

# OFFICE OF PERFORMANCE MANAGEMENT & OVERSIGHT

## FISCAL 2012 ANNUAL REPORT

The Office of Performance Management & Oversight (OPMO) measures the performance of all public and quasi-public entities engaged in economic development. All agencies are required to submit an Annual Report. The annual reports of each agency will be published on the official website of the Commonwealth, and be electronically submitted to the clerks of the senate and house of representatives, the chairs of the house and senate committees on ways and means and the house and senate chairs of the joint committee on economic development and emerging technologies.

### 1) AGENCY INFORMATION

<b>Agency Name</b>	Massachusetts Life Sciences Center		
<b>Agency Head</b>	Susan Windham-Bannister, Ph.D.	<b>Title</b>	President & CEO
<b>Website</b>	www.masslifesciences.com		
<b>Address</b>	1000 Winter Street, Suite 2900, Waltham, MA 02451		

### 2) MISSION STATEMENT

Please include the Mission Statement for your organization below.

The Massachusetts Life Sciences Center (MLSC) is a quasi-public agency of the Commonwealth of Massachusetts tasked with implementing the Massachusetts Life Sciences Act, a ten-year, \$1 billion initiative that was signed into law in June of 2008. The Center's mission is to create jobs in the life sciences and support vital scientific research that will improve the human condition. This work includes making financial investments in public and private institutions that are advancing life sciences research, development and commercialization as well as building ties among sectors of the Massachusetts life sciences community.

### 3) OPERATIONS AND ACCOMPLISHMENT DETAILS

Please provide details on the agency's operations and accomplishments for Fiscal Year 2012 as

**Attachment A.** Questions 5 through 10 will provide guidance on the type of information required under Chapter 240 of the Acts of 2010. (Please see attached FY12 MLSC Annual Report )

#### 4) ACCOUNTING

Please provide financial information for your agency. Below please give a summary of *Receipts and Expenditures* during the fiscal year, and include the *Assets and Liabilities* at the end of the fiscal year. Please include the most recent audited financial report for the agency as **Attachment B**.

(Please see attached MLSC Audit Report)

	AMOUNT	
Receipts	\$	
Expenditures	\$	
Assets	\$	
Liabilities	\$	

#### 5) INVESTMENTS OR GRANTS TO BUSINESSES OR INDIVIDUALS

Does your agency make **investments** and/or provide **grants** to businesses or individuals? **Yes X** **No** ☐

If **Yes**, please provide detailed information on investments and/or grants made during FY12 in the Operations and Accomplishments Section of this report. Information should include the number, nature and amounts of investments made and grants awarded by your agency along with job, investment and/or other economic development impact. Please list the name(s) of the investment and/or grant programs offered by your agency in the space provided below:

Please see attached MLSC FY12 Annual Report

#### 6) DEBT OR EQUITY INVESTMENT DETAILS

Is your agency involved in **debt** or **equity investments** for businesses? **Yes X** **No** ☐

If **Yes**, please provide detailed information on debt and/or equity investments made during FY12 in the Operations and Accomplishments Section of this report along with job, investment and/or other economic development impact. Please list the name(s) of the debt and/or equity investments programs offered by your agency in the space provided below:

Please see attached MLSC FY12 Annual Report – Accelerator Loan Program

#### 7) LOAN DETAILS

Is your agency involved in **real estate loans**, **working capital loans**, or any **other type of loan** or **guarantee**? **Yes X** **No** ☐

If **Yes**, please provide detailed information on loan(s) and/or guarantee(s) made during FY12 in the Operations and Accomplishments Section of this report along with job, investment and/or other economic development impact. Please list the types of loan(s) and/or guarantee(s) offered by your

agency in the space provided below:

Please see attached MLSC FY12 Annual Report. Please also note that the Center is not involved in real estate loans.

## 8) OTHER FORMS OF FINANCING OR FINANCIAL ASSISTANCE?

If your agency provides any other form of financing or financial assistance please include FY12 details in the Operations and Accomplishments Section of this report along with job, investment and/or other economic development impact. Please list the types of other forms of financing offered by your agency in the space provided below:

Please see attached FY12 Annual Report

## 9) PATENTS OR PRODUCTS

Does your agency track **patents** or **products** resulting from agency-funded activities?    Yes ☐    No ☒

If **Yes**, please include details in the Operations and Accomplishments Section of this report along with job, investment and/or other economic development impact. Please list the agency-funded activities of your agency that promote patent and product advancement in the space provided below:

[Please enter the details on patents or products here.]

## 10) TECHNICAL ASSISTANCE

If your agency provides technical assistance, please provide detailed information on technical assistance provided during FY12 in the Operations and Accomplishments Section of this report along with job, investment and/or other economic development impact. Please list the name(s) of the technical assistance programs offered by your agency in the space provided below:

N/A

### PLEASE NOTE:

THE FISCAL YEAR 2013 ANNUAL REPORT WILL REQUIRE DETAILS OF ABOVE MENTIONED CATEGORIES AS WELL AS PERFORMANCE TO PLAN AS OUTLINED IN YOUR AGENCY'S FISCAL 2013 BUSINESS PLAN. THE OFFICE OF PERFORMANCE MANAGEMENT AND OVERSIGHT WILL ANNUALLY RE-EVALUATE THE GOALS AND MEASURES ESTABLISHED BY THE AGENCIES. THE OFFICE WILL RECOMMEND CHANGES TO GOALS AND MEASURES AS ARE APPROPRIATE TO ALIGN WITH THE STATEWIDE ECONOMIC DEVELOPMENT POLICY AND PLAN.

### FILING INSTRUCTIONS:

THE FISCAL YEAR 2012 REPORT IS DUE NO LATER THAN MONDAY, OCTOBER 1ST. AN ELECTRONIC COPY OF THE REPORT AND ATTACHMENTS A & B SHOULD BE E-MAILED TO [ROB.ANDERSON@STATE.MA.US](mailto:ROB.ANDERSON@STATE.MA.US). THE OFFICE OF PERFORMANCE MANAGEMENT AND OVERSIGHT WILL REVIEW REPORTS PRIOR TO FILING WITH LEGISLATURE AND POSTING TO THE WEBSITE.

MASSACHUSETTS  
**LIFE SCIENCES**  
CENTER

## Fiscal Year (FY) 2012 Annual Report

### ***OUTPACING THE COMPETITION***





**To:** Governor Deval Patrick  
Secretary of Administration and Finance Jay Gonzalez  
Senate President Therese Murray  
Speaker of the House Robert DeLeo  
State Comptroller Martin Benison  
Clerk of the Senate William Welch  
Clerk of the House of Representatives Steven James

*By forward: House and Senate Committees on Ways and Means and the Joint Committee on Economic Development and Emerging Technologies*

**From:** Susan Windham-Bannister, Ph.D.

**Date:** September 28, 2012

**Re:** FY 2012 Annual Report of the Massachusetts Life Sciences Center

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The Massachusetts Life Sciences Center (the "Center") respectfully submits this Annual Report detailing our operations and accomplishments during FY 2012.

We are the hub of the Commonwealth's thriving life sciences community and proudly serve as stewards of the \$1 billion Massachusetts Life Sciences Initiative, which was passed by the state legislature and signed into law in June 2008. In FY 2012, through investments made by the Center, Massachusetts pulled away from its major competitors and emerged as the undisputed global leader in the life sciences.

This report and the accompanying FY 2012 Audit Report are submitted in fulfillment of the requirements mandated by the General Court pursuant to the Center's enabling statute of the Massachusetts General Laws, Chapter 23I (formerly Section 7, now Section 15), as amended by Chapter 130 of the Acts of 2008. Financial statements are contained in the accompanying FY 2012 Audit Report by PricewaterhouseCoopers.

As always, we appreciate your continued interest and support.

Sincerely,

A handwritten signature in blue ink that reads "Susan Windham-Bannister".

Susan Windham-Bannister, Ph.D.  
President & CEO

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## Outpacing the Competition

Four years ago, Massachusetts was a recognized leader in the life sciences, but the state faced stiff competition, both domestic and international. Inaction have diminished our leadership position – with negative repercussions for the state’s scientific reputation as well as our economy.

At the 2007 BIO International Convention, Governor Deval Patrick proposed the Massachusetts Life Science Initiative, a 10-year, \$1 billion investment to secure and strengthen the state’s leadership in the life sciences, and to bolster the life sciences as an economic engine for the Commonwealth. This initiative was passed by our state legislature and signed into law in June 2008.

The Center is charged with implementing the Life Sciences Initiative. The Center’s strategic priorities include funding translational life sciences research, making financial investments in promising new technologies, ensuring that the next generation of life sciences workers has skills that are well-aligned with industry needs, and building unique partnerships between sectors of the local and international life sciences communities. Since 2008, we have not only been investing in innovation, we have been innovating – creating new programs, tools and partnerships that create jobs, drive business growth and accelerate the commercialization of good science that holds the potential to improve the human condition.



President & CEO  
Dr. Susan Windham-Bannister

Since the enactment of the Initiative in 2008, the Center has made numerous investments that have secured and strengthened Massachusetts’ leadership in the life sciences. The Commonwealth has pulled ahead of the competition – Massachusetts is now **the** recognized life sciences leader in the U.S. and across the globe. This past December, independent studies once again rated Massachusetts number one for life sciences in the U.S. by a wide margin (Jones, Lang, Lasalle, 2011) and the number-one region for biotech construction (Richards, Barry, Joyce, 2011).

### The Bottom Line

The Center’s investment strategy is based on public-private collaboration to leverage public tax dollars. This strategy has proven effective; since 2008, the Center has directly invested or committed more than \$300 million and leveraged more than \$1 billion in third-party investment. In other words, for every \$1 of taxpayer money that the Center has invested, Massachusetts has attracted \$3.40 in additional, outside investment – creating a public-private investment fund of more than \$1.3 billion for the state’s life sciences ecosystem that would not have existed without the Life Sciences Initiative.

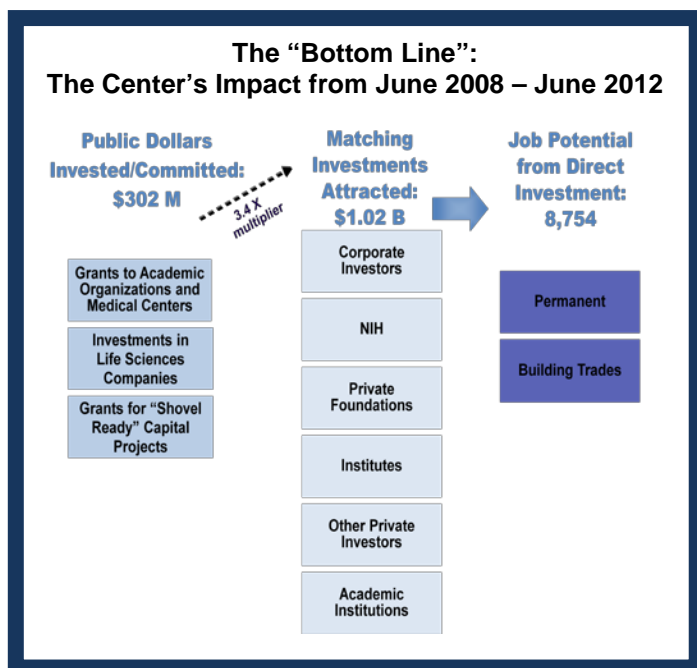
For every \$1 of taxpayer money that the Center has invested, Massachusetts has attracted \$3.40 in additional, outside investment.

