

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2008; or

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

Commission File Number 001-33133

METABOLIX, INC.

(Exact name of registrant as specified in its charter)

Delaware **04-3158289**
(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification No.)

21 Erie Street **02139**
Cambridge, MA
(Address of principal executive offices) (Zip Code)

(Registrant's telephone number, including area code): **(617) 583-1700**

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

<u>Common Stock, par value \$.01 per share</u>	<u>The NASDAQ Stock Market LLC</u>
Title of each class	Name of exchange on which registered

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

None

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (Section 229.405 of this chapter) 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.

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

Large accelerated filer <input type="checkbox"/>	Accelerated filer <input checked="" type="checkbox"/>	Non-accelerated filer <input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company <input type="checkbox"/>
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Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of Act). Yes No

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold on the NASDAQ Global Market on March 6, 2009 was \$83.7 million.

The number of shares outstanding of the registrant's common stock as of March 6, 2009 was 22,975,349.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive Proxy Statement to be filed with the Securities and Exchange Commission (the "Commission") pursuant to Regulation 14A in connection with the 2009 Annual Meeting of Stockholders to be held on May 28, 2009 are incorporated herein by reference into Part III of this report.

METABOLIX, INC.

ANNUAL REPORT ON FORM 10-K

For the Year Ended December 31, 2008

INDEX

	<u>Page</u>	
<u>PART I.</u>		
Item 1	Business	1
Item 1A	Risk Factors	22
Item 1B	Unresolved Staff Comments	36
Item 2	Properties	36
Item 3	Legal Proceedings	37
Item 4	Submission of Matters to a Vote of Security Holders	37
<u>PART II.</u>		
Item 5	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	38
Item 6	Selected Financial Data	39
Item 7	Management's Discussion and Analysis of Financial Condition and Results of Operations	40
Item 7A	Quantitative and Qualitative Disclosures About Market Risk	52
Item 8	Financial Statements and Supplementary Data	53
Item 9	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	53
Item 9A	Controls and Procedures	53
Item 9B	Other Information	54
<u>PART III.</u>		
Item 10	Directors, Executive Officers and Corporate Governance	55
Item 11	Executive Compensation	55
Item 12	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	55
Item 13	Certain Relationships and Related Transactions, and Director Independence	55
Item 14	Principal Accountant Fees and Services	55
<u>PART IV.</u>		
Item 15	Exhibits and Financial Statement Schedules	55
	<u>SIGNATURES</u>	<u>58</u>
EX-10.10.1	First Amendment to Employment Agreement between the Registrant and Richard P. Eno executed December 18, 2008	
EX-10.11.1	First Amendment to Employment Agreement between the Registrant and Oliver P. Peoples executed December 19, 2008	
EX-10.11.2	Second Amendment to Employment Agreement between the Registrant and Oliver P. Peoples executed February 25, 2009	
EX-10.12.1	First Amendment to Employment Agreement between the Registrant and Joseph D. Hill executed December 23, 2008	

EX-10.13	Change of Control Severance Agreement between the Registrant and Sarah P. Cecil executed December 18, 2008	
EX-10.14	Employment Agreement between the Registrant and Robert E. Engle executed December 19, 2008	
EX-23.1	CONSENT OF PRICEWATERHOUSECOOPERS LLP	
EX-31.1	SECTION 302 CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER	
EX-31.2	SECTION 302 CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER	
EX-32.1	SECTION 906 CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER	

Forward Looking Statements

This annual report on Form 10-K contains "forward-looking statements" within the meaning of 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. In particular, statements contained in the Form 10-K, including but not limited to, statements regarding our future results of operations and financial position, business strategy and plan prospects, projected revenue or costs and objectives of management for future research, development or operations, are forward-looking statements. These statements relate to our future plans, objectives, expectations and intentions and may be identified by words such as "may," "will," "should," "expects," "plans," "anticipate," "intends," "target," "projects," "contemplates," "believe," "estimates," "predicts," "potential," and "continue," or similar words.

Although we believe that our expectations are based on reasonable assumptions within the limits of our knowledge of our business and operations, the forward-looking statements contained in this document are neither promises nor guarantees. Our business is subject to significant risk and uncertainties and there can be no assurance that our actual results will not differ materially from our expectations. These forward looking statements include, but are not limited to, statements concerning: future financial performance and position, management's strategy, plans and objectives for future operations, plans and objectives for product development and commercialization, plans and objectives for present and future research and development and results of such research and development, plans and objectives for manufacturing, the commercialization of environmentally sustainable, economically attractive alternatives to petroleum-based plastics, chemicals and energy, the commercialization of Mirel™ biobased plastic ("Mirel") through our alliance with Archer Daniels Midland Company ("ADM"), sales of Mirel as an alternative to petroleum-based plastics, the construction of the Commercial Manufacturing Facility, the production of Mirel at the Commercial Manufacturing Facility, the commercial success of Mirel, the feasibility of extracting Mirel from plant crops, the commercial viability of plant-produced plastics, recognition of revenue, and management's plans and expectations for revenue, expenses and capital and working capital requirements. Such forward-looking statements are subject to a number of risks and uncertainties that could cause actual results to differ materially from those anticipated including, without limitation, the following risks: (1) we may not be successful at manufacturing Mirel on a commercial scale in a timely and economical manner, (2) we may not be successful in the development of commercial formulations of Mirel, (3) we may not be successful in the development of plant crops for production of plastics, (4) if ADM does not build the Commercial Manufacturing Facility on time and on budget, our revenues and the distribution of profits, if any, to us will be delayed, (5) we may not be able to develop manufacturing capacity sufficient to meet demand in an economical manner or at all, (6) we may not achieve market acceptance of our products, (7) we have limited marketing and sales experience and capabilities, (8) we rely heavily on ADM and will rely heavily on future collaborative partners, (9) our success will be influenced by the price of petroleum relative to corn sugar (10) our future profitability is uncertain, and we have a limited operating history on which you can base your evaluation of our business, (11) we may need to secure additional funding and may be unable to raise additional capital on favorable terms or at all, (12) we may lose key personnel or are unable to attract and retain necessary talent, we may be unable to develop or commercialize our products, (13) we may not be able to obtain rights to intellectual property developed by others using our information and technology, (14) intellectual property protection for our products is important and uncertain, (15) a substantial portion of the technology used in our business is owned by or subject to retained rights of third parties, (16) third parties may claim we infringe their intellectual property, (17) we may be unable to manage our growth effectively, (18) we may not be successful in identifying market needs for new technologies and developing new products to meet those needs, (19) our products may be, or may be perceived as being, harmful to human health or the environment, (20) we face and will face substantial competition in several different markets, (21) we are subject to significant foreign and domestic government regulations, including environmental and health and safety regulations, and compliance or failure to comply with these regulations could harm our business,

(22) we may not have adequate insurance and may have substantial exposure to payment of product liability claims, (23) potential future acquisitions could be difficult to integrate, divert the attention of key personnel, disrupt our business, dilute stockholder value and impair our financial results, and (24) each segment of our operations is currently conducted at a single location which makes us susceptible to disruptions.

The forward-looking statements and risks factors presented in this document are made only as of the date hereof and we do not intend to update any of these risk factors or to publicly announce the results of any revisions to any of our forward-looking statements other than as required under the federal securities laws.

PART I

ITEM 1. BUSINESS

Overview

We are a bioscience company that develops and is in the process of commercializing environmentally sustainable, economically attractive alternatives to petroleum-based plastics, with work underway to do the same with chemicals and energy. Our corporate strategy is to develop technology platforms that integrate advanced biotechnology with current industrial practice and to commercialize these platforms with industry leading strategic partners.

Our first platform, which we are commercializing through Telles, a joint venture with Archer Daniels Midland Company, or ADM, is a proprietary, large-scale microbial fermentation system for producing a versatile family of polymers known as polyhydroxyalkanoates, which we have branded under the name Mirel™. Through Telles, we intend to sell these bioplastics as environmentally friendly, but functionally equivalent, alternatives to petroleum-based plastics. In addition, this family of polymers offers superior biodegradability characteristics and can be used in a wide range of commercial applications, including products used in agriculture and horticulture, compost and organic waste diversion bags, marine and aquatic applications, consumer products, business equipment and durable goods, and general packaging materials. Mirel will be produced in a commercial scale plant designed for a 110 million pound annual capacity, or the Commercial Manufacturing Facility, which is presently under construction by ADM in Clinton, Iowa. The plant is expected to begin production in the second half of 2009. The Commercial Manufacturing Facility will produce biobased, sustainable and biodegradable Mirel plastic out of corn sugar, an abundant agriculturally-produced renewable resource. We are currently producing pre-commercial quantities of Mirel jointly with ADM at a small scale pre-commercial manufacturing facility.

Our second technology platform, which is in an early stage, is a biomass biorefinery system using plant crops to co-produce both bioplastics and bioenergy. For this system, we intend to extract polymer from the engineered plant crop, so that the remaining plant material can be used as a biomass feedstock for the production of bioenergy products including electricity and biofuel. We are engineering switchgrass to produce bioplastics in the leaf and stem of the plant. We have also collaborated with the Australian Cooperative Research Centre to do the same in sugarcane, and in 2008 we established a strategic research collaboration with the Donald Danforth Plant Science Center to develop an advanced industrial oilseed crop for co-production of bioplastics along with vegetable oil, biodiesel fuel, or oleochemicals. Switchgrass is a commercially and ecologically attractive, non-food energy crop that is indigenous to North America and is generally considered to be a leading candidate for cellulose-derived production of ethanol and other biofuels. Sugarcane is an established energy crop that is well suited for tropical regions of the world. We believe that using these crops to co-produce bioplastics with bioenergy products can offer superior economic value and productivity as compared to single product systems that produce them individually. We have been working on our biomass biorefinery platform using switchgrass for several years, and we believe that we are a scientific leader in this field. Our goal for this program is to have commercially viable plant varieties in pre-commercial field trials in two to three years. We may also seek to establish alliances with partners to commercially exploit this platform.

As demonstrated by our first two technology platforms, we take an integrated systems approach to our technology development. We are focused on developing entire production systems from gene to end product as opposed to developing specific technologies (for example, gene sequencing, shuffling or directed evolution) or singular aspects of a product's production (for example, providing a key enzyme, catalyst or ingredient). We believe this systems approach optimizes manufacturing productivity and, when commercialized, will enable us to capture more economic value from any platform that we pursue. We have core capabilities in microbial genetics, fermentation process engineering, chemical engineering, polymer science, plant genetics and botanical science, and we have assembled these

capabilities in a way that has allowed us to integrate biotechnology with chemical engineering and industrial practice. We believe that our approach can be applied to chemicals and other products to help establish and grow environmentally sustainable plastics, chemicals and energy industries.

For our third platform we intend to apply our core capabilities in microbial engineering and plant transformation to develop biological routes to other chemicals and chemical intermediates. In September 2007 the U.S. Department of Commerce's National Institute of Standards and Technology approved a \$2 million award for us to develop a commercially viable process for producing biobased chemicals from renewable agricultural products. This award will contribute to our integrated bio-engineered chemicals program, which is developing sustainable solutions for widely used industrial chemicals. Specifically, this award is being utilized in the development of the four-carbon ("C4") family of chemical products.

To exploit our first technology platform, we are working with ADM to build the Commercial Manufacturing Facility in Clinton, Iowa. The biodegradable bioplastics that this facility will produce are highly versatile and range in properties from hard and strong to soft and flexible. These properties allow for a wide variety of commercial applications, offering an environmentally-friendly alternative to petroleum-derived synthetic materials which are not biodegradable. Through Telles we intend to position Mirel as a premium priced specialty material catering to customers who want to match the functionality of petroleum-based plastic, but add the dimension of environmental responsibility to their products and brands.

With ADM we have initiated product and business development activities including production of pre-commercial amounts of Mirel, working with potential customers, initiation of qualification trials of our material for selected customer applications and establishment of commercial supply agreements with several customers. We expect that our products will initially be sold to companies that are:

- establishing themselves as leaders of the emerging market trend toward environmentally responsible products and services;
- addressing current or anticipated regulatory pressure to shift to more sustainable industry; and/or
- selling products where biodegradability is a key functional requirement.

We have a current pipeline of prospective customers that reflect each of these traits.

Market Opportunity

The Plastics Market

The plastics market is a large and global marketplace consisting of a broad range of polymer resins. The market includes several widely used, high volume commodity resins and numerous lower volume, higher performance resins targeting specialized end uses. Over the past forty years the plastics market has posted relatively consistent growth driven by a number of important fundamental factors including:

- replacement of traditional materials (glass, steel, aluminum, paper) with lower weight, higher performance plastics;
- increased health and safety requirements necessitating improved consumer packaging;
- consumer demand for enhanced appearance and aesthetics which can be achieved with plastic materials; and
- demand for more durable and functional materials in consumer products.

The growth in plastic use has generally exceeded overall economic growth as plastics have entered numerous new markets and product applications based on their functionality and ability to meet numerous user requirements.

There are many different categories of plastics sold in the market today, but they are generally categorized into two broad groups: commodity polymers and engineering specialty polymers. The most commonly known commodity polymers include polyethylene, polypropylene, polystyrene, PET and polyvinyl chloride. The commodity polymers are high volume resins which tend to be lower value-added materials produced in volumes of tens of billions of pounds per year. Engineering specialty polymer pricing varies widely based on the type of resin and the performance characteristics offered by the material. However, these resins are typically priced at a premium compared to commodity plastics and, according to *Plastics News*, engineering thermoplastics at annual volumes of 300,000-500,000 pounds were selling at values starting at \$0.80 per pound and reaching, in some cases, \$4.25 per pound in February 2009. At smaller volumes, prices can be higher. In contrast, the commodity grade resins were generally priced at less than \$1.00 per pound at that time. Pricing has been volatile due to fluctuations in raw materials costs and supply/demand characteristics.

Emerging Issues Surrounding Petroleum-Based Plastics and Fuels

The markets for petroleum-based plastics, chemicals and energy are among the largest in the global economy. While these markets encompass a diverse array of products, they are all derived from fossil fuel feedstocks, particularly petroleum and natural gas. The prolonged broad use of these petroleum-based products has created several economic, social and environmental issues, including plastic waste management and pollution, limited fossil fuel availability, energy security and possibly global warming and climate change. These issues have resulted in rising levels of interest in product alternatives that are biobased, sustainable and biodegradable, unlike those produced from fossil fuels.

Plastic Waste Management and Pollution—According to the U.S. Environmental Protection Agency, 31 million tons of plastic solid waste were deposited into the U.S. municipal solid waste stream in 2007. Plastics are a rapidly growing contributor to U.S. municipal solid waste, having increased from less than 1% in 1960 to over 12.1% by weight in 2007. In spite of intensive efforts to promote collection and recycling, only 2.1 million tons of plastic or 6.8% of plastic solid waste was recycled in 2007. While the balance is mostly deposited in landfills and waste treatment facilities, many plastic items, particularly single use items such as bottles and caps, cups, lids and straws, and grocery bags, become litter in the environment where they can become a significant problem. Plastic waste can create a significant monetary burden on state and local governments. This situation has led California and local jurisdictions within California to pass legislation banning the use of non-biodegradable plastic bags or imposing significant taxes on them. San Francisco, Manhattan Beach, Malibu and Santa Monica currently have a ban on non-biodegradable plastic bags and twelve other cities are considering similar legislation. This trend is also occurring in other parts of the world, including Europe, China, Taiwan and India.

Moreover, current disposal methods may have adverse consequences to people's health, safety and the environment. Most waste is placed in landfills or burned in incinerators. The burning process may produce dioxins and other hazardous substances that are released into the environment. In addition, landfills are filling up and requiring more land sources. Though attempts to slow the growth of landfills have led to recycling legislation, it is still recognized that other solutions will need to be pursued to address the problem.

The threat that petroleum-based plastics pose to the marine ecosystem has been well documented. Studies have noted that the world's oceans show increasing levels of persistent plastic particles of a size ingestible by marine creatures at the bottom of the food chain. Larger plastic items are also

accumulating in large quantities in certain parts of the ocean, and marine birds and mammals have been found killed by ingesting or getting tangled in plastic debris.

The Limited Long-Term Availability of Fossil Fuel—Declining domestic production in the United States, higher demand in the developed world, rising demand in emerging markets, the increasing cost of drilling activities and underinvestment in infrastructure are all factors that limit the long-term availability of fossil fuel. The lack of substantial excess supply and increasing proportion of hydrocarbon reserves in politically unstable regions leaves the existing petrochemical market subject to significant risk of supply disruptions or dramatically volatile oil prices. Because fossil fuels are the primary feedstock for the plastics industry, polymer prices are affected by fossil fuel supply disruptions and price volatility. World oil prices have fluctuated greatly from an average of \$36 per barrel in 2004 to over \$145 per barrel during 2008 and then back down to \$40 per barrel in early 2009. There is a growing view that developing alternatives to fossil fuel is a matter of national security. While the United States accounts for just 5% of the world's population and 2% of the world's oil reserves, the United States consumes about 24.3% of world oil production. According to the American Plastics Council, plastic production accounts for 4% of U.S. energy consumption. The majority of the U.S. oil needs are imported, with significant supplies coming from unstable or politically risky parts of the world (the Middle East, Nigeria, Venezuela, and Russia), presenting risks to the economy and national security. Furthermore, oil is not a sustainable resource and there is growing concern that the natural peak for production may occur within the next 20 years.

Global Warming and Climate Change—There is a growing scientific consensus that global climate change is occurring and that the rise in carbon dioxide emissions over the last 100 years has contributed to this situation. A significant source of carbon dioxide emissions comes from the use of fossil fuel. The broad acceptance of the Kyoto protocol is evidence of the widespread concern for global climate change in the industrialized world. In the United States, companies have started to account for carbon emissions, track their carbon footprint and develop a life cycle assessment of their products to prepare for carbon limits and credit trading schemes, and to seek solutions for reducing their carbon emission profile.

Fuels and Bioenergy Markets

According to the U.S. Department of Energy's Report on International Energy Outlook dated September 2008, worldwide demand for oil could potentially rise from 83.6 million barrels a day in 2005 to 95.6 million barrels a day in 2015 and 112.5 million barrels in 2030. The issues surrounding petroleum previously discussed have given rise to increasing demand for fuels produced from renewable sources. Many states are considering legislation to capitalize on the environmental and energy security benefits of renewable fuels by requiring their use.

In December of 2007, President Bush signed into law H.R. 6, the "Energy Independence and Security Act," which includes an historic Renewable Fuels Standard (RFS) calling for at least 36 billion gallons of ethanol to be used nationwide by 2022. The new RFS schedule calls for national ethanol usage to increase from a minimum of 9 billion gallons of ethanol in 2008 to a total of 36 billion gallons by 2022. This long-term growth plan for ethanol is intended to spur its commercialization from cellulosic feedstocks such as native grasses, crop residues, forestry waste, and many other materials from all regions of the country. The National Commission on Energy Policy estimates that the new RFS and the increased fuel efficiency standards in the bill will reduce domestic oil use by 5 million barrels per day by 2030, saving consumers an estimated \$161 billion annually in fuel costs and reducing the nation's carbon dioxide emissions by 320 million metric tons by 2020.

While ethanol is typically produced from starch contained in grains such as corn and grain sorghum, it can also be produced from cellulose. Cellulose is the main component of plant cell walls and is the most common organic compound on earth. The production of ethanol from corn is a mature

technology that is not likely to see significant reductions in production cost. The ability to produce ethanol from low-cost biomass will be an important factor in making it competitive as a gasoline additive.

Oilseed crops are of importance for feed, food and industrial applications. The chemical conversion of vegetable oils derived from oilseed crops to a variety of oleochemicals is already well established. A very important and growing area of application is the production of biodiesel by transesterification of vegetable oils with either methanol or ethanol to produce the corresponding methyl or ethyl esters. Biodiesel is a very good fuel that reduces ground level ozone, reliance on petrochemical resources, and greenhouse gas emissions. The energy content is only slightly less than conventional diesel. With the help of federal tax incentives, the U.S. demand for bio-diesel is continuing to grow at double digit rates from a low base of 110 million gallons and is expected to increase to over 300 million gallons over the next few years according to the National Biodiesel Board.

The Metabolix Solution

We have developed a family of bioplastics which are economically attractive, environmentally responsible alternatives to petroleum-based plastics. This family of bioplastics is biobased, sustainable, biodegradable and functionally equivalent to commodity petroleum-based plastics. The use of a renewable agricultural feedstock as a manufacturing input and the biodegradability of our bioplastics can potentially address many of the issues associated with petroleum-based products. Our first product, Mirel, which is now being commercialized through Telles, our joint venture with ADM, is produced from corn sugar using our proprietary, large-scale microbial fermentation system. We are also developing a proprietary platform technology for co-producing plastics, chemicals and energy in crops such as switchgrass, sugarcane, and oilseeds. Our targeted addressable global markets are plastics for use in agricultural/horticultural applications, compost and organic waste diversion bags, marine and aquatic applications, consumer products, business equipment and durable goods, and general packaging. Together the addressable global markets for our products exceed two billion pounds per year.

A Solution to Plastic Waste and Pollution from Persistent Plastics—Mirel is biodegradable under a wide variety of conditions and therefore offers new options for addressing the burdens of traditional plastic solid waste on the municipal waste stream and the dangers posed within the marine ecosystem. For example, Mirel will decompose in landfills where air, moisture and bacteria are present. In aerobic conditions, Mirel degrades into water and carbon dioxide. Mirel will also rapidly decompose in a waste treatment facility and will degrade when flushed into household septic systems. It can be cleanly incinerated, and can also be composted in industrial or backyard composting environments. Unlike most bioplastics, Mirel will also biodegrade in aquatic environments, and so offers a solution to the hazard of persistent plastics in wetland, river, coastal, and ocean ecosystems. It is critical to note, however, that Mirel is functionally durable under typical cold, hot or wet conditions and only degrades in the environment subject to microbial action.

Decreasing Carbon Dioxide Emissions—We believe that the widespread use of our biobased plastics not only can decrease the use of fossil fuel but also can reduce the emission of carbon dioxide into the atmosphere. While the production of Mirel produces carbon dioxide, both the agricultural production of corn feedstock for microbial fermentation and the direct production of biobased plastics in plant crops such as switchgrass have the added benefit of removing carbon dioxide from the environment through photosynthesis. An independent preliminary life cycle assessment (LCA) for one of the building blocks of Mirel, conducted by Dr. Bruce Dale, professor of Chemical Engineering at Michigan State University, determined that production of this polymer using a renewable energy source may provide a reduction in greenhouse gases compared to production of conventional petroleum-based plastics.

Leveraging Agricultural Commodity Pricing Relative to Petrochemical Costs—Our use of corn sugar as a feedstock to produce Mirel and our use of other plant crops to co-produce plastics will reduce the reliance on fossil fuel as the primary input source, thus significantly addressing the effects of the fluctuating cost of fossil fuel. We believe that polymers based on agricultural feedstocks, such as Mirel, may experience a more predictable cost structure and may become competitive to traditional petroleum-based polymers over time. While Mirel will be produced using corn sugar, other sugars including cane or cellulosic sugar as well as vegetable oils can be used as feedstocks, which can enhance cost stability. The relative cost contribution of corn to Mirel is significantly less than that of the feedstocks for traditional petroleum-based polymers. Furthermore, even if pricing dynamics for corn and corn sugar change from past experience, we believe the volatility of oil prices will provide an incentive to diversify feedstocks.

Reducing Dependency on Foreign Energy—We believe the widespread use of our Mirel can help lower the United States' exposure to imported oil. In addition, we believe that the plastic-producing crops, which we intend to develop, offer the United States an additional opportunity in biofuels production, which currently is focused primarily on corn-based ethanol. We estimate that an annual crop of 160 million tons of plastic-producing switchgrass could produce fuel equivalent to one million barrels of oil per day, approximately 5% of current U.S. oil consumption, as well as 15 million tons of polymer per year.

Formation of Metabolix

Polymers are found in nature in a wide range of organisms including microbes, plants and animals. Polyhydroxyalkanoates, or PHAs, also naturally occur within certain organisms, including microbes. These microbes use PHA to store energy and consume it for food when needed. It is this characteristic that gives Mirel its biodegradability.

Though PHA polymers are found in nature, their production in wild-type bacterial strains is inefficient and costly for commercial purposes. In 1981, Imperial Chemical Industries, or ICI, developed a controlled fermentation process using a wild-type bacterial strain to produce a PHA copolymer that they introduced under the trade name Biopol. While a handful of applications were developed for Biopol, the cost to produce the polymer using the naturally occurring bacterial strains that were available at the time was prohibitively high and its performance properties were limited. Commercialization was not possible, but the Biopol assets remained largely intact and were eventually sold to Monsanto, Inc.

By the late 1980s, tools for genetic engineering had advanced significantly, and microbes were already being genetically designed to produce various products, such as protein drugs. At the Massachusetts Institute of Technology, Dr. Oliver Peoples, our Chief Scientific Officer, working in the lab of Dr. Anthony Sinskey, a member of our Board of Directors, identified the key genes required for the biosynthesis of Mirel and invented and patented the first transgenic systems for their production. The use of genetically engineered production organisms, instead of wild-type strains, broadly expanded the number of compositions that could be made and enabled the tight level of control and high efficiency and productivity that are required for cost-effective industrial manufacturing.

Our company was formed in 1992 to exploit these discoveries. In order to fully capture the opportunity, we acquired Monsanto's patent estate related to biobased plastics, which included the Biopol assets, in 2001. We have since fully developed an integrated manufacturing process using transgenic strains for fermentation and a proprietary recovery process. This integrated manufacturing process is being incorporated into the Commercial Manufacturing Facility. We have also developed proprietary plastic formulation technology, and we are also developing our platform technology for co-producing plastics, chemicals and energy in crops such as switchgrass, oilseeds and sugarcane.

Business Strategy

Our goal is to be the leader in discovering, developing and commercializing economically attractive, environmentally sustainable alternatives to petroleum-based plastics, chemicals and energy. To achieve this goal, we are building a portfolio of programs that we believe will not only provide an attractive slate of commercial opportunities but will also generate leading and competitive intellectual property positions in the field. Key elements of our strategy include:

Establishing Production of Mirel—We have a pre-commercial manufacturing facility producing Mirel to seed the market, and we have contracted with others to perform certain processing and compounding steps. As part of our strategic alliance, ADM is constructing the Commercial Manufacturing Facility to produce Mirel. The ADM site in Clinton, Iowa is designed for a 110 million pound annual capacity and being built to accommodate significant expansion beyond its initial capacity. The plant is expected to begin production in the second half of 2009.

Market Positioning and Sales—We have put in place a marketing and sales team to educate and develop the prospective customer base for Mirel. This team is focused on positioning Mirel as a premium priced, specialty material that is an environmentally attractive alternative to petroleum-based plastics and lower performance bioplastics. Consistent with this positioning, we are marketing our biobased plastic under the brand name Mirel and will seek to co-brand Mirel with our customers. The focus of this effort is to build a pipeline of customers across a range of applications. It is our goal to establish customer relationships that will lead to substantial purchase commitments for a portion of the Commercial Manufacturing Facility's initial output when production starts.

Continuing Microbial Research and Process Development—We have identified opportunities to improve our production strains and our fermentation and recovery processes. We believe that significant reductions in the cost to manufacture Mirel can occur as we successfully exploit these opportunities. We also believe that as we acquire more experience with manufacturing our products at commercial scale, we will identify further improvements we can make.

Developing Applications for Mirel—We have developed formulations of our polymer suitable for injection molding, blown and cast film, sheet and thermoforming. These grades are being refined further to tailor them for specific customer performance requirements, and additional grades will be developed for other applications. In addition, we have developed new formulations and processing protocols to extend the applications into foam and non-woven applications.

Advancing Switchgrass Research and Other Plant Strains—We believe that we are pioneering the technical process of introducing multigene traits into plant crops for the production of plastics directly in the plant. Our switchgrass platform is currently in the research phase. In August 2008, we announced that in recently-completed greenhouse trials, switchgrass plants engineered using Metabolix multi-gene expression technology produced significant amounts of PHA bioplastics in leaf tissues. This result, developed using Metabolix's expertise in pathway engineering in plants, is the first successful expression of a new functional multi-gene pathway in switchgrass. It demonstrates the Company's path breaking bioengineering capabilities as a powerful tool for maximizing the potential of biomass crops for both bioplastic and biofuel production. We intend to further improve our plant strains to achieve even higher levels of PHA content by weight. We are also exploring additional crop varieties that offer attractive commercial opportunities. These include oilseed, which is suitable for northern climates and can co-produce PHAs along with biodiesel feedstock, and sugar cane, which is suitable for tropical climates and can co-produce PHAs along with ethanol feedstock.

Partnering our Plastics in Plant Crops Programs—As appropriate, we may seek to leverage our technology and establish strategic partnerships with one or more industry leading companies that can provide access to resources and infrastructure valuable for commercializing these platforms. These partnerships may take the form of large-scale strategic collaborations, or more limited collaborations

with partners having complementary strengths, for example in biorefinery operations or marketing. We may also seek funding through government grants or other government programs aimed at promoting development of biobased plastics and fuels. In 2007 we formed a collaboration with the Australian Cooperative Research Centre to engineer sugarcane to produce bioplastics in the plant. During 2008 we established a strategic research collaboration with the Donald Danforth Plant Science Center to develop an advanced industrial oilseed crop for co-production of bioplastics along with vegetable oil, biodiesel fuel, or olechemicals.

Building Governmental Awareness of Our Approach—Policy makers are seeking opportunities to reduce dependence on imported fossil fuel, decrease carbon dioxide emission, and address landfill and pollution issues. During 2008, we worked closely with several groups and individuals in California to address these issues. We intend to continue to pursue our governmental affairs initiatives, primarily in California, which is well known as a leader in environmental legislation. We believe that higher awareness of our solution may result in legislation that can facilitate and accelerate the adoption of our products.

Extending Our Technology to Sustainable Production of Chemicals and Intermediates—We believe that our technical capabilities can be applied to produce important commercial chemicals and chemical intermediates through biological conversion of sustainable feedstocks such as sugars. Through our integrated bio-engineered chemicals program, we are conducting research into the development of sustainable solutions for chemicals and intermediates, including widely used C4 industrial chemicals.

Furthering our Leading and Competitive Intellectual Property Position—We have built a patent estate around our platform technologies and a variety of inventions relevant to the commercialization of Mirel. We continue to extend this patent estate within our core business as well as within other commercial opportunities in the area of biobased plastics, chemicals and energy. We have licensed our technology, and where appropriate, we will continue to license our intellectual property to others in fields outside our areas of interest. Some of the areas in which we may seek to establish leading and competitive intellectual property include:

- intermediates and chemicals produced by microbial fermentation ;
- plant varieties to co-produce plastics and energy (e.g., ethanol and biodiesel); and
- plant strains that optimize crop yields and processing traits for conversion to energy.

Mirel

Our first platform, which we are commercializing through Telles, our joint venture with Archer Daniels Midland Company, or ADM, is a proprietary, large-scale microbial fermentation system for producing bioplastics. Our microbial fermentation system combines our proprietary engineered microbes with corn sugar and other materials in a fermenter. The microbes digest the corn sugar and produce the bioplastics (polyhydroxyalkanoates, or "PHAs") inside the microbes. We separate the bioplastics from the remainder of the microbes and formulate Mirel into its final form for commercial sale.

Alliance with Archer Daniels Midland Company

In 2006, we entered into a commercial alliance with ADM Polymer Corporation, a wholly-owned subsidiary of ADM, one of the largest agricultural processors in the world. The commercial alliance has two phases, which are described below and include: (i) a Commercial Alliance Phase and (ii) a Joint Venture Phase.

Commercial Alliance Phase—The purpose of this phase is to build the Commercial Manufacturing Facility, to market and sell Mirel through a joint venture company owned equally by each of Metabolix and ADM Polymer, which we have named Telles, to make arrangements for the financing of the operation and to allocate distributions of cash flow. The first part of the Commercial Alliance Phase is the construction phase. This phase will continue until the "First Commercial Sale" of Mirel, as defined in the commercial alliance agreement, when certain milestones for sales of Mirel manufactured at the Commercial Manufacturing Facility are met. Beginning with the First Commercial Sale of Mirel, the alliance will enter its commercial phase.

The Commercial Alliance Phase will last until the expiration of the US patents licensed under the agreement (including patents licensed by us to Telles and patents claiming inventions made during the strategic alliance with ADM Polymer), unless we and ADM enter the Joint Venture Phase (as described below) or unless either party terminates the strategic alliance. During the Commercial Alliance Phase, ADM is responsible for and finances construction of the Commercial Manufacturing Facility, which it will own. In addition, ADM will finance the working capital requirements of Telles. We are responsible for establishing compounding operations, and we will take responsibility for continuing research and development. In addition, we will lead the sales and marketing efforts on behalf of Telles until the end of the construction phase. At that time, Telles will assume control of such activities. Telles made twelve quarterly payments of approximately \$1.6 million to us to support these activities during the construction of the Commercial Manufacturing Facility. The last of the twelve quarterly payments was received in December 2008. In January 2009, Telles agreed to provide us with two additional quarterly payments of approximately \$1.6 million which will be payable by Telles during the second and third quarters of fiscal year 2009. After all the quarterly support payments are received we expect to bear the full cost of such sales and marketing activities until the commercial phase of the alliance begins.

Upon the commencement of the commercial phase of the alliance, Telles will pay royalties to us for all Mirel sold by Telles. Telles will also pay manufacturing fees to ADM for production of Mirel and will pay compounding fees to us for certain compounding services. Telles will compensate ADM and us for services that we each may provide under separate service agreements. For example, we anticipate that we will provide research, development, marketing and sales services to Telles under such a service agreement.

