utilize their manufacturing facilities to produce Amyris products.

Under the terms of these contract manufacturing agreements, the Company provided necessary equipment for the manufacturing of its products, over which the Company retained ownership. The Company also reimbursed the contract manufacturers for an aggregate of $\$ 13.8$ million in expenditures related to the modification of their facilities. The Company

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recorded facility modification costs as Other Assets on the balance sheet and amortized them as an offset against purchases of inventory. Certain of these contract manufacturing agreements also impose fixed purchase commitments on the Company, regardless of the production volumes.

Beginning in March 2012, the Company initiated a plan to shift a portion of its production capacity from contract manufacturing facilities to a Company-owned plant that was then under construction. As a result, the Company evaluated its contract manufacturing agreements and recorded a loss of $\$ 31.2$ million related to the write-off of $\$ 10.0$ million in facility modification costs and the recognition of $\$ 21.2$ million of fixed purchase commitments in the three months ended March 31, 2012. The Company recognized an additional charge of $\$ 1.4$ million and $\$ 7.8$ million, respectively, in the third and fourth quarters of 2012 associated with loss on fixed purchase commitments. The Company computed the loss on facility modification costs and fixed purchase commitments using the same lower of cost or market approach that is used to value inventory. The computation of the loss on fixed purchase commitments is subject to several estimates, including cost to complete and the ultimate selling price of any Company products manufactured at the relevant production facilities, and is therefore inherently uncertain. The Company also recorded a loss on write-off of production assets of $\$ 5.5$ million related to Amyris-owned production equipment at contract manufacturing facilities in the quarter ended March 31, 2012. Total loss on purchase commitments and write-off of production assets for the year ended December 31, 2012 was $\$ 45.9$ million. The Company will continue to evaluate the potential for losses in future periods based on updated production and sales price assumptions.

## Tate \& Lyle

In November 2010, the Company entered into a contract manufacturing agreement with Tate \& Lyle Ingredients Americas, Inc. ("Tate \& Lyle"), an affiliate of Tate \& Lyle PLC. Tate \& Lyle commenced production operations in the fourth quarter of 2011. At December 31, 2012 and 2011, the Company has recorded $\$ 0.8$ million and $\$ 0.7$ million, respectively, in prepaid and other current assets and $\$ 2.2$ million and $\$ 2.9$ million, respectively, in other noncurrent assets pertaining to the unamortized portion of equipment costs funded by the Company to Tate \& Lyle (see Note 4). The related amortization is being offset against purchases of inventory from this contract manufacturer.

## Paraíso Bioenergia

In March 2011, the Company entered into a supply agreement with Paraíso Bioenergia, a renewable energy company producing sugar, ethanol and electricity headquartered in São Paulo State, Brazil. Under the agreement, the Company will construct fermentation and separation capacity to produce its products and Paraíso Bioenergia will supply sugar cane juice and other utilities. The Company will retain the full economic benefits enabled by the sale of Amyris renewable products over the lower of sugar or ethanol alternatives. In conjunction with the supply agreement, the Company also entered into an operating lease on a real property owned by Paraíso Bioenergia. The real property is being used by the Company for its production site in Brotas (see Note 5).

Per the terms of the supply agreement, in the event that Paraíso is presented with an offer to sell or decides to sell the real property, the Company has the right of first refusal to acquire it. If the Company fails to exercise its right of first refusal the purchaser of the real property will need to comply with the specific obligations of Paraíso Bioenergia to the Company under the lease agreement.

Albemarle
In July 2011, the Company entered into a contract manufacturing agreement with Albemarle Corporation
("Albemarle"), which will provide toll manufacturing services at its facility in Orangeburg, South Carolina. Under this agreement, Albemarle will manufacture lubricant base oils from Biofene, which will be owned and distributed by the Company or a Company-designated commercial partner. The initial term of this agreement is from July 31, 2011
through December 31, 2012. Albemarle is required to modify its facility, including installation and qualification of equipment and instruments necessary to perform the toll manufacturing services under the agreement. The Company reimbursed Albemarle $\$ 10.0$ million for all capital expenditures related to the facility modification, which was accounted for as a prepaid asset. All equipment or facility modifications acquired or made by Albemarle will be owned by Albemarle, subject to Albemarle's obligation to transfer title to, and ownership of, certain assets to the Company within 30 days after termination of the agreement, at the Company's discretion and sole expense. In March 2012, the Company recorded a loss of $\$ 10.0$ million related to the write-off of the facility modification costs, described above.

In addition, the Company will pay a one-time, non-refundable performance bonus of $\$ 5.0$ million if Albemarle delivers to the Company certain quantity of the lubricant base stock by December 31, 2011 or $\$ 2.0$ million if Albemarle delivers the same quantity by January 31, 2012. Based on Albermarle's performance as of December 31, 2011, the Company concluded that Albermarle had earned the bonus which is payable in two payments. The Company paid Albemarle $\$ 2.5$ million during the year
ended December 31, 2012 and recorded a liability of $\$ 2.5$ million as of December 31, 2012 for the second payment which is payable on March 31, 2013.

In February 2012, the Company entered into an amended and restated agreement with Albemarle, which superseded the original contract manufacturing agreement with Albemarle. The term of the new agreement continues through December 31, 2019. The agreement includes certain obligations for the Company 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 the three months ended March 31, 2012, the Company recorded a corresponding loss related to these fixed purchase commitments, as described above. In addition, fixed costs of $\$ 2.0$ million per quarter are payable in 2013 if the Company exercises its option to have product manufactured in the facility in 2013. The agreement also includes variable pricing during the contract term.

## Supply Agreements

The Company has also entered into agreements to sell Biofene and its derivatives directly to various potential customers, including M\&G for use in plastics, Kuraray Co., Ltd. ("Kuraray") for use in the production of polymers, Firmenich and Givaudan SA. ("Givaudan") for ingredients for the flavors and fragrances market, and Method Products, Inc. ("Method") for use in home and personal care products.

## Soliance Agreements

In June 2010, the Company entered into an agreement with Soliance for the development and commercialization of Biofene-based squalane for use as an ingredient in cosmetics products. In December 2011, the Company and Soliance entered into an agreement and release to terminate the collaboration agreement and any other obligations with respect to the proposed joint venture. As part of the termination agreement the parties agreed that for a period commencing October 1, 2011 and ending on December 31, 2013, Soliance will be paid a commission of $10.0 \%$ of amounts received by the Company from Nikko Chemicals Co., Ltd. ("Nikko") on quantities of squalane sold by the Company to Nikko with respect to Nikko's committed minimum purchase obligation pursuant to a distribution agreement with Nikko. Concurrently with the execution of such termination agreement, the parties executed a distribution agreement, pursuant to which the Company appointed Soliance as its exclusive distributor to distribute the Company's squalane in the cosmetic market in the approved territory.

## Nikko Chemicals

In August 2011, the Company entered into an agreement with Nikko, a private limited company in Japan, for the sales of renewable squalane to Nikko (commencing in September 2011 and continuing for two years through the end of December 2013).

## 10. Draths Corporation Acquisition

On October 6, 2011 (the Closing Date), the Company completed an acquisition of certain assets from Draths related to production of renewable chemicals. The acquisition was accounted for as a business combination. In connection with the acquisition, the Company issued 362,319 shares of common stock, of which 41,408 shares were held in escrow and paid $\$ 2.9$ million in cash. In the quarter ended June 30, 2012, the Company recovered 5,402 shares of common stock from the escrow in connection with certain Draths indemnification obligations under the purchase agreement.

The components of the purchase price allocation for Draths are as follows:
Purchase Consideration:
(in thousands)
Fair value of common stock issued to Draths \$7,000
Cash paid to Draths 2,934
Total purchase consideration $\quad \$ 9,934$

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#### Abstract

Allocation of Purchase Price: (in thousands) Property and Equipment \$713 Other 101 In-process research and development 8,560 Goodwill 560 Total purchase consideration \$9,934 The Company has allocated $\$ 8.6$ million of the purchase price of Draths to acquired IPR\&D. This amount represents management's valuation of the fair value of assets acquired at the date of the acquisition. Management used the income approach to determine the estimated fair values of acquired IPR\&D, applying a risk adjusted discount rate of $30 \%$ to the development project's cash flows. The discounted cash flow model applies probability weighting factors, based on estimates of successful product development and commercialization, to estimated future net cash flows resulting from projected revenues and related costs. These success rates take into account the stages of completion and the risks surrounding successful development and commercialization of the underlying products such as estimates of revenues and operating profits related to the IPR\&D considering its stage of development; the time and resources needed to complete the development; the life of the potential commercialized product and associated risks, including the inherent difficulties and uncertainties in developing a product.


Goodwill totaling $\$ 0.6$ million represents the excess of the purchase price over the fair value of tangible and identifiable intangible assets acquired and is due primarily to synergies expected from combining the new genetic pathway with the Company's existing platform to accelerate development to get the technology to market sooner leading to increased market penetration from future products and customers.

The Draths business acquisition is a taxable transaction. For federal and state tax purposes, the above in-process research and development and goodwill is amortized over a 15 -year period. The Company has determined that there are no significant differences in the tax basis of assets and the basis for financial reporting purposes. In addition, the business combination did not have any impact on the Company's deferred tax balance, net of the full valuation allowance, or to uncertain tax positions, at the acquisition date.

The Company applies the applicable accounting principles set forth in the U.S. Financial Accounting Standards Board's Accounting Standards Codification to its 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. The Company 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 its intangible assets has been impaired would require the Company to write-down the impaired portion, which could reduce the value of its assets and reduce its net income for the year in which the related impairment charges occur.

## 11. Stockholders' Equity

Private Placement

In February 2012, the Company completed a private placement of its common stock of $10,160,325$ shares of it's common stock at a price of $\$ 5.78$ per share for aggregate proceeds of $\$ 58.7$ million. In connection with this private placement, the Company entered into an agreement with an investor to purchase additional shares of the Company's Common Stock for an additional $\$ 15.0$ million by March 2013 upon satisfaction by the Company of criteria associated with the commissioning of the Company's production plant in Brotas. This was partially satisfied by the investor through its $\$ 10.0$ million investment under the private placement in December 2012. Additionally, such agreement granted certain investors Board designation rights and certain rights of first investment with respect to future issuances of the Company's securities.

In May 2012, the Company also completed a private placement of its common stock for the issuance of $1,736,100$ shares of it's common stock at a price of $\$ 2.36$ per share for aggregate proceeds of $\$ 4.1$ million.

In December 2012, the Company completed a private placement of its common stock for the issuance of $14,177,849$ shares of its common stock at a price of $\$ 2.98$ per share for aggregate proceeds of $\$ 37.2$ million and the cancellation of $\$ 5.0$ million worth of outstanding senior unsecured convertible promissory notes previously issued by the Company. Shares totaling $1,677,852$ were issued to Total in exchange for this cancellation. Net cash received as of December 31, 2012 was $\$ 22.2$ million and the remaining $\$ 15.0$ million of proceeds was settled in January 2013. In connection with this private placement, the Company entered into a Letter of Agreement, dated December 24, 2012 with an investor under which the Company acknowledged that the investor's initial investment of $\$ 10.0$ million in December 2012 represented partial satisfaction of the investor's preexisting contractual obligation to fund $\$ 15.0$ million by March 31, 2013 upon satisfaction by the Company of criteria associated with the commissioning of the Company's production plant in Brotas.

## Initial Public Offering

On September 30, 2010, the Company closed its initial public offering ("IPO") of 5,300,000 shares of common stock at an offering price of $\$ 16.00$ per share, resulting in net proceeds to the Company of approximately $\$ 73.7$ million, after deducting underwriting discounts of $\$ 5.9$ million and offering costs of $\$ 5.2$ million. Upon the closing of the IPO, the Company's outstanding shares of convertible preferred stock were automatically converted into 31,550,277 shares of common stock and the outstanding convertible preferred stock warrants were automatically converted into common stock warrants to purchase a total of 195,604 shares of common stock and shares of Amyris Brasil held by third party investors were automatically converted into 861,155 shares of common stock.

In connection with the IPO, the Company granted the underwriters the right to purchase up to an additional 795,000 shares of common stock to cover over-allotments. In October 2010, the underwriters exercised such right to purchase 795,000 shares and the Company received approximately $\$ 11.8$ million of proceeds, net of underwriter's discount.

## Common Stock

Pursuant to the Company's amended and restated certificate of incorporation, the Company is authorized to issue $100,000,000$ shares of common stock. Holders of the Company's common stock are entitled to dividends as and when declared by the Board of Directors, subject to the rights of holders of all classes of stock outstanding having priority rights as to dividends. There have been no dividends declared to date. The holder of each share of common stock is entitled to one vote.

## Preferred Stock

Pursuant to the Company's amended and restated certificate of incorporation, the Company is authorized to issue $5,000,000$ shares of preferred stock. The Board of Directors has the authority, without action by its stockholders, to designate and issue shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. Prior to the closing of the Company's IPO, the Company had four series of convertible preferred stock outstanding, including Series D preferred stock issued to Total (see Note 9). As of December 31, 2012 and December 31, 2011, the Company had zero convertible preferred stock outstanding.