The Center uses a portfolio of tools and investments to achieve its goals and objectives. To ensure that all investments are evaluated on the basis of merit and “relative best use” of the Commonwealth’s funds, the Center makes its awards based on competitive solicitations and a rigorous, transparent review process that draws on experts from the life sciences sectors across the state. The broad expertise that informs the Center’s decisions has enabled us to make smart, strategic investments that attract matching investment capital and highly leverage the public dollars that have been entrusted to the Center.



The Center's direct investments to date are projected to create thousands of jobs across Massachusetts. According to MassBio's "2012 Biopharma Industry Snapshot," biopharma employment has grown 42

percent in Massachusetts since 2002, and the new jobs being created are not only for scientists. Most of these new jobs are for people with skills in manufacturing, IT, sales and marketing, and other fields. A large percentage of the available jobs are open to workers with a Bachelor's degree or less.



Furthermore, the Center's investments are made with the goals of improving health-care quality for and reducing the health-care costs of patients. A substantial portion of our portfolio represents investments both in translational research with strong potential for commercialization and in companies that are bringing new products to the marketplace.

During these challenging economic times, the Center is proud to play such a prominent role in Massachusetts' economic recovery.

## Investment Portfolio

The Center's investments in FY 2012 included six new capital projects, grants or loans to nine early-stage companies and tax incentive awards to 26 companies.

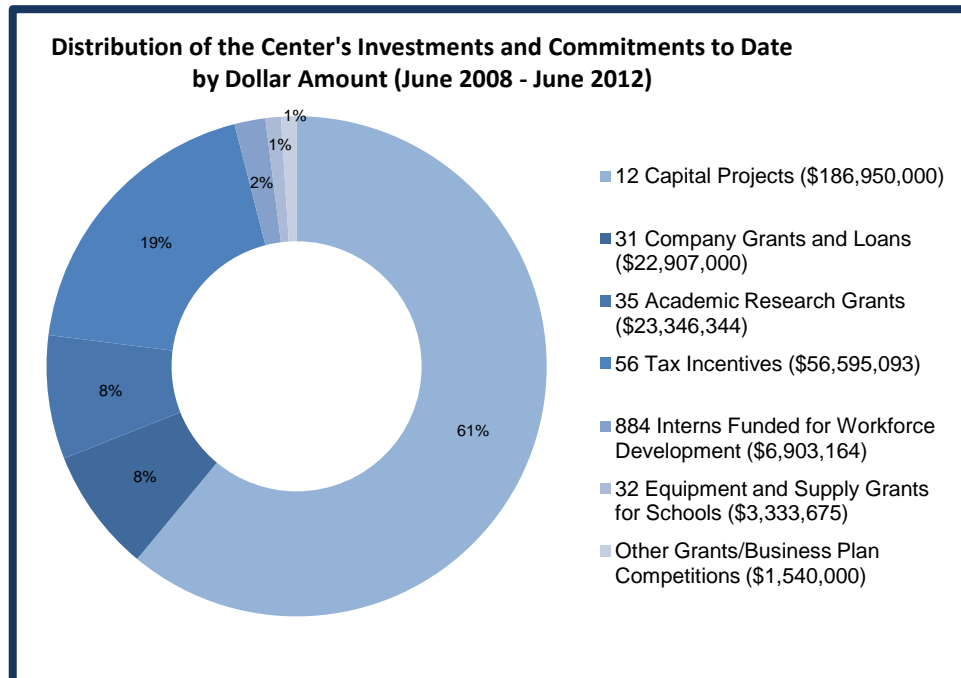
In FY 2012, more than 1,600 students applied for the Life Sciences Internship Challenge, and the Center placed 405 interns at 203 companies across Massachusetts. The Internship Challenge is now in its fourth year of investing in the next generation of talented life sciences workers in Massachusetts.

FY 2012 was also a strong year for company recruitment to Massachusetts. Motivated by the Center's tax incentives and investments in the state's life sciences ecosystem, several global life sciences leaders significantly expanded their presence in the state. The Center welcomed companies, large and small, to the Massachusetts life sciences community, helping to organize their ribbon-cutting events and collaborating on their press announcements.

The Center plays an important role as a convener across the life sciences industry at the global, national and state levels. One manifestation of these efforts is the creation of the Massachusetts Neuroscience Consortium ("the Consortium"). This pioneering model for supporting pre-clinical research, announced at the 2012 BIO International Convention, is designed to leverage the rich research environment in Massachusetts and build on the Commonwealth's status as a global leader in neuroscience. Charter sponsors of the Consortium are Abbott, Biogen Idec, EMD Serono, Janssen Research & Development LLC, Merck, Pfizer and Sunovion Pharmaceuticals Inc. The Consortium announced its first solicitation for research projects in September of 2012.

The Center currently manages a portfolio of approximately 200 grants, loans and tax incentives.

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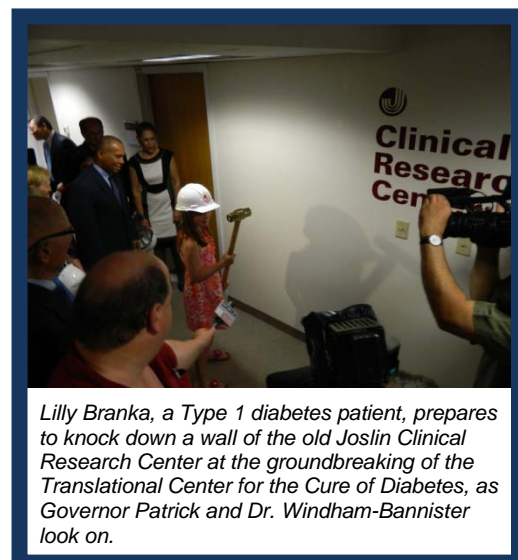
Concluding a great fiscal year, in June the Center co-hosted with MassBio Massachusetts' presence at the 2012 BIO International Convention in Boston. This convention was a landmark opportunity to showcase the accomplishments in Massachusetts since the inception of the Life Sciences Initiative and all that Massachusetts has to offer as the global leader in the life sciences.

## Investing in Infrastructure

Massachusetts has demonstrated its commitment to the life sciences community through investments in infrastructure to accelerate promising science as well as to create a business-friendly environment. Half of the resources, \$500 million, committed via the Life Sciences Initiative are dedicated to capital projects designed to ensure that more institutions and regions of the state have the necessary infrastructure to be "life-sciences ready." The Center's investments in infrastructure are funded through our capital fund, which received \$43.5 million in bonding capacity in FY 2012 as part of the state's overall capital plan. Grants from the Center not only make possible the creation of the cutting-edge infrastructure needed for scientific advancement but also support basic infrastructure upgrades that often are needed for biomanufacturing and company expansion. Additionally, the Center is committed to funding the development of novel resources that companies and researchers will be able to find only in Massachusetts.

The Center's Board of Directors approved six new infrastructure projects in FY 2012, totaling \$56 million:

- Joslin Diabetes Center** was awarded \$5 million to support the construction of its comprehensive **Translational Center for the Cure of Diabetes**. According to Joslin officials, the Center's grant is the largest single grant ever awarded to support diabetes-related research in Massachusetts. This new facility will enable the Joslin Diabetes Center to accelerate its clinical and research endeavors through the creation of cutting-edge labs and platforms. The work at this new facility will lead to the development of translational studies for curing Type 1 and Type 2 diabetes and their complications, as well as to the advancement of



Joslin's work in diabetes prevention and obesity. Joslin will renovate nearly 20,000 square feet of space, and the project is projected to create approximately 50 construction jobs beginning in FY 2013 and approximately 50 new permanent jobs in the life sciences. At the 2012 BIO International Convention, the biopharma giant, Sanofi, and the Joslin Diabetes Center announced a new collaboration to promote the development of medicines for the treatment of diabetes and related disorders. The creation of Joslin's new Translational Center will enable this partnership.

Over the past four fiscal years, the Center has committed \$187 million to 12 capital projects, which have so far created more than 2,000 jobs in the building trades and 425 permanent jobs in the life sciences.

- **Dana-Farber Cancer Institute** was awarded \$10 million to support the expansion of its Molecular Cancer Imaging Facility, a pioneering \$20-million research initiative to develop new molecular imaging probes. The facility will ultimately allow physicians to better diagnose and characterize cancer, choose targeted therapies, monitor treatment efficacy and improve the outcomes of patients with cancer. This project is expected to create 100 construction jobs and 15 permanent positions in the facility.
- The **Boston Museum of Science** was awarded \$5 million for the construction of its "Hall of Human Life." Envisioned as one of the museum's largest and most far-reaching exhibits, the "Hall of Human Life," opening in July of 2013, aims to revolutionize the way people understand their own biology and manage their health. Designed to evolve with the increasing number of breakthroughs in biology and biotechnology, this 10,000 square-foot exhibit will spark visitors' curiosity about innovations in the life sciences, address their concerns about health care and help them develop the thinking skills needed to make informed choices. The Center's grant has leveraged \$11 million in project funding from other sources, and the project is expected to create 75 jobs in the construction trades and 20 permanent new jobs at the museum.
- **UMass Dartmouth** was awarded \$14.6 million to build its new Massachusetts Biomanufacturing Center in Fall River. Designed to accelerate the development of the life sciences industry in the region, the 32,000 square-foot building will provide emerging companies with a place to prove the feasibility of their products to investors and will feature R&D laboratories and educational space. The new facility will anchor the recently established Fall River Biopark. This \$28-million project is expected to create 120 construction jobs, 10 permanent positions and additional jobs within the biomanufacturing industry.

The Center's infrastructure investments have contributed to the creation of more than one million square feet of new life sciences research and manufacturing space across the Commonwealth.

- **UMass Lowell** was awarded \$10 million to equip laboratories within its new Emerging Technologies and Innovation Center. The 84,000 square-foot facility builds on UMass Lowell's unique expertise in plastics engineering, nanotechnology, bioprocessing, electro-optics and advanced manufacturing. The grant will fund research facilities at the new center, providing the university and companies access to clean-room capabilities that are unparalleled in this region of the Commonwealth and a state-of-the-art lab focused on developing new medical applications and other capabilities tied to nano, bio-optics and other technologies. This \$70-million project is expected to create 100 construction jobs.
- **UMass Dartmouth** was awarded \$11.4 million to purchase the land and finance improvements, previously funded by Massachusetts Development Finance Agency, needed to establish the Advanced Technology Manufacturing Center (ATMC). This facility is designed to leverage university resources for regional economic development on the South Coast. The ATMC engages in research and works with industry partners to provide opportunities for technology exchange, while providing educational opportunities for students, and research and commercialization opportunities for faculty. The facility also includes a Technology Venture Center that incubates early-stage companies. The Center's funding has allowed UMass

Dartmouth to accelerate its investment in campus labs by approximately five-to-eight years through the investment of \$13.2 million in internal funds.