ADM is constructing and financing, and will own and operate the Commercial Manufacturing Facility under a manufacturing agreement with Telles. Even though Telles is a separate legal entity owned equally by Metabolix and ADM Polymer, ADM Polymer will disproportionately fund the activities of the joint venture subject to certain limitations. In order to rebalance the respective investments made by the parties, a preferential distribution of cash flow will be used, whereby Telles' profits, after payment of all royalties, service reimbursements and other operating expenses, will be distributed to ADM until ADM's disproportionate investment in Telles, including the costs of constructing the Commercial Manufacturing Facility, have been returned to ADM. Once ADM has recovered such amounts, the profits of Telles will be distributed in equal amounts to the parties.

Our agreements with ADM limit ADM's and our right to work with other parties or alone, in developing or commercializing certain PHAs produced through fermentation. These agreements do not, however, limit our right to develop, manufacture or sell biobased plastics, including PHAs, produced through plants such as switchgrass, sugarcane or oilseeds (rather than through fermentation) independent of the alliance.

These agreements also include detailed provisions setting out the rights and obligations of the parties in the event of a termination of the Commercial Alliance. These provisions include the right of the parties to terminate the Commercial Alliance upon a material default of a material obligation by the other party after a notice and cure period has expired. The parties are also permitted, under

limited circumstances, to terminate the Commercial Alliance if a change in circumstances that is not reasonably within the control of a party makes the anticipated financial return from the project inadequate or too uncertain. ADM and we have agreed that the following are examples of a change in circumstances beyond the reasonable control of ADM:

- a third party challenge to the validity or enforceability of our technology or patent rights relating to our fermentation program;
- the emergence of a third party's superior technology;
- an increase in the projected cost required to construct the Commercial Manufacturing Facility or to manufacture Mirel; and
- a decrease in the projected sales volume of Mirel.

The agreement does not provide examples of a change in circumstances beyond our reasonable control. Finally, the parties have specific obligations to fulfill in the event of termination or if they file for bankruptcy protection. The obligations on termination are generally structured to permit the non-breaching party (in the event the strategic alliance is terminated due to a breach of the agreements) to continue to develop the business established by the alliance. For example, on such a termination due to a breach by us, ADM would be permitted to continue to produce and sell Mirel (generally in limited quantities and subject to a royalty to us) and we would be required to perform compounding services for ADM for a period of time following the termination. Similarly, on a termination due to a breach by ADM or termination by ADM due to a change in circumstances, we would be permitted to continue to produce, and sell, Mirel, and ADM would be required to perform fermentation services for us for a period of time following the termination (subject to certain payment obligations to ADM).

Joint Venture Phase—When projected market demand exceeds the capacity of the Commercial Manufacturing Facility and the initial license granted by us, ADM has the option to form a new entity with us in order to build additional capacity and expand the commercial operation beyond the limits of the initial production capacity. The new joint venture entity would be owned equally by Metabolix and ADM Polymer. Under certain circumstances, if ADM does not exercise its option, Metabolix would have an opportunity to manufacture and sell Mirel independent of the Commercial Alliance.

The Value Proposition of Mirel

We believe Mirel possesses comparable functional properties to petroleum-based polymers serving applications that cover as much as half of the global polymer market. We also believe Mirel offers the broadest range of properties and processing options compared to today's existing bioplastics. Mirel's unique combination of being both biobased and biodegradable while having comparable functional properties to petroleum-based polymers stands alone in the bioplastics marketplace. Where possible, we intend to co-brand the products that incorporate Mirel. Prospective buyers of Mirel are seeking not only the functional properties Mirel provides, but also the ability to promote their use of sustainable and renewable products. Co-branding enables our customers to convey environmental responsibility to their end consumers by referencing our brand with their product. Mirel is being positioned as a specialty material that can serve both a functional need (which petroleum-based polymers may satisfy) and consumer preference for environmental responsibility (which petroleum-based polymers cannot address). Consequently, we expect Telles to price Mirel as a specialty product at a premium compared to the prices of large volume commodity polymers but comparable to a number of specialty polymers. The business model for positioning products with an environmental benefit at a higher price is increasingly prevalent with examples in several different industries ranging from retail food stores to gasoline-electric hybrid automobiles. Our strategy is to enter the market with premium priced products that address specialized segments that can be served competitively by Mirel's distinctive properties.

Telles will sell Mirel in pellet form (for further processing and re-sale as finished goods or components by customers) and may also sell Mirel in densified form, as a blend with other biodegradable materials, or in other forms as may be determined by Telles and its customers.

We believe that the principal advantages of our products will be the ability to use renewable feedstocks and biodegradability combined with their performance when compared to alternative products. We believe Mirel products are unique compared with other biodegradable (both petroleum and renewable resource based) plastics when compared based on the following factors:

Biodegradability—Mirel will biodegrade due to the action of microbial agents in a wide variety of conditions, including both backyard and municipal compost, soil, anaerobic environments such as those found in municipal waste treatment facilities and septic systems, and marine, wetland and fresh water environments. Many plastics considered to be biodegradable only degrade in a controlled municipal industrial compost facility.

Biobased, Renewable Feedstocks—Because fossil fuels are the primary feedstock for the plastics industry, polymer prices can be adversely affected by fossil fuel supply disruptions and price volatility. Mirel is produced using biobased, renewable feedstock, which are sustainable and may lead to a more predictable cost structure when compared to petroleum-based plastic. Biobased feedstock generates carbon through photosynthesis, which takes carbon out of the air. The use of fossil fuels as feedstock extracts carbon from the ground. Taking carbon out of the air, as opposed to extracting it from the ground, reduces greenhouse gases and improves the carbon footprint of the raw materials used to produce plastic.

Property Range—Similar to petroleum-based plastic, Mirel possesses a particularly broad range of functional properties, varying from stiff to flexible.

Processability—Mirel can be processed in many types of existing conventional polymer conversion equipment that is currently being used for petroleum-based plastic.

Upper Service Temperature—Mirel will withstand temperatures in excess of 100° C, i.e., the boiling point of water, an important threshold. Some formulations of Mirel can withstand temperatures up to 130° C.

Resistance to Hydrolysis—While Mirel will biodegrade in marine, wetland and fresh water environments, it is resistant to reacting with cold or hot water over the intended life span of the product.

Carbon Footprint—An independent preliminary life cycle assessment (LCA) for one of the building blocks of Mirel, conducted by Dr. Bruce Dale, professor of Chemical Engineering at Michigan State University, determined that production of this polymer using a renewable energy source may provide a reduction in greenhouse gases compared to production of conventional petroleum-based plastics.

Biobased and Biodegradable

Mirel has the unique advantage in the marketplace of being both biobased and biodegradable while having comparable functional properties to petroleum-based polymers. However, in today's marketplace there is sometimes confusion about the use of the terms "biobased" and "biodegradable." Telles has committed to following industry guidelines and specifications when making these claims. Mirel resin has received the European conformity certification of "OK Biodegradability Soil" for natural soil biodegradability and "OK Biodegradability Water" for fresh water biodegradability from Vincotte. Vincotte is the recognized European authority on materials inspection, certification, assessments and technical training. The Vincotte label communicates a cradle to grave concept that is

highly desirable for brand owners wishing to reduce environmental impact by specifying materials that integrate biodegradability with disposal methods or infrastructure.

Trends and Opportunities for Mirel

Branded Products

The market for branded products and services with attributes of environmental responsibility and sustainability is an emerging business opportunity. We expect that by co-branding products that use Mirel, Telles and its customers will be able to jointly promote environmental sustainability.

We believe that producers are positioning products as environmentally responsible or superior to gain a competitive advantage as they believe consumer preferences are shifting. We believe the use of Mirel in branded products either directly or for packaging will facilitate and enhance customers' efforts to exploit this trend. For example, during 2007, we entered into an agreement with Target Corporation to supply Mirel for use in co-branded gift cards.

Regulated Markets

Regulatory action, such as bans, taxes, subsidies, mandates and initiatives, to encourage substitution of renewable and sustainable materials for petroleum-based incumbents is increasing. Examples of this can be found in the following jurisdictions:

- Local jurisdictions within California have passed legislation banning the use of non-biodegradable plastic bags or imposing significant taxes on them. San Francisco, Manhattan Beach, Malibu and Santa Monica currently have a ban on non-biodegradable plastic bags and twelve other cities are considering similar legislation
- Beginning in June 2008, China began banning shops from giving out free plastic bags.
- Australia, Bangladesh, Ireland, Italy, Germany and Taiwan have banned or taken action to discourage the use of plastic bags.
- Many African nations including Tanzania, Zanzibar, Rwanda, and South Africa have banned the use of plastic bags.
- Mumbai, formerly Bombay, India, has also banned the use of plastic bags.

In the geographic segments where regulatory drivers exist, we expect that Mirel can meet requirements for biobased content or biodegradability that favor Mirel over conventional petroleum-based plastics. In addition, producers are now anticipating regulatory change and are initiating programs to introduce sustainable materials to their products prior to or in an attempt to forestall implementation of such regulation. We believe that as awareness of our practical and affordable alternative grows, the pace of regulatory change may accelerate.

Applications for Mirel

Although there are significant opportunities across many market segments, we are initially focusing on six market segments: agriculture/horticulture, compost and organic waste diversion bags, marine and aquatic, consumer products, business equipment and durable goods and general packaging. These markets have the strongest need for materials that are biobased and biodegradable either for branding value, because of regulatory requirements, or because biodegradability offers a useful property. To approach these market segments, we are conducting product and business development activities, including working with potential customers to determine their specific needs, and we have begun the process of qualifying our material for a variety of customer applications. In one case we have entered into a joint development arrangement with a customer that has expertise in specific product

applications. We have developed formulations of Mirel that can be processed in conventional plastics processing equipment for injection molding, blown and cast film, sheet and thermoforming. We have made great advancements in the development of foam, non-woven, blow molding and fiber. We are actively developing customer prospects to qualify our products in the following market segments:

Segment	Examples of Application	
Agricultural/Horticultural	<ul style="list-style-type: none"> • Agricultural film • Erosion control netting • Single season irrigation devices 	<ul style="list-style-type: none"> • Erosion control stakes • Biodegradable plant pots • Fencing
Compost and Organic Waste Diversion Bags	<ul style="list-style-type: none"> • Industrial can liners • Kitchen compost bags 	<ul style="list-style-type: none"> • Lawn and leaf bags
Marine and Aquatic	<ul style="list-style-type: none"> • Biodegradable water treatment devices • Fishing equipment 	<ul style="list-style-type: none"> • Marine disposables
Consumer Products	<ul style="list-style-type: none"> • Gift and credit cards • Cosmetic packaging 	<ul style="list-style-type: none"> • Personal hygiene products • Short term use retail applications
Business Equipment and Durable Goods	<ul style="list-style-type: none"> • Hand-held devices • Components 	<ul style="list-style-type: none"> • Housings • Trays
General Packaging	<ul style="list-style-type: none"> • Caps and closures • Thermoformed clamshells 	<ul style="list-style-type: none"> • Stretch wrap • Foam

Agriculture/Horticulture

The need for biodegradability is a major driver in this market. Applications such as agricultural film (mulch film, field film, bale wrap, green house film), sod netting, erosion control netting and fencing have a strong need for the biodegradability offered by Mirel. In the case of field and mulch agricultural film, Mirel will biodegrade naturally after use and can be tilled into the field after a growing season. This can avoid the costs associated with the labor of removing the film from the fields and the associated disposal costs. In horticulture, the use of Mirel can avoid the need, and cost, to remove plant pots when planting and the subsequent costs associated with disposal. As compared to existing bioplastics in the market, Mirel offers complete biodegradability, excellent toughness and strength and long term shelf life prior to use. We do not believe that existing products provide both the robust performance in use combined with the degradation properties that Mirel offers.

Compost and Organic Waste Diversion Bags

Biodegradability is a major driver in this market. Applications such as industrial can liners, kitchen compost bags and organic lawn and leaf bags have a strong need for the biodegradability offered by Mirel. Composting is becoming more and more popular as a method for organic waste disposal. The use of Mirel allows both the industrial and consumer users to dispose of these wastes in a bag that is completely biodegradable in industrial composting as well as backyard or cold composting.

Marine and Aquatic

Biodegradability is a major driver in this market. Studies have noted that the world's oceans show increasing levels of persistent plastic particles of a size ingestible by marine creatures at the bottom of the food chain. Larger plastic items are also accumulating in substantial quantities in certain parts of the ocean, and marine birds and mammals have been found dead from ingesting or getting tangled in plastic debris. Mirel allows brand owners the opportunity to offer a product that will biodegrade if

released into the environment or in applications where marine degradation is a key attribute (e.g. erosion control).

Consumer Products

The need for both biobased materials and biodegradability are major drivers in this market. Brand owners are under significant pressure to offer environmentally responsible products to their customers. The use of Mirel offers producers the opportunity to position products as environmentally responsible or superior to petroleum-based plastic. As well, producers developing new products are being held more responsible for the end life of these products or components. We believe the use of Mirel in branded products either directly or for packaging will facilitate and enhance Telles' customers' efforts to exploit this trend.

Business Equipment and Durable Goods

The need for a biobased material is a major driver in this market. Like consumer product producers, producers of business equipment or durable goods are under significant pressure to become environmentally responsible when offering products including scientific lab ware, computer components and electronic devices such as cell phones, printers, personal digital assistants and MP3s to their customers. The use of Mirel offers producers the opportunity to position products as environmentally responsible.

General Packaging

The need for both biobased materials and biodegradability are major drivers in these markets. Regulatory requirements are also a factor. Many plastic items, particularly single use items such as bottles and caps, cups, lids and straws, and grocery bags become litter in the environment where they can become a significant problem. Opportunity for the application of Mirel exists for packaging items such as shrink film for pallet wrap, foam packaging for shipping electronic devices and foam thermoformed packaging where expandable polystyrene is being banned through government regulation. Mirel offers an environmentally responsible substitute that may be more appealing to consumers.

Marketing and Sales

On behalf of Telles, we intend to sell Mirel into markets around the globe, with an initial focus on North America, Europe and Japan. We intend to establish marketing and sales efforts either directly or through regional alliances with local firms in other parts of the world. We will also consider selected market development arrangements in certain discrete segments, such as fiber, where there may be advantages to working closely with a market leader in that segment.

Metabolix is leading the marketing and sales effort on behalf of Telles. Sales of Mirel are highly technical in nature. As a result, the Mirel marketing and sales team consists of individuals with extensive experience in the polymer industry and the development of value added specialty applications. Our expertise in polymer science combined with our familiarity with the properties of the Mirel family of bioplastics is essential to developing resin grades that meet specific customer requirements. In some cases, we may coordinate joint marketing and sales efforts with ADM, taking advantage of ADM's strong customer base. ADM is a world leader in agricultural processing and fermentation technology and is one of the world's largest processors of corn, soybeans, wheat and cocoa. ADM is also a leader in the production of ethanol and corn sweeteners.

It is our goal to establish customer relationships that will lead to substantial purchase commitments for a portion of the Commercial Manufacturing Facility's initial output when production starts. To that

end, we have built a pipeline of customer projects in different applications to maximize our opportunities to fill the plant to capacity.

We have provided material to customer prospects for initial testing. Some customer prospects have progressed to evaluation of additional volumes of Mirel in larger scale product qualification trials and test marketing, which in turn may lead to more rapid product adoption and sales. During 2007, Target Corporation test marketed gift cards made using Mirel in 129 of its stores and then introduced gift cards made using Mirel in all of its 1,600 stores in time for the 2007 holiday shopping season. In 2008, Heritage Bag Company successfully test marketed Mirel as a component for its compostable industrial can liners. During 2008, Ball Horticultural Company successfully test marketed pot liners composed of Mirel. Labcon North America successfully test marketed pipette racks composed of Mirel in 2008. Telles has established supply agreements with Heritage Plastics, Ball Horticultural Company, Labcon North America and with a large consumer goods manufacturer.

Competition

The plastics market is large, with many established players. The market has grown around the chemical processing of oil and natural gas, and is concentrated in the conventional, non-biodegradable petroleum-based segment.

Established companies in this segment include Dow Chemical, DuPont, BASF, Ineos, LyondellBasell, SABIC and Mitsubishi Chemical, among many others. The price of conventional petroleum-based plastic is volatile, as it is dependent on petroleum as a key manufacturing input. In addition, the non-biodegradability of conventional petroleum-based plastics makes them persistent in and harmful to the environment and creates significant waste.

A few companies, such as DuPont, Dow Chemical, Arkema, and Braskem have taken steps toward plastics based on renewable resources, and are commercializing plastics that use building blocks derived from renewable resources as components. These products are generally not biodegradable. Other producers of petroleum-based plastics, including BASF, Mitsubishi Chemical, and DuPont, now produce certain petrochemical grades that are biodegradable in industrial compost environments, but are otherwise persistent in the environment and are still subject to the volatility of oil and natural gas prices.

Our most comparable competitors are in the biodegradable, renewable resource based plastic segment, within which there are three distinct technologies: PHA, polylactic acid (PLA) and starch-based biodegradables. Just as a wide variety of different petroleum-based plastics now serve the needs of the market, we believe that these three product classes are more complementary than competitive. We believe that of these three product classes, Mirel offers the broadest range of properties and processing options, and will address the largest proportion of opportunities as an environmentally attractive yet functionally equivalent alternative to conventional petroleum-based plastics. Unlike PLA and most starch-based biodegradables, Mirel can:

- biodegrade in the natural environment, including the marine environment,
- biodegrade in cold and hot composts,
- remain functional in a wide range of temperature settings, and
- not break down in everyday use.

Other companies active in the PHA plastics segment include Kaneka, Tianan and a minor producer in Brazil. The key players in PLA and starch-based biodegradable plastics include NatureWorks, Mitsui Chemical, Toyota, Novamont and Stanelco.

<u>Biodegradability</u>	<u>Based on Petroleum</u>	<u>Based on Renewable Resources</u>
Biodegradable	Synthetic Biodegradable: <ul style="list-style-type: none">• BASF (Ecoflex™)• Dupont (Biomax™)• ShowaDenka (Bionolle™)• Mitsubishi Chemical	PHA: <ul style="list-style-type: none">• Metabolix (Mirel™)• Kaneka (PHBH)• Tianan (PHBV) PLA: <ul style="list-style-type: none">• NatureWorks (Ingeo™)• Mitsui Chemical (Lacea™)• Toyota Starch-based: <ul style="list-style-type: none">• Novamont (Mater-Bi™)• Stanelco
Non-Biodegradable	Conventional petroleum-based plastic	<ul style="list-style-type: none">• DuPont (Sorona™ (~30% biobased))• Dow Chemical (Soybean Polyurethanes)• Arkema (Nylon 11)• Braskem (HDPE)

Regulatory Requirements

Some applications for which Mirel may be suitable, such as food packaging, plastic-coated paper cups, and lids for disposable cups, involve food contact, which is regulated by the U.S. Food and Drug Administration, the ("FDA"). The FDA process for food contact requires the submittal of a dossier, which is made up of a number of extraction studies conducted under specific guidelines. After submittal of a dossier, the FDA has 120 days to ask for additional testing or to modify the submitted approach. Once this time period has elapsed, if there are no objections from the FDA, the manufacturer is free to pursue the submitted food contact segments.

During 2008, we submitted a pre-notification submittal for Mirel to the FDA. The FDA provided us with a written preliminary response. We then submitted a series of follow-up questions to which the FDA has responded. Extraction studies and dossier preparation are currently ongoing.

Research & Development

We have a long standing and ongoing research and development program that is designed to exploit our integrated systems approach to industrial biotechnology. We believe that the technical challenges of successfully deploying biotechnology in industrial settings are high and that systems developed in an integrated and comprehensive environment will generate the optimum possible results and provide us with a competitive advantage. Furthermore, we believe fully developed, commercially viable processes will expand our financing options and where appropriate command higher values from potential partners than individual components or technologies.

The primary goals of our research and development program are to:

- lower the cost and improve the productivity of producing Mirel by microbial fermentation;
- expand the performance of Mirel in both polymer conversion and in use;
- expand the market applications into which Mirel can be sold;
- introduce a plant-based production system that can dramatically transform the markets for plastics and energy;
- develop new opportunities to produce plastics, chemicals and energy in either fermentation or plant based systems; and

- develop and acquire competitive intellectual property and know-how in biobased plastics, chemicals and energy that defines us as the leader in the field.

As of December 31, 2008, we employed 64 personnel conducting research and development for our programs. Among our research staff, 28 hold Ph.D.s and 32 hold masters' or bachelors' degrees in their respective disciplines. Our staff has expertise in the following areas: microbial genetics, bioinformatics, metabolic engineering, systems biology, plant genetic engineering, fermentation process engineering, chemical engineering and polymer science and engineering.

Research Programs

We believe Mirel is the first of several attractive opportunities we will pursue to meet the world's plastic, chemical and energy needs through the biological conversion of renewable and sustainable agricultural feedstocks.

Microbial Fermentation

We have ongoing strain development efforts to develop microbes that can produce higher yields of Mirel at lower cost than our current strains. We have identified specific projects that we believe will allow us to approach the maximum theoretical yield and productivity of these systems. In addition, we are engaged in strain development work to facilitate production of other compositions, including second generation polymers to allow us to extend the range of market applications we can address. This work will be combined with our ongoing product development effort, which is broadening the range of formulations we can create.

Integrated Bio-Engineered Chemicals Program

During 2007, we received an Advanced Technology Program (ATP) award from the U.S. Department of Commerce's National Institute of Standards and Technology (NIST). The \$2 million award is being used to develop a commercially viable process for producing biobased chemicals from renewable agricultural products. The ATP program provides cost-shared funding to industry led teams to help advance research and development projects that have the potential to spark important, broad-based economic or social benefits for the United States. Our award funded our integrated bio-engineered chemicals (IBEC) program, to develop sustainable solutions for widely-used C4 industrial chemicals. The program is designed to create a class of biobased routes for producing important industrial chemical intermediates, reducing our dependence on fossil-based feedstocks and providing the nation with competitive advantages in polymers, chemicals and agriculture, all while reducing adverse environmental impacts.

Our IBEC project seeks to bio-engineer microbes to produce polymers similar to Mirel through the fermentation of plant-derived sugars. In 2008, we achieved proof of principle for all scientific goals in this project and we are in the process of completing the development of a scalable robust industrial production microbe. The produced polyesters will then be converted into a variety of four-carbon (C4) industrial chemicals. Today, C4 chemicals are produced almost entirely from fossil-based hydrocarbons such as natural gas, oil or coal and are used in products such as auto parts, spandex, polyurethanes, engineering resins and solvents. Global demand for C4 industrial chemicals is estimated at 2.5 billion pounds annually, and has been growing at a rate of 4 to 5 percent a year. As with all research and design programs undertaken by Metabolix we will continue to review the external economic and competitive landscape to enable sound business decisions to be made based on the commercial targets achievable and the prioritization for commercialization.

Biorefinery Programs

We are developing a technology to produce plastics directly in plants, including switchgrass, sugarcane and oilseed. This effort builds on our success in creating high productivity microbial biofactories and may enable the production of biobased plastics with economics that are as favorable as, or more favorable than, general purpose commodity plastics such as polyethylene, polypropylene and polystyrene. We have successfully achieved the milestone of significant levels of polymer production in switchgrass and are now working to increase production to levels that would be commercially viable. We believe we can engineer a system that co-produces plastics along with biomass for conversion to energy (such as steam, electricity or biofuels such as ethanol or biodiesel). This concept, called a "biomass biorefinery," is based on the co-production of energy and higher value biobased plastic. It is analogous to today's energy/petrochemical industry where synthetic plastics are derivative value-adding products along with energy produced from petroleum and natural gas. We believe the co-production of biobased plastics with energy in one system will offer superior economic value and efficiency to a single product system. We have collaborations with the Donald Danforth Plant Science Center and the Australian Cooperative Research Centre to further our research in this area. Our goal is to reach field trial demonstrations within the next two to three years.

We believe we are a leader in the science and technology related to the transformation of several potentially important industrial biorefinery crops, including switchgrass. Precise insertion of novel pathways in plants is challenging due to the need for and the complexity of introducing multiple foreign genes and the lengthy time required for the cross-breeding of plant generations having new gene systems. We have developed several proprietary approaches to more efficiently introduce complex, multi-gene, multi-step pathways into switchgrass and we expect that these approaches will have value in other areas in addition to production of plastics.

We believe that our biomass biorefinery program offers the potential to improve the economics of producing not only biobased plastics, but also bioenergy. The effect of this program could nearly double the value per acre of crop harvested. We expect that polymer production economics can be improved because the manufacture of the material will take place within the plant. With our current fermentation process, starch, a precursor to our feedstock (i.e., corn sugar), is produced within the plant. Considerable capital and operating costs are incurred extracting starch, converting it to corn sugar feedstock and then fermenting that feedstock to produce microbial cells containing plastic, which is then extracted to produce Mirel. Through direct production in switchgrass, oilseeds or other crops, we can eliminate the capital required for the fermentation facility and those conversion costs and potentially achieve production economics comparable to those of general agricultural products, which are inexpensive. It is also commonplace within both the agricultural and the energy industries to produce a variety of co-products from raw materials to maximize value. As with a barrel of oil that is converted to both gasoline and plastic, or a bushel of corn that is converted to industrial starches, animal feed, sweetener and other products, we believe that a plant variety that co-produces both plastics and energy can have more value than one that does not.

While the cost of producing plastics in plant crops may be considerably lower than the cost of producing these materials by fermentation, we believe the introduction of plant based materials can significantly expand the market for fermentation based materials. The scale and complexity of agriculturally producing plastics will limit the grades of material produced to just a few. Conversely, fermentation based manufacturing allows many grades to be produced with a variety of property sets. Low cost plant based material could be blended with fermentation material to balance between cost and performance, or be sold unblended for specific applications.

Switchgrass

Our first program focuses on switchgrass, a commercially and ecologically attractive, non-food energy crop that is indigenous to North America. Switchgrass is an attractive biomass to energy crop that is generally considered to be a leading candidate for cellulose- derived production of ethanol and other biofuels. It is a high density perennial crop that can grow on marginal land and does not require substantial inputs in terms of water or fertilization. It has the capability of sequestering significant amounts of carbon dioxide from the atmosphere in its root systems.

We have already achieved several significant milestones in this program and have published these results in *Plant Biotechnology Journal*, a peer reviewed academic journal, reporting the achievement of over 3% bioplastic in switchgrass leaf and over 1% overall in the plant. Our research is currently focused on increasing plastic production levels to amounts we believe would be commercially viable, which we have stated is around 7% of the total weight of the plant.

Sugarcane

We are also developing sugarcane for co-production of biobased and biodegradable plastic within the leaves and stems of that plant. Sugarcane is currently the premier biomass crop for biofuels, and we believe it can be developed to produce an advanced biorefinery feedstock for the production of bioplastics, chemicals and energy, significantly expanding our global reach. In 2007, we entered into a research collaboration with Australia's Cooperative Research Centre for Sugar Industry Innovation through Biotechnology ("CRC SIIB") to develop sugarcane strains for the production of plastics. While switchgrass is well suited for the North American climate, sugarcane will be ideal for more tropical climate zones. Biotechnology recovery operations could be added onto an existing sugar mill to take advantage of the harvesting, processing and co-generation facilities already in place. Together with the CRC SIIB we have achieved a bioplastic content level of 3.5% in sugarcane leaves.

Oilseeds

Industrial oilseeds represent the third crop system to which we are applying our patented technology. We have initiated a program to develop an advanced industrial oilseed crop for co-production of bioplastics along with vegetable oil, which could be used for non-food applications such as biodiesel fuel or oleochemicals. Oilseeds are the primary feedstock for the more than 250 million gallons of biodiesel produced annually in the United States, and the co-production of bioplastics promises to improve the economics of this crop industry. In January 2008, we established a research collaboration with noted oilseed experts at the Donald Danforth Plant Science Center ("Danforth Center"), a leading not-for-profit research institute in St. Louis, Missouri. The successful achievement of the technical goals of this program would result in stable expression of biobased plastics directly in oilseed crops. Here again, we can tap into the existing infrastructure for harvesting, storing and transporting oilseeds. Metabolix has assembled a team of scientists in St. Louis to work closely with the Danforth Center's principal investigators. Combining the Danforth Center's extensive experience in oilseed technology with our patented technologies could expedite the commercialization of multiple products in oilseed crops. This collaboration is supported financially by a two year, \$1.14 million grant from the Missouri Life Sciences Trust Fund to the Danforth Center.

Our Technology and Product Development Process

We believe we have one of the most advanced capabilities to perform metabolic pathway engineering in the world and that we are skilled in our ability to integrate the biotechnology we develop into large scale industrial production processes. We believe that we have unprecedented capabilities on the metabolic pathways involved in the production of a wide range of bioplastic

monomers and the ability to polymerize and accumulate these bioplastics inside living cells. We believe that our advanced capabilities will allow us to:

- design and engineer living organisms to perform a series of chemical reactions that convert a feedstock to an end product in a highly efficient and reliable manner;
- integrate that organism into a reliable, large scale industrial fermentation process;
- develop highly efficient recovery technology for the product;
- tailor our end product from that process to suit our customers' needs; and
- develop new applications and commercial opportunities for these products.

Biology and Genetic Engineering

While most biotechnology products today involve identifying a single gene to produce one protein, we have identified and chromosomally inserted a series of genes to produce several proteins and have done so in such a way that they are expressed to execute the right reactions at the right times. This work is at the forefront of a scientific discipline referred to as "Synthetic Biology" which has become the focus of intense research and design activities. There have been many new entrants, both academic and venture-backed start-up companies, in this general field primarily targeting biofuels, either advanced cellulosic ethanol or next generation technologies. We believe that we have unique capabilities based on sixteen years of development taking early stage gene/pathway discovery through the entire value delivery chain to a commercially viable technology and business. In addition, we have developed core competencies in plant transformation and the development of advanced multigene expression technologies for introducing multiple traits into biomass plant crops.

Industrial Fermentation Process Engineering

We have tightly integrated our fermentation scale-up research capabilities with our genetic engineering capabilities to create a feedback loop where data from fermentation experiments can readily influence microbial design and where microbial engineering approaches can guide the fermentation group to structure the optimal protocols (recipes) for running fermentations. Based on this technology we have demonstrated the ability to produce a range of different polymers on a common fermentation platform.

Chemical Process Engineering

The third element of our technology and product development process involves process chemistry and chemical engineering to separate the polymer from the biological cell material once fermentation is complete. We have a dedicated team that has developed a proprietary process for Mirel recovery at the industrial scale. We have invented a process that achieves a high level of purity without damaging the polymer and that we believe can be implemented cost effectively on a commercial scale. We have successfully demonstrated our ability to efficiently isolate the range of polymers necessary to meet and expand our range of target applications. These polymers can be routinely produced free from cell debris and processed into pellets.

Polymer Science and Product Development

The final elements of our product development involve tailoring the polymer to provide the product properties and meet the processing requirements for specific customer applications and then compounding that material for delivery to customers. Our product development team has considerable expertise in polymer science and to date has advanced the development of formulations for injection molding, blown and cast film, sheet, and thermoforming. We will continue to work with our customers

to optimize our formulations to conform to their commercial specifications. During 2008, we have created formulations for blow molding, foam and fiber and moved these applications beyond the proof of concept stage. We will continue to develop these application areas toward commercialization.

In sum, we have successfully integrated capabilities in biology, genetics, fermentation process engineering, chemical engineering and polymer science. We believe this integrated set of capabilities will be a source of competitive advantage. These same capabilities are being applied to our plant crop programs, where we intend to develop an industrial system to co-produce bioplastics with cost advantaged biomass for bioenergy, and to our integrated bio-engineered chemicals program. We believe our capabilities can also be applied successfully to other biobased plastics, chemicals and energy projects.

Intellectual Property

Our continued success depends in large part on our proprietary technology. We rely on a combination of patent, copyright, trademark and trade secret laws, as well as confidentiality agreements, to establish and protect our proprietary rights.

We own approximately 400 issued patents and approximately 125 patent applications world wide, and we have licensed from third parties approximately 80 issued patents and patent applications world wide. These patents cover, among other things, the fundamental biotechnology needed to produce Mirel as well as compositions, processes and derived products. The licensed patents and patent applications include patents covering our core technology that are owned by Massachusetts Institute of Technology and exclusively licensed to us. Under the MIT licensing agreement, we currently pay annual license fees. In addition, under this licensing agreement, we are obligated to pay royalties on sublicensing revenue and sales of products, if any, covered by the licensed patents.

Our patents are directed to compositions of polymers, genes, vectors, expression systems in plants and microbes, devices, coatings, films, as well as methods of manufacture and use. The terms of such patents are set to expire at various times between 2010 and 2024.

We will continue to file and prosecute patent applications when and where appropriate to attempt to protect our rights in our proprietary technologies. It is possible that our current patents, or patents which we may later acquire, may be successfully challenged or invalidated in whole or in part. It is also possible that we may not obtain issued patents for our pending patent applications or other inventions we seek to protect. In that regard, we sometimes permit certain intellectual property to lapse or go abandoned under appropriate circumstances, and due to uncertainties inherent in prosecuting patent applications, sometimes patent applications are rejected and we subsequently abandon them. It is also possible that we may develop proprietary products or technologies in the future that are not patentable or that the patents of others will limit or altogether preclude our ability to do business. In addition, any patent issued to us may not provide us with any competitive advantages, in which event we may abandon such patent.

Our registered U.S. trademarks include *Metabolix*, *Mirel*, the Mirel heart-leaf design, and *Biopol*. U.S. registration applications for our marks *Telles*, *Bio-industrial Evolution*, and the Metabolix four-leaf design are pending. Our marks *Metabolix*, *Mirel*, *Telles*, the Mirel heart-leaf design, the Metabolix four-leaf design, and certain other trademarks have been registered in selected foreign countries.