## Common Stock Warrants

During the period from January 1, 2008 to September 30, 2010, the Company issued 182,405 warrants in connection with placement agent fees associated with its preferred stock issuance, capital and operating lease agreements and
consulting services. Upon the closing of the Company's IPO on September 30, 2010, these outstanding convertible preferred stock warrants were automatically converted into common stock warrants to purchase 195,604 shares of common stock. In addition, the fair value of the convertible preferred stock warrants as of September 30, 2010, estimated to be $\$ 2.3$ million using the Black-Scholes option pricing model, was reclassified to additional paid in capital.

In December 2011, in connection with a capital lease agreement, the Company issued warrants to purchase 21,087 shares of the Company's common stock at an exercise price of $\$ 10.67$ per share. The Company estimated the fair value of these warrants as of the issuance date to be $\$ 193,000$ and recorded these warrants as other assets and were amortized subsequently over the term of the lease. The fair value was based on the contractual term of the warrants of 10 years, risk free interest rate of $2.0 \%$, expected volatility of $86 \%$ and zero expected dividend yield. The warrants remain unexercised and outstanding as of December 31, 2012.

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Each of these warrants includes a cashless exercise provision which permits the holder of the warrant to elect to exercise the warrant without paying the cash exercise price, and receive a number of shares determined by multiplying (i) the number of shares for which the warrant is being exercised by (ii) the difference between the fair market value of the stock on the date of exercise and the warrant exercise price, and dividing such by (iii) the fair market value of the stock on the date of exercise. During the years ended December 31, 2012 and 2011, warrants were exercised with respect to zero and 190,468 shares, respectively through the cashless exercise provision and zero and 77,087 shares of common stock were issued after deducting the shares to cover the cashless exercises.

As of December 31, 2012 and 2011, the Company had the following unexercised common stock warrants:

|  |  | Exercise | Shares as of |  |
| :--- | :--- | :--- | :--- | :--- |
| Underlying Stock | Expiration | Price per | December 31, 2012 | December 31, 2011 |
| Common Stock | Date | Share |  | 2,884 |
| Common Stock | $1 / 31 / 2018$ | $\$ 24.88$ | - | 2,252 |
| Common Stock | $9 / 23 / 2018$ | $\$ 25.26$ | - | 21,087 |
| Total | $12 / 23 / 2021$ | $\$ 10.67$ | 21,087 | 26,223 |

## 12. Stock-Based Compensation Plans

## 2010 Equity Incentive Plan

The Company's 2010 Equity Incentive Plan ("2010 Equity Plan") became effective on September 28, 2010 and will terminate in 2020. Pursuant to the 2010 Equity Plan, any shares of the Company's common stock (i) issued upon exercise of stock options granted under the Company's 2005 Stock Option/Stock Issuance Plan (the "2005 Plan") that cease to be subject to such option and (ii) issued under the 2005 Plan that are forfeited or repurchased by the Company at the original purchase price will become part of the 2010 Equity Plan. Subsequent to the effective date of the 2010 Equity Plan, an additional 803,944 shares that were forfeited under the 2005 Plan were added to the shares reserved for issuance under the 2010 Equity Plan.

The number of shares reserved for issuance under the 2010 Equity Plan increase automatically on January $1^{\text {st }}$ of each year starting with January 1, 2011, by a number of shares equal to $5.0 \%$ percent of the Company's total outstanding shares as of the immediately preceding December $31^{\text {st }}$. The Company's Board of Directors or the Leadership Development and Compensation Committee of the Board of Directors is able to reduce the amount of the increase in any particular year. The 2010 Equity Plan provides for the granting of common stock options, restricted stock awards, stock bonuses, stock appreciation rights, restricted stock units and performance awards. It allows for time-based or performance-based vesting for the awards. Options granted under the 2010 Equity Plan may be either incentive stock options ("ISOs") or non-statutory stock options ("NSOs"). ISOs may be granted only to Company employees (including officers and directors who are also employees). NSOs may be granted to Company employees, non-employee directors and consultants. The Company will be able to issue no more than $30,000,000$ shares pursuant to the grant of ISOs under the 2010 Equity Plan. Options under the 2010 Equity Plan may be granted for periods of up to ten years. All options issued to date have had a ten year life. Under the plan, the exercise price of any ISOs and NSOs may not be less than $100 \%$ of the fair market value of the shares on the date of grant. The exercise price of any ISOs and NSOs granted to a $10 \%$ stockholder may not be less than $110 \%$ of the fair value of the underlying stock on the date of grant. The options granted to date generally vest over four to five years.

As of December 31, 2012, options to purchase 5,708,475 shares of the Company's common stock granted from the 2010 Equity Plan were outstanding and $1,059,715$ shares of the Company's common stock remained available for future awards that may be granted from the 2010 Equity Plan. The options outstanding as of December 31, 2012 had a weighted-average exercise price of approximately $\$ 9.84$ per share.

2005 Stock Option/Stock Issuance Plan
In 2005, the Company established its 2005 Plan which provided for the granting of common stock options, restricted stock units, restricted stock and stock purchase rights awards to employees and consultants of the Company. The 2005 Plan allowed for time-based or performance-based vesting for the awards. Options granted under the 2005 Plan were ISOs or NSOs. ISOs were granted only to Company employees (including officers and directors who are also employees). NSOs were granted to Company employees, non-employee directors, and consultants.

All options issued under the 2005 Plan have had a ten year life. The exercise prices of ISOs and NSOs granted under the 2005 Plan were not less than $100 \%$ of the estimated fair value of the shares on the date of grant, as determined by the Board of Directors. The exercise price of an ISO and NSO granted to a $10 \%$ stockholder could not be less than $110 \%$ of the estimated fair value of the underlying stock on the date of grant as determined by the Board of Directors. The options generally vested over 5 years.

As of December 31, 2012, options to purchase 3,178,117 shares of the Company's common stock granted from the 2005 Stock Option/Stock Issuance Plan remained outstanding and, as a result of the adoption of the 2010 Equity Incentive Plan discussed above, zero shares of the Company's common stock remained available for issuance under the 2005 Plan. The options outstanding under the 2005 Plan as of December 31, 2012 had a weighted-average exercise price of approximately $\$ 7.79$ per share.

No income tax benefit has been recognized relating to stock-based compensation expense and no tax benefits have been realized from exercised stock options or release of restricted stock units.

## 2010 Employee Stock Purchase Plan

The 2010 Employee Stock Purchase Plan (the "2010 ESPP") became effective on September 28, 2010. The 2010 ESPP is designed to enable eligible employees to purchase shares of the Company's common stock at a discount. Each offering period is for one year and consists of two six-month purchase periods. Each twelve-month offering period generally commences on May $16^{\text {th }}$ and November $16^{\text {th }}$, each consisting of two six-month purchase periods. The purchase price for shares of common stock under the 2010 ESPP is the lesser of $85 \%$ of the fair market value of the Company's common stock on the first day of the applicable offering period or the last day of each purchase period. A total of 168,627 shares of common stock were initially reserved for future issuance under the 2010 Employee Stock Purchase Plan. During the first eight years of the life of the 2010 ESPP, the number of shares reserved for issuance increases automatically on January $1^{\text {st }}$ of each year, starting with January 1, 2011, by a number of shares equal to $1 \%$ of the Company's total outstanding shares as of the immediately preceding December $3 \mathrm{~F}^{t}$. Pursuant to the automatic increase provision, an additional 459,325 shares were reserved for issuance during the year ended December 31, 2012 for a cumulative total of 897,799 additional shares reserved for issuance under the automatic increase provision. The Company's Board of Directors or the Leadership Development and Compensation Committee of the Board of Directors is able to reduce the amount of the increase in any particular year. No more than $10,000,000$ shares of the Company's common stock may be issued under the 2010 ESPP and no other shares may be added to this plan without the approval of the Company's stockholders.

During the year ended December 31, 2012, 579,167 shares of the Company's common stock were purchased under the 2010 ESPP. At December 31, 2012, 186,700 shares of the Company's common stock remained available for issuance under the 2010 ESPP.

## Stock Option Activity

The Company's stock option activity and related information for the year ended December 31, 2012 was as follows:

|  | Weighted - | Weighted - |  |
| :--- | :--- | :--- | :--- |
| Number | Average | Average | Aggregate |
| Outstanding | Exercise | Remaining | Intrinsic |
|  | Price | Contractual | Value |
|  |  | Life (Years) |  |

(in thousands)

| Outstanding - December 31, 2011 | $8,377,016$ | $\$ 14.05$ | 7.9 | $\$ 29,127$ |
| :--- | :--- | :--- | :--- | :--- |
| $\quad$ Options granted | $3,592,593$ | $\$ 3.49$ |  |  |
| $\quad$ Options exercised | $(866,203$ | $)$ | $\$ 0.72$ |  |
| $\quad$ Options cancelled | $(2,156,814$ | $)$ | $\$ 15.78$ |  |
| Outstanding - December 31, 2012 | $8,946,592$ | $\$ 9.07$ | 7.5 | $\$ 954$ |
|  |  |  |  |  |
| Vested and expected to vest after December 31, 2012 | $8,281,330$ | $\$ 9.18$ | 7.3 | $\$ 893$ |
| Exercisable at December 31, 2012 | $4,134,023$ | $\$ 9.94$ | 5.8 | $\$ 575$ |

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The aggregate intrinsic value of options exercised under all option plans was $\$ 2.7$ million, $\$ 28.7$ million and $\$ 934,000$ for the years ended December 31, 2012, 2011 and 2010, respectively, determined as of the date of option exercise.

The Company's restricted stock units and restricted stock activity and related information for the year ended December 31, 2012 was as follows:

|  |  | Weighted <br> Average <br> Grant-Date Fair | Weighted <br> Average <br> Remaining <br> Contractual Life |
| :--- | :--- | :--- | :--- |
| (Years) |  |  |  |

The following table summarizes information about stock options outstanding as of December 31, 2012:


## Common Stock Subject to Repurchase

Historically under the 2005 Plan, the Company allowed employees to exercise options prior to vesting. The Company has the right to repurchase at the original purchase price any unvested (but issued) common shares upon termination of service of an employee. The consideration received for an early exercise of an option is considered to be a deposit of the exercise price and the related dollar amount is recorded as a liability. The shares and liability are reclassified into equity on a ratable basis as the award vests. The Company recorded a liability in accrued expenses of $\$ 197$ and $\$ 30,000$, respectively, relating to options for 51 and 7,929 shares of common stock that were exercised and unvested as of December 31, 2012 and 2011, respectively. These shares were subject to a repurchase right held by the Company and are included in issued and outstanding shares as of December 31, 2012 and 2011, respectively.

## Stock-Based Compensation Expense

Stock-based compensation expense related to options and restricted stock units granted to employees and nonemployees was allocated to research and development expense and sales, general and administrative expense as follows (in thousands):

|  | Years Ended December 31, |  |  |
| :--- | :--- | :--- | :--- |
|  | 2012 | 2011 | 2010 |
| Research and development | $\$ 6,451$ | $\$ 6,345$ | $\$ 2,161$ |
| Sales, general and administrative | 21,022 | 19,147 | 8,271 |
| Total stock-based compensation expense | $\$ 27,473$ | $\$ 25,492$ | $\$ 10,432$ |

## Employee Stock-Based Compensation

During the years ended December 31, 2012, 2011 and 2010, the Company granted options to purchase $3,589,593$ shares, $2,677,249$ shares, and $2,918,440$ shares of its common stock, respectively, to employees with weighted average grant date fair values of $\$ 2.28, \$ 18.41$, and $\$ 11.84$ per share, respectively. As of December 31, 2012 and 2011, there were unrecognized compensation costs of $\$ 51.2$ million, and $\$ 54.7$ million, respectively, related to these stock options. The Company expects to recognize those costs over a weighted average period of 2.9 years as of December 31, 2012. Future option grants will increase the amount of compensation expense to be recorded in these periods.

In August 2012, the Company's CEO exercised outstanding options to purchase 668,730 shares of the Company's common stock and sold the shares to certain members of the Company's Board of Directors or their affiliates through a private sale at a price of $\$ 3.70$, which was greater than the fair market value of the stock at the date of sale. The Company recorded $\$ 388,000$ in stock-based compensation expense as an excess of the sale price over the fair market value of shares in this transaction during the year ended December 31, 2012.

During the years ended December 31, 2012 and 2011, 2,956,900 and 352,301 of restricted stock units, respectively, were granted to employees with a weighted average service-inception date fair value of $\$ 3.46$ and $\$ 29.85$ per unit, respectively. The Company recognized a total of $\$ 6.3$ million and $\$ 3.6$ million, respectively, in December 31, 2012 and 2011 in stock-based compensation expense for restricted stock units granted to employees. No restricted stock units was granted to employees in 2010. As of December 31, 2012 and 2011, there were unrecognized compensation costs of $\$ 7.8$ million and $\$ 6.0$ million, respectively, related to these restricted stock units.

During the years ended December 31, 2012, 2011 and 2010, the Company also recognized stock-based compensation expense related to its 2010 ESPP of $\$ 0.8$ million, $\$ 1.9$ million, and $\$ 0.5$ million, respectively.