Three of the six aforementioned projects – the Dana-Farber Cancer Institute, Joslin Diabetes Center and the Museum of Science – were funded through the Center's first-ever Capital Project Matching Grant solicitation. The Center received 22 applications for infrastructure projects from across the state through this program. In FY 2013, the Capital Project Matching Grant program will make \$40 million available for life-sciences-related capital projects around the state.

Over the past four fiscal years, the Center has committed \$187 million to 12 capital projects, which have thus far created more than 2,000 jobs in the building trades and 425 permanent jobs in the life sciences, with many more jobs projected as the projects are completed and the facilities become operational:

Investments in Infrastructure			
Project	Award Amount	Year of Award	Status at End of FY 2012
Framingham Wastewater and Pumping Station	\$14.3 million	FY 2009	Substantial completion and under-budget
Marine Biological Laboratory in Woods Hole	\$10 million	FY 2009	Project completed in FY 2010
Tufts/Cummings School of Veterinary Medicine, NE Regional Biosafety Lab in Grafton	\$9.5 million	FY 2009	Project completed in FY 2010
Albert Sherman Center at UMass Medical School	\$90 million	FY 2010	Project to be completed in Winter 2013
Worcester Polytechnic Institute/Gateway Park	\$5.15 million	FY 2010	Project construction well underway
UMass Boston/Dana Farber Center for Personalized Cancer Therapy	\$2 million	FY 2011	Project construction to begin in FY 2013
UMass Dartmouth Biomanufacturing Center	\$14.6 million	FY 2012	Project underway
Dana Farber Molecular Cancer Imaging Center	\$10 million	FY 2012	Project underway
Joslin Translational Center for the Cure of Diabetes	\$5 million	FY 2012	Project underway
Museum of Science "Hall of Human Life"	\$5 million	FY 2012	Project underway
UMass Lowell Emerging Technologies and Innovation Center	\$10 million	FY 2012	Project underway
UMass Dartmouth Advanced Technology Manufacturing Center (ATMC)	\$11.4 million	FY 2012	Project authorized for FY 2015

The Center's infrastructure investments have contributed to the creation of more than one *million* square feet of new life sciences research and manufacturing space across the Commonwealth.

# Incubating the Companies of the Future

## Accelerating the Growth of Early-Stage Companies

From the Accelerator program's inception through the end of FY 2012, the Center has funded or committed to a total of \$11.2 million in Accelerator Loans.

In FY 2012, the Center continued its commitment to building the pipeline of new life sciences companies in Massachusetts by committing to a total of \$3.1 million in Accelerator Loans to six early-stage companies. The Center's Accelerator Loan program provides working capital to early-stage life sciences companies at a critical stage in their development. This program seeks to de-risk these companies for future – usually private -- investors by funding the necessary steps to achieve critical milestones. Some of these companies may hold the promise of becoming the next Vertex or Boston Scientific, while others may be acquired by large companies that are increasingly depending on the creativity of entrepreneurs to find the next promising technology. These young companies help to create an exciting environment in Massachusetts for life sciences entrepreneurs. They also make Massachusetts a fertile environment for mature life sciences companies, whose business models are increasingly reliant on “external innovation.”

During FY 2012, the Center expanded the Accelerator program from one round per year to two, with the goals of reaching more prospective applicants and reducing the “wait time” for companies that miss the deadline on a particular round of the program. Over the past year, the Center received a total of 67 applications, of which 63 were eligible for review by experts selected from among the Center's 200-plus *pro bono* volunteer peer reviewers. The Center's peer reviewers recommended 33 of these applicants for review by the Center's Scientific Advisory Board (SAB – see Appendix B). Eight companies were recommended by the Investment Subcommittee of the Center's Board of Directors (“the Board” – see Appendix A), approved by the Board and designated by the Center as certified life sciences companies, as required by the Life Sciences Act. However, one company exited the program prior to receiving an award because it was acquired by a larger company. Another one of the eight recommended companies became ineligible because of a change in its strategic direction. The Center committed to a total of six loans during FY 2012, as indicated below:

To date, Accelerator companies have raised more than \$100 million in funding subsequent to receiving a loan from the Center.

Accelerator Loans in FY 2012			
Company	Location	Area of Development	Loan Amount
Allurion	Wellesley	Developing a novel medical device designed to induce significant weight loss by displacing volume in the stomach	\$750,000
Alcyone Lifesciences, Inc.	Ayer	Developing novel micro-catheter approach for treating neurological conditions	\$750,000
Christcot Medical	Sudbury	Developing an innovative and unique device for rectal medication delivery to enhance the lives of patients with chronic diseases	\$257,000
HepatoChem	Beverly	Developing difficult-to-synthesize small molecules based on chemical reactions allowed by porphyrins and other catalysts	\$330,000
Sample6 Technologies	Boston	Building the world's first “near-real-time” microbial monitoring system with first application in food safety	\$750,000
Strohl Medical	Weymouth	Creating a new medical device for triaging potential stroke patients to accelerate their time to treatment	\$245,000



From the Accelerator program's inception through the end of FY 2012, the Center has funded or committed to a total of \$11.2 million in Accelerator Loans.

In FY 2012, two companies repaid Accelerator Loans with interest early, after achieving significant success in private fundraising or the sale of the company. As of the close of FY 2012, a total of four companies have pre-paid their loans: two in FY 2012 and two in prior fiscal years.



Pluomed, recipient of an Accelerator Loan in 2009, repaid its loan in FY 2012 after being acquired by Sanofi. Pluomed's product, a new and simple device for clampless vascular and cardiovascular surgery, will now be marketed globally by Sanofi's Biosurgery Division. In addition, 4s3 Bioscience, recipient of an Accelerator Loan in 2010, prepaid its Accelerator loan after raising \$20 million in private financing. To date, Accelerator companies have raised more than \$100 million in funding subsequent to receiving a loan from the Center.

## Support for Small Businesses



The Small Business Matching Grant (SBMG) program builds on federal investments Massachusetts companies have received through grants from the National Institutes of Health (NIH), the National Science Foundation (NSF) and the Department of Defense (DOD). One of the goals of this program is to create jobs in Massachusetts based on the commercialization of products with high potential for market adoption and penetration.

In FY 2012, 19 small businesses applied for the SBMG program. The Center awarded a \$500,000 SBMG grant to Firefly Bioworks, Inc., based in Cambridge, after extensive review by the Center's peer reviewers, the SAB and the Board. Per statute, companies receiving a SBMG award are not required to be certified.

Firefly BioWorks, Inc.'s first product was recently launched and is designed to detect microRNAs, an

emerging class of biomarkers that has shown great promise in the diagnosis of cancer, neurological disorders and many other diseases. This product consists of a high-performance, universal technology platform for multiplexed biomarker detection, with applications in life sciences research and diagnostics. The platform enables detection of clinically relevant biomolecules with an unprecedented combination of performance, throughput and cost.

Small Business Matching Grants in FY 2012			
Company	Location	Area of Development	Amount Awarded
Firefly Bioworks, Inc.	Cambridge	High-performance, universal technology platform for multiplexed biomarker detection for life sciences research and diagnostics	\$500,000

From the time of the SBMG program's inception through the close of FY 2012, the Center has awarded \$4 million to eight companies. To date, SBMG awardees have raised more than \$20 million from other grants, investments or sale of the company.

Also, the Center supported entrepreneurship and company creation by co-sponsoring two important business plan competitions in FY 2012: MassChallenge received a \$100,000 contribution, and the WPI Venture Forum received a \$10,000 contribution for its annual business plan competition.

From the time of the SBMG program's inception through the close of FY 2012, the Center has awarded \$4 million to eight companies. To date, SBMG awardees have raised more than \$20 million from other grants, investments or sale of the company.

## From Bench to Bedside: Academic Research Matching Grant Programs

The promise offered by innovation begins with "discovery," usually in an academic setting. Thus, the Center's key priorities are to preserve the strong competitive position of Massachusetts' academic institutions and medical centers, support translational research in the life sciences, and accelerate the discovery and transfer of technology out of academic settings. To accomplish these objectives, the Center has created several research matching grant programs. During FY 2012, 19 of the 34 grants awarded through these programs concluded, and most of the remaining grants will conclude by December 31, 2012.

### New Investigator Research Matching Grants

The New Investigator Research Matching Grant program is designed to spur innovative research and advance the careers of new investigators working in the life sciences at research institutions in the Commonwealth. To date, the Center has awarded 21 grants, totaling \$5.1 million to early-career investigators.

To date, the Center has awarded 21 grants, totaling \$5.1 million to early-career investigators.

As of September 2012, 62 percent of the Center's New Investigators (13 of 21) have leveraged their grants from the Center with awards of follow-on funding from other sources (i.e. federal agencies, private foundations, academic institutions, etc.). The Center's investment in these 13 investigators totaled \$3.25 million. Since being awarded the Center's New Investigator Grant, these 13 investigators have won at least 28 additional research awards and grants from other sources, totaling over \$13 million — leverage of 4-times the Center's initial investment.

The New Investigator Grants have also enabled the awardees to advance science. Ninety percent of the Center's New Investigators (19 of 21) have published articles based on the projects funded by the Center.

These 19 grantees have published a combined total of 80-plus articles in more than 50 scientific, peer-reviewed journals, including the following:

*Advanced Materials*  
*Cell*  
*EMBO Journal*  
*Gastroenterology*  
*Genes & Development*  
*Journal of Cell Biology*  
*Journal of Bacteriology*  
*Journal of Infectious Diseases*  
*Lab on a Chip*

*Nature*  
*Nature Biotechnology*  
*Nature Materials*  
*New England Journal of Medicine*  
*Optics Express*  
*PLoS One*  
*Proceedings of the National Academy of Sciences (PNAS)*  
*Science*

These publications include top-tier journals – the most prestigious, high-impact publications in the life sciences, such as *Nature*, *Science* and *Cell*.

The case study below provides an illustrative example of the scientific impact enabled by the New Investigator Grants:

#### **Case Study: Dr. Matthias Marti**

A \$200,000 New Investigator Grant was awarded to Harvard School of Public Health's Dr. Matthias Marti in 2009 to establish a high throughput screen focused on preventing the development of gametocytes, which mediate transmission of malaria. No current drugs target the sexual part of the parasite's lifecycle and the therapeutic value of these drugs is decreasing.

##### ■ **2010**

- Generated a fluorescent-reporter parasite line.
- Established , optimized, and validated screen assay in 96-well format, using known bioactive malaria compounds.

##### ■ **2011**

- Performed small-scale screen targeting a pathway that had been implicated in sexual-conversion of malarial parasites. This standardized screen addressed conflicting evidence in the literature regarding the role of pathway components in malaria.

##### ■ **Current**

- Pursuing additional small-scale screens with collaborators targeting other pathways
- Developing a new screening assay with higher throughput and increased sensitivity.

**Dr. Marti's work is creating a screening assay that has the potential to identify the next generation of malaria drug candidates.**

#### **Cooperative Research Grants**

The Center's Cooperative Research Grants encourage industry-sponsored research at Massachusetts academic institutions and accelerate translational research. Between 2008 and 2011, the Center has awarded eight grants, totaling \$4.78 million.