Our means of protecting our proprietary rights may not be adequate, and our competitors may independently develop technology that is similar to ours. Legal protections afford only limited protection for our technology. The laws of many countries do not protect our proprietary rights to as great an extent as do the laws of the United States. Despite our efforts to protect our proprietary rights, unauthorized parties have in the past attempted, and may in the future attempt, to copy aspects of our products or to obtain and use information that we regard as proprietary. Third parties may also

design around our proprietary rights, which may render our protected products less valuable, if the design-around is favorably received in the marketplace. In addition, if any of our products or the technology underlying our products is covered by third-party patents or other intellectual property rights, we could be subject to various legal actions. We cannot assure you that our products do not infringe patents held by others or that they will not in the future.

Litigation may be necessary to enforce our intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity, misappropriation, or other claims. Any such litigation could result in substantial costs and diversion of our resources. Moreover, any settlement of or adverse judgment resulting from such litigation could require us to obtain a license to continue to use the technology that is the subject of the claim, or otherwise restrict or prohibit our use of the technology. Any required licenses may not be available to us on acceptable terms, if at all.

Employees

As of December 31, 2008, we had 98 full-time employees. Of those employees, 64 were in research and development, 7 were in marketing and 27 in general and administration. Most of our employees are located in Massachusetts. None of our employees are subject to a collective bargaining agreement. We consider our relationships with our employees to be good.

Corporate and Investor Information

Our company was incorporated in Massachusetts in June 1992 under the name Metabolix, Inc. In September 1998, we reincorporated in Delaware. Financial and other information about our company is available on our website (<http://www.metabolix.com>). The information on our website is not incorporated by reference into this annual report on Form 10-K and should not be considered to be part of this annual report on Form 10-K. We make available on our website, free of charge, copies of our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") as soon as reasonably practicable after filing such material electronically or otherwise furnishing it to the Securities and Exchange Commission.

ITEM 1A. RISK FACTORS

Our operations and financial results are subject to various risks and uncertainties that could have a materially adverse affect on our business, financial condition, results of operations and the trading price of our common stock.

Risks Relating to Our Business

We may not be able to successfully manufacture Mirel at commercial scale in a timely or economical manner.

We are currently producing Mirel using our fermentation platform in relatively small quantities, at pre-commercial scale, for use in marketing activities, including conversion into end-products for test marketing by our customers. The current and anticipated methods for manufacturing biobased plastics, both by fermentation and in crops, and the anticipated methods for producing chemicals and energy, are highly complex processes in which a variety of difficulties may arise. We may not be able to resolve any such difficulties in a timely or cost effective fashion, if at all. We cannot be sure of the cost of producing Mirel at commercial scale by fermentation. We cannot assure you that we will be able to successfully manufacture Mirel at a commercial scale in a timely or economical manner or that the quality of the commercial product will be acceptable on a consistent basis.

Since construction of the commercial manufacturing facility for the production of Mirel (referred to as the Commercial Manufacturing Facility) is not yet complete, manufacturing costs at such a facility are unknown and may ultimately be higher than we expect. While we believe that manufacturing costs will be reduced over time as we gain manufacturing know-how and improve our technology, we cannot be sure that we can manufacture Mirel in an economical manner. If we, in connection with our alliance with ADM, fail to commence production in a timely manner or to develop manufacturing capacity and experience, fail to continue to contract for manufacturing on acceptable terms, or fail to manufacture Mirel economically on a commercial scale or in commercial volumes, the commercialization of Mirel and our business, financial condition and results of operations will be materially adversely affected.

We may not be successful in the development of commercial formulations of Mirel.

Mirel can be produced in a large number of different formulations. Each formulation results in a material that has different performance attributes, such as flexibility, hardness or clarity. As such, different formulations will have utility in different commercial applications. Formulation development is a time-consuming and expensive activity. The development of new formulations requires significant and lengthy product development efforts, including planning, designing, developing and testing at the technological, product and manufacturing-process levels. These activities require us to make significant investments. Although there are many potential applications for Mirel, our resource constraints require us to focus on specific formulations and to forgo other opportunities. We expect that one or more of the potential formulations we choose to develop will not be technologically feasible or will not achieve commercial acceptance, and we cannot predict which, if any, of our formulations we will successfully develop or commercialize.

We may not be successful in the development of plant crops for production of plastics.

In addition to our development and scale-up work to produce Mirel through fermentation, we are also at an early stage of developing the technology and processes to produce biobased plastics in plant crops, including switchgrass, sugar cane and oilseed. We are currently focused on the genetic and process engineering required in connection with such programs. Because we will be funding much, or perhaps all, of the development of such programs, there is a risk that we may not be able to continue to fund such programs to completion or to provide the support necessary to distribute, market and sell resulting products, if any, on a worldwide basis. These development programs will consume substantial resources.

To date our efforts to produce biobased plastics in crops have focused primarily on the genetic engineering required to cause the crops to aggregate plastic in the plant mass during the life cycle of the plant. We have not yet achieved a high enough concentration of plastic in commercial crops to make the current technology and process economically feasible at a commercial scale. If we are able to complete the genetic engineering work that leads to such aggregation at acceptable levels, we will also need to perform additional process engineering so that plastic can be recovered from the harvested crops, processed and formulated as required to constitute a marketable product. Such engineering work may not be successful and we may not have the financial resources to fund such work.

In connection with these efforts, we are acquiring know-how and developing technology internally that will be useful in efforts to engineer the crops so that upon completion of the harvest and recovery of biobased plastic, the residual material, or biomass, can be readily converted into energy through, for example, burning the biomass with coal or other conventional fuels or by converting the biomass into a liquid fuel such as ethanol. These development efforts are at a very early stage. The technological challenges associated with these programs are extraordinary and we may not be able to overcome these challenges. We will be required to invest a significant amount over a long period of time to complete such development work, if it can be completed at all.

We cannot predict the costs of producing biobased plastics in plant crops, given the stage of development of this program. The anticipated methods for manufacturing biobased plastics in crops, and for producing chemicals and energy, are highly complex processes in which a variety of difficulties may arise. Given this uncertainty, we may not be able to successfully produce biobased plastics in plant crops in an economical manner.

If ADM does not successfully build the Commercial Manufacturing Facility on time and on budget, our revenues and the distribution of profits, if any, to us will be delayed.

The cost of planning, designing, constructing and operating the Commercial Manufacturing Facility being developed to serve the alliance with ADM, and the cost of ancillary facilities and services related to the production of Mirel by Telles, will be very significant. ADM will be advancing a disproportionate share of the financial capital needed for such activities and, therefore, under our agreement all profits, after payment of all royalties, reimbursements and fees, from Telles will first be distributed to ADM until ADM's disproportionate investment in the joint venture has been returned. Previously, we expected that commercial quantities of Mirel from the Commercial Manufacturing Facility would be available for customers by December 2008. We now expect that commercial quantities of Mirel from the Commercial Manufacturing Facility will be available for customers in the second half of 2009. If there are further difficulties, delays or other unforeseen issues with the construction and start-up of the Commercial Manufacturing Facility, the cost of such activities will almost certainly increase, we may incur unreimbursed sales and marketing costs until commercial sales from the Commercial Manufacturing Facility begin, and the revenue from sales, if any, of Mirel and the distribution of profits, if any, to us will be further delayed.

We may not be able to develop manufacturing capacity sufficient to meet demand in an economical manner or at all.

We cannot assure you that we will have the necessary funds to finance the development of the Commercial Manufacturing Facility or that ADM will pay its share of the costs incurred by Telles, or that we will be able to develop this manufacturing infrastructure in a timely or economical manner, or at all. ADM could experience financial or other setbacks unrelated to our collaboration that could, nevertheless, adversely affect us. If the Commercial Manufacturing Facility is not constructed to its full design capacity of 110 million pounds, or if construction to full capacity is not completed in a timely manner, Mirel may not reach its full market potential, because Telles may not be able to meet market demand for Mirel, and because Mirel manufacturing costs may not be economical. Also, the expansion of a commercial-scale manufacturing facility is complex and expensive. If demand for Mirel increases beyond the scope of the Commercial Manufacturing Facility being built to serve Telles, we may incur significant expenses in the expansion and/or construction of manufacturing facilities and increases in personnel in order to increase manufacturing capacity.

We may not achieve market acceptance of our products.

Telles currently has only limited customer commitments for commercial quantities of Mirel. Market acceptance of Mirel and our future products will depend on numerous factors, many of which are outside of our control, including among others:

- public acceptance of such products;
- ability to produce products that offer functionality comparable or superior to existing or new polymer products;
- our ability to produce products fit for their intended purpose;
- our ability to obtain necessary regulatory approvals for our products;

- the willingness and speed at which potential customers qualify Mirel for use in their products;
- pricing of our products compared to competitive products, including petroleum-based plastics;
- the strategic reaction of companies that market competitive products;
- our reliance on third parties who support or control distribution channels; and
- general market conditions.

Prospective customers are currently evaluating and performing tests on Mirel prior to making any large-scale purchase decisions. We may not be able to successfully demonstrate that our plastics have properties comparable or superior to those of environmentally sustainable competitors or similar to conventional petroleum-based plastics. There can be no assurance that products based on our technologies will be perceived as being comparable or superior to existing products or new products being developed by competing companies or that such products will otherwise be accepted by consumers. The market for our biobased plastics may not be willing to support premium prices to purchase environmentally sustainable plastics. If there is not broad market acceptance of our products, we may not generate significant revenues. Delays in the availability of material for product development, compounding scale-up and marketing activities could delay or slow the ramp-up of commercial sales from the Commercial Manufacturing Facility. If such delays occur, or if we are unable to obtain the anticipated premium pricing for Mirel, there could be a material adverse effect on the timing of the distribution of Telles profits, if any, to us.

We have limited marketing and sales experience and capabilities, which may make the commercialization of our products difficult.

We currently have limited marketing and sales experience and capabilities and virtually no distribution experience or capabilities. We will, in some instances, rely significantly on sales, marketing and distribution arrangements with our collaborative partners and other third parties. Our future revenues will be materially dependent upon the success of the efforts of these third parties and our ability to augment our own resources by identifying and hiring new employees. If we are unable to develop or obtain access to sales and marketing expertise, sales of our products, if any, may be adversely affected.

We rely heavily on ADM and may rely heavily on future collaborative partners.

We entered into a strategic alliance with ADM to commercialize our first technology platform, and we may enter into strategic partnerships with other corporations:

- to provide capital, equipment and facilities,
- to provide expertise in performing certain manufacturing and logistical activities,
- to provide funding for research and development programs, product development programs and commercialization activities,
- to provide access to raw materials, and
- to support or provide sales and marketing services.

The arrangement with ADM is, and arrangements with future collaborative partners may be, critical to our success in manufacturing our products and selling such products profitably. ADM and, we anticipate, our other future collaborative partners, will be permitted by contract to terminate their agreements with us for no reason and on limited notice. We and ADM have the ability to terminate the Commercial Alliance Agreement with 30 days notice if, based upon a change in circumstances beyond the reasonable control of the other party, the projected financial return from the commercial

alliance is deemed by the other party to be either too uncertain or inadequate. We and ADM also have the ability to terminate the Commercial Alliance Agreement with 90 days notice in the case of a breach by the other party. We cannot guarantee that any of these relationships will be entered into, or if entered into, will continue. Failure to make or maintain these arrangements or a delay or failure in a collaborative partner's performance under any such arrangements would have a materially adverse effect on our business and financial condition.

We cannot control our collaborative partners' performance or the resources they devote to our programs. We may not always agree with our partners nor will we have control of our partners' activities on behalf of any alliance. As a result of these disagreements, the performance of our programs may be adversely affected, programs may be delayed or terminated, or we may have to use funds, personnel, equipment, facilities and other resources that we have not budgeted to undertake certain activities on our own. Performance issues, program delay or termination or unbudgeted use of our resources may have a material adverse effect on our business and financial condition.

Disputes may arise between us and a collaborative partner, including possible disputes regarding the ownership of technology and other intellectual property developed during a collaboration or other issues arising out of the collaborative agreements. Such a dispute could delay the program on which we are working or could prevent us from obtaining the right to commercially exploit such developments. It could also result in expensive arbitration or litigation, which may not be resolved in our favor. Our collaborative partners could merge with or be acquired by another company or experience financial or other setbacks unrelated to our collaboration that could, nevertheless, adversely affect us.

Our success will be influenced by the price of petroleum, the primary ingredient in conventional petroleum-based plastics, relative to corn sugar, the primary ingredient in Mirel.

Our success will be influenced by the cost of Mirel relative to petroleum-based plastics. The cost of petroleum-based plastic is in part based on the price of petroleum. Mirel is primarily manufactured using corn sugar, an agricultural feedstock. ADM currently supplies all required agricultural feedstock as part of our strategic alliance. If the price of corn or corn sugar were to dramatically increase or if the price of petroleum decreases, Mirel may be less competitive relative to petroleum-based plastics. While we expect to be able to command a premium price for our environmentally sustainable products, a material decrease in the cost of conventional petroleum-based plastics may require a reduction in the prices of our products for them to remain attractive in the marketplace or reduce the size of our addressable market.

Our future profitability is uncertain, and we have a limited operating history on which you can base your evaluation of our business.

We have had net operating losses since being founded in 1992. At December 31, 2008, our accumulated deficit was approximately \$130 million. Since 1992, we have been engaged solely in research and development and other pre-commercial and early-stage commercial activities. As a part of our strategic alliance, ADM Polymer is constructing the commercial scale Commercial Manufacturing Facility for Mirel. ADM is in the process of re-evaluating construction timing for this project, and we expect that it will require an additional period of time to ramp up production. Until such time, Telles will not have significant revenues from sales of Mirel. Because we have a limited history of commercial operations and we operate in a rapidly evolving industry, we cannot be certain that we will generate sufficient revenue to operate our business and become profitable.

Our product revenue will be dependent on the successful completion of the scale-up and commercialization of Mirel through our strategic alliance with ADM, and other future products through other partnerships or joint ventures, if any, with third parties and separately for our own account. In addition, if we are unable to develop, commercialize and further advance technologies

relating to the production of biobased plastics in crops and other products, or if sales of Mirel or such other products are not significant, we could have significant losses in the future due to ongoing expenses to perform research and product development and our inability to obtain additional research and development funding in connection with such products.

In addition, the amount we spend will impact our ability to become profitable and this will depend, in part, on:

- the progress of our research and development programs for the production of biobased plastics in crops and for other products;
- the cost of building, operating and maintaining manufacturing and research facilities;
- the number of products that we attempt to develop;
- the time and expense required to prosecute, enforce and/or challenge patent and other intellectual property rights;
- how competing technological and market developments affect our proposed products; and
- the cost of obtaining licenses required to use technology owned by others for proprietary products and otherwise.

We may not achieve any or all of these goals and, thus, we cannot provide assurances that we will ever be profitable or achieve significant revenues. If we fail to achieve profitability or significant revenues, the market price of our common stock will likely decrease.

We may need to secure additional funding and may be unable to raise additional capital on favorable terms or at all.

We have consumed substantial amounts of capital since our inception in 1992 for our research and development activities. Although we believe our unrestricted cash, cash equivalents and short-term investments of approximately \$91 million as of December 31, 2008, plus two anticipated payments from the strategic alliance with ADM of approximately \$1.6 million per calendar quarter in the second and third quarters of 2009, will be sufficient to fund our anticipated cash requirements for at least the next 24 months, we may require significant additional financing in the future to fund our operations. We cannot assure you that additional financing will be available on terms acceptable to us, or at all. Until we can generate significant continuing revenues, we expect to satisfy our future cash needs through the use of existing cash resources and through strategic collaborations, governmental research grants, and/or by licensing all or a portion of our programs or technology. We may also seek additional funds through private or public sales of our securities, or debt financings. If funds are not available, we may be required to delay, reduce the scope of, or eliminate one or more of our research or development programs or our commercialization efforts. Further, additional funding may significantly dilute existing stockholders.

If we lose key personnel or are unable to attract and retain necessary talent, we may be unable to develop or commercialize our products under development

We are highly dependent on our key technical and scientific personnel, including Dr. Oliver Peoples, our Chief Scientific Officer. Dr. Peoples possesses unique information related to our research and technology. Dr. Peoples is one of our founders and has led and directed many of our scientific research and development programs. Dr. Peoples has such particular knowledge in the research, development and intellectual property aspects in connection with our technology platforms, that in the case of the loss of his services we may be unable to readily find a suitable replacement with comparable knowledge and experience necessary to further our research and development programs. The loss of key personnel with know-how related to our manufacturing technology may also adversely impact the

achievement of our objectives. Our success depends largely upon the continued service of our management and scientific staff and our ability to attract, retain and motivate highly skilled technical, scientific, management, and marketing and sales personnel. Because of the unique talents and experience of many of our scientific, engineering and technical staff, competition for our personnel is intense. The loss of key personnel or our inability to hire and retain personnel who have required expertise and skills could have a materially adverse affect on our research and development efforts and our business.

We may not be able to obtain rights to intellectual property developed by others using our information and technology, which could limit our ability to compete.

We enter into confidentiality and intellectual property assignment agreements with our employees, consultants, outside scientific collaborators, and other advisors. These agreements generally provide that inventions conceived by that party in the course of rendering services to us will be our exclusive property or that we will have the option to license such rights. We also enter into material transfer agreements with potential customers and vendors, prohibiting the other party from disclosing or filing a patent that discloses certain results of their evaluation of our material. However, these agreements may not be honored and may not effectively assign intellectual property rights to us. Enforcing a claim that a party illegally obtained intellectual property rights is difficult, expensive and time consuming and the outcome is unpredictable. The failure to obtain such rights for Metabolix or to prevent others from obtaining such rights could adversely affect our competitive position.

Intellectual property protection for our products is important and uncertain.

Our commercial success will depend in part on our obtaining and maintaining patent, trade secret and trademark protection of our technologies in the United States and other jurisdictions, as well as successfully enforcing this intellectual property and defending this intellectual property against third-party challenges. We will only be able to protect our technologies from unauthorized use by third parties by keeping them as trade secrets or to the extent that valid and enforceable intellectual property protections, such as patents, cover them. In particular, we place considerable emphasis on obtaining patent protection for significant new technologies, products and processes in the United States and in foreign jurisdictions where we plan to use such technologies. Legal means may afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. Foreign jurisdictions may not afford the same protections as U.S. law, and we cannot ensure that foreign patent applications will have the same scope of the U.S. patents.

Our patent position involves complex legal and factual questions. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. For example:

- we or our licensors might not have been the first to make the inventions covered by each of our pending patent applications and issued patents;
- we or our licensors might not have been the first to file patent applications for these inventions;
- others may independently develop similar or alternative technologies not encompassed by our patents;
- our issued patents and issued patents of our licensors may not provide us with any competitive advantages, or may be challenged and invalidated by third parties; and
- we may not develop additional proprietary technologies that are patentable.

Patents may not be issued for any pending or future pending patent applications owned by or licensed to us, and claims allowed under any issued patent or future issued patent owned or licensed by

us may not be valid or sufficiently broad to protect our technologies. Moreover, we may be unable to protect certain of our intellectual property in the United States or in foreign countries. Any issued patents owned by or licensed to us now or in the future may be challenged, invalidated, or circumvented, and the rights under such patents may not provide us with competitive advantages. In addition, competitors may design around our technology or develop competing technologies. We could incur substantial costs to bring suits in which we may assert our patent rights against others or defend ourselves in suits brought against us. An unfavorable outcome of any such litigation could have a material adverse effect on our business and results of operations.

We also rely on trade secrets to protect our technology and proprietary information, especially where we believe patent protection is not appropriate or obtainable. However, trade secrets are difficult to protect. We vigorously pursue confidentiality agreements and contractual provisions with our collaborators, potential customers, employees, and consultants to protect our trade secrets and proprietary know-how. These agreements may be breached and we may not have adequate remedies for such breach. While we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors or scientific and other advisors, our potential customers, or our strategic partners may unintentionally or willfully disclose our proprietary information to competitors. If we were to enforce a claim that a third party had illegally obtained and was using our trade secrets, our enforcement efforts would be expensive and time consuming, and the outcome would be unpredictable. In addition, courts outside the United States are sometimes unwilling to protect trade secrets. Moreover, if our competitors independently develop equivalent knowledge, methods and know-how, it will be more difficult for us to enforce our rights and our business could be harmed.

If we are not able to defend the patent or trade secret protection position of our technologies, then we will not be able to exclude competitors from developing or marketing competing technologies, and we may not generate enough revenues from product sales to justify the cost of development of our technologies and to achieve or maintain profitability.

We also rely on trademarks to establish a market identity for our products. We currently have seven registered trademarks in the United States and six pending trademark applications filed with the U.S. Patent and Trademark Office in addition to registrations and pending application in foreign jurisdictions. We expect to file additional applications as new trademarks are selected for our products, but because of the costs of filing and prosecuting such applications, there will be many countries in which we will choose not to file applications. To maintain the value of our trademarks, we might have to file lawsuits against third parties to prevent them from using trademarks confusingly similar to or dilutive of our registered or unregistered trademarks. Also, we might not obtain registrations for our pending or future trademark applications, and might have to defend our registered trademark and pending trademark applications from challenge by third parties. Enforcing or defending our registered and unregistered trademarks might result in significant litigation costs and damages, including the inability to continue using certain trademarks. In the event that we are unable to continue using certain trademarks, we may be forced to rebrand our products, which could result in the loss of brand recognition, and could require us to devote resources to advertise and market brands.

A substantial portion of the technology used in our business is owned by or subject to retained rights of third parties.

We have, and expect to have in the future, research and development agreements with academic institutions that retain rights to the developed intellectual property. The academic institutions generally retain ownership rights over the technology for use in non-commercial academic and research fields, including in some cases the right to license the technology to third parties for use in those fields. It is difficult to monitor and enforce such noncommercial academic and research uses, and we cannot predict whether the third party licensees would comply with the use restrictions of these licenses. We could incur substantial expenses to enforce our rights against such licensees. In addition, even though

the rights that academic institutions obtain are generally limited to the noncommercial academic and research fields, they may obtain rights to commercially exploit developed intellectual property in limited instances. Furthermore, under research and development agreements with academic institutions, our rights to intellectual property developed thereunder are not always certain, but instead may be in the form of an option to obtain license rights to such intellectual property. If we fail to exercise our option rights timely and/or we are unable to negotiate a license agreement, the academic institution may offer a license to the developed intellectual property to third parties for commercial purposes. Any such commercial exploitation could adversely affect our competitive position and have a material adverse effect on our business.

The academic institutions also generally have the right to terminate our license in the event that we fail to make required payments or otherwise breach the applicable agreements. The expiration of patents licensed from third parties or the termination of those licenses could have a material adverse effect on our business.

Some of our patents may cover inventions that were conceived or first reduced to practice under, or in connection with, U.S. government contracts or other federal funding agreements. With respect to inventions conceived or first reduced to practice under such federal funding agreements, the U.S. government may retain a nonexclusive, non-transferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the invention throughout the world. In addition, if we fail to comply with our reporting obligations or to adequately exploit the developed intellectual property under these federal funding agreements, the U.S. government may obtain additional rights to the developed intellectual property, including the right to take title to any patents filed by us or to permit others to commercially exploit the intellectual property itself. Furthermore, our ability to exclusively license or assign the intellectual property developed under these federal funding agreements to third parties may be limited or subject to the U.S. government's approval or oversight. These limitations could have a significant impact on the commercial value of the developed intellectual property.

Third parties may claim that we infringe their intellectual property, and we could suffer significant litigation or licensing expense as a result.

Various U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in areas relevant to biobased plastics, chemicals and energy, their compositions, formulations and uses, and processes for their production. Such third parties may claim that we infringe their patents. For example, we are aware of competitors with patents relating to biobased plastics. Such competitors may allege that we infringe these patents. There could also be existing patents of which we are not aware that our technologies may inadvertently infringe. In addition, because patent applications are maintained in secrecy for a period of time after they are filed, there may be currently pending applications, unknown to us, which may later result in issued patents that our technologies may infringe. If third parties assert claims against us alleging that we infringe their patents or other intellectual property rights, we could incur substantial costs and diversion of management resources in defending these claims, and the defense of these claims could have a materially adverse effect on our business. In addition, if third parties assert claims against us and we are unsuccessful in defending against these claims, these third parties may be awarded substantial damages, as well as injunctive or other equitable relief against us, which could effectively block our ability to make, use, sell, distribute, or market our products and services in the United States or abroad. We cannot currently predict whether a third party will assert a claim against us, or pursue infringement litigation against us; nor can we predict the ultimate outcome of any such potential claims or litigation.

In the event that a claim relating to intellectual property is asserted against us, or third parties not affiliated with us hold pending or issued patents that relate to our products or technology, we may seek licenses to such intellectual property or challenge those patents. However, we may be unable to obtain

these licenses on acceptable terms, if at all, and our challenge of the patents may be unsuccessful. Our failure to obtain the necessary licenses or other rights could prevent the sale, manufacture, or distribution of some of our products and, therefore, could have a material adverse effect on our business.

If we are unable to manage our growth effectively, our business could be adversely affected.

While historically we have focused the majority of our efforts on research and development of processes to produce Mirel, we plan to grow by allocating additional resources to developing marketing and sales expertise, entering into additional collaborations with strategic partners, adding personnel with specific technological experience, and developing and commercializing additional products, such as biobased plastics in plant crops and biological production of other chemicals and chemical intermediates from renewable resources. Our ability to grow in this manner will require that we manage a diverse range of relationships and projects, expand our personnel resources and facilities, and broaden our geographic presence. Our inability to do any of these could prevent us from successfully implementing our growth strategy, and our business could be adversely affected.

We believe that sustained growth at a higher rate will place a strain on our management, as well as on our other human resources. To manage this growth, we must continue to attract and retain qualified management, professional, scientific, technical and operating personnel. If we are unable to grow at the required rate, we may be unable to staff and manage projects adequately. This may slow the development process, and result in the commercialization of fewer products or compromise the quality of our work.

We may not be successful in identifying market needs for new technologies and developing new products to meet those needs.

The success of our business model depends on our ability to correctly identify market opportunities for biologically produced plastics, chemicals and energy. We intend to identify new market needs, but we may not always have success in doing so, in part because customers may perceive risks in adopting new materials, like Mirel, for use with existing products and because the markets for new materials and other products are not well-developed.

The materials and manufacturing technologies we research and develop are new and are steadily changing and advancing. The products that are derived from these technologies may not be applicable or compatible with the demands in existing markets. Our existing products and technologies may become uncompetitive or obsolete if our competitors adapt more quickly than we do to new technologies and changes in customers' requirements. Furthermore, we may not be able to identify new opportunities as they arise for our products since future applications of any given product may not be readily determinable, and we cannot reasonably estimate the size of any markets that may develop. If we are not able to successfully develop new products, we may be unable to increase our product revenues.

Our products are made using genetically-engineered systems and may be, or may be perceived as being, harmful to human health or the environment.

Mirel is a new material produced from genetically-engineered microbes and genetically engineered corn used as a feedstock. In the future our products may be produced in genetically-engineered crops. Some countries have adopted regulations prohibiting or limiting the production of genetically-engineered crops and the sale of products made using genetically engineered organisms. Such regulations could harm our business and impair our ability to produce biobased plastics in that manner.

The subject of genetic engineering of crops and other species has received negative publicity and has aroused public debate. Government authorities could, for social or other purposes, prohibit or

regulate the development and use of genetically-engineered organisms or products made from such organisms. Social concerns could adversely affect acceptance of our products.

The manufacture, use, sale and marketing of Mirel is subject to government regulations in the U.S and other countries, including requirements for government approval of food contact applications. The failure to comply with governmental regulations or to obtain government approval for our products could have a material adverse effect on our results of operations and financial condition. Governmental regulation or negative publicity could delay, reduce or eliminate market demand for our products which could have a material adverse effect on our results of operations and financial condition.

We face and will face substantial competition in several different markets that may adversely affect our results of operations.

The plastics, chemicals and energy that we have developed or plan to develop will compete with other technologically innovative products as well as conventional petroleum-based plastics, chemicals and energy. We face and will face substantial competition from a variety of companies in the biodegradable, renewable resource-based plastic segment, within which there are three distinct technologies: PHA, PLA and starch-based biodegradables. While some of our competitors' existing products that are produced from renewable feedstocks do not have the range of properties that Mirel offers, such products are, nonetheless, suitable for use in a range of products at a price which may be lower than our premium priced product offerings. Our competitors include, but are not limited to, Kaneka and Tianan in the PHA plastic segment, NatureWorks, Mitsui Chemical, Toyota, Novamont, and Stanelco in PLA and starch-based biodegradables, as well as all of the producers of petroleum-based plastics.

Many of our competitors have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, sales and marketing, manufacturing, distribution, technical and other resources than we do. These competitors may be able to adapt more quickly to new or emerging technologies and changes in customer requirements. In addition, current and potential competitors have established or may establish financial or strategic relationships among themselves or with existing or potential customers or other third parties. Accordingly, new competitors or alliances among competitors could emerge and rapidly acquire significant market share. We cannot assure you that we will be able to compete successfully against current or new competitors.

We are subject to significant foreign and domestic government regulations, including environmental and health and safety regulations, and compliance or failure to comply with these regulations could harm our business.

Our current and planned activities involve the use of a broad range of materials that are, or may be, considered hazardous under applicable laws and regulations. Accordingly, we and ADM are subject to a number of foreign, federal, state, and local laws and regulations relating to protection of the environment, the storage, use, disposal of, and exposure to, hazardous materials and wastes, and health and safety, including Food and Drug Administration regulations related to food contact materials. Compliance with these laws and regulations could be costly and could delay or even preclude commercialization of our products for certain applications. There can be no assurance that we will be able to meet the necessary regulatory requirements for commercialization of Mirel for any or all food contact applications in a timely manner or at an acceptable cost.

If we were to violate or become liable under environmental, health and safety laws, we could incur costs, fines and civil and criminal penalties, personal injury and third party property damage claims, or could be required to incur substantial investigation or remediation costs. Moreover, a failure to comply with environmental laws could result in fines and the revocation of environmental permits, which could prevent us, or our strategic partners, from conducting business. Liability under environmental laws can

be joint and several and without regard to fault. There can be no assurance that violations of environmental health and safety laws will not occur in the future as a result of the inability to obtain permits, human error, equipment failure or other causes. Environmental laws could become more stringent over time, imposing greater compliance costs and increasing risks and penalties associated with violations, which could harm our business. Accordingly, violations of present and future environmental laws could restrict our ability to expand facilities, pursue certain technologies, and could require us to acquire costly equipment, or to incur potentially significant costs to comply with environmental regulations.

Compliance with foreign, federal, state and local environmental laws and regulations represents a small part of our present budget. If we fail to comply with any such laws or regulations, however, a government entity may levy a fine on us or require us to take costly measures to ensure compliance. Any such fine or expenditure may adversely affect our business activities, financial condition, or results of operations. We cannot predict the extent to which future legislation and regulation could cause us to incur additional operating expenses, capital expenditures, or restrictions and delays in the development of our products and properties.

We may not have adequate insurance and may have substantial exposure to payment of product liability claims.

The testing, manufacture, marketing, and sale of our products and products sold by our licensees may involve product liability risks. Although we currently have product liability insurance covering claims up to \$4 million per occurrence and in the aggregate, we may not be able to maintain this product liability insurance at an acceptable cost, if at all. In addition, this insurance may not provide adequate coverage against potential losses. If claims or losses exceed our liability insurance coverage, we may go out of business.

Potential future acquisitions could be difficult to integrate, divert the attention of key personnel, disrupt our business, dilute stockholder value and impair our financial results.

As part of our business strategy, we may consider acquisitions of companies, technologies and assets that we believe are a strategic fit with our business. Acquisitions involve numerous risks, any of which could harm our business, including:

- difficulties in integrating the operations, technologies, existing contracts, accounting and personnel of the target company and realizing the anticipated benefits of the combined businesses;
- diversion of financial and management resources from existing operations;
- the price we pay or other resources that we devote may exceed the value we realize, or the value we could have realized if we had allocated the purchase price or other resources to another opportunity;
- potential loss of key employees, collaborators and strategic alliances from either our current business or the acquired company's business;
- assumption of unanticipated problems or latent liabilities; and
- inability to generate sufficient revenue to offset acquisition costs.

Acquisitions also frequently result in the recording of goodwill and other intangible assets which are subject to potential impairments in the future that could harm our financial results. In addition, if we finance acquisitions by issuing convertible debt or equity securities, our existing stockholders may be diluted, which could lower the market price of our common stock. As a result, if we fail to properly evaluate acquisitions or investments, we may not achieve the anticipated benefits of any such

acquisitions, and we may incur costs in excess of what we anticipate. The failure to successfully evaluate and execute acquisitions or investments or otherwise adequately address these risks could materially harm our business and financial results.

Each segment of our operations is currently conducted at a single location, which makes us susceptible to disasters or other disruptions.

Our pre-commercial manufacturing recovery operations are currently conducted at a single location in Fort Mill, South Carolina. As part of our joint venture with ADM, ADM is constructing the Commercial Manufacturing Facility at a single location in Clinton, Iowa, where Telles will initially conduct all of its commercial manufacturing operations. Our research and development operations are located at a single facility in Cambridge, Massachusetts. We take precautions to safeguard our facilities, including insurance, health and safety protocols, and off-site storage of critical research results and of computer data. However, a natural disaster, such as a fire, flood or earthquake, or a disruption due to mechanical failure, human error, business failure of a contractor, or vandalism, could damage or destroy our equipment, inventory, our microbial strains, plants or other biological materials, or result in the loss of data from our information technology systems. This could delay our research and development programs and could cause us to incur additional expenses. The insurance we maintain against fires, floods, earthquakes and other natural disasters may not be adequate to cover our losses in any particular case.