Compensation expense was recorded for stock-based awards granted to employees based on the grant date estimated fair value (in thousands):

|  | Years Ended December 31, |  |  |
| :--- | :--- | :--- | :--- |
|  | 2012 | 2011 | 2010 |
| Research and development | $\$ 6,442$ | $\$ 6,306$ | $\$ 2,086$ |
| Sales, general and administrative | 20,887 | 18,288 | 5,696 |
| Total stock-based compensation expense | $\$ 27,329$ | $\$ 24,594$ | $\$ 7,782$ |

Employee stock-based compensation expense recognized for the year ended December 31, 2012 included $\$ 907,000$, related to option modifications. As part of separation agreements with certain former senior employees, the Company agreed to accelerate the vesting of options for 825,523 shares of common stock and extend the exercise period for certain grants. The stock-based compensation expense above includes the impact of a repricing of stock options in June 2012 under which certain non-executive employees received a one-time reduction in the exercise price for such options with per share exercise prices per share higher than $\$ 24.00$ held by U.S. employees of Amyris and the new exercise price for such options was $\$ 16.00$, our initial public offering price. The total amount of the stock-based compensation associated with repricing was immaterial to the consolidated financial statements.

In the quarter ended June 30, 2011, the Company commenced sales of farnesene-derived products which were produced by contracted third parties. Accordingly, the Company did not have any dedicated production headcount so there is no stock-based compensation expense recorded in cost of products sold.

Stock-based compensation cost for RSUs is measured based on the closing fair market value of the Company's common stock on the date of grant. Stock-based compensation cost for stock options and employee stock purchase plan rights is estimated at the grant date and offering date, respectively, based on the fair-value using the Black-Scholes option pricing model. The fair value of employee stock options is being amortized on a straight-line basis over the requisite service period of the awards. The fair value of employee stock options was estimated using the following weighted-average assumptions:

|  | Years Ended December 31, |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2012 | 2011 | 2010 | $\%$ |  |
| Expected dividend yield | - | $\%$ | - | $\%$ | - |
| Risk-free interest rate | 1.1 | $\%$ | 2.3 | $\%$ | 2.5 |
| Expected term (in years) | 6.0 | 5.8 | 6.0 | $\%$ |  |
| Expected volatility | 77 | $\%$ | 86 | $\%$ | 96 |

Expected Dividend Yield-The Company has never paid dividends and does not expect to pay dividends.
Risk-Free Interest Rate-The risk-free interest rate was based on the market yield currently available on United States Treasury securities with maturities approximately equal to the option's expected term.

Expected Term-Expected term represents the period that the Company's stock-based awards are expected to be outstanding. The Company's assumptions about the expected term have been based on that of companies that have similar industry, life cycle, revenue, and market capitalization and the historical data on employee exercises.

Expected Volatility—The expected volatility is based on a combination of historical volatility for the Company's stock and the historical stock volatilities of several of the Company's publicly listed comparable companies over a period equal to the expected terms of the options, as the Company does not have a long trading history.

Fair Value of Common Stock - Prior to the IPO, the fair value of the shares of common stock underlying the stock options was determined by the Board of Directors. Because there was no public market for the Company's common stock, the Board of Directors determined the fair value of the common stock at the time of grant of the option by considering a number of objective and subjective factors including valuation of comparable companies, sales of convertible preferred stock to unrelated third parties, operating and financial performance, the lack of liquidity of capital stock and general and industry specific economic outlook, amongst other factors. The Company's common stock started trading in the NASDAQ Global Market under ticker symbol AMRS on September 28, 2010. Consequently, after the IPO, the fair value of the shares of common stock underlying the stock options is the closing price on the option grant date.

Forfeiture Rate-The Company estimates its forfeiture rate based on an analysis of its actual forfeitures and will continue to evaluate the adequacy of the forfeiture rate based on actual forfeiture experience, analysis of employee turnover behavior, and other factors. The impact from a forfeiture rate adjustment will be recognized in full in the period of adjustment, and if the actual number of future forfeitures differs from that estimated by the Company, the Company may be required to record adjustments to stock-based compensation expense in future periods.

Each of the inputs discussed above is subjective and generally requires significant management and director judgment to determine.

## Nonemployee Stock-Based Compensation

During the years ended December 31, 2012, 2011 and 2010, the Company granted nonemployee options to purchase $3,000,15,000$ and 101,000 shares of its common stock, respectively, to nonemployees in exchange for services. Compensation expense of $\$ 86,000, \$ 797,000$ and $\$ 834,000$ was recorded for the years ended December 31, 2012, 2011 and 2010, respectively, for stock-based awards granted to nonemployees. The nonemployee options were valued using the Black-Scholes option pricing model.

During the years ended December 31, 2012, 2011 and 2010, 10,000, 32,855 and 126,272 restricted stock units, respectively, were granted to nonemployees and a total of $\$ 58,000, \$ 101,000$ and $\$ 1.8$ million, respectively, in
stock-based compensation expense was recognized by the Company for the years ended December 31, 2012, 2011 and 2010. The 126,272 restricted stock units that were granted in 2010 were awarded to a related party as compensation for advisory services rendered. These restricted stock units vested quarterly and became fully vested as of September 30, 2010.

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

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|  | Years Ended December 31, |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2012 | 2011 | 2010 |  |  |
| Expected dividend yield | - | $\%$ | - | $\%$ | - |
| Risk-free interest rate | 1.4 | $\%$ | 2.1 | $\%$ | 3.2 |
| Expected term (in years) | 7.0 | 7.8 | 8.6 | $\%$ |  |
| Expected volatility | 77 | $\%$ | 86 | $\%$ | 95 |

## 13. Employee Benefit Plan

The Company established a 401(k) Plan to provide tax deferred salary deductions for all eligible employees. Participants may make voluntary contributions to the 401 (k) Plan up to $90 \%$ of their eligible compensation, limited by certain Internal Revenue Service restrictions. The Company does not match employee contributions.

## 14. Related Party Transactions

The Company has entered into a license agreement with University of California, Berkeley. A co-founder and advisor to the Company is a professor at the University of California, Berkeley. The Company paid the advisor zero, $\$ 2,500$ and $\$ 23,000$, during the years ended December 31, 2012, 2011 and 2010, respectively.

During 2008, the Company entered into an agreement with a venture capital group to provide strategic advisory services to Amyris and its then majority owned subsidiary, Amyris Brasil. One of the venture capital group's former directors is also a member of the Company's Board of Directors. Under the agreement, the Company issued options to the venture capital group, which vest and become exercisable based on the service of the former director of the group on the Company's Board of Directors.

In June 2010, the Company entered into agreements with Total relating to the Company's Series D preferred stock and collaboration for the research, development, production and commercialization of chemical and/or fuel products (see Note 9).

In October 2011, the Company completed a business combination with Draths. In connection with the acquisition, the Company issued 362,319 shares of the Company's common stock, of which 41,408 shares were held in escrow and paid $\$ 2.9$ million in cash. In the quarter ended June 30, 2012, the Company recovered 5,402 shares of common stock from the escrow in connection with certain Draths indemnification obligations under the purchase agreement. One of the Company's Board of Directors was also on the board of Draths.

In November 2011, the Company and Total entered into an amendment to their Technology License, Development, Research and Collaboration Agreement (see Note 4).

In February 2012, the Company completed a private placement of $10,160,325$ shares of its common stock at a price of $\$ 5.78$ per share for aggregate proceeds of $\$ 58.7$ million pursuant to a securities purchase agreement, among the Company and existing certain investors, including Total and Maxwell (Mauritius) Pte Ltd, each a beneficial owner of more than $5 \%$ of the Company's existing common stock at the time of the transaction. In addition, members of the Company's Board of Directors and certain parties related to such directors participated in the offering.

In May 2012, the Company completed a private placement of $1,736,100$ shares of it's common stock at a price of $\$ 2.36$ per share for aggregate proceeds of $\$ 4.1$ million pursuant to a series of Common Stock Purchase Agreements, among the Company and members of the Company's Board of Directors and certain parties related to such directors.

In July 2012, the Company entered into various agreements with Total relating to the Program (see Note 9).

In December 2012, the Company completed a private placement of its common stock for the issuance of $14,177,849$ shares it's common stock at a price of $\$ 2.98$ per share for aggregate proceeds of $\$ 37.2$ million and the cancellation of $\$ 5.0$ million worth of outstanding senior unsecured convertible promissory notes previously issued by the Company (see Note 6). Shares totaling $1,677,852$ were issued to Total in exchange for this cancellation. Net cash received as of December 31, 2012 was $\$ 22.2$ million and the remaining $\$ 15.0$ million of proceeds were settled in January 2013.

In connection with the December 2012 private placement, the Company entered into a Letter of Agreement, dated December 24, 2012 with Biolding, an existing investor. Under the letter agreement, the Company acknowledged that Biolding's initial investment of $\$ 10.0$ million under the Purchase Agreement represented partial satisfaction of Biolding's preexisting contractual obligation to fund $\$ 15.0$ million by March 31, 2013 upon satisfaction by the Company of criteria associated with the commissioning
of the Company's production plant in Brotas. Pursuant to the letter agreement, Biolding would invest the remaining $\$ 5.0$ million no later than March 31, 2013 following satisfaction of the criteria. A member of the Company's Board of Directors is affiliated with Biolding.

In connection with the February 2012 and December 2012 private placement, Naxyris SA and TPG Biotechnology Partners II, L.P., each a beneficial owner of more than $5 \%$ of the Company's outstanding common stock at the time of the December 2012 offering, purchased shares in the December 2012 offering; in addition, Naxyris SA's Board designee (pursuant to the February 2012 agreement), was serving on the Company's Board of Directors at the time of both the February 2012 and the December 2012 offerings, and a partner of TPG Biotech, an affiliate of TPG Biotechnology Partners II, L.P., was serving on the Company's Board of Directors at the time of the December 2012 offering.

Foris Ventures LLC and Sualk Capital Ltd, entities affiliated with two of the Company's existing Board of Directors, purchased shares of the Company's common stock in both the February 2012 and December 2012 offerings; in addition, Sualk Capital Ltd's Board designee (pursuant to the February 2012 agreement), was serving on the Company's Board of Directors at the time of the December 2012 offering.

Please refer to Note 18 "Subsequent Events" for additional related party transactions.

## 15. Restructuring

In June 2009, the Company initiated a restructuring plan to reduce its cost structure. The restructuring plan resulted in the consolidation of the Company's headquarter facility located in Emeryville, California, which is under an operating lease. The Company ceased using a certain part of this headquarter facility in August 2009. The Company 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, the Company 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, the Company's Board of Directors approved the Company's plan to reoccupy the part of its headquarter facility which was previously the subject of the 2009 restructuring. This reoccupied space was used to meet the Company's expansion requirements. As a result, the Company reversed approximately $\$ 4.6$ million of its restructuring liability and recognized an income from restructuring of $\$ 2.1$ million during the year ended December 31, 2010.

The following table summarizes the liability and utilization by cost type associated with the restructuring (in thousands):

|  | Exit | Deferred | Total |
| :--- | :--- | :--- | :--- |
|  | Costs | Rent | $\$ 5,078$ |
| Accrued restructuring as of December 31, 2009 | $\$ 5,078$ | $\$-$ | $(906$ |
| Cash payments | $(906$ | $)$ | 395 |
| Accretion expense | 395 | - | $(4,567$ |
| Reversal of restructuring liability | $(2,061$ | $)$ | $(2,506$ |
| Accrued restructuring as of December 31, 2010 | $\$ 2,506$ | $\$(2,506$ | $\$-$ |

## 16. Income Taxes

For the years ended December 31, 2012, 2011 and 2010, the Company recorded a provision for income taxes of $\$ 981,000, \$ 552,000$ and zero, respectively. The provision for income taxes for the year ended December 31, 2012 consisted of an accrual of Brazilian withholding tax on an intercompany interest liability. The provision for incomes
taxes for the year ended December 31, 2011 consisted of $\$ 727,000$ for the accrual of Brazilian withholding tax on an intercompany interest liability, partially offset by a $\$ 175,000$ benefit from income taxes resulting from valuation allowance adjustments due to an increase in currency translation adjustments classified as other comprehensive losses. Other than the above mentioned provision for income tax, no additional provision for income taxes has been made, net of the valuation allowance, due to cumulative losses since the commencement of operations.