As of September 2012, two of the eight, or one quarter, of the Cooperative Research Grants' academic researchers have leveraged their grants from the Center with follow-on funding. The Center's investment in these two investigators totals \$1.35 million. These two investigators have won three additional research grants from other sources, totaling more than \$8.6 million — leverage of approximately 6.4 times



the Center's investment. Moreover, one investigator has received follow-on funding from the project's industry partner to continue his translational research project.

Four of the eight, or half, of the Cooperative Research investigators have published articles based on the work conducted through their cooperative research projects funded by the Center. These grantees have published a combined total of at least 10 articles that have been presented in six scientific journals. Moreover, through their sponsored research projects, of the eight investigators, one has been granted a full U.S. patent, and another has filed a U.S. provisional patent application and international PCT provisional patent application.

The case study below provides an illustrative example of the scientific impact of the Cooperative Research Grants:

### **Case Study: Baxter Healthcare and the Immune Disease Institute**

A \$750,000 Cooperative Research Matching Grant was awarded to the Immune Disease Institute's Dr. Judy Lieberman in 2008 (matched by Baxter Healthcare) to develop an siRNA-based microbicide for viruses, such as herpes, HPV, and HIV.

- **2009:**
  - Improved siRNA's effectiveness and targeting for multiple species, including human
  - Optimized conditions for formulation of siRNA-based microbicide
  - Developed an human *ex vivo* system for testing infection and siRNA-based microbicide
- **2010:**
  - Optimized conditions for formulation of siRNA-based microbicide
  - Optimized methods for human *ex vivo* system
  - **Awarded 5-year grant from NIAID of NIH based in part on these studies**
- **2011:**
  - Assessed optimized siRNA-based microbicide's effectiveness against herpes virus in mice, and characterized the mechanism by which protection was achieved
  - Published on siRNA-conferred protection from HIV infection in mouse and *ex vivo* human studies
- **2012:**
  - US Patent granted for "siRNA microbicides for preventing and treating diseases"
  - Characterized HIV-targeted siRNA efficiency and protection from infection in humanized mice and human explants

## **Developing the Next Generation of Life Sciences Leaders**

### **The Internship Challenge Program**

The Internship Challenge is a workforce development program focused on enhancing the talent pipeline for life sciences companies in Massachusetts while simultaneously providing interns with practical, "hands-on" experience that prepares them to step into the workforce ready to meet the job requirements of life sciences employers. The program provides paid internships to sophomores, juniors and seniors; community college students; graduate students; and recent college graduates. Since the program first launched in 2009, 884 interns representing 124 different colleges and universities

Since the program first launched in 2009, 884 interns representing 124 different colleges and universities, have been placed at 290 companies across the state.

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In this program, host companies commit to providing a dedicated mentor and a meaningful internship opportunity related to the academic focus of eligible students. The Center uses a web-based interface to connect student candidates and the host companies; there, students post resumes, and host companies can match skills with their needs. Host companies then contact and interview candidates, select interns for their programs and notify the Center of their desire to provide an internship to a qualified student.



*On August 30, 2012, SouthCoast participants in the Massachusetts Life Sciences Center's Internship Challenge gathered at UMass Dartmouth's Advanced Technology and Manufacturing Center to present on their summer internship experiences.*

The Internship Challenge is designed to expand the pool of prospective employees who have practical experience, enhance opportunities for mentoring, enable more students to explore career opportunities despite the challenging economic environment, and provide students interested in working in the life sciences with a peer network through educational and informational exchange events. The Center's interns usually work in smaller and younger companies, so they also receive exposure to the dynamic environment of entrepreneurship.

The Internship Challenge is also a human-capital subsidy program for small and early-stage companies. The Center only reimburses student stipends for companies with 100 or fewer employees. Life sciences companies with more than 100 employees and research institutions can recruit students from the Center's database, but do not receive reimbursement

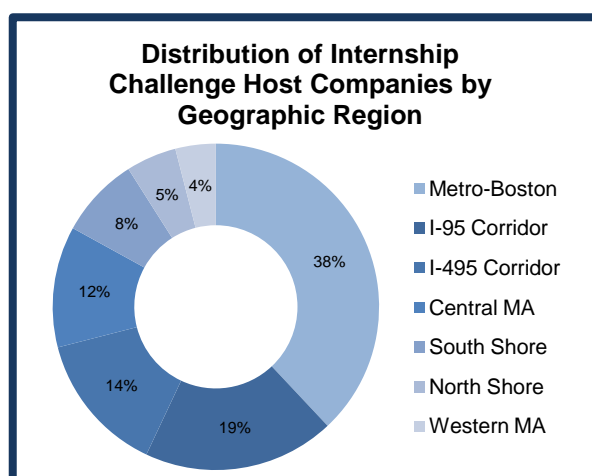
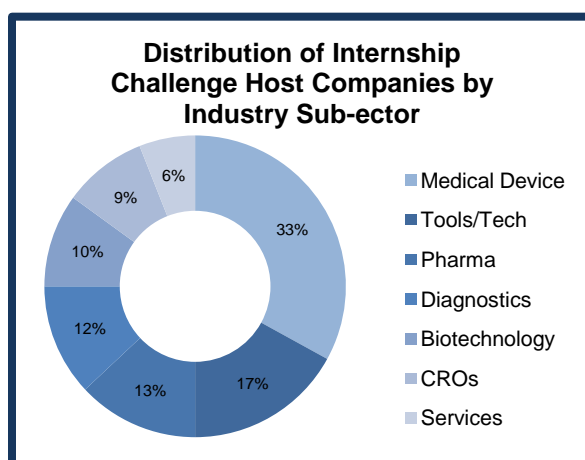
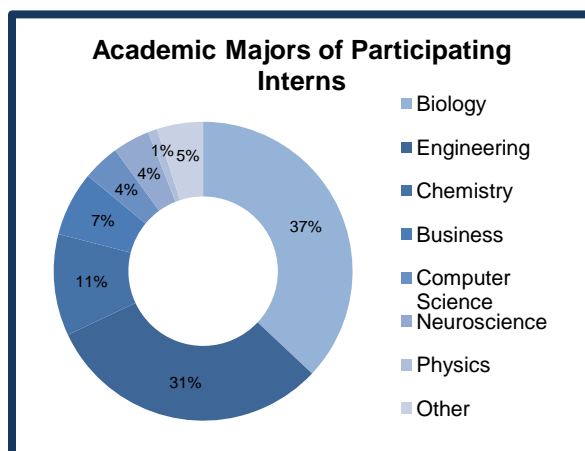
for the interns that they hire. Host companies represent a broad spectrum of the life sciences industry, including pharmaceuticals, medical devices, biotechnology and contract research organizations.

Based on the success of the program, on May 25, 2011 the Center's Board of Directors authorized its expansion from a summer-only program to a year-round program, allowing greater flexibility for students and companies.

As a result, FY 2012 brought additional growth, funding and recognition for the Center's Internship Challenge program. More than 1,645 students submitted applications for review by 274 life sciences companies across Massachusetts. The program placed a total of 405 interns with 203 host companies, a substantial increase over prior years. (See Appendix C for a complete list of the FY 2012 Internship Challenge host companies.) Interns were demographically diverse and represented 79 different colleges and universities. Nearly all of the interns selected for the Internship Challenge were hired for a 12-week work period, with a maximum reimbursement from the Center of \$15 per hour, up to \$7,200 total per intern.

More than 1,645 students submitted applications for review by 274 life sciences companies across Massachusetts in FY 2012. The program placed a total of 405 interns with 203 host companies, a substantial increase over prior years. Interns were demographically diverse and represented 79 different colleges and universities.

The Center's Internship Challenge program is broadly inclusive, as the following data on participating interns and sponsoring companies illustrates:



## Feedback about the Internship Challenge Program

The Center conducts a survey of both interns and sponsors at the conclusion of the internship period because we believe that the Internship Challenge participants themselves provide the best evidence of the program's value and impact.

Surveys of participating interns show that nearly 30 percent of the interns that were entering the workforce (recent graduates) found immediate full-time employment as a result of their internships. In most cases, these interns were hired by the company that hosted their respective internships.

Additional feedback from participants, both interns and host companies, is included below:

"Interning with NuOrtho Surgical has enhanced my understanding in both the marketing and financial fields. The opportunity to work with such upbeat and intuitive professionals has been an exceptional introduction to the business world. I feel as though I have already become a more confident and skilled individual thanks to the practical training this internship has provided."

– Tamer Plourd, UMass Dartmouth

"We are very pleased with the biology and analytical students that have worked with us. The program gives us the opportunity to hire talented students that we would otherwise not have access to. It's a win-win situation: We are extremely impressed with the contributions the students make, and it's great work experience for them."

– Shana Dobson, Operations Manager,  
Tetraphase Pharmaceuticals

"This summer internship has been much more than I expected. Working at a biotech start-up has opened my eyes to the great potential there is in the life sciences industry right here in Massachusetts."

– Juan Betanzo, Babson College

"We were fortunate to have two interns this past summer, [and one] has proven to be a great addition to our team and was recently promoted to a project engineer. All four of our engineers started as interns, two of them as part of the Internship Challenge. Their hard work and dedication contributed to a 30 percent growth in 2011."

– David Comeau, President, Albright Technologies

"Comprising of five full-time employees, the company at which I interned allowed me to thrive through regular contributions to several different projects and has introduced me to the intricacies of running a biopharmaceutical company. This experience has inspired me to pursue a career in the business sector of the biopharmaceutical industry."

– Renee McKell, Massachusetts Institute of Technology

## The Skilled Careers in Life Sciences (SCILS) Initiative

In March of 2012, the Center competed for and received for the first time federal grant funding, with the funds going to supplement the Internship Challenge program. The Center will be receiving \$800,000 over the next four years as part of a \$5 million grant to the City of Boston from the U.S. Department of Labor intended to grow and maintain the area's life sciences workforce. The SCILS Initiative is being implemented in collaboration with the City of Boston's Department of Jobs and Community Services, as well as with the Metro North, Metro Southwest and South Coastal workforce regions. This program will serve more than 80 cities and towns in greater Boston.

The Center will be receiving \$800,000 over the next four years.



*Boston Mayor Thomas Menino speaks at the SCILS Initiative announcement at Boston University.*

## Supporting STEM (Science, Technology, Engineering, and Math) Education and an Inclusive Workforce

The Center awarded grants totaling \$180,000 to four programs focused on STEM education and diversity in the life sciences workforce during FY 2012. The grants build upon the Patrick/Murray Administration's strategy for enhancing STEM educational opportunities across Massachusetts, and on the Center's commitment to ensuring an inclusive life sciences workforce. Dr. Windham-Bannister serves on the Governor's STEM Council.