Risks Relating to Owning Our Common Stock

An active trading market for our common stock may not be available on a consistent basis to provide stockholders with adequate liquidity. Our stock price may be extremely volatile, and our stockholders could lose a significant part of their investment.

Prior to November 10, 2006, there was no public market for our common stock. An active trading market for shares of our common stock may not be sustained on a consistent basis. The public trading price for our common stock will be affected by a number of factors, including:

- reported progress of our business and technology development, including construction of the Commercial Manufacturing Facility, relative to investor expectations;
- changes in earnings estimates, investors' perceptions, recommendations by securities analysts or our failure to achieve analysts' earning estimates;
- quarterly variations in our or our competitors' results of operations;
- general market conditions and other factors unrelated to our operating performance or the operating performance of our competitors;
- future sales of our common stock;
- future issuance and/or sale of preferred stock;
- announcements by us, or our competitors, of acquisitions, new products, significant contracts, commercial relationships or capital commitments;
- commencement of, or involvement in, litigation;
- any major change in our board of directors or management;
- changes in governmental regulations or in the status of our regulatory approvals;
- announcements related to patents issued to us or our competitors and to litigation involving our intellectual property;

- a lack of, limited, or negative industry or security analyst coverage;
- developments in our industry and general economic conditions; and
- the other factors described elsewhere in these "Risk Factors."

As a result of these factors, our stockholders may not be able to resell their shares at, or above, their purchase price. In addition, the stock prices of many technology companies have experienced wide fluctuations that have often been unrelated to the operating performance of those companies. The valuations of many biotechnology companies without consistent product revenues and earnings are extraordinarily high based on conventional valuation standards, such as price to earnings and price to sales ratios. These trading prices and valuations may not be sustained. Any negative change in the public's perception of the prospects of biotechnology companies could depress our stock price regardless of our results of operations. These factors may have a materially adverse affect on the market price of our common stock.

Our financial results may vary significantly from period to period which may reduce our stock price.

Our financial results may fluctuate as a result of a number of factors, many of which are outside of our control, which may cause the market price of our common stock to fall. For these reasons, comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on our past results as an indication of our future performance. Our financial results may be negatively affected by any of the risk factors listed in this "Risk Factors" section and, in particular, the following risks:

- failure to estimate or control contract costs;
- adverse judgments or settlements in legal disputes;
- expenses related to acquisitions, mergers or joint ventures;
- other one-time financial charges;
- fluctuations due to revenue recognition under strategic alliance agreements (See "Management's Discussion and Analysis of Financial Condition and Results of Operations");
- fluctuations due to the effects of inflation;
- failure to produce commercialized products or to find customers for these products; and
- that some of our programs are supported by government funding, which is unpredictable.

Provisions in our certificate of incorporation and by-laws and Delaware law might discourage, delay or prevent a change of control of our company or changes in our management and, therefore, depress the trading price of our common stock.

Provisions of our certificate of incorporation and by-laws and Delaware law may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which our stockholders might otherwise receive a premium for their shares of our common stock. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions include:

- limitations on the removal of directors;
- a classified board of directors so that not all members of our board are elected at one time;
- advance notice requirements for stockholder proposals and nominations;
- the inability of stockholders to act by written consent or to call special meetings;

- the ability of our board of directors to make, alter or repeal our by-laws;
- a supermajority stockholder vote requirement for amending certain provisions of our amended and restated certificate of incorporation and bylaws; and
- the ability of our board of directors to designate the terms of and issue new series of preferred stock without stockholder approval.

The affirmative vote of the holders of at least 75% of our shares of capital stock entitled to vote is necessary to amend or repeal the above provisions of our certificate of incorporation. In addition, absent approval of our board of directors, our by-laws may only be amended or repealed by the affirmative vote of the holders of at least 75% of our shares of capital stock entitled to vote.

In addition, Section 203 of the Delaware General Corporation Law prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

The existence of the foregoing provisions and anti-takeover measures could limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our company, thereby reducing the likelihood that our stockholders could receive a premium for their common stock in an acquisition.

We do not currently intend to pay dividends on our common stock and, consequently, our stockholders' ability to achieve a return on their investment will depend on appreciation in the price of our common stock.

We have never declared or paid any cash dividends on our common stock and do not currently intend to do so for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. Therefore, our stockholders are not likely to receive any dividends on their common stock for the foreseeable future.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable

ITEM 2. PROPERTIES

We do not own any real property. We currently lease approximately 28,000 square feet of office and research and development space at 21 Erie Street, Cambridge, Massachusetts. Our lease for this facility expires in 2014, with the option to renew for two additional five year periods. During the fiscal year 2008, we leased approximately 5,200 square feet of additional office space at One Kendall Square, Cambridge, Massachusetts and relocated the majority of our general and administrative employees to this location. Our lease for this facility expires in 2010. We also lease approximately 13,700 square feet of office and laboratory space in Lowell, Massachusetts, which serves as the headquarters of Telles, our joint venture with ADM. Our lease for this facility expires in 2012.

We have entered into an agreement with Nation Ford Chemical, or NFC, to act as a contract manufacturer and to operate a recovery facility for pre-commercial manufacturing in Fort Mill, South Carolina. We deliver raw materials to NFC for manufacturing and processing of Mirel, which is stored and then shipped at our instruction. The agreement extends until terminated by either party upon not less than three months prior written notice. This plant is a model for the larger extraction assets to be employed at the Commercial Manufacturing Facility and the current processes, technology and systems will be replicated at a larger scale at the Commercial Manufacturing Facility.

ITEM 3. LEGAL PROCEEDINGS

From time to time, we may be subject to legal proceedings and claims in the ordinary course of business. We are not currently aware of any such proceedings or claims that we believe will have, individually or in the aggregate, a material adverse effect on the business, financial condition or the results of operations.

ITEM 4. SUBMISSION FOR MATTERS TO A VOTE OF SECURITY HOLDERS

None

PART II**ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES****Market Information**

Our common stock has been traded on the NASDAQ Global Market under the symbol "MBLX" since November 10, 2006. The following table sets forth, for the period indicated, the high and low sales prices for our common stock, as reported by the NASDAQ Global Market, for the periods indicated below:

	Common Stock Price			
	2008		2007	
	High	Low	High	Low
First Quarter	\$24.50	\$9.61	\$20.00	\$15.25
Second Quarter	13.26	9.80	29.37	16.40
Third Quarter	13.88	8.05	27.94	19.76
Fourth Quarter	12.84	5.33	29.76	17.93

The close price of our common stock, as reported by the NASDAQ Global Market, was \$6.18 on March 6, 2009.

Stockholders

As of March 6, 2009, there were 22,975,349 shares of our common stock outstanding held by 91 stockholders of record.

Dividends

We have never declared or paid any cash dividends on our capital stock and do not expect to pay any cash dividends for the foreseeable future. We intend to use future earnings, if any, in the operation and expansion of our business. Any future determination relating to our dividend policy will be made at the discretion of our board of directors, based on our financial condition, results of operations, contractual restrictions, capital requirements, business properties, restrictions imposed by applicable law and other factors our board of directors may deem relevant.

Equity Compensation Plan Information

Please see Part III, Item 12, for information regarding securities authorized for issuance under our equity compensation plans.

Unregistered Sales of Securities

None.

Issuer Purchases of Equity Securities

During the quarter ended December 31, 2008, there were no repurchases made by us or on our behalf, or by any "affiliated purchasers," of shares of our common stock.

ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

The selected condensed consolidated statement of operations data for the years ended December 31, 2008, 2007, and 2006 and balance sheet data as of December 31, 2008 and 2007 have been derived from our consolidated financial statements and related notes, which are included elsewhere in this report, and have been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as indicated in their report. The selected condensed consolidated statement of operations data for the years ended December 31, 2005 and 2004 and the balance sheet data as of December 31, 2006, 2005 and 2004 have been derived from our audited financial statements that are not included in this report. The selected financial data set forth below should be read in conjunction with our financial statements, the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this report. The historical results are not necessarily indicative of the results to be expected for any future period.

	Year ended December 31,				
	2008	2007	2006	2005	2004
	(In thousands, except share and per share data)				
Statement of operations data:					
Total Revenue	\$ 1,555	\$ 1,683	\$ 4,590(2)	\$ 2,781	\$ 3,678
Operating expenses:					
Research and development expenses, including costs of revenue	24,667	19,901	11,235	5,980	5,426
General and administrative expenses	15,780	15,598	10,879	3,825	3,252
Total operating expenses	40,447	35,499	22,114	9,805	8,678
Loss from operations	(38,892)	(33,816)	(17,524)	(7,024)	(5,000)
Interest income and (expense) net	2,887	5,941	1,462	99	(55)
Loss on investment in related parties		—	—	(700)(1)	—
Net loss(3)	<u>\$ (36,005)</u>	<u>\$ (27,875)</u>	<u>\$ (16,062)</u>	<u>\$ (7,625)</u>	<u>\$ (5,055)</u>
Net loss per share Basic and Diluted	\$ (1.58)	\$ (1.27)	\$ (2.96)	\$ (2.56)	\$ (1.68)
Number of shares used in per share calculations Basic and Diluted	22,839,913	21,997,397	5,432,586	2,975,116	3,009,137

- (1) At December 31, 2005 we determined that the fair value of our preferred stock investment in Tepha, Inc. was impaired and recorded an asset impairment charge to our entire investment in Tepha, Inc.
- (2) In 2006, we recognized \$2,500 of deferred revenue associated with the termination of our joint development arrangement with BP America Production Company.
- (3) Due to the adoption of SFAS 123R on January 1, 2006 the Company changed the manner in which it accounts for share-based compensation. The years ended 2005 and 2004 do not reflect share-based compensation expense.

	Year ended December 31,				
	2008	2007	2006	2005	2004
	(In thousands)				
Balance Sheet Information:					
Cash, cash equivalents and short-term investments	\$ 91,096	\$109,326	\$122,080	\$ 3,174	\$ 4,455
Total assets	96,946	119,004	127,596	7,325	7,510
Long-term obligations	805	963	1,120	1,280	1,440
Long-term deferred revenue	32,440	24,180	13,667	5,621	3,000
Total liabilities	37,855	29,802	18,008	9,874	7,246
Redeemable convertible preferred stock	—	—	—	44,009	39,235
Accumulated deficit	(130,117)	(94,112)	(66,237)	(50,175)	(42,549)
Total stockholder's equity (deficit)	59,091	89,202	109,588	(46,558)	(38,971)

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

The following discussion and analysis should be read in conjunction with the Consolidated Financial Statements and Notes thereto included in this Annual Report on Form 10-K.

All dollar amounts are stated in thousands.

Overview

We are a bioscience company that develops and is in the process of commercializing environmentally sustainable, economically attractive alternatives to petroleum-based plastics, with work underway to do the same with chemicals and energy. Our corporate strategy is to develop technology platforms that integrate advanced biotechnology with current industrial practice and to commercialize these platforms with industry leading strategic partners.

Our first platform, which we are commercializing through Telles, a joint venture with Archer Daniels Midland Company, or ADM, is a proprietary, large-scale microbial fermentation system for producing a versatile family of polymers known as polyhydroxyalkanoates, which we have branded under the name Mirel™. Through Telles, we intend to sell these bioplastics as environmentally friendly, but functionally equivalent, alternatives to petroleum-based plastics. In addition, this family of polymers offers superior biodegradability characteristics and can be used in a wide range of commercial applications, including products used in agriculture and horticulture, compost and organic waste diversion bags, marine and aquatic applications, consumer products, business equipment and durable goods, and general packaging materials. Mirel will be produced in a commercial scale plant designed for a 110 million pound annual capacity, or the Commercial Manufacturing Facility, which is presently under construction by ADM in Clinton, Iowa. The plant is expected to begin production in the second half of 2009. The Commercial Manufacturing Facility will produce biobased, sustainable and biodegradable Mirel plastic out of corn sugar, an abundant agriculturally-produced renewable resource. We are currently producing pre-commercial quantities of Mirel jointly with ADM at a small scale pre-commercial manufacturing facility.

Our second technology platform, which is in an early stage, is a biomass biorefinery system using plant crops to co-produce both bioplastics and bioenergy. For this system, we intend to extract polymer from the engineered plant crop, so that the remaining plant material can be used as a biomass feedstock for the production of bioenergy products including electricity and biofuel. We are engineering switchgrass to produce bioplastics in the leaf and stem of the plant. We have also collaborated with the Australian Cooperative Research Centre to do the same in sugarcane, and in 2008 we established a strategic research collaboration with the Donald Danforth Plant Science Center to develop an advanced

industrial oilseed crop for co-production of bioplastics along with vegetable oil, biodiesel fuel, or oleochemicals. Switchgrass is a commercially and ecologically attractive, non-food energy crop that is indigenous to North America and is generally considered to be a leading candidate for cellulose-derived production of ethanol and other biofuels. Sugarcane is an established energy crop that is well suited for tropical regions of the world. We believe that using these crops to co-produce bioplastics with bioenergy products can offer superior economic value and productivity as compared to single product systems that produce them individually. We have been working on our biomass biorefinery platform using switchgrass for several years, and we believe that we are a scientific leader in this field. Our goal for this program is to have commercially viable plant varieties in pre-commercial field trials in two to three years. We may also seek to establish alliances with partners to commercially exploit this platform.

As demonstrated by our first two technology platforms, we take an integrated systems approach to our technology development. We are focused on developing entire production systems from gene to end product as opposed to developing specific technologies (for example, gene sequencing, shuffling or directed evolution) or singular aspects of a product's production (for example, providing a key enzyme, catalyst or ingredient). We believe this systems approach optimizes manufacturing productivity and, when commercialized, will enable us to capture more economic value from any platform that we pursue. We have core capabilities in microbial genetics, fermentation process engineering, chemical engineering, polymer science, plant genetics and botanical science, and we have assembled these capabilities in a way that has allowed us to integrate biotechnology with chemical engineering and industrial practice. We believe that our approach can be applied to chemicals and other products to help establish and grow environmentally sustainable plastics, chemicals and energy industries.

For our third platform we intend to apply our core capabilities in microbial engineering and plant transformation to develop biological routes to other chemicals and chemical intermediates. In September 2007, the U.S. Department of Commerce's National Institute of Standards and Technology approved a \$2 million award for us to develop a commercially viable process for producing biobased chemicals from renewable agricultural products. This award will contribute to our integrated bio-engineered chemicals program, which is developing sustainable solutions for widely used industrial chemicals. Specifically, this award is being utilized in the development of the four-carbon ("C4") family of chemical products.

To exploit our first technology platform, we are working with ADM as they build a Commercial Manufacturing Facility in Clinton, Iowa. The biodegradable bioplastics that this facility will produce are highly versatile and range in properties from hard and strong to soft and flexible. These properties allow for a wide variety of commercial applications, offering an environmentally-friendly alternative to petroleum-derived synthetic materials which are not biodegradable. Through Telles we intend to position Mirel as a premium priced specialty material catering to customers who want to match the functionality of petroleum-based plastic, but add the dimension of environmental responsibility to their products and brands.

With ADM, we have initiated product and business development activities including production of pre-commercial amounts of Mirel, worked with potential customers, and initiated qualification trials of our material for selected customer applications and establishment of commercial supply agreements with several customers through Telles. We expect that our products will initially be sold to companies that are:

- establishing themselves as leaders of the emerging market trend toward environmentally responsible products and services;
- addressing current or anticipated regulatory pressure to shift to more sustainable industry; and/or
- selling products where biodegradability is a key functional requirement.

We have a current pipeline of prospective customers that reflect each of these traits.

Since our inception in 1992, we have focused on the research of our platform technologies, the acquisition of patents to enhance these platforms, product development, and pre-commercial manufacturing of Mirel. Commercialization of Mirel will require significant additional expenditures in several areas, including research and development, product development, and sales and marketing organization development. We expect that research and development expenses for product development activities will increase during the construction period of the ADM agreement as we continue to develop, test and refine products to meet specification requirements of our customers. Upon the commencement of the commercial phase of the agreement research and development expenses related to product development are expected to decrease as many of these costs will be transferred to Telles. We expect that our personnel related costs will increase to support our microbial and plant research programs.

We have generated revenues primarily from government grants, research and development payments, license fees, and royalty payments. We have funded our operations primarily through the sale of equity securities, government grants, and payments from our collaborative partners.

We have incurred significant losses since our inception. As of December 31, 2008, our accumulated deficit from inception to date was \$130,117 and total stockholders' equity was \$59,091. We recognized net losses of \$36,005, \$27,875 and \$16,062 in 2008, 2007, and 2006, respectively.

Collaborative Arrangements

ADM Commercial Alliance Agreement

In 2004, we entered into the Technology Alliance and Option Agreement with ADM Polymer Corporation, or ADM Polymer, a subsidiary of ADM. The goal of the Technology Alliance and Option Agreement was to demonstrate the capabilities of our fermentation and recovery technologies at commercial scale and to prepare a master plan and budget for the construction of a commercial facility with a 110 million pound annual capacity. Upon achievement of such goals, ADM Polymer had the option to enter into a commercial alliance, by execution of the Commercial Alliance Agreement, for further research, development, manufacture, use, and sale of bioplastics. In July 2006, ADM Polymer exercised its option under our Technology Alliance and Option Agreement and entered into a Commercial Alliance Agreement with us. Upon entering into the Commercial Alliance Agreement, the Technology Alliance and Option Agreement terminated pursuant to its terms. The Commercial Alliance Agreement calls for Telles to pay us twelve quarterly support payments of \$1,575 each during the period of construction of the Commercial Manufacturing Facility, along with reimbursements for pre-commercial manufacturing facility expansion and material production expenses. The last of the twelve quarterly support payments was received in December 2008. In January 2009 Telles agreed to provide us with two additional quarterly payments of \$1,575 which are payable on the first business day of each of the second and third quarters of calendar 2009. As of December 31, 2008, all quarterly support payments received from ADM on behalf of Telles, totaling \$18,900, have been recorded as deferred revenue on our balance sheet and we will continue to defer recognition of these and future payments received from ADM during the construction phase of our agreement. We expect to begin recognizing revenue at the time of the First Commercial Sale of Mirel (as defined in the Commercial Alliance Agreement) and all amounts will be recognized on a straight line basis over the estimated period, of approximately ten years, in which our obligations are fulfilled in accordance with the terms of the Commercial Alliance Agreement. We also expect to receive payments from Telles for the compounding services we provide as well as royalty payments. The compounding payments and royalty payments are due to us after Telles has sold the product to the end customer and we expect to recognize these payments in the period they have been earned.

We received the following payments from this arrangement since inception with ADM to offset operating cash needs:

- upfront payment of \$3,000 from ADM in November 2004;
- milestone payment of \$2,000 from ADM in May 2006;
- quarterly support payments totaling \$18,900 from ADM, on behalf of Telles, through December 31, 2008;
- cumulative cost sharing payments from ADM for pre-commercial manufacturing plant construction and operations of \$8,540 through December 31, 2008.

During the commercial alliance, ADM will construct, finance, own and operate the Commercial Manufacturing Facility through a manufacturing agreement with Telles and we will provide or procure compounding services to convert the output from the Commercial Manufacturing Facility into forms that are suitable for various commercial applications.

Even though Telles is a separate legal entity owned equally by us and ADM, ADM will disproportionately fund the activities of the joint venture. Specifically, the cost of the Commercial Manufacturing Facility, the working capital requirements of the joint venture and the support payments to us will exceed the investments made by us to establish compounding operations for the joint venture. In order to rebalance the respective investments made by the parties, a preferential distribution of cash flow will be used, whereby all profits, after payment of all royalties, reimbursements and fees, from the joint venture, will be distributed to ADM until ADM's disproportionate investment in the joint venture, and the costs of constructing the Commercial Manufacturing Facility, have been returned to ADM. Once ADM has recouped such amounts, the profits of the joint venture will be distributed in equal amounts to the parties. In order to track the disproportionate investments ADM has made, a Ledger Account has been established to record the respective investments made by the parties. As of December 31, 2008 the balance of the ADM Ledger Account was \$280,517 and this balance is expected to increase as the construction of the Commercial Manufacturing Facility progresses and Telles becomes operational.

BP America Production Company

On February 14, 2005, we signed a joint development agreement with BP America Production Company ("BP") to advance our technology for producing PHA polymers in plants and to conduct an evaluation of the potential for using PHA producing plants in a biomass to energy system. In exchange for our completing certain research and development activities, the agreement provided for BP to pay us \$500 at the start of each calendar quarter during the term of the agreement with the first two such payments due within five days of the effective date of the agreement. We received \$2,000 in 2005 related to this agreement. Because these amounts would be applicable for determining BP's equity participation in a potential future joint venture between the parties, these amounts were recorded as deferred revenue at December 31, 2005.

In January 2006, we received notice of termination from BP with respect to the joint development agreement and as a result, there were no longer any continuing obligations from either party. During the year ended December 31, 2006, we recognized \$2,500 in research and development revenue from the BP arrangement, consisting of the \$2,000 of deferred revenue and the \$500 final payment due under the arrangement, which was received in June 2006.

United States Government Contracts and Grants

As of December 31, 2008, expected gross proceeds of \$1,400 remain to be received under our government contracts and grants, which include amounts for reimbursement to our subcontractors, as

well as reimbursement for our employees' time and benefits and other expenses related to performance under the contracts.

The status of our United States government contracts and grants is as follows:

<u>Program Title</u>	<u>Funding Agency</u>	<u>Total Government Funds</u>	<u>Total received through December 31, 2008</u>	<u>Remaining amount available as of December 31, 2008</u>	<u>Contract/Grant Expiration</u>
PHA Bioplastic					
Packing Materials	SERDP(1)	\$ 1,005	\$ 785	\$ 220	Feb. 2009
Integrated					
Bio-Engineered Chemicals	Department of Commerce	2,000	820	1,180	Sept. 2009
Total		\$ 3,005	\$ 1,605	\$ 1,400	

(1) Strategic Environmental Research and Development Program

Critical Accounting Estimates and Judgments

Our consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses, and related disclosures. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates.

We believe that of our significant accounting policies, which are described in Note 2 to our consolidated financial statements, the accounting policies described below involve a greater degree of judgment and complexity. Accordingly, we believe that the accounting policies described below are the most critical to aid in fully understanding and evaluating our consolidated financial condition and results of operations.

In the first quarter of 2008, due to an extended construction period and revised estimated completion date of the Commercial Manufacturing Facility, we determined we would extend the period of use of our pre-commercial manufacturing plant by six months to June 2009 from December 2008. In connection with this, the useful lives of the leasehold improvements connected to the pre-commercial manufacturing plant were increased by six months. This change in accounting estimate was adopted prospectively. The effect of the change in estimate on the financial statements for the year ended December 31, 2008 is a decrease in loss from operations and net loss of \$1,413 and a decrease in loss per share of \$0.06.

Revenue Recognition

We recognize revenue under government research grants when the related expense is incurred and we have obtained governmental approval to use the grant funds for agreed upon budgeted expenses.

For revenue received under our arrangements with ADM and BP, we recognize revenue in accordance with the Staff Accounting Bulletin ("SAB") 104, *Revenue Recognition*, and Emerging Issues Task Force ("EITF") Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables*.

Our arrangement with ADM contains multiple elements including obligations for us to provide future compounding services, sales and marketing services, and certain research and development activities, amongst others. We have determined that these elements cannot be separated and accounted for individually as separate units of accounting. Therefore payments received from ADM have been

classified as deferred revenue at the respective balance sheet dates and will begin to be recognized at the First Commercial Sale of Mirel, as defined in the agreement. All amounts will be recognized on a straight line basis over the estimated period, of approximately ten years, in which our obligations are fulfilled in accordance with the term of the Commercial Alliance Agreement. We also expect to receive payments from Telles for the compounding services we provide as well as royalty payments. The compounding payments and royalty payments are due to us after Telles has sold the product to the end customer and we expect to recognize these payments in the period they have been earned.

Under our joint development arrangement with BP, we received \$2,000 in 2005 and \$500 in 2006. Due to these amounts being applicable to future elements of the arrangement, the amounts received during 2005 were recorded as deferred revenue at December 31, 2005. We recognized the revenue for these amounts during the first quarter of 2006 upon the termination notice from BP in January 2006, as we were released from any future obligations under this agreement.

Fees to license the use of the Company's proprietary and licensed technologies are recognized only after both the license period has commenced and the technology has been delivered to the customer. Royalty revenue is recognized when it becomes determinable and collectibility is reasonably assured, otherwise the Company recognizes revenue upon receipt of payment.

Stock-Based Compensation

We recognize stock-based compensation in accordance with *Statement of Financial Accounting Standards ("SFAS") No. 123-revised, Share-Based Payment ("SFAS 123(R))*, which revises SFAS No. 123, *Accounting for Stock-Based Compensation ("SFAS 123")* and supersedes Accounting Principles Board ("APB") Opinion No. 25, *Accounting for Stock Issued to Employees ("APB 25")*. SFAS 123(R) requires that all employee-related stock-based compensation be recognized as an expense in the consolidated financial statements and that such expense be measured at the fair value of the award.

Determining the appropriate fair value model and calculating the fair value of stock-based payment awards requires the use of highly subjective assumptions, including the expected life of the stock-based payment awards and stock price volatility. We use the Black-Scholes option-pricing model to value our option grants and determine the related compensation expense. The assumptions used in calculating the fair value of stock-based awards represent management's best estimates, but the estimates involve inherent uncertainties and the application of management judgment. As a result, if factors change, and we use different assumptions, our stock-based compensation expense could be materially different in the future. See Note 11 to the consolidated financial statements for further discussion on the key assumptions used to determine the fair values of option grants pursuant to the Black-Scholes option pricing model.

We account for stock compensation arrangements with non-employees in accordance with EITF No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*, using a fair value approach. For stock options granted to non-employees, the fair value of the stock options is estimated using the Black-Scholes valuation model. Stock-based compensation expense is recognized over the period of expected service by the non-employee. As the service is performed, we are required to update these assumptions and periodically revalue unvested options and make adjustments to the stock-based compensation expense using the new valuation. These adjustments may result in additional or lesser stock-based compensation expense than originally estimated or recorded, with a corresponding increase or decrease in compensation expense in the statement of operations. Ultimately, the final compensation charge for each option grant to non-employees is unknown until those options have vested or services have been completed.

Results of Operations**Comparison of the Years Ended December 31, 2008 and 2007****Revenue**

	Year ended December 31,		Change
	2008	2007	
Research and development revenue	\$ 229	\$ 147	\$ 82
License fee and royalty	—	500	(500)
License fee and royalty revenue from related parties	120	157	(37)
Grant revenue	1,206	879	327
Total revenue	\$ 1,555	\$ 1,683	\$ (128)

Total revenue was \$1,555 for the year ended December 31, 2008 as compared to \$1,683 for the year ended December 31, 2007. The increase in research and development revenue to \$229 from \$147 was primarily due to an increase in pre-commercial sales of sample product as Mirel market development activities progress. During the year ended December 31, 2007 we recognized license fee revenue of \$500 as a result of a one-time license issuance fee. The increase in grant revenue is primarily attributable to an increase in activity relating to the Department of Commerce and Strategic Environmental Research Development Program grants. This increase was partially offset by the completion of our grant from the Department of Energy during the second quarter of 2007.

We expect revenues from government grants to fluctuate due to the availability of funding from the government.

Expense

	Year ended December 31,		Change
	2008	2007	
Research and development expenses, including cost of revenue	\$24,667	\$19,901	\$4,766
Selling, general, and administrative expenses	15,780	15,598	182
Total operating expense	\$40,447	\$35,499	\$4,948

Research and development expenses

Research and development expenses were \$24,667 and \$19,901 for the years ended December 31, 2008 and 2007, respectively. The increase of \$4,766 was primarily due to increased activity related to product development activities associated with developing new product grades and formulations for prospective Mirel customers, and increased personnel to support our microbial and plant research programs. Research and development payroll and benefits related expenses, including stock-based compensation, increased by \$2,245 for the year ended December 31, 2008 to \$9,445 compared to \$7,200 for the year ended December 31, 2007. Depreciation expense increased by \$1,681 to \$2,858 for the year ended December 31, 2008 as compared to \$1,177 for the year ended December 31, 2007. The increase in depreciation is primarily attributable to leasehold improvements in our pre-commercial manufacturing facility which were placed in service during December of 2007. In addition, we purchased depreciable equipment during 2008 to support our microbial and plant science programs.

We expect to incur increasing research and development expenses through the construction period of the ADM agreement for pre-commercial manufacturing and product development activities as we

continue to develop, test, and refine product to meet the specification requirements of our customers. Upon commencement of the commercial phase of the agreement expenses relating to product development are expected to decrease as these expenses will be transferred to Telles. We expect our personnel costs will increase to support our microbial and plant research programs.

Selling, general, and administrative expenses

Selling, general, and administrative expenses were \$15,780 and \$15,598 for the years ended December 31, 2008 and 2007, respectively. The increase of \$182 was primarily due to the expansion of our facilities, growth in administrative structure to support the growth of the company and increased sales and marketing activities to prepare for the commercialization of Mirel.

We expect that selling, general, and administrative expenses will increase through the construction period of the ADM agreement due to increasing payroll and expanding infrastructure to support sales and marketing efforts for commercializing Mirel. Upon the commencement of the commercial phase of the agreement, selling, general, and administrative expenses are expected to decrease as the cost of sales and marketing efforts will be transferred to Telles.

Other Income (Net)

	Year ended December 31,		Change
	2008	2007	
Total other income (net)	\$2,887	\$5,941	\$(3,054)

Other income (net) consists of investment income and was \$2,887 and \$5,941 for the years ended December 31, 2008 and 2007, respectively. The decrease of \$3,054 during the year ending December 31, 2008 was due to a market decline in investment yields during the period, our decision to convert a majority of our investment portfolio to lower risk/lower yield U.S. Federal Treasury Notes and government-backed Federal Agency Notes and a decrease in our average cash and short-term investments held during the comparative period.

Results of Operations

Comparison of the Years Ended December 31, 2007 and 2006

Revenue

	Year ended December 31,		Change
	2007	2006	
Research and development revenue	\$ 147	\$ 2,505	\$ (2,358)
License fee and royalty	500	—	500
License fee and royalty revenue from related parties	157	257	(100)
Grant revenue	879	1,828	(949)
Total revenue	\$ 1,683	\$ 4,590	\$ (2,907)

Total revenues were \$1,683 for the year ended December 31, 2007 as compared to \$4,590 for the year ended December 31, 2006. The primary reason for the decrease in research and development revenue in 2007 was the recognition of \$2,500 of deferred revenue, in fiscal year 2006, associated with the termination of the Company's joint development arrangement with BP. During 2007 the Company received \$500 in license fee revenue from entering a new licensing agreement in the fourth quarter of 2007. The decrease in license fee and royalty revenue from related parties was due to the receipt of the

final license payment due from one of our license agreements with a related party during the first half of 2006. The decrease in grant revenue was attributable to the completion of a US Department of Agriculture program in the first quarter of 2006 and the completion of the Department of Energy program in the second quarter of 2007.

Expense

	Year ended December 31,		Change
	2007	2006	
Research and development expenses, including cost of revenue	\$19,901	\$11,235	\$ 8,666
Selling, general, and administrative expenses	15,598	10,879	4,719
Total operating expense	<u>\$35,499</u>	<u>\$22,114</u>	<u>\$13,385</u>

Research and development expenses

Research and development expenses were \$19,901 and \$11,235 for the years ended December 31, 2007 and 2006, respectively. The increase of \$8,666 was primarily due to the expansion of product development activities associated with developing new product grades and formulations for prospective customers, increased pre-commercial manufacturing of Mirel to support market development activities, and increases in research and development personnel for polymer science and engineering to support our collaborative agreement with ADM. Employee payroll and benefits related expenses, including stock-based compensation, for the year ended December 31, 2007 was \$7,200 as compared to \$3,997 during the respective period in 2006. The expenses related to pre-commercial manufacturing increased to \$6,599 during the year ended December 31, 2007 as compared to \$3,522 during the respective period in 2006.

Selling, general, and administrative expenses

Selling, general, and administrative expenses were \$15,598 and \$10,879 for the years ended December 31, 2007 and 2006, respectively. The increase of \$4,719 was primarily due to increased costs associated with being a public company and an increase in sales and marketing costs as we built our sales and marketing infrastructure for the commercialization of Mirel. Employee payroll and benefits related expenses, including stock-based compensation, increased to \$8,679 during the year ended December 31, 2007 as compared to \$6,645 for the respective period in 2006. Professional fees and consulting related fees increased to \$3,835 during the year ended December 31, 2007 as compared to \$2,703 for the respective period in 2006. These increases were primarily attributable to accounting services relating to compliance with additional regulatory requirements of being a public company. Expenses related to facilities increased to \$1,038 during the year ended December 31, 2007 as compared to \$259 for 2006. This increase is primarily the result of the expansion of our facilities to support our sales and marketing functions.

Other Income (Net)

	Year ended December 31,		Change
	2007	2006	
Total other income (net)	<u>\$5,941</u>	<u>\$1,462</u>	<u>\$4,479</u>

Other income (net) consists of investment income and was \$5,941 and \$1,462 for the years ended December 31, 2007 and 2006, respectively. The increase of \$4,479 was due to an increase in the cash and short-term investments held during the full year 2007 as compared with 2006. The increase in cash and short-term investments was primarily a result of the completion of our initial public offering in November 2006.

Liquidity and Capital Resources

Currently, we require cash to fund our working capital needs, to purchase capital assets and to pay our operating lease obligations.

We fund our cash requirements primarily through the following methods:

- our strategic alliance with ADM;
- government grants;
- equity financing, including proceeds from our initial public offering on November 15, 2006 of our common stock registered under a Registration Statement on Form S-1 (File No. 333-135760) at an offering price of \$14.00 per share; and
- interest earned on cash and short-term investments.