The components of loss before income taxes and minority interests are as follows for the years ended December 31, 2012, 2011 and 2010 (in thousands):

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|  | Years Ended December 31, |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  | 2010 |
| United States | \$(146,028 | ) | \$(140,153 | ) | \$(67,525 |
| Foreign | (59,024 | ) | (38,806 | ) | (15,265 |
| Loss before income taxes | \$ 205,052 | ) | \$ (178,959 |  | \$ 82,790 |

The components of the provision for income taxes are as follows for the years ended December 31, 2012, 2011 and 2010 (in thousands):

|  | Years Ended December 31, |  | 2010 |
| :--- | :--- | :--- | :--- |
| Current: | 2012 | 2011 |  |
| Federal | $\$-$ | $\$-$ | $\$-$ |
| State | - | - | - |
| Foreign | 981 | 727 | - |
| Total current provision (benefit) | 981 | 727 | - |
| Deferred: | - | $(150$ | $)-$ |
| Federal | - | $(25$ | $)-$ |
| State | - | - | - |
| Foreign | - | $(175$ | - |
| Total deferred provision (benefit) | $\$ 981$ | $\$ 552$ | $\$-$ |
| Total provision for income taxes |  |  |  |

A reconciliation between the statutory federal income tax and the Company's effective tax rates as a percentage of loss before income taxes is as follows:

|  | Years Ended December 31, |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2012 | 2011 | 2010 | $) \%$ |  |
| Statutory tax rate | $(34.0$ | $) \%$ | $(34.0$ | $) \%$ | $(34.0$ |
| State tax rate, net of federal benefit | $(0.4$ | $)$ | $\%$ | $(4.4$ | $) \%$ |
| Stock-based compensation | 0.2 | $\%$ | 0.6 | $) \%$ |  |
| Federal R\&D credit | - | $\%$ | 0.6 | 0.3 | $\%$ |
| Other | 1.6 | $\%$ | $(0.8$ | $) \%$ | $(0.8$ |
| Foreign losses | $(5.8$ | $) \%$ | $(5.4$ | $) \%$ | $)$ |
| Change in valuation allowance | 38.8 | $\%$ | 45.0 | $\%$ | $\%$ |
| Effective income tax rate | 0.4 | $\%$ | 0.3 | $\%$ | $\%$ |
|  |  |  |  | $\%$ | $\%$ |

Temporary differences and carryforwards that gave rise to significant portions of deferred taxes are as follows (in thousands):

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|  | December 31, |  |  |
| :--- | :--- | :--- | :--- |
|  | 2012 | 2011 | 2010 |
| Net operating loss carryforwards | $\$ 145,324$ | $\$ 103,390$ | $\$ 56,615$ |
| Fixed assets | - | - | 340 |
| Research and development credits | 7,259 | 5,937 | 3,325 |
| Foreign Tax Credit | 1,782 | 801 | - |
| Accruals and reserves | 15,997 | 12,150 | 2,257 |
| Stock-based compensation | 15,882 | 11,351 | 4,316 |
| Capitalized start-up costs | 16,070 | 22,974 | 8,993 |
| Capitalized research and development costs | 26,850 | - | - |
| Other | 7,649 | 2,904 | 225 |
| Total deferred tax assets | 236,813 | 159,507 | 76,071 |
| Fixed assets | $(525$ | $)(2,742$ | $)-$ |
| Other | - | - | - |
| Total deferred tax liabilities | $(525$ | $)(2,742$ | $)$ |
| Net deferred tax asset prior to valuation allowance | 236,288 | 156,765 | 76,071 |
| Less: Valuation allowance | $(236,288$ | $)(156,765$ | $)(76,071$ |
| Net deferred tax assets (liabilities) | $\$-$ | $\$-$ | $\$-$ |

Recognition of deferred tax assets is appropriate when realization of such assets is more likely than not. Based upon the weight of available evidence, especially the uncertainties surrounding the realization of deferred tax assets through future taxable income, the Company believes it is not yet more likely than not that the net deferred tax assets will be fully realizable. Accordingly, the Company has provided a full valuation allowance against its net deferred tax assets as of December 31, 2012. The valuation allowance increased $\$ 79.5$ million, $\$ 80.7$ million, and $\$ 28.3$ million, during the years ended December 31, 2012, 2011 and 2010, respectively.

As of December 31, 2012, the Company had federal and state net operating loss carryforwards of approximately $\$ 373.7$ million and $\$ 202.4$ million , respectively, available to reduce future taxable income, if any. Approximately $\$ 25.7$ million and $\$ 12.7$ million of the federal and state net operating loss carryforwards, respectively, resulted from exercises of employee stock options and vesting of restricted stock units and have not been included in the Company's gross deferred tax assets. In accordance with ASC 718, such unrealized tax benefits of approximately $\$ 9.5$ million will be accounted for as a credit to additional paid-in capital if and when realized through a reduction in income taxes payable.

The Company also has federal research and development credits of $\$ 5.1$ million and foreign tax credit carryforwards of $\$ 1.8$ million, and California research and development credit carryforwards of $\$ 7.9$ million, respectively, at December 31, 2012. The American Taxpayer Relief Act of 2012 (the "Act") was enacted on January 2, 2013. The Act retroactively reinstates the federal research and development credit from January 1, 2012, through December 31, 2013. The benefit of the reinstated credit is not expected to impact the income statement in the period of enactment, which is the first quarter of 2013 as the research and development credit carryforwards are offset by a full valuation allowance.

The Tax Reform Act of 1986 and similar state provisions limit the use of net operating loss and credit carryforwards in certain situations where equity transactions result in a change of ownership as defined by Internal Revenue Code Section 382. In the event the Company has experienced an ownership change, as defined, utilization of its federal and state net operating loss and credit carryforwards could be limited. If not utilized, the federal net operating loss carryforward begins expiring in 2025, and the California net operating loss carryforward begins expiring in 2015. The federal foreign tax credits and research and development credit carryforwards will expire starting in 2020 and in 2024; respectively, if not utilized. The California tax credits can be carried forward indefinitely.

Effective January 1, 2007, the Company adopted the accounting guidance on uncertainties in income taxes. A reconciliation of the beginning and ending amounts of unrecognized tax benefits since the adoption of accounting guidance on uncertainty in income taxes is as follows:
Balance at December 31, 2010 ..... 1,734
Increases in tax positions for prior period ..... -
Increases in tax positions during current period ..... 1,369
Balance at December 31, 2011 ..... \$3,103
Increases in tax positions for prior period ..... 82
Increases in tax positions during current period ..... 733
Balance at December 31, 2012 ..... \$3,918

The Company's policy is to include interest and penalties related to unrecognized tax benefits within the provision for taxes. The Company determined that no accrual for interest and penalties was required as of December 31, 2012.

As of December 31, 2012, the Company's total unrecognized tax benefits were $\$ 3.9$ million, of which none of the tax benefits, if recognized, would affect the effective income tax rate due to the valuation allowance that currently offsets deferred tax assets. The Company does not anticipate the total amount of unrecognized income tax benefits will significantly increase or decrease in the next 12 months.

The Company's primary tax jurisdiction is the United States. For United States federal and state tax purposes, tax years 2003 and forward remain open and subject to tax examination by the appropriate federal or state taxing authorities. Brazil tax years 2008 through the current remain open and subject to examination.

The Company is currently under audit by the US Internal Revenue Service for tax year 2008. As of December 31, 2012, the Company has received a Form 4549-A, Income Tax Discrepancy Adjustments (Examination No Change Report) which concluded that there were no adjustments resulting from the audit by the US Internal Revenue Service for the tax year 2008. As of December 31, 2012, the Company has not yet received the Area Director's final approval of the report.

## 17. Reporting Segments

The chief operating decision maker for the Company is the chief executive officer. The chief executive officer reviews financial information presented on a consolidated basis, accompanied by information about revenue by geographic region, for purposes of allocating resources and evaluating financial performance. The Company has one business activity comprised of research and development and sales of fuels and farnesene-derived products and there are no segment managers who are held accountable for operations, operating results or plans for levels or components below the consolidated unit level. Accordingly, the Company has determined that it has a single reportable segment and operating unit structure.

Revenues by geography are based on the location of the customer. The following tables set forth revenue and long-lived assets by geographic area (in thousands):

## Revenues

|  | Years Ended December 31, |  |  |
| :--- | :--- | :--- | :--- |
|  | 2012 | 2011 | 2010 |
| United States | $\$ 49,111$ | $\$ 141,098$ | $\$ 80,311$ |
| Brazil | 3,786 | 141 | - |
| Europe | 16,461 | 5,695 | - |
| Asia | 4,336 | 57 | - |
| Total | $\$ 73,694$ | $\$ 146,991$ | $\$ 80,311$ |

Long-Lived Assets

|  | December 31, |  |
| :--- | :--- | :--- |
|  | 2012 | 2011 |
| United States | $\$ 70,273$ | $\$ 76,108$ |
| Brazil | 90,982 | 48,240 |
| Europe | 1,866 | 3,753 |
| Total | $\$ 163,121$ | $\$ 128,101$ |

## 18. Subsequent Events

Evergreen Shares for 2010 Equity Plan and 2010 ESPP
On January 23, 2013, the Company's Board of Directors approved the additional shares which will be available for issuance under the 2010 Equity Plan and the 2010 ESPP. These shares represent an automatic increase in the number of shares available for issuance under the 2010 Equity Plan and the 2010 ESPP of 3,435,483 and 687,096, respectively, equal to $5 \%$ and $1 \%$, respectively of $68,709,660$ shares, the total outstanding shares of the Company's common stock as of December 31, 2012. This automatic increase was effective as of January 1, 2013. Shares available for issuance under the 2010 Equity Plan and 2010 ESPP were initially registered on a registration statement on Form S-8 filed with the Securities and Exchange Commission on October 1, 2010 (Registration No. 333-169715). The Company intends to file a registration statement on Form S-8 with respect to a portion of the shares added by the automatic increase on January 1, 2013 following the filing of its annual report on Form 10-K.

Proceeds from December 2012 Private Placement
On January 11, 2013, the Company received the remaining $\$ 15.0$ million of proceeds from the private placement offering that closed in December 2012. Consequently, the Company issued 5,033,557 shares of the Company's common stock to an investor on that date.
Firmenich Agreement
On March 13, 2013, the Company entered into a Master Collaboration Agreement (the "Agreement") with Firmenich to establish a collaboration for the development and commercialization of multiple renewable flavors and fragrances ("F\&F") compounds. Under this Agreement, except for rights granted under preexisting collaboration relationships, the Company is granting Firmenich exclusive access for such compounds to specified Company intellectual property for the development and commercialization of F\&F products in exchange for research and development funding and a profit sharing arrangement. The Agreement supersedes and expands a prior collaboration agreement between the Company and Firmenich as described in Note 9.

The Agreement provides annual, up-front funding to the Company by Firmenich of $\$ 10.0$ million for each of the first three years of the collaboration. The initial payment of $\$ 10.0$ million was received by the Company on March 27, 2013. The Agreement contemplates additional funding by Firmenich on a discretionary basis and up to $\$ 5.0$ million in
milestone payments from Firmenich to the Company. In addition, the Agreement contemplates that the parties will mutually agree on a supply price for each compound and share product margins from sales of each compound on a $70 / 30$ basis ( $70 \%$ for Firmenich) until Firmenich receives $\$ 15.0$ million more than the Company in the aggregate, after which the parties will share 50/50 in the product margins on all compounds. The Company also agreed to pay a one-time success bonus of up to $\$ 2.5$ million to Firmenich for outperforming certain commercialization targets.

The Agreement does not impose any specific research and development commitments on either party after year six, but if the parties mutually agree to perform development after year six, the Agreement provides that the parties will fund it equally.

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Under the Agreement, the parties jointly select target compounds, subject to final approval of compound specifications by Firmenich. During the development phase, the Company is required to provide labor, intellectual property and technology infrastructure and Firmenich is required to contribute downstream polishing expertise and market access. The Agreement provides that the Company will own research and development and strain engineering intellectual property, and Firmenich will own blending and, if applicable, chemical conversion intellectual property. Under certain circumstances such as the Company's insolvency, Firmenich gains expanded access to the Company's intellectual property. Following development of F\&F compounds under the Agreement, the Agreement contemplates that Company will manufacture the initial target molecules for the compounds and Firmenich will perform any required downstream polishing and distribution, sales and marketing.

## Export Financing with ABC Brasil

On March 18, 2013, the Company entered into an export financing agreement with Banco ABC Brasil S.A. (ABC Bank) for approximately US $\$ 2.5$ million (approximately R $\$ 5.0$ million based on exchange rate as of March 18, 2013) for a 1 year-term to fund exports through March 2014.

## Letter Agreement with Total

As of March 24, 2013, the Company entered into a letter agreement with Total under which Total agreed to waive its right to cease its participation in our fuels collaboration at the July 2013 decision point referenced above under Note 9 - "Significant Agreements," and committed to proceed with the July 2013 funding tranche of $\$ 30.0$ million (subject to the Company's satisfaction of the relevant closing conditions for such funding in the securities purchase agreement). As consideration for this waiver and commitment, the Company agreed to:
Reduce the conversion price for the senior unsecured convertible promissory notes to be issued in connection with such funding from $\$ 7.0682$ per share to a price per share equal to the greater of (i) the consolidated closing bid price of the Company's common stock on the date of the letter agreement, plus $\$ 0.01$, and (ii) $\$ 3.08$ per share, provided that the conversion price will not be reduced by more than the maximum possible amount permitted under the NASDAQ rules such that the new conversion price would require the Company to obtain stockholder consent; and Grant Total a senior security interest in the Company's intellectual property, subject to certain exclusions and subject to release by Total when the Company and Total enter into final documentation regarding the establishment of the Fuels JV.

In addition to the waiver by Total described above, Total also agreed that, at the Company's request and contingent upon the Company meeting its obligations described above, it would pay advance installments of the amounts otherwise payable at the July 2013 closing. Specifically, if the Company requests such advance installments, subject to certain closing conditions and delivery of certifications regarding the Company's cash levels, Total is obligated to fund $\$ 10.0$ million no later than May 15,2013 , and an additional $\$ 10.0$ million no later than June 15,2013 , with the remainder funding on the original July 2013 closing date.

## Biolding Follow-on Investment

On March 27, 2013, the Company completed a private placement of its common stock to Biolding for the issuance of $1,533,742$ of its common stock at a price of $\$ 3.26$ per share aggregate proceeds of approximately $\$ 5.0$ million. This private placement represented the final tranche of Biolding's preexisting contractual obligation to fund $\$ 15.0$ million upon satisfaction by the Company of certain criteria associated with the commissioning of a production plant in Brazil.