The four organizations that received grants focus on different strategies for enhancing STEM education and diversity:

- **Women in Engineering, Science and Technology (WEST)** was awarded \$30,000. WEST is primarily focused on workforce development for women at all career stages in science and technology: students, early career, mid-career and executive. WEST's programs are designed to develop skills, build and expand professional relationships, and empower women to achieve full leadership potential. The purpose of the Center's grant was to expand WEST's offerings to regions of Massachusetts outside of Cambridge and Boston. The WEST organization is using the Center's funds to add 12 programs, targeting two main corridors – Route #128/Suburbs and Route #495/Worcester – and cities and towns along these corridors. These two corridors are home to more than 230 life sciences companies and 18 colleges.
- The **Urban Massachusetts Louis Stokes Alliance for Minority Participation (UMLSAMP) program at UMass Boston** was awarded \$50,000 to expand its offerings. The UMLSAMP program is a consortium of eight Massachusetts academic institutions of higher learning: UMass Boston, UMass Dartmouth, UMass Lowell, Wentworth Institute of Technology, and Bristol, Bunker Hill, Middlesex and Roxbury Community Colleges. The mission of the NSF UMLSAMP grant under which this consortium has operated for the last five years has been to establish best practices and innovative approaches to increase the number of STEM bachelor-degree graduates, especially those from underrepresented minority communities. The Center's funds will be used for the design, development and implementation of two undergraduate Biotechnology Research

The Center awarded grants totaling \$180,000 to four programs focused on STEM education and diversity in the life sciences workforce during FY 2012.

Skills Development workshops that will be delivered in April of 2012 for the Boston and New Bedford/Fall River metropolitan areas.

- Consistent with the Center's emphasis on promoting diversity in the life sciences workforce, the Center awarded a \$50,000 grant to the **Girl Scouts of Eastern Massachusetts (GSEM)** in November 2011 to support girls and their involvement in STEM education and careers. GSEM serves 178 communities composed of 41,000 girls ranging in age from five to 18 and more than 17,000 adult volunteers. One of every seven girls in eastern Massachusetts is a Girl Scout. In particular, this grant will fund a 10-week module in STEM within the FaB Factor program, which is an early intervention and prevention program for at-risk, low-income, inner-city girls ranging in age from five to 17 years old, designed to address the fact that women are underrepresented in the majority of STEM fields.
- **Search4STEM** was awarded \$50,000 that will be put toward creating a "one-stop" portal for STEM education – to connect teachers, educational leaders, businesses and other stakeholders with STEM programs, projects, products, initiatives, collaborations and services. Millions of dollars are appropriated every year for STEM initiatives throughout the nation, but existing STEM data warehouses, inventories and other resource lists are disconnected, disparate and difficult to use, and challenging to find. Search4STEM is an interactive, searchable "one-stop" portal for resource and knowledge exchange. The Center's funds will be used to develop the interactive web-based portal; fund the programming activities and technical consultant; and pay for materials and supplies.

The Center will continue to seek additional opportunities to expand access to STEM education and to ensure an inclusive life sciences workforce in the fiscal year ahead.

## Investing in Industry and Job Creation

### The Life Sciences Tax Incentive Program

In calendar year 2012, the Center awarded \$20.3 million in tax incentives to 26 life sciences companies under the Center's 2011 Life Sciences Tax Incentive program. The companies receiving tax incentive awards have committed to creating more than 900 new jobs in the Commonwealth during calendar year 2012.

The Life Sciences Act authorizes up to \$25 million in tax incentives each year for companies engaged in life sciences research and development, commercialization and manufacturing. The primary goal of the program is to incentivize life sciences companies to create new long-term jobs in Massachusetts. Companies receiving incentives must commit to the creation of a specific number of net new jobs during the following calendar year and also to the retention of those jobs for a five-year period.

The 2011 round of the program featured 10 different incentives, which address the significant capital expenditures associated with the life sciences R&D cycle and the high costs of translating research into commercially viable products. A total of 45 companies applied for tax incentives in 2011. Details of the 26 tax incentive awardees are below:



Tax Incentives Awarded Under the Center's 2011 Life Sciences Tax Incentive Program			
Company	Location	Tax Incentive Amount Awarded	Jobs Committed
Aegerion Pharmaceuticals, Inc.	Cambridge	\$661,122	27
AVEO Pharmaceuticals, Inc.	Cambridge	\$2,301,683	94
Biogen Idec MA, Inc.	Weston	\$1,836,449	75
Blueprint Medicines Corporation	Cambridge	\$160,750	15
Boston Heart Diagnostics Corporation	Framingham	\$220,000	31
Cell Signaling Technology	Danvers	\$489,720	20
Courtagen Life Sciences, Inc.	Woburn	\$125,000	13
DePuy Othopaedics, Inc.	Raynham	\$1,224,300	50
Ironwood Pharmaceuticals, Inc.	Cambridge	\$1,836,449	75
Knome, Inc.	Cambridge	\$49,000	12
LightLab Imaging, Inc.	Westford	\$636,636	26
Metamark Genetics, Inc.	Cambridge	\$269,346	11
Moderna Therapeutics, Inc.	Cambridge	\$138,270	13
Momenta Pharmaceuticals, Inc.	Cambridge	\$1,224,300	50
New England Biolabs, Inc.	Ipswich	\$244,860	10
NinePoint Medical, Inc.	Cambridge	\$313,483	15
Nova Biomedical Corporation	Waltham	\$244,860	10
Organogenesis, Inc.	Canton	\$857,010	35
PAREXEL International Corporation	Billerica	\$150,000	32
PerkinElmer, Inc.	Waltham	\$1,224,300	50
Pharmalucence, Inc.	Bedford	\$293,832	12
Quanterix Corporation	Cambridge	\$465,234	19
Ra Pharmaceuticals, Inc.	Cambridge	\$161,270	10
Shire HGT, Inc.	Lexington	\$3,000,000	100
T2 Biosystems, Inc.	Lexington	\$244,860	10
Vertex Pharmaceuticals	Cambridge	\$2,448,599	100

In FY 2012, Shire HGT, Inc., of Lexington received an additional \$3.5 million of tax incentives under an existing tax commitment by the Commonwealth.

The Center takes its stewardship of these resources seriously and has built in strong accountability measures to ensure that the program has “teeth.” The Center is carefully monitoring the performance of companies that have received tax incentives to ensure compliance with the tax incentive agreements they are required to execute with the Center. Headcount requirements must not only be met in the year following receipt of the award, but also maintained for the following five years. Under agreements by awardees, recipients of tax incentives are required to report job creation results to the Center by the end of the calendar year. Under the Life Sciences Act, the Department of Revenue has the authority to recover or “claw back” incentives from companies that the Center determines will not meet the minimum job creation threshold in their tax incentive agreement.

To date, the tax program has resulted in a combined net new hire commitment of more than 2,000 jobs among active awardees.

Through three rounds of the program, the Center has provided 86 awards to 71 companies at an aggregate amount of \$73.6 million. Ten awardees declined their awards due to changes in their business or general economic conditions. Eighteen awardees determined that they were unlikely to reach their job creation commitment under the statutory guidelines and opted to voluntarily terminate their agreements, either by foregoing taking the tax benefits at all or by returning the benefits to the Commonwealth if they had already received them. The Center decertified two awardees for not achieving the statutory thresholds. As of June 20, 2012, the Center had provided 56 active awards across all program years to 44 different companies. Eight active companies have received two or more active awards, illustrating their continued commitment to grow their headcount in the Commonwealth.

In FY 2012, awardees from the 2009 and 2010 tax programs were required to report their headcount as of December 31, 2011. As of December 31, 2011, reporting awardees from the 2009 and 2010 programs had hired or maintained 1,899 new employees, representing a 145 percent attainment of their commitment.

As of June 30, 2012 there were 30 active awards from the 2009 and 2010 program years, with a combined commitment of maintaining or fulfilling their 1,150 new hire commitment under the program. The 26 active awardees from the 2011 Tax Incentive program will provide their initial headcount reports – reflecting headcount as of December 31, 2012 – in January of 2013, as required under the program. The 2011 awardees have committed to creating an additional 915 jobs within the Commonwealth in calendar year 2012. To date, the tax program has resulted in a combined net new hire commitment of more than 2,000 jobs among active awardees.

### Attracting Companies to Massachusetts

Massachusetts continues to be a magnet for growing companies, both domestic and international. The Commonwealth is a great place for life sciences companies to do business because it is home to cutting-edge research, a superior workforce, a vibrant investment community and a supportive environment for growth. The Center actively recruits new companies to the state through extensive marketing efforts and our portfolio of tools and programs, and supports the integration of these companies into our life sciences community.

FY 2012 was an active year for the Center -- we helped organize numerous grand openings and press announcements for new or expanding life sciences companies in Massachusetts:

- Thermo Fisher celebrated the opening of its new manufacturing facility in Tewksbury, a project that will bring approximately 100 new jobs to Massachusetts.
- Lieutenant Governor Murray helped to celebrate the grand opening of Forma Therapeutics' new headquarters in Watertown.
- Spanish life sciences company Progenika opened its expanded facilities in Medford.





- U.K.-based Xenetic announced plans to relocate its drug discovery operations to Massachusetts, a direct return on investment for the Governor's trade mission to the U.K., in which the Center participated.
- H3 Biomedicine, a start-up drug discovery company funded by Japan-based Eisai, located its facilities in Cambridge.

Other recent arrivals include Batavia Bioservices from the Netherlands, Izon from New Zealand, Ohio-based Navidea and California-based BioSurplus; these companies opened new facilities in Woburn, Cambridge, Andover and Boston, respectively.

In addition, U.K.-based IDBS celebrated a significant expansion in Burlington, including the designation of its Burlington office as the company's U.S. healthcare headquarters. Ipsen-Biomeasure, based in France, announced a \$45-million expansion of its facilities in Milford. Ipsen, Izon and IDBS all came as a direct result of a meeting that each company had with Governor Patrick at the BIO Convention in 2011. These companies continue to cite the Life Sciences Initiative, along with the state's talented workforce, world-class academic institutions and industry-leading companies, as their primary reasons for locating or expanding in Massachusetts.

Company officials cite Massachusetts' Life Sciences Initiative, talented workforce, and leading research institutions as important reasons for choosing the state. A sampling of companies that have expanded or located in Massachusetts over the past four years is shown below:



The Center continues to engage companies across the nation and around the world, in order to encourage them to invest and locate in Massachusetts. We anticipate many more announcements in FY 2013.

## Building Partnerships

### International Partnerships

The Center continues to solidify Massachusetts' global life sciences leadership. In 2012, we further expanded relationships with companies and governments around the world by cultivating important new relationships in Brazil as a result of the Governor's trade mission to this emerging life sciences leader.

Another significant international collaboration for the Center emerged through the Northern Ireland Massachusetts Connection (NIMAC): a new multi-national research study that will develop non-invasive procedures to detect pre-malignant lesions. An international contingent of academic and economic development officials representing Finland, Northern Ireland and Catalonia have also made commitments to be part of the study. The study, which is being supported by the Center with a \$300,000 grant, will look at samples from all of the participating regions and will also utilize the most effective, cutting-edge applications to analyze the data collected. The result will be to determine at-risk patients without unnecessary surgery.



Governor Patrick speaks at the MIIP announcement on June 19, 2012 at BIO.

At the 2011 BIO International Convention, Governor Patrick joined Avi Hasson, the Israeli Chief Scientist, the U.S.-Israel Science and Technology Foundation (USISTF), and three Massachusetts economic development agencies, including the Center, to announce a formal collaboration between the State of Israel and the Commonwealth of Massachusetts to encourage and support innovation and entrepreneurship between Massachusetts' and Israel's life sciences, clean energy and technology sectors.

During FY 2012, this partnership, known as the Massachusetts-Israel Innovation Partnership (MIIP), launched a joint solicitation seeking Industrial R&D collaborations between Massachusetts and Israeli companies. After an

eight-month process, Governor Patrick and Chief Scientist Hasson announced the award winners at the 2012 BIO International Convention in Boston.