Currently our products are in the pre-commercial stage of development and large-scale commercial sales have not begun. In addition, we have incurred significant expenses relating to our research and development efforts. As a result, we have incurred net losses since our inception. As of December 31, 2008, we had an accumulated deficit of \$130,117. Our total unrestricted cash, cash equivalents and short-term investments as of December 31, 2008 were \$91,096 as compared to \$109,326 at December 31, 2007. As of December 31, 2008, we had no outstanding debt.

Our cash and cash equivalents at December 31, 2008 were held for working capital purposes. We do not enter into investments for trading or speculative purposes. The primary objective of our investment activities is to preserve our capital. As of December 31, 2008 we had restricted cash of \$593. Restricted cash consists of \$493 held in connection with the lease agreement for our Erie Street facility in Cambridge, Massachusetts and \$100 held in connection with our corporate credit card program. Short-term investments are made in accordance with our corporate investment policy, as approved by our Board of Directors. Investments are limited to high quality corporate debt, U.S. Treasury bills and notes, bank debt obligations, municipal debt obligations and asset-backed securities. The policy establishes maturity limits, concentration limits, and liquidity requirements. At December 31, 2008, we were in compliance with this policy.

We believe that our cash, cash equivalents and short-term securities, the interest we earn on these balances, as well as cash expected from our alliance with ADM will be sufficient to meet our anticipated cash requirements, including cash requirements with respect to the commercial launch of Mirel, for at least the next 24 months. If our available cash, cash equivalents, and short-term marketable securities are insufficient to satisfy our liquidity requirements, or if we develop additional products, we may need to sell additional equity or debt securities or obtain a credit facility. The sale of additional equity and debt securities may result in additional dilution to our stockholders. If we raise additional funds through the issuance of debt securities or preferred stock, these securities could have rights senior to those of our common stock and could contain covenants that would restrict our operations. We may require additional capital beyond our currently forecasted amounts. Any such required additional capital may not be available on reasonable terms, if at all. If we are unable to obtain additional financing, we may be required to reduce the scope of, delay or eliminate some or all of our planned research, development and commercialization activities, which could harm our business.

Net cash used in operating activities was \$18,392 during the year ended December 31, 2008, compared to net cash used in operating activities of \$10,900 and \$3,603 in 2007 and 2006, respectively. The cash used during 2008 primarily reflects the net loss for the period offset by an increase in deferred revenue of \$9,389, and non-cash charges including stock-based compensation expense of \$4,439, depreciation expense of \$3,731, and a company 401(k) matching contribution of \$400. The increase in deferred revenue was due to an increase in pre-commercial material production expenses

that are subject to our cost sharing collaborative arrangement with ADM and quarterly support payments from ADM, made on behalf of Telles.

Net cash of \$21,089 was provided by investing activities during the year ended December 31, 2008, compared to net cash of \$5,804 provided during 2007 and net cash of \$97,076 used during 2006. Net cash provided by investing activities, during the year ended December 31, 2008, included net proceeds of \$21,978 from maturities and sales of short-term investments which represent a transfer of funds from short-term investments to cash and cash equivalents for working capital needs, partially offset by \$794 used for the acquisition of property and equipment. Property and equipment purchases for the year ended December 31, 2008 mainly consisted of equipment for research and development purposes. Net cash flows from investing activities may fluctuate from period to period due to the timing of capital expenditures and investment activity.

Net cash of \$811 was provided by financing activities during the year ended December 31, 2008, compared to \$2,600 and \$124,026 provided by financing activities during the years ended December 31, 2007 and 2006, respectively. The cash provided by financing activities for the year ended December 31, 2008 and 2007 was solely attributable to the proceeds received from the exercise of stock options and warrants. During the year ended December 31, 2006 net cash provided by financing activities included \$16,819 from the issuance of redeemable convertible preferred stock and warrants, \$407 from the proceeds of the exercise of stock options and warrants, and \$106,863 in proceeds from our initial public offering.

Off-Balance Sheet Arrangement

As of December 31, 2008, we had no off-balance sheet arrangements as defined in Item 303(a) (4) of the Securities and Exchange Commission's Regulation S-K.

Contractual Obligations

The following table summarizes our contractual obligations at December 31, 2008:

	Payments Due by Period				
	Total	Less than 1 year	2-3 years	4-5 years	More than 5 years
Operating lease obligations	\$6,148	\$1,365	\$2,392	\$2,062	\$329
Purchase obligations	469	224	170	50	25
Total	<u>\$6,617</u>	<u>\$1,589</u>	<u>\$2,562</u>	<u>\$2,112</u>	<u>\$354</u>

Our lease obligations relate to current office and laboratory space. The lease related to our primary facility in Cambridge Massachusetts will expire in May 2014. We have the option to extend this lease for two additional five-year periods at then current market rates.

On March 30, 2007 we entered into a rental agreement to lease additional office and laboratory space in Lowell, Massachusetts. The term of the lease commenced on June 18, 2007 and will expire five years from the start date. We have the option to extend this lease for an addition five-year period at then current market rates.

On April 30, 2008 we entered into a rental agreement to sublease additional office space in Cambridge, Massachusetts. The term of the sublease commenced on May 1, 2008 and will expire February 28, 2010.

Related Party Transactions

We entered into a sublicense agreement in 1999 with Tephra, Inc. ("Tephra"), a related party, to sublicense certain technology to Tephra. The sublicense contains provisions for us to receive sublicense maintenance fees, milestone payments and royalties on sublicense product and sublicensing revenues received by Tephra.

We routinely undertake transactions with ADM in connection with our collaborative Commercial Alliance Agreement for the development and commercialization of Mirel. ADM and we have established Telles, a joint venture company owned equally by us, to undertake this commercialization effort.

The Company has also retained Dr. ChoKyun Rha, a related party, to serve as an advisor for the purpose of building and managing business relationships in Asia. In consideration for Dr. Rha's services, we have granted to Dr. Rha a nonqualified stock option for the purchase of 16,346 shares of our common stock.

See Note 8 to our consolidated financial statements for a full description of our related party transactions.

Effects of Inflation

Our assets are primarily monetary, consisting of cash, cash equivalents and short-term investments. Because of their liquidity, these assets are not directly affected by inflation. Since we intend to retain and continue to use our equipment, furniture and fixtures and leasehold improvements, we believe that the incremental inflation related to replacement costs of such items will not materially affect our operations. However, the rate of inflation affects our expenses, such as those for employee compensation, which could increase our level of expenses and the rate at which we consume our financial resources.

Recent Accounting Pronouncements

In December 2007, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") No. 141(R), *Business Combinations* ("SFAS 141(R)"), which replaces SFAS No. 141. This revised standard requires assets, liabilities and non-controlling interests acquired to be measured at fair value and requires that costs incurred to effect the acquisition be recognized separately from the business combination. In addition, this statement expands the scope to include all transactions and other events in which one entity obtains control over one or more businesses. This statement is effective for all business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. SFAS No. 141 will be applied prospectively to business combinations with acquisition dates on or after January 1, 2009. Adoption is not expected to materially impact our consolidated financial position or results of operations directly when it becomes effective. Adoption of this statement is, however, expected to have a significant effect on how acquisition transactions subsequent to January 1, 2009 are reflected in the financial statements.

In December 2007, the FASB issued SFAS 160, *Noncontrolling Interests in Consolidated Financial Statements* ("SFAS 160"). SFAS 160 amends Accounting Research Bulletin 51 to establish accounting and reporting standards for the noncontrolling (minority) interest in a subsidiary and for the deconsolidation of a subsidiary. It clarifies that a noncontrolling interest in a subsidiary is an ownership interest in the consolidated entity that should be reported as equity in the consolidated financial statements. SFAS 160 is effective for our fiscal year beginning January 1, 2009. Adoption of this statement is not expected to have a material impact on our consolidated financial position, results of

operations or cash flows when it becomes effective, but may affect the accounting for non-controlling (or minority) interests from that date forward.

In December 2007, the Emerging Issues Task Force ("EITF") reached a consensus on EITF Issue 07-01, *Accounting for Collaborative Arrangements Related to the Development and Commercialization of Intellectual Property* ("EITF 07-01"). EITF 07-01 prescribes the accounting for collaborations. It requires certain transactions between collaborators to be recorded in the income statement on either a gross or net basis when certain characteristics exist in the collaboration relationship. EITF 07-01 is effective for all of our collaborations existing after January 1, 2009. We are in the process of evaluating whether the adoption of this standard will have a material effect on our financial position, results of operations or cash flows.

In May 2008, the FASB issued SFAS No. 162, *The Hierarchy of Generally Accepted Principles* ("SFAS 162"). SFAS 162 identifies the sources of accounting principles and the framework for selecting the principles used in the preparation of financial statements of nongovernmental entities that are presented in conformity with the GAAP hierarchy. SFAS 162 will become effective 60 days following the SEC's approval of the Public Company Accounting Oversight Board amendments to AU 411, *the Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles*. The adoption of SFAS 162 did not have a material effect on our financial position, results of operations or cash flows.

In June 2008, the FASB issued FSP EITF 03-6-1, *Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities* ("FSP EITF 03-6-1"). FSP EITF 03-6-1 addresses whether instruments granted in share-based payment transactions are participating securities prior to vesting and, therefore, need to be included in the earnings allocation in computing earnings per share under the two-class method as described in SFAS No. 128, *Earnings per Share*. Under the guidance in FSP EITF 03-6-1, unvested share-based payment awards that contain non-forfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and shall be included in the computation of earnings per share pursuant to the two-class method. FSP EITF 03-6-1 is effective for financial statements issued in fiscal years beginning after December 15, 2008, and interim periods within those years. All prior-period earnings per share data presented shall be adjusted retrospectively. Early application is not permitted. The adoption of FSP EITF 03-6-1 did not have a material effect on our financial position, results of operations or cash flows.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

Our exposure to market risk is confined to our cash, cash equivalents and marketable securities. The unrestricted cash and cash equivalents and marketable securities are held for working capital purposes. Our primary investment objective is capital preservation, with a secondary objective of generating income on such capital. We do not enter into investments for trading or speculative purposes.

Interest Rate Risk.

We invest in high-quality financial instruments, primarily money market funds, federal agency notes, U.S. treasury notes, investment-grade commercial paper, and corporate debt securities. All of our interest-bearing securities are subject to interest rate risk and could decline in value if interest rates fluctuate. Because of the short-term maturities of our cash equivalents and marketable securities, we do not believe that an increase in market rates would have any significant impact on the realized value of our marketable securities. However, in a declining interest rate environment, as short term investments mature, reinvestment occurs at less favorable interest rates. Given the short term nature of our investments, anticipated declining interest rates would negatively impact our investment income. Exposure to market rate risk for changes in interest rates relates to our cash, cash equivalents and investment in marketable securities, totaling \$91,689 at December 31, 2008. Based on a hypothetical

10% adverse movement in interest rates, the potential annual losses in future earnings and cash flows are estimated to be \$289.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The consolidated financial statements and related financial statement schedules required to be filed are indexed on page F-1 and are incorporated herein.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Effectiveness of Disclosure Controls and Procedures

As of the end of the period covered by this Annual Report on Form 10-K, under the supervision of our Chief Executive Officer and our Chief Financial Officer, we evaluated the effectiveness of our disclosure controls and procedures, as such term is defined in Rule 13a-15(e) and Rule 15d-15(e) under the Exchange Act. Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that as of December 31, 2008 our disclosure controls and procedures are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act (1) is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms, and (2) is accumulated and communicated to our management, including our Chief Executive Officer and our Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Our disclosure controls and procedures include components of our internal control over financial reporting. Management's assessment of the effectiveness of our internal control over financial reporting is expressed at the level of reasonable assurance because a control system, no matter how well designed and operated, can provide only reasonable, but not absolute, assurance that the control system's objectives will be met.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act. Our 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. Our 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 our assets; (ii) provide reasonable assurance that transactions are recorded to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. 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.

Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2008. In making this assessment, management used the criteria set forth in *Internal*

Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Based on its assessment of internal control over financial reporting, management has concluded that, as of December 31, 2008, our internal control over financial reporting was effective 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.

The effectiveness of our internal control over financial reporting as of December 31, 2008 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) of the Exchange Act that occurred during our last fiscal quarter in the period covered by this Annual Report on Form 10-K that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

Pursuant to General Instructions G to Form 10-K, the information required for Part III, Items 10, 11, 12, 13 and 14, is incorporated herein by reference from the Company's proxy statement for the Annual Meeting of Stockholders to be held on May 28, 2009 which is expected to be filed not later than 120 days after the fiscal year end covered by this Form 10-K.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this Report:

(1) **Financial Statements**

See Index to Financial Statements on page F-1.

(2) **Supplemental Schedules**

All schedules have been omitted because the required information is not present in amounts sufficient to require submission of the schedule, or because the required information is included in the consolidated financial statements or notes thereto.

(3) **Exhibits**

See Item 15(b) below.

(b) The following exhibits are filed as part of, or incorporated by reference into, this annual report on Form 10-K:

<u>Exhibit Number</u>	<u>Description</u>
3.1(1)	Amended and Restated Certificate of Incorporation of the Registrant
3.3(1)	Amended and Restated By-laws of the Registrant
4.1(1)	Specimen Stock Certificate for shares of the Registrant's Common Stock
10.1†(1)	1995 Stock Plan
10.1.1†(1)	1995 Stock Plan, Form of Incentive Stock Option Agreement
10.1.2†(1)	1995 Stock Plan, Form of Non-Qualified Stock Option Agreement
10.2†(1)	2005 Stock Plan
10.2.1†(1)	2005 Stock Plan, Form of Incentive Stock Option Agreement
10.2.2†(1)	2005 Stock Plan, Form of Non-Qualified Stock Option Agreement
10.3†(1)	2006 Stock Option and Incentive Plan
10.3.1†(1)	2006 Stock Option and Incentive Plan, Form of Incentive Stock Option Agreement
10.3.2†(1)	2006 Stock Option and Incentive Plan, Form of Non-Qualified Stock Option Agreement
10.3.3†(1)	2006 Stock Option and Incentive Plan, Form of Director Non-Qualified Stock Option Agreement
10.4#(1)	License Agreement between the Registrant and Massachusetts Institute of Technology dated July 15, 1993, as amended

Exhibit Number	Description
10.5#(1)	Commercial Alliance Agreement by and among the Registrant, ADM/Metabolix Sales Company, LLC and ADM Polymer Corporation dated July 14, 2006
10.6#(1)	Operating Agreement of ADM/Metabolix Sales Company, LLC by and between the Registrant and ADM Polymer Corporation dated July 14, 2006
10.7(1)	Letter Agreement by and between the Registrant and Archer Daniels Midland Company dated November 3, 2004
10.8#(1)	Technology Alliance and Option Agreement by and between the Registrant and ADM Polymer Corporation dated as of November 4, 2004
10.9#(1)	First Amendment to Technology Alliance and Option Agreement by and between the Registrant and ADM Polymer Corporation dated as of September 8, 2005
10.10†(6)	Employment Agreement between the Registrant and Richard P. Eno dated February 20, 2008
10.10.1†*	First Amendment to Employment Agreement between the Registrant and Richard P. Eno executed December 18, 2008
10.11†(1)	Employment Agreement between the Registrant and Oliver P. Peoples dated July 20, 2006
10.11.1†*	First Amendment to Employment Agreement between the Registrant and Oliver P. Peoples executed December 19, 2008
10.11.2†*	Second Amendment to Employment Agreement between the Registrant and Oliver P. Peoples executed February 25, 2009
10.12†(7)	Employment Agreement between the Registrant and Joseph D. Hill executed March 21, 2008
10.12.1†*	First Amendment to Employment Agreement between the Registrant and Joseph D. Hill executed December 23, 2008
10.13†*	Change of Control Severance Agreement between the Registrant and Sarah P. Cecil executed December 18, 2008
10.14†*	Employment Agreement between the Registrant and Robert E. Engle executed December 19, 2008
10.15†(1)	Form of Employee Noncompetition, Nondisclosure and Inventions Agreement with Oliver P. Peoples
10.16†(1)	Form of Noncompetition, Nondisclosure and Inventions Agreement between the Registrant Richard P. Eno, Joseph D. Hill, Robert E. Engle and Sarah P. Cecil
10.17†(1)	Form of Indemnification Agreement between the Registrant and its Directors and Officers
10.18(1)	Lease Agreement between the Registrant and 21 Erie Realty Trust dated as of December 29, 2003 for the premises located at 21 Erie Street, Cambridge, Massachusetts 02139
10.19(3)	Lease between Fortune Wakefield, LLC ("Landlord") and Metabolix, Inc. dated March 30, 2007
10.20(1)	Fifth Amended and Restated Stockholders Agreement by and among the Registrant and certain of its stockholders dated January 19, 2006

Exhibit Number	Description
10.21(1)	Amendment No. 1 to Fifth Amended and Restated Stockholders Agreement by and among the Registrant and certain of its stockholders dated July 12, 2006
10.22(1)	Stock Purchase Agreement between the Registrant and Archer Daniels Midland Company dated July 12, 2006
10.23#(1)	License Agreement between the Registrant and Tephra, Inc. dated as of October 1, 1999
10.24#(1)	License Agreement between the Registrant and Tephra, Inc. dated as of September 9, 2003
10.25(6)#	Exclusive License Agreement between the Registrant and Abbott Laboratories dated November 12, 2007
21.1(2)	Subsidiaries of the Registrant
23.1*	Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm
24.1	Power of Attorney (incorporated by reference to the signature page of this Annual Report on Form 10-K)
31.1*	Certification Pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934
31.2*	Certification Pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934
32.1*	Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

† Indicates a management contract or any compensatory plan, contract or arrangement.

Confidential treatment has been granted for certain portions of this document pursuant to a Commission order. Such provisions have been filed separately with the Commission.

* Filed herewith

- (1) Incorporated by reference herein to the exhibits to the Company's Registration Statement on Form S-1 (File No. 333-135760)
- (2) Incorporated by reference herein to the exhibits to the Company's 2006 Annual Report on Form 10-K (File No. 001-33133)
- (3) Incorporated by reference herein to the exhibits to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2007 (File No. 001-33133)
- (4) Incorporated by reference herein to the exhibits to the Company's Report on Form 8-K/A filed June 19, 2007 (File No. 001-33133)
- (5) Incorporated by reference herein to the exhibits to the Company's Report on Form 8-K/A filed May 22, 2007 (File No. 001-33133)
- (6) Incorporated by reference herein to the exhibits to the Company's 2007 Annual Report on Form 10-K filed March 13, 2008 (File No. 001-33133)
- (7) Incorporated by reference herein to the exhibits to the Company's Report on Form 8-K filed March 24, 2008 (File No. 001-33133)

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ EDWARD M. MULLER</u> Edward M. Muller	Director	March 12, 2009
<u>/s/ OLIVER P. PEOPLES</u> Oliver P. Peoples	Director	March 12, 2009
<u>/s/ ANTHONY J. SINSKEY</u> Anthony J. Sinskey, Sc.D.	Director	March 12, 2009
<u>/s/ MATTHEW STROBECK</u> Matthew Strobeck	Director	March 12, 2009
<u>/s/ ROBERT L. VAN NOSTRAND</u> Robert L. Van Nostrand	Director	March 12, 2009

METABOLIX, INC.

Index to Consolidated Financial Statements

	<u>Page</u>
Report of Independent Registered Public Accounting Firm	F-2
Consolidated Balance Sheets as of December 31, 2008 and 2007	F-3
Consolidated Statements of Operations for the Years Ended December 31, 2008, 2007, and 2006	F-4
Consolidated Statements of Cash Flows for the Years Ended December 31, 2008, 2007, and 2006	F-5
Consolidated Statements of Changes in Stockholders' Equity (Deficit) and Comprehensive Loss for the Years Ended December 31, 2008, 2007, and 2006	F-6
Notes to Consolidated Financial Statements	F-7

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Metabolix, Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, of stockholders' equity (deficit) and comprehensive loss, and of cash flows present fairly, in all material respects, the financial position of Metabolix, Inc. and its subsidiary at December 31, 2008 and 2007, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2008 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2008, 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, 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 and on the Company's internal control over financial reporting based on our audits (which were integrated audits in 2008 and 2007). 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.

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for uncertain tax positions effective January 1, 2007.

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

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

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
March 12, 2009

METABOLIX, INC.

CONSOLIDATED BALANCE SHEETS

(In thousands, except share and per share amounts)

	December 31, 2008	December 31, 2007
Assets		
Current Assets:		
Cash and cash equivalents	\$ 26,194	\$ 22,686
Short-term investments	64,902	86,640
Accounts receivable	159	133
Due from related parties	—	1,216
Unbilled receivables	56	198
Prepaid expenses and other current assets	530	673
Total current assets	91,841	111,546
Restricted cash	593	498
Property and equipment, net	4,388	6,890
Other assets	124	70
Total assets	\$ 96,946	\$ 119,004
Liabilities and Stockholders' Equity		
Current Liabilities:		
Accounts payable	\$ 858	\$ 299
Accrued expenses	3,587	4,195
Current portion of deferred rent	165	165
Total current liabilities	4,610	4,659
Deferred rent	717	883
Long-term deferred revenue	32,440	24,180
Other long-term liabilities	88	80
Total liabilities	37,855	29,802
Commitments and contingencies (Note 7)		
Stockholders' Equity:		
Preferred stock (\$0.01 par value per share); 5,000,000 shares authorized; no shares issued or outstanding	—	—
Common stock (\$0.01 par value per share); 100,000,000 shares authorized at December 31, 2008 and 2007, 22,962,628 and 22,576,111 shares issued and outstanding at December 31, 2008 and 2007, respectively	230	226
Additional paid-in capital	188,532	182,852
Accumulated other comprehensive income	446	236
Accumulated deficit	(130,117)	(94,112)
Total stockholders' equity	59,091	89,202
Total liabilities and stockholders' equity	\$ 96,946	\$ 119,004

The accompanying notes are an integral part of these consolidated financial statements.

METABOLIX, INC.**CONSOLIDATED STATEMENTS OF OPERATIONS****(In thousands, except share and per share amounts)**

	Years Ended December 31,		
	2008	2007	2006
Revenue:			
Research and development revenue	\$ 229	\$ 147	\$ 2,505
License fee and royalty revenue	—	500	—
License fee and royalty revenue from related parties	120	157	257
Grant revenue	1,206	879	1,828
Total revenue	1,555	1,683	4,590
Operating expense:			
Research and development expenses, including cost of revenue	24,667	19,901	11,235
Selling, general, and administrative expenses	15,780	15,598	10,879
Total operating expenses	40,447	35,499	22,114
Loss from operations	(38,892)	(33,816)	(17,524)
Other income:			
Interest income, net	2,887	5,941	1,462
Net loss	\$ (36,005)	\$ (27,875)	\$ (16,062)
Net loss per share:			
Basic and Diluted	\$ (1.58)	\$ (1.27)	\$ (2.96)
Number of shares used in per share calculations:			
Basic and Diluted	22,839,913	21,997,397	5,432,586

The accompanying notes are an integral part of these consolidated financial statements.

METABOLIX, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Year Ended December 31,		
	2008	2007	2006
Cash flows from operating activities			
Net loss	\$ (36,005)	\$ (27,875)	\$ (16,062)
Adjustments to reconcile net loss to cash used in operating activities:			
Depreciation and amortization	3,731	1,451	964
Charge for 401(k) company common stock match	400	276	—
Stock-based compensation	4,439	4,559	3,505
Changes in operating assets and liabilities:			
Accounts receivable	(26)	(75)	30
Unbilled receivable	142	(108)	282
Due from related parties	122	(111)	(7)
Prepaid expenses and other assets	89	(67)	(529)
Accounts payable	516	(1,305)	304
Accrued expenses	(1,031)	2,652	479
Deferred rent and other long-term liabilities	(158)	(166)	(165)
Deferred revenue	9,389	9,869	7,596
Net cash used in operating activities	(18,392)	(10,900)	(3,603)
Cash flows from investing activities			
Purchase of property and equipment	(794)	(4,662)	(1,544)
Change in restricted cash	(95)	—	(2)
Purchase of short-term investments	(132,826)	(190,862)	(118,486)
Proceeds from sale and maturity of short-term investments	154,804	201,328	22,956
Net cash provided by (used) in investing activities	21,089	5,804	(97,076)
Cash flows from financing activities			
Principal payments for capitalized lease obligations	—	—	(63)
Proceeds from issuance of redeemable convertible preferred stock and warrants, net of issuance cost	—	—	16,819
Proceeds from options exercised	811	2,459	91
Proceeds from warrants exercised	—	141	316
Proceeds from initial public offering net of issuance costs	—	—	106,863
Net cash provided by financing activities	811	2,600	124,026
Net increase (decrease) in cash and cash equivalents	3,508	(2,496)	23,347
Cash and cash equivalents at beginning of period	22,686	25,182	1,835
Cash and cash equivalents at end of period	\$ 26,194	\$ 22,686	\$ 25,182
Supplemental disclosure of noncash activities			
Conversion of advances from investors to preferred stock	—	—	(613)
Conversion of preferred stock to common stock	—	—	61,443
Cash paid for interest	—	—	5

The accompanying notes are an integral part of these consolidated financial statements.

METABOLIX, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT) AND COMPREHENSIVE LOSS
(In thousands, except share amounts)

	Common Stock		Treasury Stock		Additional Paid-In Capital	Deferred Compensation	Accumulated other		Stockholder's Equity (Deficit)	Total Comprehensive Loss
	Shares	Par Value	Shares	Amount			Comprehensive Income	Accumulated Deficit		
Balance, December 31, 2005	1,812,828	\$ 18	10,624	\$ (35)	\$ 3,634	\$ —	\$ —	\$ (50,175)	\$ (46,558)	
Exercise of common stock warrants	383,586	4			312				316	
Exercise of common stock options	40,867	1			90				91	
Non-cash stock-based compensation expense					3,717	(212)			3,505	
Treasury stock restored to authorized but unissued	(10,624)	—	(10,624)	35	(35)				—	
Conversion of redeemable convertible preferred stock into common stock upon initial public offering	9,992,041	100			61,343				61,443	
Issuance of common stock upon initial public offering, net of offering costs of \$10,153	8,355,714	83			106,742				106,825	
Change in unrealized gain on investments							28		28	28
Net loss								(16,062)	(16,062)	(16,062)
Balance, December 31, 2006	<u>20,574,412</u>	<u>206</u>	<u>—</u>	<u>—</u>	<u>175,803</u>	<u>(212)</u>	<u>28</u>	<u>(66,237)</u>	<u>109,588</u>	
2006 Comprehensive loss										\$ (16,034)
Exercise of common stock warrants	975,479	10			131				141	
Exercise of common stock options	1,021,354	10			2,449				2,459	
Non-cash stock-based compensation expense					4,347	212			4,559	
Issuance of common stock for 401k match	4,866	—			122				122	
Change in unrealized gain on investments							208		208	208
Net loss								(27,875)	(27,875)	(27,875)
Balance, December 31, 2007	<u>22,576,111</u>	<u>226</u>	<u>—</u>	<u>—</u>	<u>182,852</u>	<u>—</u>	<u>236</u>	<u>(94,112)</u>	<u>89,202</u>	
2007 Comprehensive loss										\$ (27,667)
Exercise of common stock warrants	10,146	—			—				—	
Exercise of common stock options	343,837	3			808				811	
Non-cash stock-based compensation expense					4,439				4,439	
Issuance of common stock for 401k match	32,534	1			433				434	
Change in unrealized gain on investments							210		210	210
Net loss								(36,005)	(36,005)	(36,005)
Balance, December 31, 2008	<u>22,962,628</u>	<u>\$ 230</u>	<u>—</u>	<u>\$ —</u>	<u>\$ 188,532</u>	<u>\$ —</u>	<u>\$ 446</u>	<u>\$ (130,117)</u>	<u>\$ 59,091</u>	
2008 Comprehensive loss										\$ (35,795)

The accompanying notes are an integral part of these consolidated financial statements.

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(In thousands, except for share and per share amounts)

1. Nature of Business

Metabolix, Inc. (the "Company") uses advanced biotechnology to develop environmentally sustainable, economically attractive alternatives to petrochemical-based plastics, energy and chemicals. The Company is a leader in applying the advanced tools of metabolic engineering and molecular biology to efficiently produce biobased plastic in microbial systems and directly in non-food plant crops. The Company is commercializing its first product, Mirel™ bioplastic, through Telles, the Company's joint venture with Archer Daniels Midland Company ("ADM"). The Company is subject to risks common to companies in the biotechnology industry including, but not limited to, development by the Company's competitors of new technological innovations, dependence on key personnel, protection of proprietary technology, the need to obtain additional funding, and compliance with government regulations.

2. Summary of Significant Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, Metabolix Securities Corp. All significant intercompany transactions were eliminated.

Use of Estimates

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

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with an original maturity date of ninety days or less at the date of purchase to be cash equivalents.

Short-Term Investments

The Company considers all highly liquid investments with a maturity date of one year or less at the balance sheet date to be short-term investments. At December 31, 2008 short-term investments consisted of U.S. Treasury securities, debt securities of the U.S. government and corporate debt. Short-term investments consisted of corporate debt and asset backed securities at December 31, 2007. All short-term investments were classified as available for sale as of December 31, 2008 and 2007. See Note 4 for further discussion on short-term investments.

Restricted Cash

The Company had restricted cash in the amount of \$593 and \$498 at December 31, 2008 and 2007, respectively. Restricted cash as of December 31, 2008 consisted of a certificate of deposit supporting a letter of credit, in the amount of \$493, held in connection with one of the Company's leased facilities and \$100 held in accordance with the Company's corporate credit card program. Restricted cash as of December 31, 2007 consisted of the letter of credit, of \$498, in connection with the leased facility.

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

2. Summary of Significant Accounting Policies (Continued)

Comprehensive Income (Loss)

Statement of Financial Accounting Standards No. 130, *Reporting Comprehensive Income* ("SFAS No. 130"), requires that changes in comprehensive income be shown in the financial statements with the same prominence as other financial statements. Comprehensive income (loss) is comprised of net income (loss) and certain changes in stockholder's equity that are excluded from net income (loss). The Company includes unrealized gains and losses on marketable securities in other comprehensive income (loss).

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk primarily consist of cash and cash equivalents and short-term investments. The Company primarily invests its excess cash and cash equivalents in money market funds, federal agency notes, U.S. treasury notes, investment-grade commercial paper, and corporate debt securities.

Fair Value Measurements

The carrying amounts of the Company's financial instruments as of December 31, 2008 and 2007, which include cash equivalents, accounts receivable, unbilled receivables, accounts payable, and accrued expenses, approximate their fair values due to the short-term nature of these instruments.

The Company adopted the provisions of Financial Accounting Standards Board ("FASB") Statement of Financial Accounting Standard ("SFAS") No. 157, *Fair Value Measurements* ("SFAS 157") on January 1, 2008. As permitted by FASB Staff Position ("FSP") No. SFAS 157-2, *Effective Date of FASB Statement No. 157* ("FSP SFAS 157-2"), the Company elected to defer the adoption of SFAS 157 for all nonfinancial assets and nonfinancial liabilities, except those that are recognized or disclosed at fair value in the financial statements on a recurring basis, until January 1, 2009. SFAS 157 establishes a framework for measuring fair value and expands financial statement disclosures about fair value measurements. There was no cumulative effect of adoption related to SFAS 157 and the adoption did not have an impact on the Company's financial position, results of operations, or cash flows. The Company is studying SFAS 157 with respect to nonfinancial assets and nonfinancial liabilities falling under the scope of FSP SFAS 157-2 and has not yet determined the expected impact on the financial position, results of operations, or cash flows. FSP No. 157-3 clarifies the application of SFAS No. 157 as it relates to the valuation of financial assets in a market that is not active for those financial assets. This FSP is effective immediately and includes those periods for which financial statements have not been issued. As of December 31, 2008, the Company does not have any financial assets that are valued using inactive markets, and as such is not currently impacted by the issuance of this FSP. See Note 14 for a discussion of the Company's adoption of SFAS 157.

The Company adopted the provisions of SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities, including an amendment of FASB Statement No. 115* ("SFAS 159") on January 1, 2008. SFAS 159 permits entities to choose, at specified election dates, to measure eligible items at fair value (the "fair value option"). Under this pronouncement, a business entity must report unrealized gains and losses on items for which the fair value option has been elected in earnings at

METABOLIX, INC.**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****(In thousands, except for share and per share amounts)****2. Summary of Significant Accounting Policies (Continued)**

each subsequent reporting period. The Company has not elected the fair value option under SFAS 159 for any items on its balance sheet.

Segment Information

Statement of Financial Accounting Standards No. 131, *Disclosures about Segments of an Enterprise and Related Information* ("SFAS 131"), establishes standards for reporting information on operating segments in interim and annual financial statements. The Company operates in one segment, which is the business of developing and commercializing technologies for the production of polymers and chemicals in plants and in microbes. The Company's chief operating decision-makers review the Company's operating results on a consolidated basis and manage operations as a single operating segment located, and operated, in the United States of America. All revenue is earned, and all assets are held, in the United States of America.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. Repairs and maintenance are charged to operations as incurred. Gains and losses on the disposition of equipment are recorded in net income or loss and the related cost and accumulated depreciation are removed from the respective accounts. Depreciation is computed using the straight-line method over the estimated useful lives as follows:

<u>Asset Description</u>	<u>Estimated Useful Life</u>
Equipment	2.5–3 years
Furniture and Fixtures	5
Software	3
Leasehold improvements	Shorter of useful life or term of lease

The Company accounts for operating lease incentive payments received from the lessor in accordance with Statement of Financial Accounting Standards No. 13, *Accounting for Leases* ("SFAS 13"). Under SFAS 13, leasehold improvements made by a lessee that are funded by landlord incentives or allowances under an operating lease should be recorded by the lessee as leasehold improvement assets and amortized over the shorter of their economic lives or the lease term. The Company records landlord incentive payments received as deferred rent and amortizes those amounts as reductions to lease expense over the lease term.