Joint Venture with Cosan

As of March 26, 2013, the Company and Cosan US, Inc. ("Cosan US") entered into agreements to (i) expand their base oils joint venture to also include additives and lubricants and (ii) operate their joint venture exclusively through Novvi LLC. Specifically, the parties entered into an Amended and Restated Operating Agreement for Novvi LLC, which sets forth the governance procedures for Novvi LLC and the joint venture and the parties initial contribution, which for the Company are the licenses granted under the IP License Agreement. The Company also entered into an IP License Agreement with Novvi LLC under which the Company granted Novvi LLC (i) an exclusive (subject to certain limited exceptions for the Company), worldwide, royalty-free license to develop, produce and commercialize base oils, additives, and lubricants derived from Biofene for use in the automotive, commercial and industrial lubricants markets and (ii) a non-exclusive, royalty-free license, subject to certain conditions, to manufacture Biofene solely for its own products. In addition, both the Company and Cosan US granted Novvi LLC certain rights of first refusal with respect to alternative base oil and additive technologies that may be acquired by the Company or Cosan US during the term of the IP License Agreement. Under these agreements, the Company and Cosan US will each own $50 \%$ of Novvi LLC, and each party

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will share equally in any costs and any profits ultimately realized by the joint venture. The IP License Agreement has an initial term of 20 years from the date of the agreement, subject to standard early termination provisions such as uncured material breach or a party's insolvency.

In conjunction with the execution of the documents above, the Company, Amyris Brasil and Cosan are also entering into a termination of the Original JV Agreement. In addition, Amyris Brasil agreed to sell, for a nominal amount, its $50 \%$ interest in the Novvi S.A. entity, a now-dormant company, to Cosan. Following consummation of such sale, the Shareholders' Agreement between Amyris Brasil and Cosan with regard to Novvi S.A. will automatically terminate pursuant to its terms.

## SUPPLEMENTARY FINANCIAL DATA <br> Selected Quarterly Financial Data (unaudited)

The following table presents selected unaudited consolidated financial data for each of the eight quarters in the two-year periods ended December 31, 2012. In the Company's opinion, this unaudited information has been prepared on the same basis as the audited information and includes all adjustments (consisting of only normal recurring adjustments) necessary for a fair statement of the financial information for the periods presented. Net loss per share-basic and diluted, for the four quarters of each fiscal year may not sum to the total for the fiscal year because of the different number of shares outstanding during each period.

Year Ended December 31, 2012

| Total revenues | \$29,469 |  | \$ 19,263 |  | \$ 19,108 |  | \$5,854 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Product sales | \$26,307 |  | \$15,580 |  | \$4,728 |  | \$3,023 |  |
| Gross profit (loss) from product sales | \$(17,504 | ) | \$(8,056 | ) | \$284 |  | \$(2,400 |  |
| Net loss attributable to common stockholders | \$ 94,548 | ) | \$(46,806 | ) | \$(20,293 |  | \$ (43,492 |  |
| Net loss per share-basic and diluted | \$(1.88 | ) | \$(0.81 | ) | \$(0.34 |  | \$(0.72 |  |
| Shares used in calculation-basic and diluted Year Ended December 31, 2011 | 50,214,192 |  | 57,442,834 |  | 58,964,226 |  | 60,187,256 |  |
| Total revenues | \$37,174 |  | \$32,002 |  | \$36,276 |  | \$41,539 |  |
| Product sales | \$34,020 |  | \$27,816 |  | \$31,162 |  | \$36,839 |  |
| Gross profit (loss) from product sales | \$(362 | ) | \$(1,320 | ) | \$(4,567 |  | \$(19,529 |  |
| Net loss attributable to common stockholders | \$(33,137 | ) | \$(42,615 | ) | \$(43,690 | ) | \$(59,428 |  |
| Net loss per share-basic and diluted | \$(0.76 | ) | \$(0.95 | ) | \$(0.97 | ) | \$(1.30 |  |
| Shares used in calculation-basic and diluted | 43,851,142 |  | 44,626,721 |  | 45,031,613 |  | 45,663,667 |  |

## ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

## ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures
Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures pursuant to Rule 13a-15 under the Securities Exchange Act of 1934, as amended (Exchange Act), as of the end of the period covered by this Annual Report on Form 10-K. Based on this evaluation, our chief executive

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officer (CEO) and chief financial officer (CFO) concluded that, as of December 31, 2012, our disclosure controls and procedures are designed and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure.

Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

## Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, our CEO and CFO, and effected by our Board of Directors, management and other personnel, 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 and includes those policies and procedures that:

- Pertain to the maintenance of records that accurately and fairly reflect in reasonable detail the transactions and dispositions of the assets of our company;

Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and

Provide reasonable assurances regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material adverse effect on our financial statements.

Our management assessed our internal control over financial reporting as of December 31, 2012, the end of our fiscal year. Management based its assessment on criteria established in "Internal Control-Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on management's assessment of our internal control over financial reporting, management concluded that, as of December 31, 2012, our internal control over financial reporting was effective. The effectiveness of the Company's internal control over financial reporting as of December 31, 2012 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Internal control over financial reporting has inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements will not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in management's evaluation pursuant to Rules 13a-15(d) or 15d-15(d) of the Exchange Act during our fourth fiscal quarter ended December 31, 2012 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION
Not applicable.

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## PART III

Certain information required by Part III is omitted from this Annual Report on Form 10-K and is incorporated herein by reference from our definitive proxy statement, relating to our 2013 annual meeting of stockholders, pursuant to Regulation 14A of the Exchange Act, also referred to in this Form 10-K as our 2013 Proxy Statement, which we expect to file with the SEC no later than April 30, 2013.

## ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information appearing in our 2013 Proxy Statement under the following headings is incorporated herein by reference:

Proposal 1-Election of Directors
Corporate Governance
Section 16(a) Beneficial Ownership Reporting Compliance
The information under the heading "Executive Officers of the Registrant" in Item 1 of this Annual Report on Form 10-K is also incorporated by reference in this section.

We have adopted a Code of Business Conduct and Ethics that applies to all directors, officers and employees of Amyris as required by NASDAQ governance rules and as defined by applicable SEC rules. Our Code of Business Conduct and Ethics includes a section entitled "Code of Ethics for Chief Executive Officer and Senior Financial Officers," providing additional principles for ethical leadership and a requirement that such individuals foster a culture throughout Amyris that helps ensure the fair and timely reporting of our financial results and condition. Our Code of Business Conduct and Ethics is available on the corporate governance section of our website at "http://investors.amyris.com/governance.cfm." Stockholders may also obtain a print copy of our Code of Business Conduct and Ethics and our Corporate Governance Guidelines by writing to the Secretary of Amyris at 5885 Hollis Street, Suite 100, Emeryville, California 94608. If we make any substantive amendments to our Code of Business Conduct and Ethics or grant any waiver from a provision of the Internal Revenue Code to any executive officer or director, we will promptly disclose the nature of the amendment or waiver on the corporate governance section of our website at "http://investors.amyris.com/governance.cfm."

## ITEM 11. EXECUTIVE COMPENSATION

The information appearing in our 2013 Proxy Statement under the following headings is incorporated herein by reference:

Executive Compensation
Director Compensation
Compensation Committee Interlocks and Insider Participation

## ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND

 RELATED STOCKHOLDER MATTERSThe information appearing in our 2013 Proxy Statement under the following headings is incorporated herein by reference:

Security Ownership of Certain Beneficial Owners and Management Equity Compensation Plan Information

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE
The information appearing in our 2013 Proxy Statement under the following headings is incorporated herein by reference:

Transactions with Related Persons
Proposal 1—Election of Directors-Independence of Directors
Proposal 1-Election of Directors-Committees of the Board
ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES
The information appearing in our 2013 Proxy Statement under the proposal entitled "Ratification of Appointment of Independent Registered Public Accounting Firm" is incorporated herein by reference.

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## PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES
(a) The following documents are filed as part of this report on Form 10-K:
(1) Financial Statements. Reference is made to the Index to the registrant's Financial Statements under Item 8 in Part II of this Form 10-K.
(2) Financial Statement Schedules. The following consolidated financial statement schedule of the registrant is filed as part of this report on Form $10-\mathrm{K}$ and should be read in conjunction with the Consolidated Financial Statements of Amyris, Inc.

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## SCHEDULE II

VALUATION AND QUALIFYING ACCOUNTS
FOR THE YEARS ENDED DECEMBER 31, 2012, 2011 and 2010
(in thousands)

|  | Balance at <br> Beginning <br> of Period | Additions | Write-off/ <br> Adjustments | Balance <br> at End of <br> Period |
| :--- | :--- | :--- | :--- | :--- |
| Deferred Tax Assets Valuation Allowance:    <br> Year ended December 31, 2012 $\$ 156,765$ $\$ 79,523$ $\$-$ <br> Year ended December 31, 2011 $\$ 76,071$ $\$ 80,694$ $\$-$ <br> Year ended December 31, 2010 $\$ 47,799$ $\$ 28,272$ $\$-$ <br> $\$ 236,288$    |  | $\$ 76,765$ |  |  |


|  | Balance at <br> Beginning <br> of Period | Additions | Write-off/ <br> Adjustments | Balance <br> at End of <br> Period |
| :--- | :--- | :--- | :--- | :--- |
| Allowance for Doubtful Accounts: | $\$ 245$ | $\$ 236$ | $\$-$ | $\$ 481$ |
| Year ended December 31, 2012 | $\$-$ | $\$ 245$ | $\$-$ | $\$ 245$ |
| Year ended December 31,2011 | $\$-$ | $\$-$ | $\$-$ |  |

Schedules not listed above are omitted because they are not required, they are not applicable or the information is already included in the consolidated financial statements or notes thereto.
(3) Exhibits. Reference is made to the exhibits listed in the index to exhibits in Item 15(b) below.

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(b) Exhibits.

The following table lists the exhibits filed as part of this report on Form $10-\mathrm{K}$. In some cases, these exhibits are incorporated into this report by reference to exhibits to our other filings with the Securities and Exchange Commission. Where an exhibit is incorporated by reference, we have noted the type of form filed with the Securities and Exchange Commission, the file number of that form, the date of the filing, and the number of the exhibit referenced in that filing.


Registration Rights Agreement, dated

| 4.11 | February 27, 2012, among registrant and the Fidelity Purchasers | S-3 | 333-180005 | March 9, 2012 | 4.04 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $4.12{ }^{\text {a }}$ | Form of Common Stock Purchase Agreement among registrant and certain investors | 10-Q | 001-34885 | August 8, 2012 | 4.01 |
| 4.13 | Securities Purchase Agreement, dated July 30, 2012, between registrant and Total Gas \& Power USA, SAS | 10-Q | 001-34885 | November 9, $2012$ | 4.01 |
| $4.14{ }^{\text {b }}$ | 1.5\% Senior Unsecured Convertible Notes, dated July 30, 2012, September 14, 2012 and December 24, 2012, respectively, issued by registrant to Total Gas \& Power USA, SAS | 10-Q | 001-34885 | November 9, $2012$ | 4.02 |
| 4.15 | Registration Rights Agreement, dated July 30, 2012, between registrant and Total Gas \& Power USA, SAS | 10-Q | 001-34885 | November 9, $2012$ | 4.03 |


| Exhibit |  | Previously Filed |  |  | Exhibit | Filed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Description | Form | File No. | Filing Date |  | Herewith |
|  | Securities Purchase Agreement, dated |  |  |  |  |  |
| $4.16{ }^{\text {d }}$ | December 24, 2012, between registrant and certain investors listed therein |  |  |  |  | X |
|  | Follow-On Investment Agreement, dated |  |  |  |  |  |
| $4.17{ }^{\text {d }}$ | December 24, 2012, between registrant and Biolding Investment SA |  |  |  |  | X |
| 10.01 | Form of Indemnity Agreement between registrant and its directors and officers | S-1 | 333-166135 | June 23, 2010 | 10.01 |  |
|  | Uncommitted Facility Letter, dated |  |  |  |  |  |
| $10.02^{\text {c }}$ | November 25, 2008, between BNP Paribas and Amyris Fuels, Inc. | S-1 | 333-166135 | August 31, 2010 | 10.02 |  |
| $10.03{ }^{\text {c }}$ | Amendment to Uncommitted Facility Letter, dated October 7, 2009, among registrant, BNP Paribas and Amyris Fuels, LLC | S-1 | 333-166135 | August 31, 2010 | 10.03 |  |
| 10.04 | Amendment No. 2 to Uncommitted Facility Letter, dated March 8, 2010, among registrant, BNP Paribas and Amyris Fuels, LLC | S-1 | 333-166135 | August 31, 2010 | 10.04 |  |
| 10.05 | Amendment No. 3 to Uncommitted Credit Facility Letter, dated February 7, 2011, among registrant, BNP Paribas and Amyris Fuels, LLC | 10-Q | 001-34885 | August 11, 2011 | 10.03 |  |
| 10.06 | Amendment No. 4 to Uncommitted Credit Facility Letter, dated May 24, 2011, among registrant, BNP Paribas and Amyris Fuels, LLC | 10-Q | 001-34885 | August 11, 2011 | 10.04 |  |
| 10.07 | Amendment to Uncommitted Facility Letter, dated April 17, 2012, among registrant, BNP Paribas and Amyris Fuels, LLC | 10-Q | 001-34885 | August 8, 2012 | 10.05 |  |
|  | Assistance Agreement, dated December 30, 2009, as modified by Assistance Agreement |  |  |  |  |  |
| 10.08 | dated March 26, 2010, between registrant and the U.S. Department of Energy, together with schedules and supplements thereto | S-1 | 333-166135 | April 16, 2010 | 10.09 |  |
|  | Modification No. 2, dated April 19, 2010, to |  |  |  |  |  |
| 10.09 | Assistance Agreement between registrant and the U.S. Department of Energy | S-1 | 333-166135 | May 25, 2010 | 10.13 |  |
|  | Modification Nos. 3-8 to Assistance |  |  |  |  |  |
| 10.10 | Agreement between registrant and the U.S. |  |  |  |  | X |
|  | Department of Energy |  |  |  |  |  |
|  | Technology Investment Agreement, dated |  |  |  |  |  |
| $10.11^{\text {c }}$ | June 11, 2012, between registrant and The Defense Advanced Research Projects Agency (DARPA) | $10-Q$ | 001-34885 | August 8, 2012 | 10.08 |  |
| $10.12^{\text {ce }}$ | Agreement for Credit Opening, dated November 16, 2011, between Amyris Brasil | 10-K | 001-34885 | February 28, 2012 | 10.11 |  |