The Center, along with the Massachusetts Technology Collaborative (MTC) and the Massachusetts Clean Energy Center (MassCEC), awarded a total of more than \$600,000 to fund four partnerships between Massachusetts and Israeli companies. The two projects awarded by the Center, for a total of \$300,000 in expected grant funding, are as follows:

MIIP Projects in Round 1			
Companies	Massachusetts Location	Project Description	Amount Awarded
Automated Medical Instruments (AMI) and STI Lasers (Israel)	Needham	Emerging medical device company developing new radio frequency energy-based approach to perform circumferential ablation of the pulmonary veins	\$116,000
SBH Sciences and Improdia (Israel)	Natick	Developing and planning to manufacture chronic inflammation-dependent immunosuppression prognostic kit using a novel biomarker, which predicts changes in patient's immune system response as an indicator of disease status	\$184,000

The Center also participated in Massachusetts Senate President Therese Murray's announcement at the 2012 BIO International Convention that the first-ever United States-European Union (U.S.-E.U.) Conference on Connected Health would be held not in Washington, D.C., but in Boston in October of 2012. The European Commission selected Massachusetts to hold this conference to further develop and implement the U.S.-E.U. Memorandum of Understanding on e-Health between the E.U. and the U.S. Department of Health and Human Services. Senate President Murray is hosting the E.U.; other states; and biotechnology, medical device and e-health companies from across the globe. This two-day event will include a business marketplace that will provide opportunities for companies, health care providers, research institutions and others from both sides of the Atlantic to encourage business relationships, research and collaboration.

### Pursuing a Strategy for Biomanufacturing

The Center's priorities include making investments that strengthen Massachusetts' ability to compete for biomanufacturing jobs. In August of 2011, the Center provided a second \$50,000 grant to support the Massachusetts Biomanufacturing Roundtable ("the Roundtable"), a partnership between the Center and Massachusetts Institute of Technology's Industrial Performance Center to work with industry and academic biomanufacturing leaders and experts from across the state. The Roundtable is co-chaired by Eleven Biotherapeutics, Inc., CEO Abbie Celniker; Acceleron Pharma Senior Vice President of Manufacturing Bob Steininger; and former Pfizer Vice President Mickey Koplove.

Current priority areas include biomanufacturing technology innovation, workforce development and business development. To further these priorities, the Center worked with members of the Roundtable to host a panel at BIO 2012 on Massachusetts' leadership in biomanufacturing. In addition, the Center worked with the Roundtable to develop a brochure to showcase biomanufacturing innovation in Massachusetts, the global leadership role played by Massachusetts companies in biopharmaceutical manufacturing and technology, and the strength and depth of biomanufacturing experience in academic institutions as they collaborate with industry partners.

### The Massachusetts Neuroscience Consortium

Beginning in 2009, the Center began work to create a Massachusetts Neuroscience Consortium ("the Consortium") to accelerate pre-clinical research available to the pharmaceutical industry, introduce academic researchers to the challenges of targeted research and facilitate industry-academic partnerships. We were thrilled when Governor Patrick joined the Center to announce the formalization of this new Consortium at the 2012 BIO International Convention.

The charter Consortium members are Abbott, Biogen Idec, EMD Serono, Janssen Research and Development, Merck, Pfizer, and Sunovion Pharmaceuticals Inc.

The Consortium is comprised of seven global pharmaceutical leaders that recognize the value of leveraging the rich Massachusetts environment in the field of neuroscience. Consortium members are seeking an



opportunity to advance our collective understanding and treatment of neurological diseases through engagement with researchers representing all major fields of neurobiology and neurology.

The charter Consortium members, Abbott, Biogen Idec, EMD Serono, Janssen Research and Development, Merck, Pfizer, and Sunovion Pharmaceuticals Inc., have pooled their resources to fund the identification and validation of novel targets for the symptomatic treatment and modification of chronic and debilitating neurological diseases. Each Consortium member has agreed to contribute \$250,000, for total first-year funding of \$1,750,000.

During FY 2012, the Center grew its email list from 3,900 to more than 4,700 contacts.

The Center had more than 2,200 media mentions during FY 2012.

During FY 2012, Center staff participated as presenters, speakers or panelists at more than 50 public events.

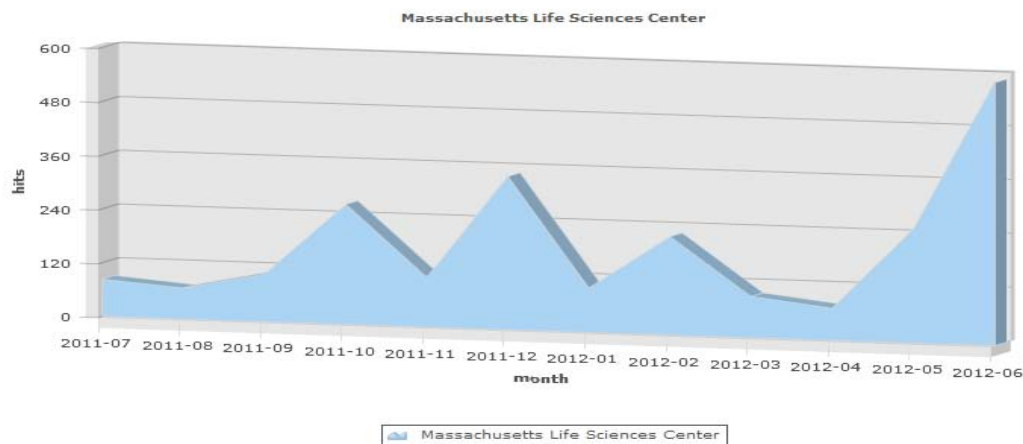
## Staying Connected

The Center's communications program keeps our stakeholders and the general public informed about the Center's investments of public dollars, promotes public accountability for the Center's progress in accomplishing our mission, and provides ongoing updates and information exchange with the life sciences community in order to encourage its involvement and input. Communication and outreach have been integral to the Center's success in attracting a robust and diverse pool of applicants for Center programs.

During FY 2012, the Center grew its email list from 3,900 to more than 4,700 contacts. We used our website as both a clearinghouse for information about the Center and a portal for applying to the Center's programs.

The Center had more than 2,200 media mentions during FY 2012. Publications across the nation and around the world covered our activities. The chart below shows the monthly distribution of the Center's media coverage during FY 2012. Periods of greater coverage tended to coincide with the announcement of new programs or investments, with a substantial increase resulting from the 2012 BIO International Convention in June.

**Monthly Distribution of MSLC Media Mentions  
(July 1, 2011 – June 30, 2012)**



During FY 2012, Center staff participated as presenters, speakers or panelists at more than 50 public events.

## **Massachusetts Takes BIO 2012 by Storm**

One noteworthy event is the 2012 BIO International Convention, which was an important moment for Massachusetts that provided an opportunity to showcase all that the Commonwealth has to offer. More than 16,500 people participated from 48 states and 65 countries. The Massachusetts Pavilion experienced heavy traffic throughout the event. More than 100 business development meetings took place with companies from all over the world, and new relationships were forged with regions across the globe, including the signing of formal agreements with the Medicon Valley region (Denmark and Sweden) and the Catalonia region (Spain).

## **Pulling Ahead and Taking the Lead**

In FY 2012, Massachusetts emerged as the clear global leader in life sciences. The Center made enormous strides in fulfilling our mission and delivering on the promise of the Life Sciences Initiative to create jobs, advance good science and coalesce the state's life sciences community.

The year ahead will present major opportunities to showcase Massachusetts' leadership in the life sciences, with the AdvaMed and International Society for Stem Cell Research annual conferences both coming to Boston during FY 2013.

The state budget calls for a FY 2013 investment fund appropriation of \$15 million, a \$5-million increase over the course of FY 2012, contingent on the comptroller's declaration of a consolidated net surplus for FY 2012. We are appreciative and excited about this vote of confidence by Governor Patrick, Lt. Governor Murray and the State Legislature, under the leadership of Senate President Murray and Speaker of the House DeLeo. We look forward to delivering another productive and impactful year.

## **Appendix A - The Board of Directors of the Massachusetts Life Sciences Center as of June 30, 2012**

- **Gregory Bialecki, Co-Chair**  
Secretary, Executive Office of Housing and Economic Development
- **Jay Gonzalez, Co-Chair**  
Secretary, Executive Office for Administration and Finance
- **Edward J. Benz, Jr., M.D.**  
President and CEO, Dana-Farber Cancer Institute
- **Josh Boger, Ph.D.**  
Founder & CEO (retired), Vertex Pharmaceuticals
- **Robert L. Caret, Ph.D.**  
President, University of Massachusetts
- **Abbie Celniker, Ph.D.**  
CEO, Eleven Biotherapeutics, Inc.
- **Lydia Villa-Komaroff, Ph.D.**  
Director and Chief Scientific Officer, Cytonome/ST



## Appendix B - Massachusetts Life Sciences Center Scientific Advisory Board Members as of June 30, 2012

- **Harvey Lodish, Ph.D., Chair**  
Whitehead Institute for Biomedical Research and Professor of Biology and of Bioengineering, Massachusetts Institute of Technology
- **James Barry, Ph.D.**  
Executive Vice President and COO, Arsenal Medical
- **Gary Borisy, Ph.D.**  
Director and CEO, Marine Biological Laboratory
- **Dalia Cohen, Ph.D.**  
Chief Scientific Officer, Asterand, Inc.
- **James Collins, Ph.D.**  
Professor of Biomedical Engineering, Boston University
- **John Collins, Ph.D.**  
Chief Operating Officer, Center for Integration of Medicine & Innovative Technology
- **T. (Teo) Forcht Dagli, M.D.**  
Partner, HLM Venture Partners
- **Robert D'Amato, M.D., Ph.D.**  
Judah Folkman Chair in Surgery and Director, Center for Macular Degeneration Research, Children's Hospital, Boston
- **Jonathan Fleming, M.P.A.**  
Managing General Partner, Oxford Bioscience Partners
- **Rainer Fuchs, Ph.D.**  
Chief Information Officer, Harvard Medical School
- **Richard A. Goldsby, Ph.D.**  
John Woodruff Simpson Lecturer and Professor of Biology, Amherst College
- **Dale Larson**  
Director of Biomedical Systems, Draper Laboratory
- **Lita Nelsen**  
Director, Technology Licensing Office, Massachusetts Institute of Technology

- **Carmichael Roberts, Ph.D.**  
Partner, North Bridge Venture Partners
- **Lauren Silverman, Ph.D.**  
Managing Director, Novartis Option Fund
- **Alan Smith, Ph.D.**  
Former Chief Scientific Officer, Genzyme Corporation
- **Allison Taunton-Rigby, Ph.D.**  
Co-founder, CEO and Director, RiboNovix, Inc.
- **David Walt, Ph.D.**  
Robinson Professor of Chemistry and Howard Hughes Medical Institute Professor, Tufts University School of Medicine
- **Philip Zamore, Ph.D.**  
Professor, Biochemistry and Molecular Pharmacology, UMass Medical School