Impairment of Long-Lived Assets

The Company accounts for the impairment and disposal of long-lived assets utilizing Statement of Financial Accounting Standards No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets* ("SFAS 144"). SFAS 144 requires that long-lived assets, such as property, plant and equipment, and purchased intangible assets subject to amortization, be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. SFAS No. 144 further refines the requirements of Statement of Financial Accounting Standards No. 121, *Accounting for the Impairment of Long-Lived Assets and Long-Lived Assets to be Disposed of* ("SFAS No. 121"), that companies recognize an impairment loss only if the carrying amount of a long-lived

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

2. Summary of Significant Accounting Policies (Continued)

asset is not recoverable based on its undiscounted future cash flows and measure an impairment loss as the difference between the carrying amount and fair value of the asset.

Research and Development Expenses

All costs associated with internal research and development as well as research and development services conducted for others are expensed as incurred. Research and development expenses include direct costs for salaries, employee benefits, subcontractors, facility related expenses, depreciation and stock-based compensation related to employees and non-employees involved in the Company's research and development. Costs related to revenue-producing contracts are recorded as research and development expenses. The Company's portion of the costs incurred by ADM relating to the pre-commercial manufacturing of Mirel are netted against amounts due from ADM and recorded as due from related party on the balance sheet.

Revenue Recognition

The Company recognizes revenue in accordance with the Staff Accounting Bulletin No. 104, *Revenue Recognition* ("SAB 104"), and Emerging Issues Task Force (EITF) Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables*. Principal sources of revenue are government grants, license fees, royalty revenues and research and development payments that are primarily derived from collaborative agreements with other companies.

The Company's research and development revenue includes revenue from research services and delivery of specified materials or sample product produced from the research services. Revenue is recognized upon completion of the related services. Revenue related to product sales from the Company's pre-commercial manufacturing operations has been recorded in research and development revenue in the consolidated statements of operations.

Fees to license the Company's proprietary and licensed technologies are recognized only after both the license period has commenced and the technology has been delivered. Royalty revenue is recognized when it becomes determinable and collectibility is reasonably assured; otherwise the Company recognizes revenue upon receipt of payment.

The Company analyzes its multiple element arrangements to determine whether the elements can be separated and accounted for individually as separate units of accounting in accordance with EITF No. 00-21. The Company recognizes up-front license payments or technology access fees as revenue if the license or access fee has stand-alone value and the fair value of the undelivered items can be determined. If the license is considered to have stand-alone value but the fair value of any of the undelivered services or items cannot be determined, the license payments are initially deferred and recognized as revenue over the period of performance of undelivered services or as undelivered items are delivered.

Revenue from milestone payments related to arrangements under which the Company has continuing performance obligations is recognized as revenue upon achievement of the milestone only if all of the following conditions are met: the milestone payments are nonrefundable; achievement of the milestone was not reasonably assured at the inception of the arrangement; substantive effort is involved in achieving the milestone; and the amount of the milestone is reasonable in relation to the effort

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

2. Summary of Significant Accounting Policies (Continued)

expended or the risk associated with the achievement of the milestone. If any of these conditions are not met, the milestone payments are deferred and recognized as revenue over the term of the arrangement as the Company completes its performance obligations.

Government grant revenue is earned as research expenses related to the grants are incurred.

Intellectual Property Costs

The Company includes all costs associated with the prosecution and maintenance of patents within general and administrative expenses in the consolidated statement of operations.

Stock-Based Compensation

On January 1, 2006, the Company adopted Statement of Financial Accounting Standards No. 123(R), *Share-Based Payments* ("SFAS No. 123(R)"). Under the provisions of SFAS No. 123(R), compensation cost recognized for the years ended December 31, 2008, 2007 and 2006, includes compensation cost for all share-based payments granted to employees subsequent to January 1, 2006, based on the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R) and will be recognized over the vesting period of the applicable award on a straight-line basis. There is no expense recorded for options which were granted prior to January 1, 2006 under the minimum value method and with an exercise price equal to the fair value of common stock and that had a fixed measurement date at the time of grant.

Basic and Diluted Net Loss per Share

In accordance with SFAS No. 128, *Earnings Per Share*, basic net loss per share is computed by dividing net loss by the weighted-average number of common shares outstanding and warrants outstanding during the period that were previously issued for little or no consideration, excluding the dilutive effects of common stock equivalents. Common stock equivalents include redeemable convertible preferred stock, stock options and certain warrants. Diluted net loss per share is computed by dividing net loss by the weighted-average number of dilutive common shares outstanding during the period. Diluted shares outstanding is calculated by adding to the weighted shares outstanding any potential (unissued) shares of common stock from outstanding stock options and warrants based on the treasury stock method. In periods when a net loss is reported, all common stock equivalents are excluded from the calculation because they would have an anti-dilutive effect, meaning the loss per share would be reduced. Therefore, in periods when a loss is reported the calculation of basic and dilutive loss per share results in the same value.

The number of shares of potentially dilutive common stock related to options and warrants that were excluded from the calculation of dilutive shares since the inclusion of such shares would be

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

2. Summary of Significant Accounting Policies (Continued)

anti-dilutive for the three years ended December 31, 2008, 2007 and 2006, respectively, are shown below:

	Year ended December 31,		
	2008	2007	2006
Redeemable convertible preferred stock	—	—	8,471,666
Options	2,646,765	2,151,784	2,764,647
Warrants	4,086	69,343	829,890
Total	<u>2,650,851</u>	<u>2,221,127</u>	<u>12,066,203</u>

Income Taxes

The Company follows the provisions of Statement of Financial Accounting Standards No. 109, *Accounting for Income Taxes* ("SFAS No. 109"). SFAS No. 109 requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. A valuation allowance is provided to reduce the deferred tax asset to a level which, more likely than not, will be realized. In addition, the Company adopted Financial Accounting Standards Interpretation No. 48, *Accounting for Uncertainty in Income Taxes* ("FIN 48") on January 1, 2007. See Note 12 for further discussion of income taxes.

Recent Accounting Pronouncements

In December 2007, the FASB issued SFAS No. 141(R), *Business Combinations* ("SFAS 141(R)"), which replaces SFAS No. 141. This revised standard requires assets, liabilities and non-controlling interests acquired to be measured at fair value and requires that costs incurred to effect the acquisition be recognized separately from the business combination. In addition, this statement expands the scope to include all transactions and other events in which one entity obtains control over one or more businesses. This statement is effective for all business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. SFAS No. 141 will be applied prospectively to business combinations with acquisition dates on or after January 1, 2009. Adoption is not expected to materially impact the Company's consolidated financial position or results of operations directly when it becomes effective. Adoption of this statement is, however, expected to have a significant effect on how acquisition transactions subsequent to January 1, 2009 are reflected in the financial statements.

In December 2007, the FASB issued SFAS 160, *Noncontrolling Interests in Consolidated Financial Statements* ("SFAS 160"). SFAS 160 amends Accounting Research Bulletin 51 to establish accounting and reporting standards for the noncontrolling (minority) interest in a subsidiary and for the deconsolidation of a subsidiary. It clarifies that a noncontrolling interest in a subsidiary is an ownership interest in the consolidated entity that should be reported as equity in the consolidated financial statements. SFAS 160 is effective for the Company's fiscal year beginning January 1, 2009. Adoption of

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

2. Summary of Significant Accounting Policies (Continued)

this statement is not expected to have a material impact on the Company's consolidated financial position, results of operations or cash flows when it becomes effective, but may affect the accounting for non-controlling (or minority) interests from that date forward.

In December 2007, the Emerging Issues Task Force ("EITF") reached a consensus on EITF Issue 07-01, *Accounting for Collaborative Arrangements Related to the Development and Commercialization of Intellectual Property* ("EITF 07-01"). EITF 07-01 prescribes the accounting for collaborations. It requires certain transactions between collaborators to be recorded in the income statement on either a gross or net basis when certain characteristics exist in the collaboration relationship. EITF 07-01 is effective for all of the Company's collaborations existing after January 1, 2009. The Company is in the process of evaluating whether the adoption of this standard will have a material effect on its financial position, results of operations or cash flows.

In May 2008, the FASB issued SFAS No. 162, *The Hierarchy of Generally Accepted Principles* ("SFAS 162"). SFAS 162 identifies the sources of accounting principles and the framework for selecting the principles used in the preparation of financial statements of nongovernmental entities that are presented in conformity with the GAAP hierarchy. SFAS 162 will become effective 60 days following the SEC's approval of the Public Company Accounting Oversight Board amendments to AU 411, *the Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles*. The Company does not expect the adoption of SFAS 162 to have a material effect on its financial position, results of operations or cash flows.

In June 2008, the FASB issued FSP EITF 03-6-1, *Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities* ("FSP EITF 03-6-1"). FSP EITF 03-6-1 addresses whether instruments granted in share-based payment transactions are participating securities prior to vesting and, therefore, need to be included in the earnings allocation in computing earnings per share under the two-class method as described in SFAS No. 128, *Earnings per Share*. Under the guidance in FSP EITF 03-6-1, unvested share-based payment awards that contain non-forfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and shall be included in the computation of earnings per share pursuant to the two-class method. FSP EITF 03-6-1 is effective for financial statements issued in fiscal years beginning after December 15, 2008, and interim periods within those years. All prior-period earnings per share data presented shall be adjusted retrospectively. Early application is not permitted. The adoption of FSP EITF 03-6-1 did not have a material effect on the Company's financial position, results of operations or cash flows.

3. Significant Collaborations

ADM Collaboration

Technology Alliance and Option Agreement

On November 3, 2004, the Company signed a Technology Alliance and Option Agreement with ADM Polymer Corporation, a subsidiary of ADM, to establish an alliance whereby the Company would provide technology and licenses thereto and research and development services, and ADM would provide manufacturing services and capital necessary to produce biobased plastic on a commercial scale.

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

3. Significant Collaborations (Continued)

The goal of the Technology Alliance and Option Agreement was to demonstrate the capabilities of the Company's fermentation and recovery technologies on a commercial scale and to prepare a master plan and budget for the construction of a 110 million pound commercial manufacturing facility, which would provide the basis for entering into the next phase of the collaboration under a Commercial Alliance Agreement.

The Technology Alliance and Option Agreement provided ADM with an option (the "Option") to enter into a commercial alliance for further research, development, manufacture, use, and sale of bioplastic on the terms and conditions set forth in the Commercial Alliance Agreement (see below). On July 12, 2006, ADM exercised this Option.

Under the Technology Alliance and Option Agreement, ADM made a nonrefundable, noncreditable upfront payment of \$3,000 to the Company in 2004. In May 2006, the Company received a \$2,000 payment from ADM in recognition of achieving certain technical goals under the Technology Alliance and Option Agreement. Due to future obligations of the Company under the agreements for which fair value cannot be determined, including the requirement to provide research and development activities and recovery services under the Technology Alliance and Option Agreement and certain manufacturing services, including sales and marketing activities and other services under the Commercial Alliance Agreement, the entire upfront payment and milestone payments received have been recorded as deferred revenue. The Company's policy is to expense, as period costs, the direct and incremental costs incurred associated with this collaboration.

The Technology Alliance and Option Agreement was amended in 2005 to define certain cost sharing activities related to pre-commercial manufacturing, to change certain milestones and to make other minor modifications. In accordance with this amendment ADM agreed to reimburse the Company for one-half of certain costs incurred by the Company related to the Company's establishment of pre-commercial manufacturing capabilities. Amounts reimbursed totaled \$1,209, and were recorded as deferred revenue. Further reimbursements were made under the Commercial Alliance agreement as noted below.

Commercial Alliance Agreement

The Commercial Alliance Agreement specifies the terms and structure of the relationship between the Company and ADM. The primary function of this agreement is to establish the activities and obligations of the Company and ADM by which the parties will commercialize Mirel. These activities include: the establishment of a joint sales company, which has been named Telles, to market and sell Mirel, the construction of a manufacturing facility capable of producing 110 million pounds of material annually (the "Commercial Manufacturing Facility"), the licensing of technology to Telles and to ADM, and the conducting of various research, development, manufacturing, sales and marketing, compounding and administrative services by the parties.

Telles is a limited liability company, formed and equally owned by the Company and ADM, and is intended to: (i) serve as the commercial entity to establish and develop the commercial market for Mirel, and conduct the marketing and sales in accordance with the goals of the commercial alliance, (ii) assist in the coordination and integration of the manufacturing, compounding and marketing

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

3. Significant Collaborations (Continued)

activities, and (iii) administer and account for financial matters on behalf of the parties. The Company and ADM each have 50% ownership and voting interest in Telles.

A summary of the key activities under this agreement is as follows: (i) ADM will arrange for, finance the construction of, and own, a facility in which it will manufacture Mirel under contract to Telles; (ii) the Company will either arrange for and finance the acquisition or construction of a facility in which it will compound Mirel or it will arrange for third parties to compound Mirel; (iii) the Company, acting in the name and on behalf of Telles, will establish the initial market for Mirel. The Company will also continue its research and development efforts to further advance the technology and expand and enhance the commercial potential of Mirel. Subject to certain limitations, ADM will finance the working capital requirements of Telles.

The Commercial Alliance Agreement calls for Telles to pay the Company twelve quarterly support payments of \$1,575 each during the period of construction of the Commercial Manufacturing Facility, along with reimbursements for pre-commercial manufacturing facility expansion and material production expenses. The last of the twelve quarterly support payments was received in December 2008. In January 2009 Telles agreed to provide the Company with two additional quarterly payments of \$1,575 which are payable on the first business day of each of the second and third quarters of calendar 2009. As of December 31, 2008, all quarterly support payments received from ADM on behalf of Telles, totaling \$18,900, have been recorded as deferred revenue on the Company's balance sheet and the Company will continue to defer recognition of these and future payments received from ADM during the Construction Phase of our agreement.

During the construction period of the Commercial Manufacturing Facility all pre-commercial material production expenses incurred by ADM and the Company are shared equally. Accordingly, from the execution of this agreement in July 2006 through December 31, 2008, ADM has reimbursed the Company \$7,331. All amounts due to or received from ADM relating to this agreement are recorded as deferred revenue.

During the commercial phase of the alliance Telles will pay the Company royalties on sales of Mirel. In addition, if Telles engages Metabolix to perform certain services, and Metabolix accepts the service arrangement, Telles will reimburse Metabolix for the cost of the services provided pursuant to the Commercial Alliance Agreement.

While Telles is a fifty-fifty joint venture, ADM will be advancing a disproportionate share of the financial capital needed to construct the Commercial Manufacturing Facility and to fund its activities. Therefore, a preferential distribution of cash flow will be used, whereby all profits (after payment of all royalties, reimbursements and fees) from Telles will be distributed to ADM until ADM's disproportionate investment in the alliance has been returned in full. Once ADM has recovered such amounts, the profits of Telles will be distributed in equal amounts to the parties.

The Commercial Alliance Agreement provides for expansion of the operations of Telles beyond the initial license of 110 million pounds annual production through an equally-owned joint venture. While certain principles of the joint venture have been agreed to, the detailed terms and conditions will not be determined until a later date.

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

3. Significant Collaborations (Continued)

Revenue recognition for amounts deferred through December 31, 2008 is expected to commence when the commercial phase of the alliance begins, and amounts will be recognized on a straight line basis over the estimated period, of approximately ten years, in which the Company's obligations are fulfilled in accordance with the Commercial Alliance Agreement. We also expect to receive payments from Telles for the compounding services we provide as well as royalty payments. The compounding payments and royalty payments are due to us after Telles has sold the product to the end customer and we expect to recognize these payments in the period they have been earned.

The Commercial Alliance Agreement and related agreements include detailed provisions setting out the rights and obligations of the parties in the event of a termination of the Commercial Alliance Agreement. These provisions include the right for either party to terminate the Commercial Alliance Agreement upon a material default of a material obligation by the other party after a notice and cure period has expired. The parties are also permitted to terminate the Commercial Alliance Agreement if a change in circumstances that is not reasonably within the control of a party makes the anticipated financial return from the project inadequate or too uncertain. The parties have specific obligations to fulfill in the event of termination or if they file for bankruptcy protection.

BP America Production Company

On February 14, 2005, the Company signed a joint development agreement with BP America Production Company ("BP") to advance the Company's technology for producing PHA polymers in plants and to conduct an evaluation of the potential for using PHA producing plants in a biomass to energy system. In exchange for the Company completing certain research and development activities, the agreement provided for BP to pay the Company \$500 at the start of each calendar quarter during the term of the agreement with the first two such payments due within five days of the effective date of the agreement. The Company received \$2,000 in 2005 related to this agreement. Because these amounts would be applicable for determining BP's equity participation in a potential future joint venture between the parties, these amounts were recorded as deferred revenue at December 31, 2005.

In January 2006, the Company received notice of termination from BP with respect to the joint development agreement and as a result, there were no longer any continuing obligations from either party. During the year ended December 31, 2006, the Company recognized \$2,500 in revenue from the BP arrangement, consisting of the \$2,000 of deferred revenue and the \$500 final payment due under the arrangement, which was received in June 2006.

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

4. Investments

Short-term investments consist of the following:

	Amortized Cost	Unrealized Gain/(Loss)	Market Value
December 31, 2008			
Corporate debt securities	\$ 23,413	\$ 85	\$ 23,498
United States government treasury bills and agency obligations	41,043	361	41,404
Total	<u>\$ 64,456</u>	<u>\$ 446</u>	<u>\$ 64,902</u>
December 31, 2007			
Corporate debt securities	\$ 64,781	\$ 211	\$ 64,992
Asset-backed securities	21,623	25	21,648
Total	<u>\$ 86,404</u>	<u>\$ 236</u>	<u>\$ 86,640</u>

As of December 31, 2008 and 2007 the contractual maturity of all investments was one year or less.

5. Property and Equipment

Property and equipment consisted of the following:

	Year ended December 31,	
	2008	2007
Equipment	\$ 3,504	\$ 2,597
Furniture and fixtures	223	175
Leasehold improvements	8,161	8,117
Software	163	92
Total property and equipment, at cost	12,051	10,981
Less: Accumulated depreciation	(7,663)	(4,091)
Property and equipment, net	<u>\$ 4,388</u>	<u>\$ 6,890</u>

Depreciation expense for the years ended December 31, 2008, 2007, and 2006 was \$3,731, \$1,451 and \$964 respectively. The Company had no capitalized leased equipment as of December 31, 2008 or 2007.

METABOLIX, INC.**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****(In thousands, except for share and per share amounts)****6. Accrued Expenses**

Accrued expenses consist of the following:

	Year ended December 31,	
	2008	2007
Employee compensation and benefits	\$1,618	\$1,985
Pre-commercial manufacturing costs	350	443
Professional services	206	407
Contracted research and development	317	325
Other	1,096	1,035
Total accrued expenses	<u>\$3,587</u>	<u>\$4,195</u>

7. Commitments and Contingencies**Leases**

The Company rents its facilities under operating leases, which expire through May 2014. Rental payments under operating leases for the years ended December 31, 2008, 2007 and 2006 were \$1,482, \$1,152 and \$1,051, respectively. The deferred rent liability recorded on the Company's balance sheet at December 31, 2008 includes the unamortized balance of the landlord incentive payments and the cumulative difference between actual facility lease payments and lease expense recognized ratably over the operating lease period. At December 31, 2008, the Company's future minimum payments required under operating leases are as follows:

Year ended December 31,	Minimum lease payment
2009	\$ 1,365
2010	1,204
2011	1,188
2012	1,074
2013 and thereafter	1,317
Total	<u>\$ 6,148</u>

Funded Research Arrangement with the University of Massachusetts at Lowell

The Company has entered into a fee for service agreement with the University of Massachusetts at Lowell to perform certain research and development activities. Under this agreement the Company agreed to pay an annual retainer of \$40 through 2010.

License Agreement with Massachusetts Institute of Technology ("MIT")

The Company's exclusive license agreement with MIT requires the Company to pay annual license fees of \$25 and additional royalty payments to MIT based on a percentage of sublicensing revenues or net sales of products or services covered by a patent that is subject to the license. There was \$2 accrued at December 31, 2008 and 2007, respectively, for such royalties.

METABOLIX, INC.**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****(In thousands, except for share and per share amounts)****7. Commitments and Contingencies (Continued)****Joint Research Agreement with the Cooperative Research Centre for Sugar Industry Innovation through Biotechnology**

In 2007, the Company entered a joint research arrangement, known as the Cooperative Research Centre for Sugar Industry Innovation through Biotechnology, with the Commonwealth of Australia and various other parties for the purpose of developing and gaining access to certain intellectual property. The Commonwealth of Australia established the program to enhance the transfer of research outputs into commercial or other outcomes of economic, environmental or social benefit to Australia. The contract commenced on January 1, 2007 and the Company's funding obligation continues until July 1, 2010. In connection with this agreement the Company was obligated to provide funding in the form of cash in the amount of \$805 Australian dollars and in kind contribution in the amount of \$2,287 Australian dollars. As of December 31, 2008 the remaining cash portion and in kind portion of the Company's obligation, denominated in U.S. dollars, is \$238 and \$696, respectively. The in kind contribution consists of salaries and overhead attributable to research associated with the joint research agreement. The cash and in kind contributions are recorded as research and development expense as incurred, in the consolidated statement of operations.

8. Related Party Transactions**Tepha, Inc.**

During 1999, the Company entered into a sublicense agreement with Tepha, Inc. ("Tepha"), to sublicense technology to Tepha. The president and chief executive officer of Tepha, who was also a director of Tepha was a director of the Company at that time. In addition, the Company directors Messrs. Muller and Giles and Dr. Sinskey serve on the Board of Directors of Tepha. The agreement with Tepha contains provisions for sublicense maintenance fees to be paid to the Company upon Tepha achieving certain financing milestones and for product related milestones. Under the agreement, the Company also receives royalties on net sales of licensed products or sublicensing revenues received by Tepha, subject to a minimum payment each year.

The Company recognized license and royalty revenues of \$120, \$157 and \$257, from Tepha for the years ended December 31, 2008, 2007, and 2006 and respectively. As of December 31, 2008 there was no outstanding receivable due from Tepha. As of December 31, 2007, the Company had an outstanding receivable of \$122 from Tepha which was recorded as due from related parties in the consolidated balance sheet.

ADM

The Company's collaborative partner ADM made a \$5,000 investment in the Company as part of the Series 05 redeemable convertible preferred stock issuance in January 2006. Concurrent with the Company's initial public offering, ADM purchased \$7,500 of the Company's shares in a private placement. ADM makes various payments to the Company under the collaborative agreements signed during November 2004 and July 2006. See Note 3 for further discussion regarding collaborative agreements with ADM. As of December 31, 2008 there were no significant amounts due from ADM. As of December 31, 2007, the Company had an outstanding balance receivable of \$1,093 from ADM which was recorded as due from related parties in the consolidated balance sheet.

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

8. Related Party Transactions (Continued)

Dr. ChoKyun Rha

The Company retained Dr. ChoKyun Rha, a related party, to serve as an advisor for the purpose of building and managing business relationships in Asia. Dr. Rha is the spouse of a director of the Company. In consideration for Dr. Rha's services, on September 20, 2005, the Company granted her a nonqualified stock option for the purchase of 16,346 shares of the Company's common stock, vesting over a period of four years, with an exercise price of \$1.65 per share, which was the fair market value per share of the common stock at the date of grant of the option.

9. Redeemable Convertible Preferred Stock

The Company's certificate of incorporation, as amended and restated, authorizes it to issue up to 5,000,000 shares of \$0.01 par value preferred stock. As of December 31, 2008 and 2007 no preferred stock was issued or outstanding.

In connection with the Company's initial public offering in November 2006 and in accordance with the preferred stock agreements, all outstanding shares of preferred stock were converted into 9,992,041 of the Company's common stock, and at December 31, 2006 there were no shares of preferred stock outstanding.

Warrants

In connection with the issuance of the Series H preferred stock during 2001, the Company issued warrants to purchase 108,239 shares of common stock at an exercise price of \$13.21 per share. The warrants expired five years from issuance date. The warrants were recorded at their relative fair value of \$170 as a reduction to the carrying value of the Series H preferred stock and a corresponding increase to additional paid-in capital. The fair value of the warrants was estimated on the date of grant using the Black-Scholes option-pricing model with the following assumptions: no dividend yield, 90% volatility, risk-free interest rate of 5.13%, and a life of five years. In connection with the issuance of Series I preferred stock during 2002, the Company issued warrants to purchase 520,990 shares of common stock at an exercise price of \$13.21 per share; concurrently, the Company issued warrants to purchase 432,983 shares of common stock at an exercise price of \$13.21 per share in connection with the exchange of Series H preferred stock for Series I preferred stock. The warrants expired five years from issuance date. The warrants were recorded at their relative fair value of \$1,553 as a reduction to the carrying value of the Series I preferred stock and a corresponding increase to additional paid-in capital. The fair value of the warrants was estimated on the date of grant using the Black-Scholes option-pricing model with the following assumptions: no dividend yield, 100% volatility, risk-free interest of 4.65%, and a life of five years.

In conjunction with the issuance of the Series I preferred stock during 2003, the Company issued warrants to purchase 221,238 shares of common stock at an exercise price of \$13.21 per share. The warrants expired five years from issuance date. The warrants were recorded at their relative fair value of \$149 as a reduction to the carrying value of the Series I preferred stock and a corresponding increase to additional paid-in capital. The fair value of the warrants was estimated on the date of grant using the Black-Scholes option-pricing model with the following assumptions: no dividend yield, 100% volatility, risk-free interest of 2.27%, and a life of five years.

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

9. Redeemable Convertible Preferred Stock (Continued)

In connection with the issuance of Series J preferred stock, the Company issued warrants to purchase 264,865 shares of common stock at an exercise price of \$0.12 per share; concurrently, the Company issued warrants to purchase 988,004 shares of common stock at an exercise price of \$0.12 per share in connection with the exchange of Series I preferred stock for Series J preferred stock. The warrants expired five years from issuance date. In addition, the Company cancelled warrants to purchase 348,386 shares of common stock at an exercise price of \$13.21 per share. The warrants issued were recorded at their relative fair value of \$1,282 as a reduction to the carrying value of the Series J preferred and a corresponding increase to additional paid-in capital, net of the reversal of the canceled warrants. The fair value of the warrants was estimated on the date of grant using the Black-Scholes option-pricing model with the following assumptions: no dividend yield, 100% volatility, risk-free interest rate of 3.29%, and a life of five years.

In connection with the issuance of the Series J preferred stock during 2004, the Company issued warrants to purchase 46,881 shares of common stock at an exercise price of \$0.12 per share; concurrently, the Company issued warrants to purchase 30,173 shares of common stock at an exercise price of \$0.12 per share in connection with the exchange of Series I preferred stock for Series J preferred stock. The warrants expire five years from issuance date. The warrants were recorded at their relative fair value of \$108 as a reduction to the carrying value of the Series J preferred stock and a corresponding increase to additional paid-in capital. The fair value of the warrants was estimated on the date of grant using the Black-Scholes option-pricing model with the following assumptions: no dividend yield, 100% volatility, risk-free interest rate range of 3.12%—3.29%, and a life of five years.

In connection with signing a lease agreement in 2004, the Company issued the landlord warrants to purchase 4,086 shares of common stock at an exercise price of \$3.30 per share. The warrants expire ten years from the lease term commencement date. The fair value of the warrants was immaterial.

In conjunction with the issuance of Series 04 preferred stock in 2004 and the exchange of the shares of Series J preferred stock, 155,041 warrants to purchase common stock were cancelled resulting in a decrease of additional paid-in capital of \$219.

At December 31, 2008 there were 14,541 and 4,086 warrants outstanding with exercise prices of \$0.12 and \$3.30 per share, respectively. During the year ended December 31, 2008, 10,246 of the \$0.12 warrants were exercised.

10. Common Stock

Common Stock Issuances

On September 20, 2006, a 0.8173-for-1 reverse stock split was approved by the Board of Directors and became effective on November 3, 2006. All information in these consolidated financial statements has been retroactively adjusted to reflect such reverse stock split.

During November 2006, the Company completed its initial public offering of 7,820,000 shares of common stock at an initial public offering price of \$14.00 per share. Net proceeds were \$99,327 after deducting underwriting discounts, commissions and other offering expenses. Concurrent with this offering, ADM purchased 535,714 shares at an initial offering price of \$14.00 per share, and the Company realized additional net proceeds of \$7,500. The Company's redeemable convertible preferred

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

10. Common Stock (Continued)

stock was converted on a one-to-one basis into 9,992,041 shares of common stock upon the closing of the initial public offering.

11. Stock-Based Compensation

The Company adopted a stock plan in 1995, (the "1995 Plan") which provided for the granting of incentive stock options, nonqualified stock options, stock awards, and opportunities to make direct purchases of stock, to employees, officers, directors and consultants of the Company. In June 2005 the 1995 Plan was terminated and the Company adopted a new plan (the "2005 Plan"). No further grants or awards were subsequently made under the 1995 Plan. A total of 907,679 options were awarded from the 1995 Plan and as of December 31, 2008, 109,163 of these options remain outstanding and eligible for future exercise and continue to be governed by the terms of the 1995 Plan.

The 2005 Plan provided for the granting of incentive stock options, nonqualified stock options, stock awards, and opportunities to make direct purchases of stock, to employees, officers, directors and consultants of the Company. In November 2006 the 2005 Plan was terminated and the Company adopted a new plan (the "2006 Plan"). No further grants or awards were subsequently made under the 2005 Plan. A total of 1,619,134 options were awarded from the 2005 Plan and as of December 31, 2008, 583,612 of these options remain outstanding and eligible for future exercise and continue to be governed by the terms of the 2005 Plan.

The 2006 Plan provides for the granting of incentive stock options, nonqualified stock options, stock appreciation rights, deferred stock awards, restricted stock awards, unrestricted stock awards, cash-based awards and dividend equivalent rights. The 2006 Plan states that not more than 10,000,000 shares shall be issued under the plan. A total of 2,201,817 options have been awarded from the 2006 Plan and as of December 31, 2008, 1,953,990 of these options remain outstanding and eligible for future exercise.

Options granted under the Plans generally vest ratably over four years from the date of hire, or date of commencement of services with the Company for nonemployees, and generally expire ten years from the date of issuance. A summary of the activity related to the shares of common stock covered by outstanding options follows:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic value
Balance at December 31, 2007	2,151,784	\$ 10.70		
Granted	1,107,200	11.42		
Exercised	(343,837)	2.36		
Cancelled	(268,382)	15.60		
Balance at December 31, 2008	<u>2,646,765</u>	11.59	8.24	\$ 8,776
Vested and expected to vest at December 31, 2008	2,547,680	11.56	8.20	8,576
Exercisable at December 31, 2008	1,257,179	10.68	7.40	5,919

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

11. Stock-Based Compensation (Continued)

The weighted average grant date fair value per share of options granted during fiscal years 2008, 2007, and 2006 was \$7.01, \$14.08 and \$8.76, respectively. The total intrinsic value of options exercised was \$3,428 and \$20,238 for the years ended December 31, 2008 and 2007 respectively.

A summary of information about the shares of common stock covered by outstanding and exercisable options under the option plans at December 31, 2008 follows:

Range of Exercise Prices	Stock Options Outstanding			Stock Options Exercisable	
	Number of Shares	Weighted Average Remaining Contractual Life (in years)	Weighted Average Exercise Price per share	Number of Shares	Weighted Average Exercise Price per share
\$ 1.65— 3.30	458,985	6.08	\$ 1.92	433,260	\$ 1.93
3.36— 9.12	495,790	8.69	\$ 6.95	144,570	\$ 4.91
9.20—11.75	483,212	9.41	\$ 10.81	60,628	\$ 10.81
12.35—14.00	550,116	8.17	\$ 13.70	292,180	\$ 13.99
14.01—22.31	370,224	8.86	\$ 17.97	179,323	\$ 19.90
22.32—24.97	288,438	8.28	\$ 24.04	147,218	\$ 24.26
\$ 1.65—24.97	<u>2,646,765</u>	8.24	\$ 11.59	<u>1,257,179</u>	\$ 10.68

In December 2005, 324,658 options were granted to an officer of the Company, of which 125,863 contained performance based vesting conditions. The 125,863 options were a variable award and were subject to remeasurement which could have resulted in the recording of compensation expense in the future, depending on the probability of achieving certain performance conditions. During the twelve months ended December 31, 2006, 41,954 of the 125,863 variable options granted to the officer of the Company during 2005 were cancelled due to the term expiration; 83,909 of these variable options were deemed to have met the performance conditions during 2006, and as a result \$635 of stock-based compensation expense was recorded during the year ended December 31, 2006. Stock-based compensation expense of \$36 was recorded during the twelve months ended December 31, 2007 as the officer continued to complete the remaining service conditions related to these options. The remaining \$176 was not recorded as the officer's employment terminated.

Expense Information for Employee Stock Option Awards

The effect of SFAS No. 123(R) for the years ended December 31, 2008, 2007 and 2006 was stock-based compensation expense of \$4,486, \$4,054, and \$3,505 respectively, which had an impact of \$0.20, \$0.18 and \$0.34 on basic and diluted net loss per share for the years ended December 31, 2008, 2007 and 2006, respectively.