Ltda. and Banco Nacional de
Desenvolvimento Econ mico e Social -
BNDES
Corporate Guarantee, dated November 28,
$10.13^{c} \begin{array}{llllll}\text { 2011, issued by registrant to Banco Nacional } \\ \text { de Desenvolvimento Econ mico e Social - }\end{array} ~ 10-\mathrm{K} ~ 001-34885 ~\left(\begin{array}{l}\text { February 28, } \\ 2012\end{array} \quad 10.12\right.$ BNDES
Bank Credit Agreement, dated December 21,
10.14e 2011, between Amyris Brasil Ltda. and
$\begin{array}{llll}10-\mathrm{K} & 001-34885 & \begin{array}{l}\text { February 28, } \\ 2012\end{array} & 10.13\end{array}$ Banco Pine S.A.
Addendum to the Banking Credit Form,
$10.15^{e}$ dated February 17, 2012, between Amyris $\quad 10-\mathrm{Q} \quad 001-34885$ May 9, $2012 \quad 10.02$
Brasil Ltda. and Banco Pine S.A.
Addendum to the Banking Credit Form,
$10.16^{e}$ dated May 17, 2012, between Amyris Brasil $\quad$ 10-Q $\quad 001-34885$ August 8, $2012 \quad 10.02$ Ltda. and Banco Pine S.A.
Note of Bank Credit, dated June 21, 2012,
$10.17^{e}$ between Amyris Brasil Ltda. and Banco Pine $\quad 10-\mathrm{Q} \quad 001-34885$ August 8, 201210.03 S.A.

Global Derivatives Contract (swap
$\begin{array}{llllll}10.18^{\text {ce }} \text { agreement), dated June 15, 2012, between } & \text { 10-Q } & 001-34885 & \text { August 8, } 2012 & 10.04\end{array}$
Amyris Brasil Ltda. and Banco Pine S.A.

| Exhibit |  | Previous | y Filed |  |  | Filed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Description | Form | File No. | Filing Date | Exhibit | Herewith |
| $10.19 \text { ce }$ | Note of Bank Credit, dated July 13, 2012, between Amyris Brasil Ltda. and Nossa Caixa Desenvolvimento | 10-Q | 001-34885 | $\begin{aligned} & \text { November 9, } \\ & 2012 \end{aligned}$ | 10.01 |  |
| $10.20^{\mathrm{ce}}$ | Note of Bank Credit, dated July 13, 2012, between Amyris Brasil Ltda. and Banco Pine S.A. | 10-Q | 001-34885 | November 9, 2012 | 10.02 |  |
| $10.21{ }^{\text {e }}$ | Fiduciary Conveyance of Movable Goods Agreement, dated July 13, 2012, among Amyris Brasil Ltda., Nossa Caixa Desenvolvimento and Banco Pine S.A. | 10-Q | 001-34885 | $\begin{aligned} & \text { November 9, } \\ & 2012 \end{aligned}$ | 10.03 |  |
| 10.22 | Corporate Guarantee, dated July 13, 2012, issued by registrant to Nossa Caixa Desenvolvimento | 10-Q | 001-34885 | November 9, 2012 | 10.04 |  |
| 10.23 | Corporate Guarantee, dated July 13, 2012, issued by registrant to Banco Pine S.A. | 10-Q | 001-34885 | $\begin{aligned} & \text { November 9, } \\ & 2012 \end{aligned}$ | 10.05 |  |
| $10.24{ }^{\text {c }}$ | Revolving Credit Facility letter agreement, dated December 23, 2010, between registrant and Bank of the West | 10-K/A | 001-34885 | May 2, 2012 | 10.14 |  |
| 10.25 | Letter agreement, dated May 3, 2012, amending Revolving Credit Facility dated December 23, 2010, between registrant and Bank of the West | 10-Q | 001-34885 | August 8, 2012 | 10.06 |  |
| 10.26 | Letter agreement, dated June 20, 2012, terminating Revolving Credit Facility dated December 23, 2010, as amended, between registrant and Bank of the West | 10-Q | 001-34885 | August 8, 2012 | 10.07 |  |
| $10.27^{\text {c }}$ | Joint Venture Agreement dated April 14, 2010 among registrant, Amyris Brasil S.A. and Usina São Martinho S.A. | S-1 | 333-166135 | August 31, 2010 | 10.14 |  |
| $10.28^{\text {c }}$ | Shareholders' Agreement dated April 14, 2010 among registrant, Amyris Brasil S.A. and Usina São Martinho S.A. | S-1 | 333-166135 | May 25, 2010 | 10.17 |  |
| $10.29^{\text {c }}$ | Technology License, Development, Research and Collaboration Agreement, dated June 21, 2010, between registrant and Total Gas \& Power USA Biotech, Inc. | S-1 | 333-16135 | $\begin{aligned} & \text { September 20, } \\ & 2010 \end{aligned}$ | 10.46 |  |
| 10.30 | Letter agreement, dated January 11, 2011, between registrant and Total Gas \& Power USA Biotech, Inc. | 10-Q | 001-34885 | May 11, 2011 | 10.01 |  |
|  | First Amendment to Technology License, Development, Research and Collaboration |  |  |  |  |  |
| $10.31^{\text {c }}$ | Agreement, dated November 23, 2011, between Amyris and Total Gas \& Power USA SAS | 10-K/A | 001-34885 | May 2, 2012 | 10.19 |  |
| $10.32^{\text {c }}$ | Master Framework Agreement, dated July 30, 2012, between registrant and Total Gas \& | 10-Q | 001-34885 | November 9, 2012 | 10.06 |  |

Power USA, SASSecond Amendment to the TechnologyLicense, Development, Research and
$10.33^{c}$ Collaboration Agreement, dated July 30, ..... 10-Q 001-34885
November 9, ..... 2012 ..... 10.072012, between registrant and Total Gas \&Power USA, SAS
Joint Venture Implementation Agreementdated June 3, 2011 among Amyris, Inc.,
$10.34^{\text {c }}$ Amyris Brasil S.A., Cosan Combustíveis e ..... 10-Q
001-34885 August 11, $2011 \quad 10.01$Lubrificantes S.A. and Cosan S.A. Indústriae ComércioShareholders' Agreement, dated June 3,
10.35c 2011, among Amyris Brasil S.A., CosanCombustíveis e Lubrificantes S.A. and Novvi$10-\mathrm{Q}$001-34885 August 11, $2011 \quad 10.02$
S.A.Agreement for the Supply of Sugarcane Juice10.36 ce and Other Utilities, dated March 18, 2011,between Amyris Brasil Ltda. and ParaísoBioenergia S.A.Lease Agreement, dated March 18, 2011,
$10.37^{\text {de }}$ between Amyris Brasil Ltda. and Paraíso ..... XBioenergia S.A.

| Exhibit |  | Previously Filed |  |  |  | Filed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Description | Form | File No. | Filing Date | Exhibit | Herewith |
|  | Addendum to Lease Agreement, dated April |  |  |  |  |  |
| $10.38{ }^{\text {de }}$ | 28, 2011, between Amyris Brasil Ltda. and |  |  |  |  | X |
|  | Paraíso Bioenergia S.A. |  |  |  |  |  |
| 10.39 | Lease, dated August 22, 2007, between registrant and ES East Associates, LLC | S-1 | 333-166135 | April 16, 2010 | 10.17 |  |
|  | First Amendment, dated March 10, 2008, to |  |  |  |  |  |
| 10.40 | Lease between registrant and ES East Associates, LLC | S-1 | 333-166135 | April 16, 2010 | 10.18 |  |
|  | Second Amendment, dated April 25, 2008, to |  |  |  |  |  |
| 10.41 | Lease between registrant and ES East Associates, LLC | S-1 | 333-166135 | April 16, 2010 | 10.19 |  |
|  | Third Amendment, dated July 31, 2008, to |  |  |  |  |  |
| 10.42 | Lease between registrant and ES East Associates, LLC | S-1 | 333-166135 | April 16, 2010 | 10.20 |  |
|  | Fourth Amendment, dated November 14, |  |  |  |  |  |
| 10.43 | 2009, to Lease between registrant and ES | S-1 | 333-166135 | April 16, 2010 | 10.21 |  |
|  | East Associates, LLC |  |  |  |  |  |
| 10.44 | Fifth Amendment, dated October 15, 2010, to | 10-K | 001-34885 | March 14, 2011 | 10.17 |  |
|  | Lease between registrant and ES East, LLC | 10-K | 001-34885 | March 14, 2011 | 10.17 |  |
| 10.45 | Lease dated April 25, 2008 between registrant and EmeryStation Triangle, LLC | S-1 | 333-166135 | April 16, 2010 | 10.22 |  |
|  | Letter, dated April 25, 2008, amending Lease |  |  |  |  |  |
| 10.46 | between registrant and EmeryStation | S-1 | 333-166135 | April 16, 2010 | 10.23 |  |
|  | Triangle, LLC |  |  |  |  |  |
|  | Second Amendment, dated February 5, 2010, |  |  |  |  |  |
| 10.47 | to Lease between registrant and | S-1 | 333-166135 | April 16, 2010 | 10.24 |  |
|  | EmeryStation Triangle, LLC |  |  |  |  |  |
|  | Pilot Plant Expansion Right Letter dated |  |  |  |  |  |
| 10.48 | December 22, 2008 between registrant and | S-1 | 333-166135 | April 16, 2010 | 10.25 |  |
|  | EmeryStation Triangle, LLC |  |  |  |  |  |
|  | Lease Agreement, dated August 10, 2011, |  |  |  |  |  |
|  | between Amyris Brasil Ltda. and Techno | 10-K | 001-34885 | February 28, | 10.32 |  |
| 10.49 | Park Empreendimentos e Administração Imobiliária Ltda. |  | 001-34885 | 2012 |  |  |
|  | Private Instrument of Non-Residential Real |  |  |  |  |  |
| 10.50 | Estate Lease Agreement, dated March 31, 2008, as amended, between Lucio | S-1 | 333-166135 | April 16, 2010 | 10.26 |  |
|  | Tomasiello and Amyris Brasil S.A. |  |  |  |  |  |
|  | Third Amendment to the Private Instrument |  |  |  |  |  |
| $10.51{ }^{\text {de }}$ | of Non Residential Real Estate Lease |  |  |  |  | X |
|  | Agreement, dated October 1, 2012, between |  |  |  |  |  |
|  | Lucio Tomasiello and Amyris Brasil Ltda. |  |  |  |  |  |
| $10.52^{\text {f }}$ | Offer Letter dated September 27, 2006 between registrant and John Melo | S-1 | 333-16135 | April 16, 2010 | 10.27 |  |
| $10.53{ }^{\text {f }}$ | Amendment, dated December 18, 2008, between registrant and John Melo | S-1 | 333-16135 | April 16, 2010 | 10.28 |  |
| $10.54{ }^{\text {f }}$ |  | 10-Q | 001-34885 | May 9, 2012 | 10.05 |  |

Offer letter, dated March 23, 2012, between registrant and Steven R. Mills

| $10.55{ }^{\text {f }}$ | Offer letter, dated January 17, 2008, between registrant and Jeryl Hilleman | S-1 | 333-16135 | April 16, 2010 | 10.31 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $10.56{ }^{\text {f }}$ | Amendment, dated December 18, 2008, between registrant and Jeryl Hilleman | S-1 | 333-16135 | April 16, 2010 | 10.32 |
| $10.57^{\text {f }}$ | Letter Agreement dated August 2, 2011 between Amyris, Inc. and Jeryl Hilleman | 10-Q | 001-34885 | November 9, $2011$ | 10.01 |
| $10.58{ }^{\text {f }}$ | Letter agreement extending exercise period for outstanding stock options, dated May 31, 2012, between registrant and Jeryl Hilleman | 10-Q | 001-34885 | August 8, 2012 | 10.14 |
| $10.59^{\text {f }}$ | Offer letter, dated November 9, 2009, between registrant and Peter Boynton | 10-Q | 001-34885 | August 11, 2011 | 10.05 |
| $10.60{ }^{\text {f }}$ | Offer letter, dated February 11, 2011, between registrant and Paulo Diniz | 10-Q | 001-34885 | August 8, 2012 | 10.10 |
| $10.61{ }^{\text {f }}$ | Letter Confirming Amended and Restated Terms of Employment, dated April 18, 2011, between Amyris, Inc. and Mario Portela | 10-Q | 001-34885 | August 11, 2011 | 10.06 |
| $10.62^{\text {f }}$ | Separation agreement, dated May 2, 2012, between registrant and Mario Portela | 10-Q | 001-34885 | August 8, 2012 | 10.13 |