## Appendix C - FY 2012 Internship Challenge Host Companies

480 Biomedical, Inc.	CeQur Corporation
A Chemtek Inc.	ChemGenes Corp.
AB Biosciences, Inc.	Christcot Medical Company
Abazyme LLC	Clover Medical LLC
AbPro Labs	Constellation Pharmaceuticals
Accelaron Pharma, Inc.	Convergence Medical Devices, Inc.
Addgene, Inc.	Court Square Group, Inc.
Advanced Research and Development	Courtagen Life Sciences, Inc.
AdvanDx, Inc.	CreaGen Biosciences, Inc
Advantagene, Inc.	Cytonome/ST, LLC
Aegerion Pharmaceuticals	Daktari Diagnostics, Inc.
Agilux Laboratories	Dentovations Inc
Agrivida, Inc.	Differential Proteomics, Inc.
Akaza Research, LLC	Digilab, Inc.
Alacrita LLC	DMI Dx, LLC
Albright Technologies	DNA Medicine Institute
Allied Minds Devices, LLC	DocBox Inc
Alzheimers Disease Center	Ekam Imaging, Inc.
Antagen Pharmaceuticals, Inc	Emergent Inc.
Antigen Targeting & Consulting Services Inc	EndoDynamix, Inc.
Appempler, Inc.	EndoSim, LLC
Arsenal Medical	Energesis Pharmaceuticals, Inc.
Arteriocyte Medical Systems	Ensemble Therapeutics Corporation
Aushon BioSystems	Enumeral Biomedical
Avaxia Biologics, Inc.	EpigenDx, Inc.
Averica Discovery Services Inc	Essential Life Solutions Ltd.
Bach Pharma, Inc	Eutropics Pharmaceuticals
BIND Biosciences	Excellims Corporation
Bio2 Technologies	First Light Biosciences
Biomedical Research Models, Inc.	Five Star Manufacturing, Inc.
BIOS2 Medical, Inc.	Five Star Surgical, Inc.
BioSensics LLC	FloDesign Sonics
BioSurfaces, Inc.	Flow Forward Medical, LLC
BioTechnic Products, Ltd	G&F Industries, Inc.
Biotrofix, Inc.	G&F Medical Inc.
Blossom Innovations	Genoceas Biosciences, Inc.
Blue Ocean Biomanufacturing, Inc.	Giner, Inc.
Blue Sky Biotech, Inc.	Ginkgo BioWorks, Inc.
Blue Stream Laboratories, Inc.	Global Business Support, Inc.
Boston Biomedical Associates	GlycoSolutions Corporation
Boston MedTech Advisors	Glycosyn Inc.
Boston Microfluidics Inc.	Grove Instruments, Inc.
Boston Micromachines Corporation	Harvard Apparatus
Boston Open Labs	Hemedex Inc.
Cambridge Biolabs LLC	Hepatochem, Inc.
Cambridge Biomedical, Inc.	Hepregen Corporation
Cambridge Polymer Group, Inc.	HighRes Biosolutions Inc
CBT Advisors	HPA Ventures
Cellay, Inc.	Hstar Technologies Co.
Celldex Therapeutics, Inc.	HydroCision, Inc
CellMosaic LLC	Imgen BioSciences, Inc.
Celltreat Scientific Products	Immunetics, Inc
Cephos Corp.	Immunotrex Biologics Inc.

InCrowd, Inc.  
 incTANK Ventures Management LLC  
 InfoBionic  
 Infraredx, Inc.  
 Institute for Pediatric Innovation, Inc.  
 Interactive Motion Technologies  
 Interscope, Inc.  
 inviCRO  
 InVivo Therapeutics Corporation  
 IonSense  
 iQuartic, Inc.  
 Janus Biotherapeutics  
 JEF Core, Inc.  
 JNK Healthcare Inc  
 KeraFAST  
 LaVoie Strategic Communications, Inc.  
 Ligon Discovery  
 MagneMotion Inc.  
 Massachusetts Medical Devices Journal, LLC  
 Matrigen LLC.  
 Matrivax R&D Corporation  
 Maxiom Consulting Group Inc.  
 Med Techna, Inc.  
 MedChem Partners LLC  
 MedPanel  
 Metis Manufacturing LLC  
 Microbiotix, Inc.  
 Microtest Laboratories, Inc.  
 Most Corporation  
 MOSTMED, Inc.  
 Mouse Specifics, Inc.  
 MSM Protein Technologies  
 MX Orthopedics  
 Myomo, Inc.  
 Nemucore Medical Innovations, Inc.  
 Neo-Advent Technologies, LLC  
 New England Peptide LLC  
 Nexcelom Bioscience LLC  
 NKT Therapeutics Inc.  
 Northeast Biomedical, Inc.  
 NovoBiotic Pharmaceuticals, LLC  
 Nuclea Biotechnologies, Inc.  
 Ocean Genome Legacy  
 OnSite Therapeutics, Inc.  
 OpenClinica, LLC  
 Ora, Inc.  
 PharmaHealth Clinical Research Services  
 Pharmeducence, Inc.  
 Phosphorex, Inc.

Phylonix Pharmaceuticals, Inc.  
 pION INC  
 Pluromed, Inc  
 Pressure BioSciences, Inc.  
 Privo Technologies  
 Progenika Inc  
 Quanterix Corporation  
 Reflectance Medical Inc.  
 Relay Technology Management, Inc.  
 Respiratory Motion, Inc.  
 ReSurfX LLC  
 Safe Food Scientific, LLC.  
 Safety Partners, Inc.  
 Sage Science, Inc.  
 Sample6 Technologies, Inc.  
 SBH Sciences, Inc.  
 Scientia Advisors, LLC  
 Segterra Inc.  
 Selecta Biosciences, Inc.  
 SemiNex Corporation  
 Senscio Systems, Inc.  
 Sentien Biotechnologies, Inc.  
 Seventh Sense Biosystems  
 Sharp Edge Labs, Inc.  
 SonyaSoft  
 Sproxil, Inc.  
 STAR Analytical Services  
 STC Biologics, Inc.  
 Targeted Cell Therapies, LLC  
 TDC Medical, Inc.  
 Tetrphase Pharmaceuticals, Inc.  
 TheraTorr Medical, Inc.  
 THINQ Pharma  
 TRA360  
 Two Square Science, LLC  
 Union Biometrica, Inc.  
 VasoTech, Inc.  
 VelQuest Corporation  
 Vista Scientific LLC  
 VitaThreads Inc.  
 VivoPath, LLC  
 WaterSep Technology Corp  
 WaveGuide Corporation  
 White Systems, Inc.  
 WorldCare Clinical, LLC  
 X-CHEM, Inc.  
 Xtal BioStructures Inc.  
 ZeptoMetrix Corporation

## Appendix D - List of Active Certified Life Sciences Companies as of June 30, 2012

Company	Location
4s3 Bioscience, Inc.	Medford
Aegerion Pharmaceuticals, Inc.	Cambridge
AesRx, LLC	Newton
Aura Medsystems, Inc.	Duxbury
Avaxia Biologics, Inc.	Burlington
AVEO Pharmaceuticals, Inc.	Cambridge
Bind Biosciences, Inc.	Cambridge
Biogen Idec MA, Inc.	Cambridge
Bluebird Bio, Inc.	Cambridge
Blueprint Medicines Corporation	Cambridge
Boston Heart Diagnostics Corporation	Framingham
Cell Signaling Technology	Danvers
Christcot Medical, Inc	Sudbury
Constellation Pharmaceuticals, Inc.	Cambridge
Courtagen Life Sciences, Inc	Woburn
Cubist Pharmaceuticals, Inc.	Lexington
DePuy Othopaedics, Inc.	Raynham
Dyax Corporation	Cambridge
Eutropics Pharmaceuticals, Inc.	Dorchester
Foundation Medicine, Inc	Cambridge
Good Start Genetics, Inc.	Boston
Grove Instruments, Inc	Worcester
Infinity Pharmaceuticals, Inc.	Cambridge
InfraReDx, Inc.	Burlington
Instrumentation Laboratory Company	Bedford
InVivo Therapeutics, Inc.	Cambridge
Ironwood Pharmaceuticals, Inc	Cambridge
Knome, Inc	Cambridge
LeMaitre Vascular, Inc.	Burlington
Lightlab Imaging, Inc.	Westford
Merrimack Pharmaceuticals, Inc.	Cambridge
Metamark Genetics, Inc	Cambridge
Mevion, Inc.	Littleton
Moderna Therapeutics, Inc	Cambridge
MoMelan Technologies, Inc	Cambridge
Momenta Pharmaceuticals, Inc	Cambridge
Myomo, Inc	Cambridge
New England Biolabs, Inc	Ipswich
NinePoint Medical, Inc	Cambridge
Nova Biomedical Corporation	Waltham
NxStage Medical, Inc.	Lawrence
OmniGuide, Inc.	Cambridge
Organogenesis, Inc.	Canton
PAREXEL International Corporation	Lowell

PerkinElmer, Inc	Waltham
Pharmalucence, Inc	Bedford
Pluromed, Inc.	Woburn
Quanterix Corporation	Cambridge
Ra Pharmaceuticals, Inc	Cambridge
Sanofi-Aventis, Inc.	Cambridge
Shire Human Genetic Therapies, Inc.	Lexington
STD Med, Inc.	Stoughton
Sunovion, Inc.	Marlboro
T2Biosystems, Inc	Lexington
Valeritas, Inc.	Shrewsbury
Vertex Pharmaceuticals, Inc	Cambridge
Wadsworth Medical Technologies, Inc	Westborough
Wolfe Laboratories, Inc.	Watertown

# **Massachusetts Life Sciences Center**

**Financial Statements with Management's  
Discussion and Analysis  
June 30, 2012 and 2011**

**Massachusetts Life Sciences Center**  
**Index**  
**June 30, 2012 and 2011**

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## Report of Independent Auditors

To the Board of Directors of the  
Massachusetts Life Sciences Center:

In our opinion, the accompanying balance sheets and the related statements of revenues, expenses and changes in net assets and of cash flows of the Massachusetts Life Sciences Center (the "Center") (a component unit of the Commonwealth of Massachusetts), present fairly, in all material respects, the financial position of the Center at June 30, 2012 and June 30, 2011, and the related changes in financial position and cash flows for the years then ended, in conformity with accounting principles accepted in the United States of America. These financial statements are the responsibility of the Center's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

The accompanying management's discussion and analysis on pages 2 through 5 is required by accounting principles generally accepted in the United States of America to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in the appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*PricewaterhouseCoopers LLP*

September 26, 2012

# **Massachusetts Life Sciences Center**

## **Management's Discussion and Analysis (unaudited)**

### **June 30, 2012 and 2011**

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As the Board of Directors of the Massachusetts Life Sciences Center (the "Center") we offer the following narrative overview and analysis of the financial activities of the Center for the fiscal years ended June 30, 2012, 2011 and 2010. This unaudited management discussion and analysis should be read in conjunction with the audited financial statements and the notes thereto, which follow this section.

The Center was created on June 24, 2006 in the Economic Stimulus Bill, Chapter 123, Section 24 of the Acts of 2006 and codified in the Massachusetts General Laws, Chapter 23I. The Center is a body politic and corporate. Exercise of the powers conferred by Chapter 23I is considered to be the performance of an essential governmental function. The purpose of the Center is to promote the life sciences within the Commonwealth of Massachusetts (the "Commonwealth"). It is tasked with investing in life sciences research and economic development initiatives. This work includes making financial investments in public and private institutions growing life sciences research, development and commercialization, as well as building ties between sectors of the Massachusetts life sciences community.