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

11. Stock-Based Compensation (Continued)

For the years ended December 31, 2008, 2007 and 2006, the Company determined the fair value of stock options using the Black-Scholes option pricing model with the following assumptions for option grants, respectively:

	Year Ended December 31,		
	2008	2007	2006
Expected dividend yield	—	—	—
Risk-free rate	2.09%—3.77%	3.51%—4.82%	4.29%—5.15%
Expected option term (in years)	6.1	6.1	6.1
Volatility	61%—81%	59%	75%

For the year ended December 31, 2008, expected volatility is based on review of historical volatilities for similar public companies. Management believes that the historical volatility of the Company's stock price does not best represent the expected volatility of the stock price.

The risk-free interest rate used for each grant is equal to the U.S. Treasury yield curve in effect at the time of grant for instruments with a term similar to the expected life of the related option.

For the year ended December 31, 2008, the expected term of the options granted was determined using the "simplified" method for "plain vanilla" options as permitted by Staff Accounting Bulletin ("SAB") No. 107 and SAB No. 110. The Company did not issue any options that were not considered "plain vanilla" during the year ended December 31, 2008.

The stock price volatility and expected terms utilized in the calculation involve management's best estimates at that time, both of which impact the fair value of the option calculated under the Black-Scholes methodology and, ultimately, the expense that will be recognized over the life of the option. SFAS 123(R) requires that the Company recognize compensation expense for only the portion of options that are expected to vest. Therefore, the Company has estimated expected forfeitures of stock options for the grants valued. In developing a forfeiture rate estimate, the Company considered its historical experience, its growing employee base, actual forfeitures for the year, and forfeiture rates used by peer companies. The Company will continue to evaluate its forfeiture rate as compared to the actual number of forfeitures in future periods to determine if adjustments to compensation expense may be required.

Expense Information for Non-employee Stock Option Awards

During the years ended December 2008, 2007, and 2006, the Company granted stock options to purchase 6,500, 15,000 and 51,080 shares of common stock, respectively, to non-employee consultants. The compensation expense related to these options is to be recognized over a period of four years. The granted stock options vest quarterly and such vesting is contingent upon future services provided by the consultants to the Company. The Company recorded a benefit of \$47 for the year ended December 31, 2008. Consultant related stock-based compensation expense of \$505 and \$996 was recorded during the years ended December 2007 and 2006, respectively. Options remaining unvested for nonemployees are subject to remeasurement each reporting period prior to vesting in full. Since the fair market value of the options issued to nonemployees is subject to change in the future, the compensation expense

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

11. Stock-Based Compensation (Continued)

recognized in each year may not be indicative of future stock-based compensation charges. The Company's policy is to issue new shares upon the exercise of stock options.

The fair value of each option granted to non-employees was estimated using the Black-Scholes option pricing model with the following assumptions:

	Year Ended December 31,		
	2008	2007	2006
Expected dividend yield	—	—	—
Risk-free rate	2.25%—3.99%	4.04%—5.03%	4.64%—5.15%
Expected option term (in years)	10	10	10
Volatility	61%—81%	59%	75%

12. Income Taxes

There is no provision for income taxes because the Company has incurred operating losses since inception. The reported amount of income tax expense for the years differs from the amount that would result from applying domestic federal statutory tax rates to pretax losses primarily because of changes in valuation allowance. Significant components of the Company's net deferred tax asset at December 31, 2008, 2007 and 2006 are as follows:

	Year		
	2008	2007	2006
Net operating loss carryforward	17,712	12,924	9,784
Capitalization of research and development expenses	10,874	8,224	6,178
Credit carryforwards	4,266	3,260	2,429
Other temporary differences	20,690	14,758	9,148
Total deferred tax assets	53,542	39,166	27,539
Valuation Allowance	(53,542)	(39,166)	(27,539)
Net deferred tax asset	—	—	—

In July, 2006 the FASB issued Financial Accounting Standards Interpretation No. 48, *Accounting for Uncertainty in Income Taxes* ("FIN 48"). FIN 48 clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements in accordance with Statement of Accounting Standards No. 109, *Accounting for Income Taxes*. FIN 48 prescribes a threshold for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. FIN 48 also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosures and transitions. The Company adopted FIN 48 on January 1, 2007 with no effect on financial position. In addition, the Company has no amounts recorded for any unrecognized tax benefits as of December 31, 2008 or December 31, 2007.

The tax years 2005 through 2008 remain open to examination by major taxing jurisdictions to which the Company is subject, which are primarily in the US.

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

12. Income Taxes (Continued)

The Company's policy is to record estimated interest and penalties related to uncertain tax positions in income tax expense. As of December 31, 2008, and December 31, 2007, the Company had no accrued interest or penalties recorded related to uncertain tax positions.

At December 31, 2008 the Company had net operating loss carryforwards for federal and state income tax purposes of \$46,357 and \$31,108, respectively. The Company's federal and state net operating loss carryforwards will begin to expire in 2009. The Company also had available research and development credits for federal and state income tax purposes of \$2,743 and \$2,217 respectively. The federal and state research and development credits will begin to expire in 2012 and 2015, respectively. As of December 31, 2008 the Company also had available investment tax credits for state income tax purposes of \$92 which begin to expire in 2009. Management of the Company has evaluated the positive and negative evidence bearing upon the realizability of its deferred tax assets, which are comprised principally of net operating loss carryforwards and research and development credits. Under the applicable accounting standards, management has considered the Company's history of losses and concluded that it is more likely than not that the Company will not recognize the benefits of federal and state deferred tax assets. Accordingly, a full valuation allowance has been established against the deferred tax assets.

Utilization of Net Operating Loss, or NOL, and Research & Development, or R&D, credit carryforwards may be subject to a substantial annual limitation due to ownership change limitations that have occurred previously or that could occur in the future as provided by Section 382 and 383 of the Internal Revenue Code of 1986, as well as similar state provisions. These ownership changes may limit the amount of NOL and R&D credit carryforwards that can be utilized annually to offset future taxable income and tax, respectively. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain shareholders or public groups in the stock of a corporation by more than 50 percentage points over a three year period. Since the Company's formation, the Company has raised capital through the issuance of capital stock which, combined with the purchasing shareholders' subsequent disposition of those shares, may have resulted in a change of control, as defined by Section 382, or could result in a change of control in the future upon subsequent disposition. The Company has not currently completed a study to assess whether there have been multiple changes of control since the Company's formation due to the significant complexity and cost associated with such study. If the Company has experienced a change in control at any time since the Company's formation, utilization of the Company's NOL or R&D credit carryforwards would be subject to an annual limitation under Section 382 and 383. Any limitation may result in expiration of a portion of the NOL or R&D credit carryforwards before utilization. Until a study is completed and any limitation known, no amounts are being presented as uncertain tax positions under FIN 48.

13. Employee Benefits

The Company maintains a 401(k) savings plan in which substantially all of its regular employees are eligible to participate. Participants may contribute up to 60% of their annual compensation to the plan, subject to eligibility requirements and IRS limits. In 2007 the Company initiated a matching contribution in common stock of up to 4.5% of a participant's total compensation dependent upon the level of participant contributions made during the plan year. Pursuant to this plan, the Company issued

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

13. Employee Benefits (Continued)

32,534 and 4,866 shares of common stock in 2008 and 2007 respectively and recorded \$400 and \$276, respectively of related expense. Company contributions are fully vested upon issuance.

14. Fair Value Measurements

On January 1, 2008, the Company adopted Statement of Financial Accounting Standards No. 157, *Fair Value Measurements*, ("SFAS 157") for financial assets and liabilities. In accordance with the provisions of FASB Staff Position No. FAS 157-2, *Effective Date of FASB Statement No. 157*, the Company elected to defer the adoption of SFAS 157 for all nonfinancial assets and nonfinancial liabilities, except those that are recognized or disclosed at fair value in the financial statements on a recurring basis until January 1, 2009. SFAS 157 provides a framework for measuring fair value under GAAP and requires expanded disclosures regarding fair value measurements. SFAS 157 defines fair value as 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 on the measurement date. SFAS 157 also establishes a fair value hierarchy which requires an entity to maximize the use of observable inputs, where available, and minimize the use of unobservable inputs when measuring fair value. The standard describes three levels of inputs that may be used to measure fair value:

Level 1 Quoted prices in active markets for identical assets or liabilities.

Level 2 Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following table sets forth the financial assets (cash equivalents and short-term investments) that were measured at fair value on a recurring basis as of December 31, 2008 by level within the fair value hierarchy. The Company did not have any financial liabilities, nonfinancial assets, or nonfinancial liabilities that were measured or disclosed at fair value on a recurring basis as of December 31, 2008. As required by SFAS 157, assets measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The assessment of the

METABOLIX, INC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(In thousands, except for share and per share amounts)

14. Fair Value Measurements (Continued)

significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability.

Description	Fair value measurements at reporting date using			Balance as of 12/31/08
	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
Cash equivalents:				
Money Market funds	\$ —	\$ 23,152	\$ —	\$ 23,152
Commercial paper	—	1,100	—	1,100
Short-term investments:				
Treasuries	—	4,000	—	4,000
Commercial paper	—	23,497	—	23,497
Government-sponsored enterprises	—	37,405	—	37,405
	<u>\$ —</u>	<u>\$ 89,154</u>	<u>\$ —</u>	<u>\$ 89,154</u>

15. Change in Accounting Estimate

In the first quarter of 2008, due to an extended construction period and revised estimated completion date of the Commercial Manufacturing Facility, the Company determined it would extend the period of use of its pre-commercial manufacturing plant by six months to June 2009 from December 2008. In connection with this, the useful lives of the leasehold improvements connected to the pre-commercial manufacturing plant were increased by six months. This change in accounting estimate was adopted prospectively. The effect of the change in estimate on the financial statements for the year ended December 31, 2008 is a decrease in loss from operations and net loss of \$1,413 and a decrease in loss per share of \$0.06.

16. Summary of Quarterly Financial Data (unaudited)

The following tables summarize the unaudited quarterly financial data for the last two fiscal years.

2008	Quarter Ended			
	March 31,	June 30,	September 30,	December 31,
Total revenues	\$ 404	\$ 401	\$ 351	\$ 399
Loss from operations	(9,627)	(9,655)	(10,268)	(9,342)
Net loss	(8,448)	(8,925)	(9,728)	(8,904)
Basic and diluted net loss per share	(0.37)	(0.39)	(0.42)	(0.40)

2007	Quarter Ended			
	March 31,	June 30,	September 30,	December 31,
Total revenues	\$ 429	\$ 187	\$ 180	\$ 887
Loss from operations	(6,226)	(9,190)	(9,782)	(8,618)
Net loss	(4,688)	(7,666)	(8,298)	(7,223)
Basic and diluted net loss per share	(0.22)	(0.35)	(0.37)	(0.33)

[Table of Contents](#)

<u>Exhibit Number</u>	<u>Description</u>
3.1(1)	Amended and Restated Certificate of Incorporation of the Registrant
3.3(1)	Amended and Restated By-laws of the Registrant
4.1(1)	Specimen Stock Certificate for shares of the Registrant's Common Stock
10.1†(1)	1995 Stock Plan
10.1.1†(1)	1995 Stock Plan, Form of Incentive Stock Option Agreement
10.1.2†(1)	1995 Stock Plan, Form of Non-Qualified Stock Option Agreement
10.2†(1)	2005 Stock Plan
10.2.1†(1)	2005 Stock Plan, Form of Incentive Stock Option Agreement
10.2.2†(1)	2005 Stock Plan, Form of Non-Qualified Stock Option Agreement
10.3†(1)	2006 Stock Option and Incentive Plan
10.3.1†(1)	2006 Stock Option and Incentive Plan, Form of Incentive Stock Option Agreement
10.3.2†(1)	2006 Stock Option and Incentive Plan, Form of Non-Qualified Stock Option Agreement
10.3.3†(1)	2006 Stock Option and Incentive Plan, Form of Director Non-Qualified Stock Option Agreement
10.4#(1)	License Agreement between the Registrant and Massachusetts Institute of Technology dated July 15, 1993, as amended
10.5#(1)	Commercial Alliance Agreement by and among the Registrant, ADM/Metabolix Sales Company, LLC and ADM Polymer Corporation dated July 14, 2006
10.6#(1)	Operating Agreement of ADM/Metabolix Sales Company, LLC by and between the Registrant and ADM Polymer Corporation dated July 14, 2006
10.7(1)	Letter Agreement by and between the Registrant and Archer Daniels Midland Company dated November 3, 2004
10.8#(1)	Technology Alliance and Option Agreement by and between the Registrant and ADM Polymer Corporation dated as of November 4, 2004
10.9#(1)	First Amendment to Technology Alliance and Option Agreement by and between the Registrant and ADM Polymer Corporation dated as of September 8, 2005
10.10†(6)	Employment Agreement between the Registrant and Richard P. Eno dated February 20, 2008
10.10.1†*	First Amendment to Employment Agreement between the Registrant and Richard P. Eno executed December 18, 2008
10.11†(1)	Employment Agreement between the Registrant and Oliver P. Peoples dated July 20, 2006
10.11.1†*	First Amendment to Employment Agreement between the Registrant and Oliver P. Peoples executed December 19, 2008
10.11.2†*	Second Amendment to Employment Agreement between the Registrant and Oliver P. Peoples executed February 25, 2009
10.12†(7)	Employment Agreement between the Registrant and Joseph D. Hill executed March 21, 2008
10.12.1†*	First Amendment to Employment Agreement between the Registrant and Joseph D. Hill executed December 23, 2008

[Table of Contents](#)

Exhibit Number	Description
10.13†*	Change of Control Severance Agreement between the Registrant and Sarah P. Cecil executed December 18, 2008
10.14†*	Employment Agreement between the Registrant and Robert E. Engle executed December 19, 2008
10.15†(1)	Form of Employee Noncompetition, Nondisclosure and Inventions Agreement with Oliver P. Peoples
10.16†(1)	Form of Noncompetition, Nondisclosure and Inventions Agreement between the Registrant Richard P. Eno, Joseph D. Hill, Robert E. Engle and Sarah P. Cecil
10.17†(1)	Form of Indemnification Agreement between the Registrant and its Directors and Officers
10.18(1)	Lease Agreement between the Registrant and 21 Erie Realty Trust dated as of December 29, 2003 for the premises located at 21 Erie Street, Cambridge, Massachusetts 02139
10.19(3)	Lease between Fortune Wakefield, LLC ("Landlord") and Metabolix, Inc. dated March 30, 2007
10.20(1)	Fifth Amended and Restated Stockholders Agreement by and among the Registrant and certain of its stockholders dated January 19, 2006
10.21(1)	Amendment No. 1 to Fifth Amended and Restated Stockholders Agreement by and among the Registrant and certain of its stockholders dated July 12, 2006
10.22(1)	Stock Purchase Agreement between the Registrant and Archer Daniels Midland Company dated July 12, 2006
10.23#(1)	License Agreement between the Registrant and Tepha, Inc. dated as of October 1, 1999
10.24#(1)	License Agreement between the Registrant and Tepha, Inc. dated as of September 9, 2003
10.25(6)#	Exclusive License Agreement between the Registrant and Abbott Laboratories dated November 12, 2007
21.1(2)	Subsidiaries of the Registrant
23.1*	Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm
24.1	Power of Attorney (incorporated by reference to the signature page of this Annual Report on Form 10-K)
31.1*	Certification Pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934
31.2*	Certification Pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934
32.1*	Certification Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

† Indicates a management contract or any compensatory plan, contract or arrangement.

Confidential treatment has been granted for certain portions of this document pursuant to a Commission order. Such provisions have been filed separately with the Commission.

* Filed herewith

[Table of Contents](#)

- (1) Incorporated by reference herein to the exhibits to the Company's Registration Statement on Form S-1 (File No. 333-135760)
 - (2) Incorporated by reference herein to the exhibits to the Company's 2006 Annual Report on Form 10-K (File No. 001-33133)
 - (3) Incorporated by reference herein to the exhibits to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2007 (File No. 001-33133)
 - (4) Incorporated by reference herein to the exhibits to the Company's Report on Form 8-K/A filed June 19, 2007 (File No. 001-33133)
 - (5) Incorporated by reference herein to the exhibits to the Company's Report on Form 8-K/A filed May 22, 2007 (File No. 001-33133)
 - (6) Incorporated by reference herein to the exhibits to the Company's 2007 Annual Report on Form 10-K filed March 13, 2008 (File No. 001-33133)
 - (7) Incorporated by reference herein to the exhibits to the Company's Report on Form 8-K filed March 24, 2008 (File No. 001-33133)
-



December 17, 2008

Richard P. Eno
c/o Metabolix, Inc.
21 Erie Street
Cambridge, MA 02139

Re: First Amendment to Employment Agreement

Dear Richard:

This letter amends the terms of the Employment Letter Agreement (the "Agreement") dated as of February 20, 2008, by and between Metabolix, Inc. (the "Company") and you, as set forth below. Capitalized terms not defined herein shall have the meaning specified in the Agreement.

1. Section 3(a) of the Agreement is hereby amended by inserting the following after the word "Company" and prior to the word "will" in the second sentence thereof:

"will pay such base salary on a semi-monthly basis in accordance with the Company's normal payroll practices and"

2. Section 4(f) of the Agreement is hereby amended by deleting said section in its entirety and substituting the following therefor:

"(f) Definition of Good Reason. As used in this Agreement, "Good Reason" means that you have complied with the 'Good Reason Process' (hereinafter defined) following the occurrence of any of the following events: (i) a material diminution in your responsibilities, authority or duties; (ii) a material diminution in your Base Salary; (iii) a material change in the geographic location at which you provide services to the Company; or (iv) the material breach of this Agreement by the Company. 'Good Reason Process' shall mean that (i) you reasonably determine in good faith that a 'Good Reason' condition has occurred; (ii) you notify the Company in writing of the occurrence of the Good Reason condition within 60 days of the occurrence of such condition; (iii) you cooperate in good faith with the Company's efforts, for a period not less than 30 days following such notice (the 'Cure Period'), to remedy the condition; (iv) notwithstanding such efforts, the Good Reason condition continues to exist; and (v) you terminate your employment within 60 days after the end of the Cure Period. If the Company cures the Good Reason condition

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during the Cure Period, Good Reason shall be deemed not to have occurred."

3. Section 5(a) of the Agreement is hereby amended by inserting the following immediately prior to the period at the end of the last sentence thereof:

"but in no event more than 45 days after the date on which your employment terminates"

4. Section 5(b) of the Agreement is hereby amended by inserting the following immediately after the word "Company" and prior to the comma within the first sentence thereof:

"within thirty (30) days after the date of termination"

5. Section 5(b) of the Agreement is hereby amended (x) by deleting the second and third sentences thereof and (y) by inserting the following immediately prior to the period at the end of the first sentence thereof:

“, commencing on the 37th day after the date on which your employment terminates (provided the Release is effective prior to such date), payable in accordance with the Company's normal payroll practices, provided that the first payment will include all amounts which would have been paid in the 37 days following your termination of employment.”

6. Section 5(c) of the Agreement is hereby amended (x) by deleting the second sentence thereof and (y) by inserting the following immediately following the word "Release" and prior to the comma within the first sentence thereof:

"within thirty (30) days after the date of termination"

7. Section 5(e) of the Agreement is hereby amended by deleting the word "you" after the term "pay to" and prior to the term "an additional amount" within the second sentence thereof, and substituting the following therefor:

"the relevant taxing authority as withholding taxes at such time or times when each payment of Excise Tax is due,"

8. Section 5(g) of the Agreement is hereby amended to provide that the term "separation from service" shall be defined in accordance with Section 409A(a)(2)(A)(i) of the Code and the applicable provisions of Treasury Regulation Section 1.409A-1(h).

9. The Agreement is hereby amended by inserting the following as a new Section 5(h) to the Agreement:

2

“(h) Section 409A. (i) Anything in this Agreement to the contrary notwithstanding, if at the time of your ‘separation from service,’ the Company determines that the you are a ‘specified employee’ within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that you become entitled to under this Agreement on account of your separation from service would be considered deferred compensation subject to the 20 percent additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (A) six months and one day after your separation from service, or (B) your death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule.

(ii) Solely for purposes of Section 409A of the Code, each installment payment described in Section 5 is considered a separate payment.”

10. Section 9(e) of the Agreement is hereby amended by deleting subsection (i) of such section and substituting the following therefore:

“(i) The Company shall cause its rights and obligations hereunder to be assumed by any person or entity that succeeds to all or substantially all of the Company’s business or that aspect of the Company’s business in which you are principally involved and may assign its rights and obligations hereunder to any Company Affiliate.”

11. Section 9(k) of the Agreement is hereby amended by inserting the following after the word “Agreement” and prior to the word “comply” within the second sentence thereof:

“be exempt from, or”

12. Except as amended herein, the Agreement is hereby confirmed in all other respects and nothing contained herein shall be deemed a waiver of any right or abrogation of any obligation otherwise existing under the Agreement except to the extent specifically provided for herein.

3

Please indicate your acceptance of this amendment to the Agreement by signing the enclosed copy of this letter and returning it to me.

METABOLIX, INC.

By: /s/ Joseph D. Hill
Joseph D. Hill
Chief Financial Officer

Accepted and agreed:

/s/ Richard P. Eno
Richard P. Eno

Date: 12/18/08

4



December 17, 2008

Dr. Oliver Peoples
c/o Metabolix, Inc.
21 Erie Street
Cambridge, MA 02139

Re: First Amendment to Employment Agreement

Dear Oliver:

This letter amends the terms of the Employment Letter Agreement (the "Agreement") dated as of July 20, 2006 by and between Metabolix, Inc. (the "Company") and you as set forth below. Capitalized terms not defined herein shall have the meaning specified in the Agreement.

1. Section 3(a) of the Agreement is hereby amended by inserting the following immediately prior to the period at the end of the first sentence thereof:

"payable on a semi-monthly basis in accordance with the Company's normal payroll practices"

2. Section 4(a) of the Agreement is hereby amended by inserting the following immediately before the period at the end of the last sentence thereof:

"but in no event more than 45 days after the date on which your employment terminates"

3. Section 4(b) of the Agreement is hereby amended by adding the following immediately prior to the comma after the phrase "release of claims against the Company" within the first sentence thereof:

"that is fully effective, within thirty (30) days after the date of termination"

4. Section 4(b) of the Agreement is hereby amended by deleting subsections (A) and (B) thereof and substituting the following therefor:

"on the 37th day after the date on which your employment terminates (provided the release referred to above is effective prior to such date)"

5. Section 4(c)(i) of the Agreement is hereby amended by adding the following immediately prior to the comma after the phrase "release of claims against the Company" within the first sentence thereof:

"that is fully effective within thirty (30) days after the date of termination"

6. Section 4(c)(i)(A) of the Agreement is hereby amended by deleting subsections (x) and (y) thereof and substituting the following therefor:

"in accordance with Section 4(b), above."

7. Section 4(c)(ii) of the Agreement is hereby amended by adding the following sentence at the end thereof:

"In the event that such payments are required to be reduced hereunder, such payments shall be reduced in the following order: (1) cash payments not subject to Section 409A of the Code; (2) cash payments subject to Section 409A of the Code; (3) equity-based payments and acceleration; and (4) non-cash forms of benefits, and to the extent any payment is to be made over time (e.g., in installments, etc.), then the payments shall be reduced in reverse chronological order."

8. Section 4(f) of the Agreement is hereby amended by deleting said section in its entirety and substituting the following therefor:

"(f) 'Good Reason' shall mean that you have complied with the 'Good Reason Process' (hereinafter defined) following the occurrence of any of the following events: (i) a material diminution in your responsibilities, authority or duties; (ii) a material diminution in your Base Salary; (iii) a material change in the geographic location at which you provide services to the Company; or (iv) the material breach of this Agreement by the Company. 'Good Reason Process' shall mean that (i) you reasonably determine in good faith that a 'Good Reason' condition has occurred; (ii) you notify the Company in writing of the occurrence of the Good Reason condition within 60 days of the occurrence of such condition; (iii) you cooperate in good faith with the Company's efforts, for a period not less than 30 days following such notice (the 'Cure Period'), to remedy the condition; (iv) notwithstanding such efforts, the Good Reason condition continues to exist; and (v) you terminate your employment within 60 days after the end of the Cure Period. If the Company cures the Good Reason condition during the Cure Period, Good Reason shall be deemed not to have occurred."

9. Section 8(e) of the Agreement is hereby amended by deleting the first sentence thereof and substituting the following therefor:

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“The Company shall cause its rights and obligations hereunder to be assumed by any person or entity that succeeds to all or substantially all of the Company’s business or that aspect of the Company’s business in which you are principally involved and may assign its rights and obligations hereunder to any Company Affiliate.”

10. Section 8(k) of the Agreement is hereby amended by inserting the following after the word “Agreement” and prior to the word “comply” within the second sentence thereof:

“be exempt from, or”

11. The Agreement is hereby amended by inserting the following as a new section 8(l) and renumbering the remaining sections of the Agreement accordingly:

“(l) Section 409A.

(i) Notwithstanding anything in this Agreement to the contrary:

(1) to the extent that any payment or benefit described in this Agreement constitutes ‘non-qualified deferred compensation’ under Section 409A of the Code, and to the extent that such payment or benefit is payable upon the termination of your employment, then such payments or benefits shall only be payable upon your ‘Separation from Service.’ The term ‘Separation from Service’ shall mean your ‘separation from service’ from the Company, an affiliate of the Company or a successor entity within the meaning set forth in Section 409A(a)(2)(A)(i) of the Code, determined in accordance with the presumptions set forth in Treasury Regulation Section 1.409A-1(h); and

(2) if at the time of your ‘separation from service,’ the Company determines that the you are a ‘specified employee’ within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that you become entitled to under this Agreement on account of your separation from service would be considered deferred compensation subject to the 20 percent additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (A) six months and one day after your separation from service, or (B) your death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall

include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule.

(ii) Solely for purposes of Section 409A of the Code, any installment payments made hereunder shall be considered separate payments.”

12. Except as amended herein, the Agreement is hereby confirmed in all other respects and nothing contained herein shall be deemed a waiver of any right or abrogation of any obligation otherwise existing under the Agreement except to the extent specifically provided for herein.

Please indicate your acceptance of this amendment to the Agreement by signing the enclosed copy of this letter and returning it to me.

METABOLIX, INC.

By: /s/ Richard P. Eno
Richard P. Eno
President & CEO

Accepted and agreed:

/s/ Oliver P. Peoples
Oliver P. Peoples

Date: 12/19/2008



February 6, 2009

Dr. Oliver Peoples
c/o Metabolix, Inc.
21 Erie Street
Cambridge, MA 02139

Re: Second Amendment to Employment Agreement

Dear Oliver:

This letter amends the terms of the Employment Letter Agreement (the "Agreement") dated as of July 20, 2006 by and between Metabolix, Inc. (the "Company") and you, as previously amended, as set forth below. Capitalized terms not defined herein shall have the meaning specified in the Agreement.

1. Section 4(e)(iii) of the Agreement is hereby amended by deleting said section in its entirety and substituting the following therefor:

(iii) any one person, entity or group, who is not a shareholder at time of execution of this Agreement, acquires ownership of capital stock of the Company that, together with the capital stock of the Company already held by such person, entity or group, constitutes more than 50% of the total fair market value or total voting power of the capital stock of the Company; provided, however, if any one person, entity or group is considered to own more than 50% of the total fair market value or total voting power of the capital stock of the Company, the acquisition of additional capital stock by the same person, entity or group shall not be deemed to be a Change of Control.

2. Except as amended herein, the Agreement is hereby confirmed in all other respects and nothing contained herein shall be deemed a waiver of any right or abrogation of any obligation otherwise existing under the Agreement except to the extent specifically provided for herein.

Please indicate your acceptance of this amendment to the Agreement by signing the enclosed copy of this letter and returning it to me.

METABOLIX, INC.

By: /s/ Richard P. Eno
Richard P. Eno
President & CEO

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tel: 617 583 1700 | fax: 617 583 1767 | www.metabolix.com

Accepted and agreed:

/s/ Oliver P. Peoples
Oliver P. Peoples

Date: 2/25/2009



December 17, 2008

Joseph Hill
 c/o Metabolix, Inc.
 21 Erie Street
 Cambridge, MA 02139

Re: First Amendment to Employment Agreement

Dear Joe:

This letter amends the terms of the Employment Letter Agreement (the "Agreement") dated as of March 14, 2008, by and between Metabolix, Inc. (the "Company") and you as set forth below. Capitalized terms not defined herein shall have the meaning specified in the Agreement.

1. Section 3(a) of the Agreement is hereby amended by inserting the following after the word "Company" and prior to the word "will" in the second sentence thereof:

"will pay such base salary on a semi-monthly basis in accordance with the Company's normal payroll practices and"

2. Section 4(f) of the Agreement is hereby amended by deleting said section in its entirety and substituting the following therefor:

"(f) Definition of Good Reason. As used in this Agreement, 'Good Reason' means that you have complied with the 'Good Reason Process' (hereinafter defined) following the occurrence of any of the following events: (i) a material diminution in your responsibilities, authority or duties; (ii) a material diminution in your Base Salary; (iii) a material change in the geographic location at which you provide services to the Company; or (iv) the material breach of this Agreement by the Company. 'Good Reason Process' shall mean that (i) you reasonably determine in good faith that a 'Good Reason' condition has occurred; (ii) you notify the Company in writing of the occurrence of the Good Reason condition within 60 days of the occurrence of such condition; (iii) you cooperate in good faith with the Company's efforts, for a period not less than 30 days following such notice (the 'Cure Period'), to remedy the condition; (iv) notwithstanding such efforts, the Good Reason condition continues to exist; and (v) you terminate your employment within 60 days after the end of the Cure Period. If the Company cures the Good Reason condition

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during the Cure Period, Good Reason shall be deemed not to have occurred."

3. Section 5(a) of the Agreement is hereby amended by adding the following immediately before the period at the end of the last sentence thereof:

"but in no event more than 45 days after the date on which your employment terminates"

4. Sections 5(b) and 5(c) of the Agreement are each hereby amended by inserting the following immediately at the end of the parenthetical and prior to the comma within the first sentence thereof:

"within thirty (30) days after the date of termination"

5. Sections 5(b) and 5(c) of the Agreement are each hereby amended by deleting the "upon your delivery of the Release" at the end thereof and substituting therefor:

", commencing on the 37th day after the date on which your employment terminates (provided the Release is effective prior to such date) payable in accordance with the Company's normal payroll practices, provided that the first payment will include all amounts which would have been paid in the 37 days following your termination of employment."

6. Section 5(d) of the Agreement is hereby amended by deleting the first and second sentences thereof.

7. Section 5(e) of the Agreement is hereby amended (x) by deleting the second sentence thereof and (y) by deleting ", then" following the word "Agreement" and prior to the term "in addition" within the first sentence thereof and substituting the following therefor:

"it shall be considered a termination by the Company without Cause and"

8. Section 5(g) of the Agreement is hereby amended by deleting the word "you" after the term "pay to" and prior to the term "an additional amount" within the second sentence thereof, and substituting the following therefor:

"the relevant taxing authority as withholding taxes at such time or times when each payment of Excise Tax is due,"

9. Section 5(i) of the Agreement is hereby amended to provide that the term "separation from service" shall be defined in accordance with Section 409A(a)(2)(A)(i) of the Code and the applicable provisions of Treasury Regulation Section 1.409A-1(h).

2

10. The Agreement is hereby amended by inserting the following as a new Section 5(j) to the Agreement:

"(j) Section 409A. (i) Anything in this Agreement to the contrary notwithstanding, if at the time of your 'separation from service,' the Company determines that the you are a 'specified employee' within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that you become entitled to under this Agreement on account of your separation from service would be considered deferred compensation subject to the 20 percent additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (A) six months and one day after your separation from service, or (B) your death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule.

(ii) Solely for purposes of Section 409A of the Code, each installment payment described in Section 5 is considered a separate payment."

11. Section 9(e) of the Agreement is hereby amended by deleting the first sentence of such section and substituting the following therefore:

"The Company shall cause its rights and obligations hereunder to be assumed by any person or entity that succeeds to all or substantially all of the Company's business or that aspect of the Company's business in which you are principally involved and may assign its rights and obligations hereunder to any Company Affiliate."

12. Section 9(k) of the Agreement is hereby amended by inserting the following after the word "Agreement" and prior to the word "comply" within the second sentence thereof:

"be exempt from, or"

13. Except as amended herein, the Agreement is hereby confirmed in all other respects and nothing contained herein shall be deemed a waiver of any right or abrogation of any obligation otherwise existing under the Agreement except to the extent specifically provided for herein.

3

Please indicate your acceptance of this amendment to the Agreement by signing the enclosed copy of this letter and returning it to me.

METABOLIX, INC.

By: /s/ Richard P. Eno
Richard P. Eno
President & CEO

Accepted and agreed:

/s/ Joseph D. Hill
Joseph D. Hill

Date: 12-23-08

4



December 17, 2008

Sarah P. Cecil
 c/o Metabolix, Inc.
 21 Erie Street
 Cambridge, MA 02139

Re: Change of Control Severance Agreement

Dear Sarah:

Metabolix, Inc. (the "Company") believes that it is in the best interests of the Company to provide you with certain severance benefits in the event of a termination of your employment in connection with a Change of Control, in order to provide you with financial security and sufficient encouragement to remain with the Company notwithstanding the possibility of a Change of Control (as defined below).