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| Exhibit |  | Previ | ly Filed |  |  | Filed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Description | Form | File No. | Filing Date | Exhibit | Herewith |
| $10.63{ }^{\text {f }}$ | Separation agreement, dated June 18, 2012, between registrant and Neil Renninger | 10-Q | 001-34885 | August 8, 2012 | 10.15 |  |
| $10.64{ }^{\text {f }}$ | Offer letter, dated December 21, 2010, between registrant and James Richardson | 10-Q | 001-34885 | August 8, 2012 | 10.09 |  |
| $10.65{ }^{\text {f }}$ | Separation agreement, dated April 5, 2012, between registrant and James Richardson | 10-Q | 001-34885 | August 8, 2012 | 10.11 |  |
| $10.66{ }^{\text {f }}$ | Offer Letter, dated January 24, 2005, between registrant and Tamara Tompkins | S-1 | 333-16135 | April 16, 2010 | 10.35 |  |
| $10.67{ }^{\text {f }}$ | Amendment, dated January 15, 2009, between registrant and Tamara Tompkins | S-1 | 333-16135 | April 16, 2010 | 10.36 |  |
| $10.68{ }^{\text {f }}$ | Separation agreement, dated May 1, 2012, between registrant and Tamara Tompkins | 10-Q | 001-34885 | August 8, 2012 | 10.12 |  |
| $10.69^{\text {f }}$ | 2005 Stock Option/Stock Issuance Plan | 10-Q | 001-34885 | November 9, 2011 | 10.02 |  |
| $10.70^{\text {f }}$ | Form of Notice of Grant of Stock Option under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.38 |  |
| $10.71{ }^{\text {f }}$ | Form of Notice of Grant of Stock Option (non-Exempt) under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.39 |  |
| $10.72^{\text {f }}$ | Form of Notice of Grant of Stock Option (non-US) under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.40 |  |
| $10.73{ }^{\text {f }}$ | Form of Stock Option Agreement under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.41 |  |
| $10.74{ }^{\text {f }}$ | Form of Stock Option Agreement (non-US) under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.42 |  |
| $10.75{ }^{\text {f }}$ | Form of Stock Purchase Agreement under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.43 |  |
| $10.76{ }^{\text {f }}$ | Form of Stock Purchase Agreement (non-US) under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.44 |  |
| $10.77{ }^{\text {f }}$ | 2010 Equity Incentive Plan and forms of award agreements thereunder | S-1 | 333-16135 | June 23, 2010 | 10.46 |  |
| $10.78{ }^{\text {f }}$ | 2010 Employee Stock Purchase Plan and forms of award agreements thereunder | S-1 | 333-16135 | $\begin{aligned} & \text { September 20, } \\ & 2010 \end{aligned}$ | 10.45 |  |
| 10.79 fg | Compensation arrangements between registrant and its non-employee directors |  |  |  |  | g |
| $10.80{ }^{\text {fh }}$ | Compensation arrangements between registrant and its executive officers |  |  |  |  | h |
| 21.01 | List of subsidiaries |  |  |  |  | X |
| 23.01 | Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm |  |  |  |  | X |


| 24.01 | Power of Attorney (see signature page to this Form 10-K) | X |
| :---: | :---: | :---: |
|  | Certification of Chief Executive Officer pursuant to Securities Exchange Act Rules |  |
| 31.01 | 13a-14(c) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 | X |
|  | Certification of Chief Financial Officer pursuant to Securities Exchange Act Rules |  |
| 31.02 | 13a-14(c) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 | X |
| $32.01^{\text {i }}$ | Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 | X |
| $32.02{ }^{\text {i }}$ | Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 | X |

Exhibit
No. Description
The following materials from registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2012, formatted in XBRL (Extensible Business Reporting Language): (i) the Consolidated Statements of Operations; (ii) the Consolidated Balance Sheets; (iii) the Consolidated Statements of

101 Comprehensive Income; (iv) the
Consolidated Statements of Convertible
Preferred Stock, Redeemable Noncontrolling Interest and Equity (Deficit); (v) the Consolidated Statements of Cash Flows; and
(vi) Notes to Consolidated Financial

Statements.

Previously Filed
Form File No. Filing Date Exhibit Herewith

Filed

Substantially identical Common Stock Purchase Agreements, each dated May 18, 2012, were entered into with five separate investors. Registrant has filed the form of such Common Stock Purchase Agreements, which is substantially identical in all material respects to all of such Common Stock Purchase Agreements, except as to the parties thereto and the number of shares.
Registrant issued substantially identical $1.5 \%$ Senior Unsecured Convertible Notes (the "Notes") to Total Gas \& Power USA, SAS on separate dates. Registrant has filed the first of the Notes (number R-1), and has included,
b with such exhibit, a schedule (updated Schedule A to Exhibit 4.02) identifying each of the Notes and setting forth the material details in which the other Note(s) differ from the filed Note (i.e., the dates of issuance and the amounts of the Notes). Commission, have been omitted.
d Portions of this exhibit have been omitted pending a determination by the Securities and Exchange Commission as to whether these portions should be granted confidential treatment.
Translation to English from Portuguese in accordance with Rule 12b-12(d) of the regulations promulgated by
e the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended (the "Exchange Act").
f Indicates management contract or compensatory plan or arrangement. Description contained under the heading "Director Compensation" in registrant's definitive proxy materials filed with the Securities and Exchange Commission on April 12, 2012 is incorporated herein by reference.
h Descriptions contained under the heading "Executive Compensation" in registrant's definitive proxy materials filed with the Securities and Exchange Commission on April 12, 2012.
This certification shall not be deemed "filed" for purposes of Section 18 of the Exchange Act or otherwise subject
i to the liability of that Section, nor shall it be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act.
j Pursuant to applicable securities laws and regulations, registrant is deemed to have complied with the reporting obligation relating to the submission of interactive data files in such exhibits and is not subject to liability under any anti-fraud provisions of the federal securities laws as long as registrant has made a good faith attempt to comply with the submission requirements and promptly amends the interactive data files after becoming aware that the interactive data files fails to comply with the submission requirements. These interactive data files are deemed not filed or part of a registration statement or prospectus for purposes of sections 11 or 12 of the

Securities Act, are deemed not filed for purposes of section 18 of the Exchange Act and otherwise are not subject to liability under these sections.
(c) Financial statements and schedules.

Reference is made to Item 15(a) above.
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## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: March 28, 2013

Amyris, Inc.<br>/s/ JOHN G. MELO<br>John G. Melo<br>President and Chief Executive Officer

## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints John Melo and Steven Mills as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.
Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

| Signature | Title | Date |
| :---: | :---: | :---: |
| /s/ JOHN MELO John Melo | Director, President and Chief Executive Officer (Principal Executive Officer) | March 28, 2013 |
| /s/ STEVEN MILLS Steven Mills | Chief Financial Officer <br> (Principal Accounting and Financial Officer) | March 28, 2013 |
| /s/ RALPH ALEXANDER Ralph Alexander | Director | March 28, 2013 |
| /s/ PHILIPPE BOISSEAU <br> Philippe Boisseau | Director | March 28, 2013 |
| /S/ NAM-HAI CHUA <br> Nam-Hai Chua | Director | March 28, 2013 |
| /S/ JOHN DOERR John Doerr | Director | March 28, 2013 |
| /s/ GEOFFREY DUYK Geoffrey Duyk | Director | March 28, 2013 |
| /s/ ARTHUR LEVINSON Arthur Levinson | Director | March 28, 2013 |
| /s/ PATRICK PICHETTE Patrick Pichette | Director | March 28, 2013 |
| /s/ CAROLE PIWNICA Carole Piwnica | Director | March 28, 2013 |
| /s/ FERNANDO REINACH Fernando Reinach | Director | March 28, 2013 |
| /s/ HH SHEIKH ABDULLAH BIN KHALIFA <br> AL THANI <br> HH Sheikh Abdullah bin Khalifa Al Thani | Director | March 28, 2013 |

## EXHIBIT INDEX

| Exhibi |  | Previo | ly Filed |  |  | Filed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Description | Form | File No. | Filing Date | Exhibit | Herewith |
| 3.01 | Restated Certificate of Incorporation | 10-Q | 001-34885 | $\begin{aligned} & \text { November 10, } \\ & 2010 \end{aligned}$ | 3.01 |  |
| 3.02 | Restated Bylaws | 10-Q | 001-34885 | $\begin{aligned} & \text { November 10, } \\ & 2010 \end{aligned}$ | 3.02 |  |
| 4.01 | Form of Stock Certificate <br> Amended and Restated Investors' Rights | S-1 | 333-166135 | July 6, 2010 | 4.01 |  |
| 4.02 | Agreement, dated June 21, 2010, among registrant and its security holders listed therein | S-1 | 333-166135 | June 23, 2010 | 4.02 |  |
| 4.03 | First Amendment to Amended and Restated Investors' Rights Agreement, dated February 23, 2012, among registrant and registrant's security holders listed therein | S-3 | 333-180005 | March 9, 2012 | 4.06 |  |
| 4.04 | Amendment No. 2 to Amended and Restated Investors' Rights Agreement, dated December 24, 2012, among registrant and registrant's security holders listed therein |  |  |  |  | X |
| 4.05 | Warrant to Purchase Stock, dated December 23, 2011, issued to ATEL Ventures, Inc. | 10-K | 001-34885 | $\begin{aligned} & \text { February } 28, \\ & 2012 \end{aligned}$ | 4.07 |  |
| 4.06 | Side Letter, dated June 21, 2010, between registrant and Total Gas \& Power USA, SAS Securities Purchase Agreement, dated | S-1 | 333-166135 | June 23, 2010 | 4.19 |  |
| 4.07 | February 22, 2012, among registrant and certain investors listed therein | 10-Q | 001-34885 | May 9, 2012 | 4.01 |  |
| 4.08 | Agreement, dated February 23, 2012, among registrant, Maxwell (Mauritius) Pte Ltd, Naxyris SA, Biolding Investment SA and Sualk Capital Ltd. | 10-Q | 001-34885 | May 9, 2012 | 4.02 |  |
| 4.09 | February 24, 2012, among registrant and certain investment funds affiliated with Fidelity Investments Institutional Services Company, Inc. listed therein (each a "Fidelity Purchaser") | S-3 | 333-180005 | March 9, 2012 | 4.02 |  |
|  | Form of Unsecured Senior Convertible Promissory Note issued by registrant to the |  |  |  |  |  |
| 4.10 | Fidelity Purchasers in the amounts set forth next to each Fidelity Purchaser's name on Schedule I of Exhibit 4.09 hereof | S-3 | 333-180005 | March 9, 2012 | 4.03 |  |
| 4.11 | Registration Rights Agreement, dated February 27, 2012, among registrant and the Fidelity Purchasers | S-3 | 333-180005 | March 9, 2012 | 4.04 |  |
| $4.12{ }^{\text {a }}$ | Form of Common Stock Purchase Agreement among registrant and certain investors | 10-Q | 001-34885 | August 8, 2012 | 4.01 |  |
| 4.13 |  | 10-Q | 001-34885 |  | 4.01 |  |




Desenvolvimento Econ mico e Social BNDES
Corporate Guarantee, dated November 28,

| $10.13^{\text {c }}$ | 2011, issued by registrant to Banco Nacional de Desenvolvimento Econ mico e Social BNDES | 10-K | 001-34885 | February 28, 2012 | 10.12 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $10.14{ }^{\text {e }}$ | Bank Credit Agreement, dated December 21, 2011, between Amyris Brasil Ltda. and | 10-K | 001-34885 | February 28, 2012 | 10.13 |

Banco Pine S.A.
2012
Addendum to the Banking Credit Form,
$10.15^{\circ}$ dated February 17, 2012, between Amyris $\quad$ 10-Q $\quad 001-34885$ May 9, $2012 \quad 10.02$
Brasil Ltda. and Banco Pine S.A.
Addendum to the Banking Credit Form,
$10.16^{\text {e }}$ dated May 17, 2012, between Amyris Brasil $\quad$ 10-Q $\quad 001-34885$ August 8, 201210.02
Ltda. and Banco Pine S.A.
Note of Bank Credit, dated June 21, 2012,
$10.17^{\text {e }}$ between Amyris Brasil Ltda. and Banco Pine $10-\mathrm{Q} \quad 001-34885$ August 8, 201210.03
S.A.

Global Derivatives Contract (swap
$10.18^{\text {ce }}$ agreement), dated June 15, 2012, between $\quad 10-\mathrm{Q} \quad 001-34885$ August 8, $2012 \quad 10.04$ Amyris Brasil Ltda. and Banco Pine S.A.

Exhibit
No. Description
Note of Bank Credit, dated July 13, 2012,
$10.19^{c e}$ between Amyris Brasil Ltda. and Nossa Caixa Desenvolvimento
Note of Bank Credit, dated July 13, 2012,
$10.20^{\text {ce }}$ between Amyris Brasil Ltda. and Banco Pine S.A.

Fiduciary Conveyance of Movable Goods
$10.21^{\mathrm{e}}$ Agreement, dated July 13, 2012, among
Amyris Brasil Ltda., Nossa Caixa
Desenvolvimento and Banco Pine S.A.
Corporate Guarantee, dated July 13, 2012,
10.22 issued by registrant to Nossa Caixa Desenvolvimento
10.23 Corporate Guarantee, dated July 13, 2012, issued by registrant to Banco Pine S.A. Revolving Credit Facility letter agreement,
$10.24^{c}$ dated December 23, 2010, between registrant and Bank of the West
Letter agreement, dated May 3, 2012,
10.25 amending Revolving Credit Facility dated

December 23, 2010, between registrant and Bank of the West
Letter agreement, dated June 20, 2012,
10.26 terminating Revolving Credit Facility dated

December 23, 2010, as amended, between registrant and Bank of the West
Joint Venture Agreement dated April 14,
$10.27^{c} 2010$ among registrant, Amyris Brasil S.A and Usina São Martinho S.A.
Shareholders' Agreement dated April 14,
$10.28^{c} 2010$ among registrant, Amyris Brasil S.A. and Usina São Martinho S.A.
Technology License, Development, Research
10.29c and Collaboration Agreement, dated June 21,

2010, between registrant and Total Gas \& Power USA Biotech, Inc.
Letter agreement, dated January 11, 2011,
10.30 between registrant and Total Gas \& Power USA Biotech, Inc.
First Amendment to Technology License, Development, Research and Collaboration
$10.31^{\text {c }}$ Agreement, dated November 23, 2011, between Amyris and Total Gas \& Power USA SAS
Master Framework Agreement, dated July
$10.32^{\text {c }} 30,2012$, between registrant and Total Gas \& Power USA, SAS

Previously Filed
Form File No.

10-Q 001-34885

10-Q 001-34885

10-Q 001-34885

10-Q 001-34885

10-Q 001-34885

10-K/A 001-34885

10-Q 001-34885
August 8, 2012
10.06

10-Q 001-34885 August 8, $2012 \quad 10.07$

S-1 333-166135 August 31, 201010.14

S-1 333-166135 May 25, $2010 \quad 10.17$

S-1 333-16135
September 20, 2010

10-Q 001-34885 May 11, $2011 \quad 10.01$


10-K/A 001-34885
May 2, 2012
10.19
Second Amendment to the Technology License, Development, Research and
$\begin{array}{lllllll}10.33^{c} & \text { Collaboration Agreement, dated July 30, } & \text { 10-Q } & 001-34885 & \begin{array}{l}\text { November 9, } \\ 2012\end{array} & 10.07\end{array}$ 2012, between registrant and Total Gas \& Power USA, SAS
Joint Venture Implementation Agreement dated June 3, 2011 among Amyris, Inc.,
$10.34^{c}$ Amyris Brasil S.A., Cosan Combustíveis e $\quad 10-\mathrm{Q} \quad 001-34885$ August 11, 201110.01
Lubrificantes S.A. and Cosan S.A. Indústria e Comércio
Shareholders' Agreement, dated June 3,
10.35c 2011, among Amyris Brasil S.A., Cosan Combustíveis e Lubrificantes S.A. and Novvi 10-Q 001-34885 August 11, $2011 \quad 10.02$ S.A.
Agreement for the Supply of Sugarcane Juice
$10.36^{\mathrm{ce}}$ and Other Utilities, dated March 18, 2011, between Amyris Brasil Ltda. and Paraíso Bioenergia S.A.
Lease Agreement, dated March 18, 2011,
$10.37^{\text {de }}$ between Amyris Brasil Ltda. and Paraíso
Bioenergia S.A.

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| Exhibit |  | Previously Filed |  |  |  | Filed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Description | Form | File No. | Filing Date | Exhibit | Herewith |
|  | Addendum to Lease Agreement, dated April |  |  |  |  |  |
| $10.38{ }^{\text {de }}$ | 28, 2011, between Amyris Brasil Ltda. and |  |  |  |  | X |
|  | Paraíso Bioenergia S.A. |  |  |  |  |  |
| 10.39 | Lease, dated August 22, 2007, between registrant and ES East Associates, LLC | S-1 | 333-166135 | April 16, 2010 | 10.17 |  |
|  | First Amendment, dated March 10, 2008, to |  |  |  |  |  |
| 10.40 | Lease between registrant and ES East Associates, LLC | S-1 | 333-166135 | April 16, 2010 | 10.18 |  |
|  | Second Amendment, dated April 25, 2008, to |  |  |  |  |  |
| 10.41 | Lease between registrant and ES East Associates, LLC | S-1 | 333-166135 | April 16, 2010 | 10.19 |  |
|  | Third Amendment, dated July 31, 2008, to |  |  |  |  |  |
| 10.42 | Lease between registrant and ES East Associates, LLC | S-1 | 333-166135 | April 16, 2010 | 10.20 |  |
|  | Fourth Amendment, dated November 14, |  |  |  |  |  |
| 10.43 | 2009, to Lease between registrant and ES | S-1 | 333-166135 | April 16, 2010 | 10.21 |  |
|  | East Associates, LLC |  |  |  |  |  |
| 10.44 | Fifth Amendment, dated October 15, 2010, to | 10-K | 001-34885 | March 14, 2011 | 10.17 |  |
|  | Lease between registrant and ES East, LLC | 10-K | 001-34885 | March 14, 2011 | 10.17 |  |
| 10.45 | Lease dated April 25, 2008 between registrant and EmeryStation Triangle, LLC | S-1 | 333-166135 | April 16, 2010 | 10.22 |  |
|  | Letter, dated April 25, 2008, amending Lease |  |  |  |  |  |
| 10.46 | between registrant and EmeryStation | S-1 | 333-166135 | April 16, 2010 | 10.23 |  |
|  | Triangle, LLC |  |  |  |  |  |
|  | Second Amendment, dated February 5, 2010, |  |  |  |  |  |
| 10.47 | to Lease between registrant and | S-1 | 333-166135 | April 16, 2010 | 10.24 |  |
|  | EmeryStation Triangle, LLC |  |  |  |  |  |
|  | Pilot Plant Expansion Right Letter dated |  |  |  |  |  |
| 10.48 | December 22, 2008 between registrant and | S-1 | 333-166135 | April 16, 2010 | 10.25 |  |
|  | EmeryStation Triangle, LLC |  |  |  |  |  |
|  | Lease Agreement, dated August 10, 2011, |  |  |  |  |  |
|  | between Amyris Brasil Ltda. and Techno | 10-K | 001-34885 | February 28, | 10.32 |  |
| 10.49 | Park Empreendimentos e Administração Imobiliária Ltda. |  | 001-34885 | 2012 |  |  |
|  | Private Instrument of Non-Residential Real |  |  |  |  |  |
| 10.50 | Estate Lease Agreement, dated March 31, 2008, as amended, between Lucio | S-1 | 333-166135 | April 16, 2010 | 10.26 |  |
|  | Tomasiello and Amyris Brasil S.A. |  |  |  |  |  |
|  | Third Amendment to the Private Instrument |  |  |  |  |  |
| $10.51{ }^{\text {de }}$ | of Non Residential Real Estate Lease |  |  |  |  | X |
|  | Agreement, dated October 1, 2012, between |  |  |  |  |  |
|  | Lucio Tomasiello and Amyris Brasil Ltda. |  |  |  |  |  |
| $10.52^{\text {f }}$ | Offer Letter dated September 27, 2006 between registrant and John Melo | S-1 | 333-16135 | April 16, 2010 | 10.27 |  |
| $10.53{ }^{\text {f }}$ | Amendment, dated December 18, 2008, between registrant and John Melo | S-1 | 333-16135 | April 16, 2010 | 10.28 |  |
| $10.54{ }^{\text {f }}$ |  | 10-Q | 001-34885 | May 9, 2012 | 10.05 |  |

Offer letter, dated March 23, 2012, between registrant and Steven R. Mills

| $10.55^{\text {f }}$ | Offer letter, dated January 17, 2008, between <br> registrant and Jeryl Hilleman | S-1 | $333-16135$ | April 16, 2010 | 10.31 |
| :---: | :--- | :--- | :--- | :--- | :--- |
| $10.56^{\text {f }}$ | Amendment, dated December 18, 2008, <br> between registrant and Jeryl Hilleman | S-1 | $333-16135$ | April 16, 2010 | 10.32 |
| $10.57^{\text {f }}$Letter Agreement dated August 2, 2011 <br> between Amyris, Inc. and Jeryl Hilleman <br> Letter agreement extending exercise period | 10-Q | $001-34885$ | November 9, <br> 2011 | 10.01 |  |
| $10.58^{\text {f }}$for outstanding stock options, dated May 31, <br> 2012, between registrant and Jeryl Hilleman | 10-Q | $001-34885$ | August 8, 2012 | 10.14 |  |
| $10.59^{\text {f }}$Offer letter, dated November 9, 2009, <br> between registrant and Peter Boynton | 10-Q | $001-34885$ | August 11, 2011 | 10.05 |  |
| $10.60^{\text {f }}$Offer letter, dated February 11, 2011, <br> between registrant and Paulo Diniz <br> Letter Confirming Amended and Restated | 10-Q | $001-34885$ | August 8, 2012 | 10.10 |  |
| $10.61^{\text {f }}$Terms of Employment, dated April 18, 2011, <br> between Amyris, Inc. and Mario Portela | 10-Q | $001-34885$ | August 11, 2011 | 10.06 |  |
| $10.62^{\text {f }}$Separation agreement, dated May 2, 2012, <br> between registrant and Mario Portela | 10-Q | $001-34885$ | August 8, 2012 | 10.13 |  |


| Exhibit |  | Previ | ly Filed |  |  | Filed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. | Description | Form | File No. | Filing Date | Exhibit | Herewith |
| $10.63{ }^{\text {f }}$ | Separation agreement, dated June 18, 2012, between registrant and Neil Renninger | 10-Q | 001-34885 | August 8, 2012 | 10.15 |  |
| $10.64{ }^{\text {f }}$ | Offer letter, dated December 21, 2010, between registrant and James Richardson | 10-Q | 001-34885 | August 8, 2012 | 10.09 |  |
| $10.65{ }^{\text {f }}$ | Separation agreement, dated April 5, 2012, between registrant and James Richardson | 10-Q | 001-34885 | August 8, 2012 | 10.11 |  |
| $10.66{ }^{\text {f }}$ | Offer Letter, dated January 24, 2005, between registrant and Tamara Tompkins | S-1 | 333-16135 | April 16, 2010 | 10.35 |  |
| $10.67{ }^{\text {f }}$ | Amendment, dated January 15, 2009, between registrant and Tamara Tompkins | S-1 | 333-16135 | April 16, 2010 | 10.36 |  |
| $10.68{ }^{\text {f }}$ | Separation agreement, dated May 1, 2012, between registrant and Tamara Tompkins | 10-Q | 001-34885 | August 8, 2012 | 10.12 |  |
| $10.69^{\text {f }}$ | 2005 Stock Option/Stock Issuance Plan | 10-Q | 001-34885 | November 9, 2011 | 10.02 |  |
| $10.70^{\text {f }}$ | Form of Notice of Grant of Stock Option under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.38 |  |
| $10.71{ }^{\text {f }}$ | Form of Notice of Grant of Stock Option (non-Exempt) under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.39 |  |
| $10.72^{\text {f }}$ | Form of Notice of Grant of Stock Option (non-US) under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.40 |  |
| $10.73{ }^{\text {f }}$ | Form of Stock Option Agreement under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.41 |  |
| $10.74{ }^{\text {f }}$ | Form of Stock Option Agreement (non-US) under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.42 |  |
| $10.75{ }^{\text {f }}$ | Form of Stock Purchase Agreement under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.43 |  |
| $10.76{ }^{\text {f }}$ | Form of Stock Purchase Agreement (non-US) under registrant's 2005 Stock Option/Stock Issuance Plan | S-1 | 333-16135 | April 16, 2010 | 10.44 |  |
| $10.77{ }^{\text {f }}$ | 2010 Equity Incentive Plan and forms of award agreements thereunder | S-1 | 333-16135 | June 23, 2010 | 10.46 |  |
| $10.78{ }^{\text {f }}$ | 2010 Employee Stock Purchase Plan and forms of award agreements thereunder | S-1 | 333-16135 | $\begin{aligned} & \text { September 20, } \\ & 2010 \end{aligned}$ | 10.45 |  |
| 10.79 fg | Compensation arrangements between registrant and its non-employee directors |  |  |  |  | g |
| $10.80{ }^{\text {fh }}$ | Compensation arrangements between registrant and its executive officers |  |  |  |  | h |
| 21.01 | List of subsidiaries |  |  |  |  | X |
| 23.01 | Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm |  |  |  |  | X |


| 24.01 | Power of Attorney (see signature page to this Form 10-K) | X |
| :---: | :---: | :---: |
|  | Certification of Chief Executive Officer pursuant to Securities Exchange Act Rules |  |
| 31.01 | 13a-14(c) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 | X |
| 31.02 | Certification of Chief Financial Officer pursuant to Securities Exchange Act Rules 13a-14(c) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 | X |
| $32.01^{\text {i }}$ | Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 | X |
| $32.02^{\text {i }}$ | Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 | X |




[^0]:    2. Summary of Significant Accounting Policies

    Basis of Presentation

[^1]:    * No outstanding balance
    ** Less than $10 \%$

[^2]:    * Not a customer