Therefore, you and the Company agree as follows:

1. Change of Control Severance Benefits.

1.1. In the event that your employment is terminated by the Company without Cause or by you for Good Reason within 12 months immediately following or 6 months immediately prior to a Change of Control (each as defined herein), then, in addition to any accrued salary and benefits otherwise payable to you by law or pursuant to the Company's benefit plans as in effect at the date of termination and contingent upon your executing a complete release of claims against the Company (the "Release") within 30 days after the date of your termination of employment:

(a) the Company shall continue your base salary at the rate in effect at the date of termination for a period of twelve (12) months from the date of termination, and such salary continuation shall commence on the 37th day after the date on which your employment terminates and shall be paid in accordance with the Company's normal payroll practice, provided that the first payment will include all amounts which would have been paid in the 37 days following your termination of employment;

(b) the Company shall pay COBRA premiums to maintain medical and dental benefits, if any, in effect at the time of termination beginning on the date of your termination of employment until the earlier of (i) twelve (12) months following the date of termination, or (ii) the date you become insured under a medical insurance plan providing similar benefits to that of the Company plan, or (iii) the date you revoke the Release; and

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(c) the Company shall cause the full vesting of all your unvested equity, including but not limited to any options or restricted stock granted to you under the 2006 Stock Plan or any authorized successor stock plan, provided that the conditions to vesting other than the passage of time have been satisfied.

1.2. Notwithstanding anything set forth in this Agreement, a termination of employment shall be deemed not to have occurred until such time as you incur a "separation from service" with the Company in accordance with Section 409A(a)(2)(A)(i) of the Code and the applicable provisions of Treasury Regulation Section 1.409A-1(h).

1.3. Anything in this Agreement to the contrary notwithstanding, if at the time of your separation from service within the meaning of Section 409A of the Code, the Company determines you are a "specified employee" within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that you become entitled to under this Agreement on account of your separation from service would be considered deferred compensation subject to the 20 percent additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (A) six months and one day after your separation from service, or (B) your death. The first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments (if any) shall be payable in accordance with their original schedule.

2. Definitions.

"Change of Control": As used herein, a "Change of Control" shall occur or be deemed to have occurred only upon any one or more of the following events:

(i) any "person" (as such term is used in Sections 13(d) and 14(d)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) becomes a "beneficial owner" (as such term is defined in Rule 13d-3 promulgated under the Exchange Act) (other than the Company, any trustee or other fiduciary holding securities under an employee benefit plan of the Company, or any corporation owned, directly or indirectly, by the stockholders of the Company, in substantially the same proportions as their ownership of stock of the Company), directly or indirectly, of securities of the Company, representing fifty percent (50%) or more of the combined voting power of the Company's then outstanding securities; or

(ii) persons who, as of the effective date of this Agreement, constituted the Company's Board of Directors (the "Incumbent Board") cease for any reason including, without limitation, as a result of a tender offer, proxy contest, merger, consolidation or similar transaction, to constitute at least a majority of the Board of Directors, provided that any person becoming a director of the Company subsequent to the Effective Date whose election was

approved by at least a majority of the directors then comprising the Incumbent Board shall, for purposes of this Section 6(f), be considered a member of the Incumbent Board; or

(iii) the consummation of a merger or consolidation of the Company with any other corporation or other entity, other than (1) a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than fifty percent (50%) of the combined voting power of the voting securities of the Company or such surviving entity outstanding immediately after such merger or consolidation or (2) a merger or consolidation effected to implement a recapitalization of the Company (or similar transaction) in which no "person" (as hereinabove defined) acquires more than fifty percent (50%) of the combined voting power of the Company's then outstanding securities; or

(iv) the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets.

Termination for Cause. "Cause" for termination shall be limited to the following:

- (i) Your conviction of a felony; or
- (ii) Your commission of fraud, or misconduct that results in material and demonstrable damage to the business or reputation of the Company; or
- (iii) Your continued, repeated, intentional and willful refusal to perform the duties associated with your position with Company, which is not cured within thirty (30) days following written notice to you; provided, however, that your refusal to take any action that you reasonably believes violates any applicable law or regulation or fiduciary duty, shall not constitute grounds for the application of this subsection.

"Good Reason". For purposes of this Agreement, "Good Reason" shall mean that you have complied with the "Good Reason Process" (hereinafter defined) following the occurrence of any of the following events:

- (i) a material diminution in your responsibilities, authority or duties;
- (ii) a material diminution in your base salary except for across-the-board salary reductions based on the Company's financial performance similarly affecting all or substantially all senior management employees of the Company; or
- (iii) the requirement that you relocate to a location more than 50 miles outside of Cambridge, Massachusetts.

"Good Reason Process" shall mean that (i) you reasonably determine in good faith that a "Good Reason" condition has occurred; (ii) you notify the Company in writing of the occurrence of the Good Reason condition within 60 days of the occurrence of such condition; (iii) you cooperate in good faith with the Company's efforts, for a period not less than 30 days following such notice (the "Cure Period"), to remedy the condition; (iv) notwithstanding such efforts, the Good Reason condition continues to exist; and (v) you terminate your employment within 60 days after the end of the Cure Period. If the Company cures the Good Reason condition during the Cure Period, Good Reason shall be deemed not to have occurred.

3. **At-Will Employment.** The Company and you acknowledge that, notwithstanding anything contained in this Agreement, your employment with the Company shall be at-will, as defined under applicable law. Nothing in this letter agreement is intended to provide you with any right to continue in the employ of the Company for any period of specific duration or interfere with or otherwise restrict in any way your rights or the rights of the Company, which rights are hereby expressly reserved by each, to terminate your employment at any time and for any reason. If your employment terminates for any reason, you shall not be entitled to any payments, benefits, damages, awards or compensation other than as provided by this Agreement, or as may otherwise be established under the Company's then existing employee benefit plans or policies at the time of termination.

4. **General.**

- 4.1. **Entire Agreement.** This Agreement embodies the entire agreement and understanding between you and the Company with respect to the subject matter hereof and supersedes all prior oral or written agreements and understandings relating to the subject matter hereof.
- 4.2. **Modifications, Amendments, Waivers.** The terms and provisions of this Agreement may be modified or amended only by written agreement executed by you and the Company. The terms and provisions of this Agreement may be waived, or consent for the departure therefrom granted, only by written document executed by the party entitled to the benefits of such terms or provisions.
- 4.3. **Assignment.** The Company shall cause its rights and obligations hereunder to be assumed by any person or entity that succeeds to all or substantially all of the Company's business or that aspect of the Company's business in which you are principally involved or to any Company affiliate. You may not assign your rights and obligations under this Agreement without the prior written consent of the Company and any such attempted assignment by you without the prior written consent of the Company will be void. Notwithstanding the foregoing, the terms of this Agreement and your rights hereunder shall inure to the benefit of, and be enforceable by, your personal or legal representatives, executors, administrators, successors, heirs, and legatees.

- 4.4. Governing Law. This Agreement and the rights and obligations of the parties hereunder will be construed in accordance with and governed by the law of Massachusetts, without giving effect to the conflict of law principles thereof.
- 4.5. Jurisdiction, Venue and Service of Process. Any legal action or proceeding with respect to this Agreement will be brought in the courts of Massachusetts or of the United States of America for the District of Massachusetts. By execution and delivery of this Agreement, each of the parties hereto accepts for itself and in respect of its property, generally and unconditionally, the exclusive jurisdiction of the aforesaid courts.
- 4.6. Jury Waiver. You and the Company agree to waive trial by jury in connection with any action arising from or relating to this Agreement.
- 4.7. Severability. The parties intend this Agreement to be enforced as written. However, if any portion or provision of this Agreement is to any extent declared illegal or unenforceable by a duly authorized court having jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, will not be affected thereby, and each portion and provision of this Agreement will be valid and enforceable to the fullest extent permitted by law.
- 4.8. Taxes. All payments required to be made by the Company to you under this Agreement shall be subject to the withholding of such amounts for taxes and other payroll deductions as the Company may reasonably determine it should withhold pursuant to any applicable law or regulation. To the extent applicable, it is intended that this Agreement be exempt from, or comply with, the provisions of Section 409A of the Code, and this Agreement shall be construed and applied in a manner consistent with this intent. In the event that any severance payments or benefits hereunder are determined by the Company to be in the nature of nonqualified deferred compensation payments, you and the Company hereby agree to take such actions as may be mutually agreed to ensure that such payments or benefits comply with the applicable provisions of Section 409A of the Code and the official guidance issued thereunder. Notwithstanding the foregoing, the Company does not guarantee the tax treatment or tax consequences associated with any payment or benefit arising under this Agreement.

5

If the foregoing accurately sets forth our agreement, please so indicate by signing and returning to us the enclosed copy of this Agreement.

Very truly yours,

Metabolix, Inc.

By: /s/ Richard P. Eno
Richard P. Eno
President & CEO

Accepted and agreed:

/s/ Sarah P. Cecil
Sarah P. Cecil

Date: 12/18/08

6



December 18, 2008

Robert Engle
 Schloss Str. 37
 Hofheim, Germany 65719
 Via E-Mail

Re: Employment Agreement

Dear Bob:

This letter is to confirm our understanding with respect to your employment by Metabolix, Inc. (the "Company"). The terms and conditions agreed to in this letter are hereinafter referred to as the "Agreement." In consideration of the mutual promises and covenants contained in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby mutually acknowledged, we have agreed as follows:

1. Employment.

1.1. General. The Company will employ you, and you will be employed by the Company, as General Manager of Telles, LLC ("Telles"), the Company's joint venture with Archer Daniels Midland Company, reporting to the Telles Board of Directors, and you shall have the responsibilities, duty and authority commensurate with that position. You will also perform such reasonable other and/or different services for Telles as may be assigned to you from time to time. You agree that if your employment hereunder ends for any reason, you will tender to the Company your resignation of all offices with Telles or the Company as of the date of your termination.

1.2. Devotion to Duties. While you are employed hereunder, you will use your best efforts, skills and abilities to perform faithfully all duties assigned to you pursuant to this Agreement and will devote your full business time and energies to the business and affairs of Telles. While you are employed hereunder, you will not undertake any other employment from any person or entity without the prior written consent of Telles.

2. Term. The Company hereby agrees to employ you, and you hereby accept employment with the Company, upon the terms set forth in this Agreement, for the period commencing on January 15, 2008 (or such other date as the parties shall mutually agree) (the "Commencement Date") and ending on the first anniversary of the Commencement Date (such period is the "Initial Term"), subject to earlier termination as provided in Section 4; provided, however, that at the end of such Initial Term and each anniversary date thereafter, the term of this Agreement will automatically be extended for an additional year unless, not

Metabolix | 21 Erie Street | Cambridge | MA | 02139 | USA
 tel: 617 583 1700 | fax: 617 583 1767 | www.metabolix.com

less than thirty (30) days prior to the end of such Initial Term or one (1) year extension period, as the case may be, the Company or you shall have given written notice that it or you elects not to have the term extended. The term of this Agreement as extended and defined by this Section shall be referred to as the "Agreement Term."

3. Compensation.

3.1. Base Salary. While you are employed hereunder, the Company will pay you a base salary at the annual rate of no less than \$240,000 per year (the "Base Salary"). The Company will pay such base salary on a semi-monthly basis in accordance with the Company's normal payroll practices and will deduct from each monthly salary payment all amounts required to be deducted or withheld under applicable law or under any employee benefit plan in which you participate.

3.2. Bonus Opportunity. You will be eligible to receive an annual cash bonus in an amount of up to 120% of the Base Salary, based upon the Company's good faith assessment of your achievement of individual goals, and of Telles's achievement of its goals, which assessment shall be done by the Company's Compensation Committee in conjunction with the Telles Board of Directors. Individual goals for each calendar year will be established, and modified, in good faith by you and the Telles Board of Directors in conjunction with the Company's Compensation Committee. The Company expects that the annual target bonus opportunity will be in the range of 60% of your Base Salary if your performance fully meets those expectations. To the extent the Company awards you a cash bonus, the bonus, if payable, shall be calculated and paid no later than two and a half months following the later of the close of the calendar or Company fiscal year to which such bonus relates. In order to receive an annual bonus, you must be employed at the time of a timely payment. For your first year of employment, and any other partial year, your cash bonus will be awarded on a pro rata basis.

3.3. Equity Compensation. At the first meeting of the Company's Compensation Committee following the Commencement Date, the Company shall grant you a stock option under the Metabolix, Inc. 2006 Stock Option and Incentive Plan, as amended and restated (the "2006 Stock Plan"), to purchase 50,000 shares of common stock of the Company (the "Option") at an exercise price equal to the Fair Market Value (as defined in the 2006 Stock Plan) of the Company's common stock on the date of such grant. Provided you are employed by the Company on the vesting date, the Option shall vest in equal installments as to 1/16 of the shares three months after the Commencement Date and on the last day of each three (3) month period following the first vesting date until the Option fully vests. Except as provided herein, the Option will be subject to the terms and conditions of the 2006 Stock Plan and the customary terms and conditions of the Company's standard form of stock option agreement. To the extent allowed

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- 3.4. Relocation. In addition to the above, the Company will provide you the relocation benefits set forth in Appendix A attached hereto. You must submit any request for reimbursement no later than ninety (90) days following the date that such relocation expense is incurred in accordance with the Company's reimbursement policy regarding same and relocation expenses must be substantiated by appropriate receipts and documentation. If a relocation expense reimbursement is not exempt from Section 409A of the Code, any reimbursement in one calendar year shall not affect the amount that may be reimbursed in any other calendar year and a reimbursement (or right thereto) may not be exchanged or liquidated for another benefit or payment. Any relocation expense reimbursements subject to Section 409A of the Code shall be made no later than the end of the calendar year following the calendar year in which you incur such relocation expense.
- 3.5. Vacation. You will be entitled to paid vacation and paid holidays, accrued and used in accordance with the Company's policies as currently in effect. All vacation days will be taken at times mutually agreed by you and the Company and will be subject to the business needs of the Company.
- 3.6. Fringe Benefits. You will be entitled to participate in employee benefit plans which the Company provides or may establish for the benefit of its senior executives (for example, group life, disability, medical, dental and other insurance, retirement, pension, profit-sharing and similar plans) (collectively, the "Fringe Benefits"). Your eligibility to participate in the Fringe Benefits and receive benefits thereunder will be subject to the plan documents governing such Fringe Benefits. Nothing contained herein will require the Company to establish or maintain any Fringe Benefits.
- 3.7. Reimbursement of Certain Expenses. You shall be reimbursed for such reasonable and necessary business expenses incurred by you while you are employed by the Company, which are directly related to the furtherance of the Company's business. You must submit any request for reimbursement no later than ninety (90) days following the date that such business expense is incurred in accordance with the Company's reimbursement policy regarding same and business expenses must be substantiated by appropriate receipts and documentation. If a business expense reimbursement is not exempt from Section 409A of the Code, any reimbursement in one calendar year shall not affect the amount that may be reimbursed in any other calendar year and a reimbursement (or right thereto) may not be exchanged or liquidated for another benefit or payment. Any business expense reimbursements subject to Section 409A of the Code shall be made no later than the end of the calendar year following the calendar year in which you incur such business expense.
4. Termination. This Agreement shall terminate upon the occurrence of any of the following:
- 4.1. Expiration of the Agreement Term. This Agreement shall terminate at the expiration of the Agreement Term as set forth in Section 2.

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- 4.2. Termination for Cause. This Agreement shall terminate, at the election of the Company, for Cause upon written notice by the Company to you. For the purposes of this Section, "Cause" for termination shall be limited to the following:
- a) Your conviction of a felony; or
 - b) Your commission of fraud, or misconduct that results in material and demonstrable damage to the business or reputation of the Company; or
 - c) Your willful and continued failure to perform your duties hereunder (other than such failure resulting from your incapacity due to Disability, as defined herein) within 10 business days after the Company delivers a written demand for performance to you that specifically identifies the actions to be performed.
- 4.3. Termination by the Company Without Cause or by You for Good Reason. This Agreement shall terminate at the election of the Company, without Cause, at any time upon 30 days prior written notice by the Company to you or by you for Good Reason (as defined herein).
- 4.4. Death or Disability. The Agreement shall terminate upon your death or disability. If you shall be disabled so as to be unable to perform the essential functions of your position under this Agreement with or without reasonable accommodation, the Board may remove you from any responsibilities and/or reassign you to another position with the Company during the period of such disability, and such reassignment shall not trigger a Good Reason termination as provided herein. Notwithstanding any such removal or reassignment, you shall continue to receive your Base Salary (less any disability pay or sick pay benefits to which you may be entitled under the Company's policies) and benefits under this Agreement (except to the extent that you may be ineligible for one or more such benefits under applicable plan terms) for a period of three months, and your employment may be terminated by the Company at any time thereafter. Nothing in this Section shall be construed to waive your rights, if any, under existing law including, without limitation, the Family and Medical Leave Act of 1993, 29 U.S.C. §2601 *et seq.* and the Americans with Disabilities Act, 42 U.S.C. §12101 *et seq.*
- Notwithstanding the foregoing, if and only to the extent that your disability is a trigger for the payment of deferred compensation, as defined in Section 409A of the Code, "disability" shall have the meaning set forth in Section 409A(a)(2)(C) of the Code.
- 4.5. Voluntary Termination by You. You may terminate this Agreement at your election upon not less than 30 days prior written notice to the Company.
- 4.6. Definition of Good Reason. As used in this Agreement, 'Good Reason' means that you have complied with the 'Good Reason Process' (hereinafter defined) following the

occurrence of any of the following events: (i) a material diminution in your responsibilities, authority or duties; (ii) a material diminution in your Base Salary; (iii) a material change in the geographic location at which you provide services to the Company; or (iv) the material breach of this Agreement by the Company. ‘Good Reason Process’ shall mean that (i) you reasonably determine in good faith that a ‘Good Reason’ condition has occurred; (ii) you notify the Company in writing of the occurrence of the Good Reason condition within 60 days of the occurrence of such condition; (iii) you cooperate in good faith with the Company’s efforts, for a period not less than 30 days following such notice (the ‘Cure Period’), to remedy the condition; (iv) notwithstanding such efforts, the Good Reason condition continues to exist; and (v) you terminate your employment within 60 days after the end of the Cure Period. If the Company cures the Good Reason condition during the Cure Period, Good Reason shall be deemed not to have occurred.

5. Effect of Termination.

- 5.1. Termination for Cause, Death, Disability or Voluntary Resignation. In the event (i) you are terminated for Cause; (ii) you are terminated for death or Disability; or (iii) you voluntarily resign (other than for Good Reason), unless otherwise specifically provided herein, you, or your estate, shall be eligible only to receive (i) the portion of your Base Salary as has accrued prior to the effectiveness of such termination and has not yet been paid, (ii) an amount equal to the value of your accrued unused vacation days, and (iii) reimbursement for expenses properly incurred by you on behalf of the Company prior to such termination if such expenses are properly documented in accordance with Company policy and practice and submitted for reimbursement within 30 days of the termination date (collectively, the “Accrued Obligations”). Such amounts will be paid promptly after termination in accordance with applicable law but in no event more than 45 days after the date on which your employment terminates.
- 5.2. Termination Without Cause or Resignation for Good Reason. In the event that (i) you are terminated without Cause; or (ii) you resign for Good Reason, then in addition to the Accrued Obligations, and contingent on your executing a complete release of claims against the Company, and provided you do not revoke the release (a fully effective release is hereafter, the “Release”) within thirty (30) days after the date of termination, you shall be entitled, in addition to the Accrued Obligations, to receive continuation of your Base Salary in effect at the time of termination for a period of twelve (12) months, commencing on the 37th day after the date on which your employment terminates (provided the Release is effective prior to such date), payable in accordance with the Company’s normal payroll practices, provided that the first payment will include all amounts which would have been paid in the 37 days following your termination of employment.

In addition to the foregoing, you shall be entitled to receive payment of COBRA premiums to maintain medical and dental benefits, if any, in effect at the time of termination for the earlier of (x) 12 months following the termination and (y) the date you

5

become insured under a medical insurance plan providing similar benefits to that of the Company plan.

- 5.3. Expiration of Agreement. In the event the Agreement Term expires and the Company elects not to extend the Agreement, it shall be considered a termination by the Company without Cause and, in addition to the Accrued Obligations, you shall be entitled to the same benefits provided in Section 5.2 herein, upon your execution of the Release; provided, that notwithstanding the foregoing, if you continue in the employment of the Company after the expiration of the Agreement Term, this Section 5.3 shall be of no further force and effect.
- 5.4. Additional Benefits upon Termination in Connection With a Change of Control. In the event that your employment is terminated by the Company without Cause or by you for Good Reason (each as defined herein) within 12 months immediately following or 6 months immediately prior to a Change of Control, then, in addition to the Accrued Obligations and the benefits described in Section 5.2, you shall be entitled to receive full vesting of all unvested equity, including but not limited to any options or restricted stock granted to you under the 2006 Stock Plan or any authorized successor stock plan, provided that the conditions to vesting other than the passage of time have been satisfied.
- 5.5. Excise Tax. You agree that the payments and benefits hereunder, and under all other contracts, arrangements or programs that apply to you (the “Company Payments”), shall be reduced to an amount that is one dollar less than the amount that would trigger an excise tax under Section 4999 of the Code, as determined in good faith by the Company’s independent public accountants, provided, however, that the reduction shall occur only if the reduced Company Payments received by you (after taking into account further reductions for applicable federal, state and local income, social security and other taxes) would be greater than the unreduced Company Payments to be received by you minus (i) the excise tax payable with respect to such Company Payments under Section 4999 of the Code; and (ii) all applicable federal, state and local income, social security and other taxes on such Company Payments. You and the Company agree to cooperate in good faith with each other in connection with any administrative or judicial proceedings concerning the existence or amount of golden parachute penalties with respect to payments or benefits that you receive. In the event that such payments are required to be reduced pursuant to this Section, such payments shall be reduced in the following order: (1) cash payments not subject to Section 409A of the Code; (2) cash payments subject to Section 409A of the Code; (3) equity-based payments and acceleration; and (4) non-cash forms of benefits, and to the extent any payment is to be made over time (e.g., in installments, etc.), then the payments shall be reduced in reverse chronological order.
- 5.6. “Change of Control.” As used herein, a “Change of Control” shall occur or be deemed to have occurred only upon any one or more of the following events:

6

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- a) any “person” (as such term is used in Sections 13(d) and 14(d)(2) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) becomes a “beneficial owner” (as such term is defined in Rule 13d-3 promulgated under the Exchange Act) (other than the Company, any trustee or other fiduciary holding securities under an employee benefit plan of the Company, or any corporation owned, directly or indirectly, by the stockholders of the Company, in substantially the same proportions as their ownership of stock of the Company), directly or indirectly, of securities of the Company, representing fifty percent (50%) or more of the combined voting power of the Company’s then outstanding securities; or

- b) persons who, as of the Commencement Date, constituted the Company's Board of Directors (the "Incumbent Board") cease for any reason including, without limitation, as a result of a tender offer, proxy contest, merger, consolidation or similar transaction, to constitute at least a majority of the Board of Directors, provided that any person becoming a director of the Company subsequent to the Commencement Date whose election was approved by at least a majority of the directors then comprising the Incumbent Board shall, for purposes of this Section, be considered a member of the Incumbent Board; or
 - c) the consummation of a merger or consolidation of the Company with any other corporation or other entity, other than (1) a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than fifty percent (50%) of the combined voting power of the voting securities of the Company or such surviving entity outstanding immediately after such merger or consolidation or (2) a merger or consolidation effected to implement a recapitalization of the Company (or similar transaction) in which no "person" (as hereinabove defined) acquires more than fifty percent (50%) of the combined voting power of the Company's then outstanding securities; or
 - d) the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets.
- 5.7. Separation from Service. Notwithstanding anything set forth in Sections 4 and 5 of this Agreement, a termination of employment shall be deemed not to have occurred until such time as you incur a "separation from service" with the Company in accordance with Section 409A(a)(2)(A)(i) of the Code and the applicable provisions of Treasury Regulation Section 1.409A-1(h).
- 5.8. Section 409A. Anything in this Agreement to the contrary notwithstanding, if at the time of your 'separation from service,' the Company determines that the you are a 'specified employee' within the meaning of Section 409A(a)(2)(B)(i) of the Code, then

7

to the extent any payment or benefit that you become entitled to under this Agreement on account of your separation from service would be considered deferred compensation subject to the 20 percent additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (A) six months and one day after your separation from service, or (B) your death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule. Solely for purposes of Section 409A of the Code, each installment payment described in Section 5 is considered a separate payment.

- 6. Taxes. All payments required to be made by the Company to you under this Agreement shall be subject to the withholding of such amounts for taxes and other payroll deductions as the Company may reasonably determine it should withhold pursuant to any applicable law or regulation. To the extent applicable, it is intended that this Agreement be exempt from, or comply with, the provisions of Section 409A of the Code, and this Agreement shall be construed and applied in a manner consistent with this intent. In the event that any severance payments or benefits hereunder are determined by the Company to be in the nature of nonqualified deferred compensation payments, you and the Company hereby agree to take such actions as may be mutually agreed to ensure that such payments or benefits comply with the applicable provisions of Section 409A of the Code and the official guidance issued thereunder. Notwithstanding the foregoing, the Company does not guarantee the tax treatment or tax consequences associated with any payment or benefit arising under this Agreement.
- 7. Noncompetition, Confidentiality and Inventions Obligations. You agree to execute the Employee Noncompetition, Confidentiality and Inventions Agreement attached as Appendix B hereto simultaneously with the execution of this Agreement.
- 8. Disclosure to Future Employers. You will provide, and the Company, in its discretion, may similarly provide, a copy of the covenants contained in the Employee Noncompetition, Confidentiality and Inventions Agreement to any business or enterprise which you may, directly or indirectly, own, manage, operate, finance, join, control or in which you may participate in the ownership, management, operation, financing, or control, or with which you may be connected as an officer, director, employee, partner, principal, agent, representative, consultant or otherwise.
- 9. Representations. You hereby represent and warrant to the Company that you understand this Agreement, that you enter into this Agreement voluntarily and that your employment under this Agreement will not conflict with any legal duty owed by you to any other party.

8

10. General.

- 10.1. Notices. Whenever any notice is required hereunder, it shall be given in writing addressed as follows:

To Company: Metabolix, Inc.
21 Erie Street
Cambridge, Ma 02139
Attention: General Counsel

To the Executive: Robert Engle
c/o Metabolix, Inc.
21 Erie Street
Cambridge, MA 02139

All notices, requests, consents and other communications hereunder which are required to be provided, or which the sender elects to provide, in writing, will be addressed to the receiving party's address set forth above or to such other address as a party may designate by notice hereunder, and will be either (i) delivered by hand, (ii) sent by overnight courier, or (iii) sent by registered or certified mail, return receipt requested, postage

prepaid. All notices, requests, consents and other communications hereunder will be deemed to have been given either (i) if by hand, at the time of the delivery thereof to the receiving party at the address of such party set forth above, (ii) if sent by overnight courier, on the next business day following the day such notice is delivered to the courier service, or (iii) if sent by registered or certified mail, on the 5th business day following the day such mailing is made.

- 10.2. Entire Agreement. This Agreement, together with any Stock Option Agreements executed by you and the Company (either prior to or in conjunction with this Agreement) and the Employee Noncompetition, Confidentiality and Inventions Agreement, embody the entire agreement and understanding between the parties hereto with respect to the subject matter hereof and supersedes all prior oral or written agreements and understandings relating to the subject matter hereof. No statement, representation, warranty, covenant or agreement of any kind not expressly set forth in this Agreement will affect, or be used to interpret, change or restrict, the express terms and provisions of this Agreement.
- 10.3. Modifications and Amendments. The terms and provisions of this Agreement may be modified or amended only by written agreement executed by the parties hereto.
- 10.4. Waivers and Consents. The terms and provisions of this Agreement may be waived, or consent for the departure therefrom granted, only by written document executed by the party entitled to the benefits of such terms or provisions. No such waiver or consent will be deemed to be or will constitute a waiver or consent with respect to any other terms or provisions of this Agreement, whether or not similar. Each such waiver or consent will

9

be effective only in the specific instance and for the purpose for which it was given, and will not constitute a continuing waiver or consent.

- 10.5. Assignment. The Company shall cause its rights and obligations hereunder to be assumed by any person or entity that succeeds to all or substantially all of the Company's business or that aspect of the Company's business in which you are principally involved and may assign its rights and obligations hereunder to any Company affiliate, including without limitation Telles. You may not assign your rights and obligations under this Agreement without the prior written consent of the Company and any such attempted assignment by you without the prior written consent of the Company will be void; provided, however, in the event of your death, your rights, compensation and benefits under this Agreement shall inure to the benefit of your estate, such that, for example, stock issuable to you, and awards and payments payable to you, shall be issued and paid to your estate.
- 10.6. Governing Law. This Agreement and the rights and obligations of the parties hereunder will be construed in accordance with and governed by the law of Massachusetts, without giving effect to the conflict of law principles thereof.
- 10.7. Jury Waiver. You and the Company agree to waive trial by jury in connection with any action arising from or relating to this Agreement.
- 10.8. Severability. The parties intend this Agreement to be enforced as written. However, if any portion or provision of this Agreement is to any extent declared illegal or unenforceable by a duly authorized court having jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, will not be affected thereby, and each portion and provision of this Agreement will be valid and enforceable to the fullest extent permitted by law.
- 10.9. Headings and Captions. The headings and captions of the various subdivisions of this Agreement are for convenience of reference only and will in no way modify or affect the meaning or construction of any of the terms or provisions hereof.
- 10.10. Acknowledgments. You recognize and agree that the enforcement of the Noncompetition, Nondisclosure and Inventions Agreement is necessary to ensure the preservation, protection and continuity of the business, trade secrets and goodwill of the Company. You agree that, due to the proprietary nature of the Company's business, the restrictions set forth in the Noncompetition, Confidentiality and Inventions Agreement are reasonable as to time and scope.
- 10.11. Counterparts. This Agreement may be executed in two or more counterparts, and by different parties hereto on separate counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument.

10

- 10.12. Conditions. This Agreement is subject to and contingent upon the Company's receipt of proof that you have appropriate authorization to work in the United States as required by U.S. laws and regulations, and upon satisfactory completion of a background check.

If the foregoing accurately sets forth our agreement, please so indicate by signing and returning to us the enclosed copy of this Agreement.

Very truly yours,

METABOLIX, INC.

By: Richard P. Eno
Name: Richard P. Eno
Title: President & CEO

Accepted and Agreed:

Robert Engle

12/19/2008

Attachments:

Appendix A – Relocation

Appendix B – Employee Noncompetition, Confidentiality and Inventions Agreement

Relocation Reimbursement Program

Metabolix will reimburse you for the following expenses, upon submission of documentation in accordance with Section 3.5 of your employment agreement, up to a maximum total of US\$60,000:

- a. Fees and costs of relocation and/or expat services incurred in connection with your relocation from Germany to Boston;
- b. Reasonable expenses for moving your household goods from your current residence to the Boston area, including:
 - Full packing, shipping and delivery of goods from your primary residence in Germany. All packing shipping and delivery must be completed on a weekday
 - Temporary storage in transit if necessary, including warehouse handling charges, delivery charges, and other reasonable expenses, for a maximum of thirty (30) days
 - Full replacement value insurance (maximum liability of US\$100,000)
 - Import/customs duties (excluding those levied on goods listed below)
 - Partial unpacking
 - Appliance hook-up (applies only to items shipped from former location)
 - One trash pick-up at the new location

The Company will not arrange, pay for, or assume liability for shipment of items that are difficult or unusually costly to transport or insure. These items include, but are not limited to, the following:

- Automobiles, boats or any other motorized vehicle;
- Pets;
- Valuables – jewelry, antiques, furs, currency, etc.
- Pianos
- Pool tables
- Firearms and ammunition
- Flammable items – matches, paint, cleaning and lighting fluids, laundry detergents, aerosols, candles, etc.
- Construction materials, fireplace wood, etc.
- Food/perishables, alcoholic beverages or plants
- Electrical appliances – unless the electrical system in the US is compatible
- Unusual or irreplaceable items.

If you choose to transport such goods, it will be at your own expense.

Specialized packing and shipping arrangements not included in this program are the responsibility of the employee. This includes additional insurance, storage and other charges not specifically mentioned above.

- c. Two house hunting trips for you and your fiancée;
- d. Reasonable double living expenses for a period of up to 3 months;
- e. The Company will also cover other reasonable miscellaneous relocation expenses upon submission of receipts.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Forms S-3 (No. 333-148758) and S-8 (Nos. 333-138631, 333-145232, 333-155115) of Metabolix, Inc. of our report dated March 12, 2009 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K. We also consent to the reference to us under the heading "Selected Consolidated Financial Data" in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
March 12, 2009

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[EXHIBIT 23.1](#)

[CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM](#)

CERTIFICATIONS

I, Richard P. Eno certify that:

1. I have reviewed this annual report on Form 10-K of Metabolix, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 12, 2009

/s/ RICHARD P. ENO

Name:
Title:

Richard P. Eno
President and Chief Executive Officer
(Principal Executive Officer)

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[EXHIBIT 31.1](#)

CERTIFICATIONS

I, Joseph D. Hill certify that:

1. I have reviewed this annual report on Form 10-K of Metabolix, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 12, 2009

/s/ JOSEPH D. HILL

Name:
Title:

Joseph D. Hill
Chief Financial Officer
(Principal Financial and Accounting Officer)

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[EXHIBIT 31.2](#)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the annual report on Form 10-K of Metabolix, Inc. (the "Company") for the year ended December 31, 2008 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Richard P. Eno, President, Chief Executive Officer and Principal Executive Officer of the Company and Joseph D. Hill, Chief Financial Officer and Principal Financial and Accounting Officer of the Company, certify, pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge that:

1. the Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and
2. the information in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certification is being provided pursuant to 18 U.S.C. 1350 and is not to be deemed a part of the Report, nor is it to be deemed to be "filed" for any purpose whatsoever.

METABOLIX, INC.

March 12, 2009

By: /s/ RICHARD P. ENO

Richard P. Eno
President and Chief Executive Officer
(Principal Executive Officer)

March 12, 2009

By: /s/ JOSEPH D. HILL

Joseph D. Hill
Chief Financial Officer
(Principal Financial and Accounting Officer)

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[EXHIBIT 32.1](#)

[CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002](#)