On June 16, 2008, the Life Sciences Act enacted by the Massachusetts Legislature was signed into law by Governor Deval Patrick. The Commonwealth committed to investing \$1 billion over a ten year period to create jobs, drive innovation and promote biomedical breakthroughs that improve people's lives. The Center is the steward of the \$1 billion and uses three statutory funding vehicles to achieve the Commonwealth's mission: the Life Sciences Investment Fund (the "Investment Fund"), the Capital Program and the Life Sciences Tax Incentive Program.

The Life Sciences Investment Fund is to be used in making appropriations, allocations, grants or loans to leverage development and investments in life sciences in Massachusetts. The Capital Program is for municipalities and institutions for buildings, upgrades to roads, equipment, sewer lines and other infrastructure that supports growth in the life sciences sector. The Life Sciences Tax Incentive Program allows the Center to award tax incentives to companies at every stage of development.

The Center is governed by a seven member Board of Directors (the "Board of Directors") consisting of: the Secretary of Administration and Finance or her/his designee; the Secretary of Housing and Economic Development or his/her designee; the president of the University of Massachusetts or his/her designee; and four members appointed by the Governor, one of whom is a physician licensed to practice medicine in Massachusetts and affiliated with an academic medical center, one of whom is a CEO of a Massachusetts-based life sciences corporation that is a member of the board of directors of the Massachusetts Biotechnology Council, one of whom is a researcher involved in the commercialization of biotechnology, pharmaceuticals or medical diagnostic products and one of whom has significant financial experience in the life sciences sector.

#### **Using the Financial Statements**

The Center's annual report includes three basic financial statements: the balance sheet; the statement of revenues, expenses and changes in net assets; and the statement of cash flows. The basic financial statements are prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") as promulgated by the Governmental Accounting Standards Board ("GASB").

# **Massachusetts Life Sciences Center**

## **Management's Discussion and Analysis (unaudited)**

### **June 30, 2012 and 2011**

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#### **Financial Highlights**

The balance sheet is presented to illustrate both the current and non-current balances of each asset and liability. All revenues and expenses are classified as either operating or non-operating activities in the statement of revenues, expenses and changes in net assets. Operating activities are those that support the mission and purpose of the Center. Non-operating activities represent transactions that are capital, investing, legislative or regulated in nature. The GASB requires that resources be classified into three categories of net assets. Net assets represent the residual interest in the Center's assets after liabilities are deducted and consist of: invested in capital assets, net of related debt; restricted; and unrestricted.

Total assets of the Center fluctuate year to year mainly based on timing of receipts of reimbursements due to the Center for Investment Fund and Capital Program expenses incurred by grantees in addition to contributions received from the Commonwealth of Massachusetts. Total liabilities fluctuate year to year mainly due to the timing of related payments for the Investment Fund and Capital Program passed through the Center payable to the grantees. Net assets of the Center are all unrestricted, aside from those invested in capital assets. Ending net assets as of June 30, 2012, 2011 and 2010 is \$27,201,578, \$26,271,099 and \$25,452,148, respectively. Changes in net assets year over year is driven by the changes in revenues and expenses by the Center. The significant components of change in revenues and expenses year over year are discussed in the remainder of the management discussion and analysis of this document.

Fiscal year 2012 is the fourth year of the initiative and reflects a year of significant operating activities of the Center as grants were made both from the Investment Fund and Capital Programs and a third round of awards under the Life Sciences Tax Incentive Program were made.

#### **Investment Fund**

Section 24 of Chapter 123 of the Acts of 2006 established the Massachusetts Life Sciences Investment Fund to be administered by the Center to finance its activities. The Life Sciences Act of 2008 contemplates an annual appropriation from the legislature totaling \$250 million over 10 years. The Investment Fund is also to be used to support the administrative expenses and investment in property and equipment of the Center.

The legislature appropriated \$10 million in fiscal year 2012, \$10 million in fiscal year 2011 and \$10 million in fiscal year 2010.

In fiscal year 2012, the Board of Directors authorized \$5.1 million in commitments as compared to \$4.5 million in fiscal year 2011 and \$4.4 million in fiscal year 2010. The commitments were for research grants, workforce development programs, and programs that support innovation in life sciences. The increase in fiscal year 2012 from fiscal year 2011 is due to an expansion of existing programs and a new international innovation program. The slight increase in commitments in fiscal year 2011 from fiscal year 2010 was due to an expansion of existing programs. In fiscal year 2012, the Center incurred \$6.8 million of grant expense compared to \$6.6 million in fiscal year 2011 and \$9.1 million in fiscal year 2010. The slight increase in expense in fiscal year 2012 from fiscal year 2011 is due to the timing of programs. The decrease in fiscal year 2011 from fiscal year 2010 is due to fewer grants in 2011 and grants obligations that were fulfilled in fiscal year 2010. Remaining payment commitments as of June 30, 2012 on the outstanding grants are approximately \$9.2 million.

## **Massachusetts Life Sciences Center**

### **Management's Discussion and Analysis (unaudited)**

#### **June 30, 2012 and 2011**

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In fiscal year 2012, the Board of Directors authorized \$6 million for early stage company loans under the Life Sciences Accelerator Loan program for fiscal year 2013. The loan program provides working capital to early stage companies at a critical stage of development. From prior year authorizations, the Center awarded \$3.1 million in fiscal year 2012 and \$3.75 million in fiscal year 2011. Of the \$3.1 million in investment funds awarded in fiscal year 2012, none have been disbursed as of June 30, 2012.

#### **Capital Programs**

The Capital Program was created by the Life Sciences Act and is for municipalities and institutions for buildings, upgrades to roads, sewer lines and other infrastructure that supports growth in the life sciences sectors. The Life Sciences Act provides for \$500 million to the Capital Program over 10 years. The Capital Program is funded by the Commonwealth of Massachusetts. In fiscal year 2012, the Center entered into six new commitments for \$56 million. In fiscal year 2012, the Center incurred \$42.5 million of grant expense compared to approximately \$29.1 million in fiscal year 2011 and \$28.5 million in fiscal year 2010. The increase in fiscal year 2012 from fiscal year 2011 is due to prior commitments incurring greater expense in fiscal year 2012. The increase in fiscal year 2011 from fiscal year 2010 is due to prior commitments incurring greater expense in fiscal year 2011. The Life Sciences Act also provides for a Life Sciences Education fund for providing grants for purchasing or leasing equipment to train students in life sciences and research. In fiscal year 2011, the Center made 32 grants for a new program to vocational/technical high schools, community colleges and other workforce development programs totaling nearly \$3.4 million and incurring expense of \$2.9 million. In fiscal year 2012, no new awards were made and the Center incurred \$483,000 of grant expense under the program from prior year awards.

The Life Sciences Act also provides for a small business matching grant fund under the Capital Program. Under the program companies that have received Phase II or later small business innovation research ("SBIR") grants can receive up to \$500,000 in grants from the Center to assist the awardee with commercializing their product. In fiscal year 2010, three companies received awards and the Center incurred \$1,500,000 of expense in fiscal year 2010. In fiscal year 2011, four companies received awards and the Center incurred \$2,000,000 of expense in fiscal year 2011. In fiscal year 2012, the Center made one award totaling \$500,000 under the program.

#### **Life Sciences Tax Incentive Program**

The Life Sciences Tax Incentive Program was created by the Life Sciences Act and allows the Center to award tax incentives to companies at every stage of development. The Center has the ability to award ten different tax incentives with a cumulative cap of \$25 million per year for 10 years. The tax incentives have no financial impact on the Center. The Center awarded \$20.3 million to 26 companies in fiscal year 2012, \$20.9 million to 24 companies in fiscal year 2011, and \$24.4 million to 26 companies in fiscal year 2010.

#### **Investment Income**

Investment income in fiscal year 2012 was \$73,000 compared to \$86,000 in fiscal year 2011 and \$113,000 in fiscal year 2010. Investment income relates to interest earned throughout the fiscal year on the Center's cash and cash equivalent balance. The decrease in fiscal year 2012 from fiscal year 2011 is due to a lower average balance. The decrease in fiscal year 2011 from fiscal year 2010 is due to a lower average balance.

**Massachusetts Life Sciences Center**  
**Management's Discussion and Analysis (unaudited)**  
**June 30, 2012 and 2011**

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**Administrative Expenses and Investments in Property and Equipment**

In accordance with the Act, administrative expenses and purchases of property and equipment are provided by the Investment Fund. In fiscal year 2012, the Center incurred approximately \$2.2 million of administrative expenses and purchases of property and equipment. In fiscal year 2011 and 2010 the Center incurred approximately \$2.2 million and \$2.3 million, respectively, of administrative expenses. The same level of expenditures in fiscal year 2012 from fiscal year 2011 is due to higher staffing costs as a result of a full year of costs for open positions filled during fiscal year 2011 and lower fiscal year 2012 communications programs, professional fees and administrative expenses. The decrease in expenditures in fiscal year 2011 from fiscal year 2010 is due to lower staffing costs as a result of open positions and lower communications programs. For the fiscal years ended June 30, 2012, June 30, 2011 and June 30, 2010, the headcount of the Center was ten, nine, and nine, respectively.

**Liquidity of the Investment Fund**

From inception through June 30, 2012, the Investment Fund has received appropriations from the Commonwealth of \$70 million. In addition, the Center has received investment income of approximately \$2.1 million and in loan repayments, sponsorship and corporate consortium revenues of approximately \$3.8 million during the corresponding period for total inflows of approximately \$75.9 million. The Center reserves all the funds required for a grant or loan commitment at the time of the Board of Directors' authorization. From inception through June 30, 2012, the Center has disbursed or reserved approximately \$72.2 million resulting in approximately \$3.7 million of available funds as of June 30, 2012.

**Massachusetts Life Sciences Center**  
**Balance Sheets**  
**June 30, 2012 and 2011**

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	2012	2011
<b>Assets</b>		
Current assets		
Cash and cash equivalents	\$ 27,513,436	\$ 27,279,085
Accounts receivable	-	64,900
Grant reimbursement from the Commonwealth	17,464,289	19,715,000
Interest receivable, net	351,674	198,126
Prepaid expenses and other current assets	49,646	38,517
Total current assets	<u>45,379,045</u>	<u>47,295,628</u>
Loans receivable, net	2,503,500	2,012,500
Property and equipment, net	31,683	100,018
Total noncurrent assets	<u>2,535,183</u>	<u>2,112,518</u>
Total assets	<u>\$ 47,914,228</u>	<u>\$ 49,408,146</u>
<b>Liabilities</b>		
Current liabilities		
Accounts payable and accrued expenses	\$ 201,371	\$ 231,438
Grants payable and accrued grant expense	20,466,488	22,717,961
Other current liabilities	-	125,000
Total current liabilities	<u>20,667,859</u>	<u>23,074,399</u>
Deferred rent	44,791	62,648
Total liabilities	<u>20,712,650</u>	<u>23,137,047</u>
<b>Net Assets</b>		
Invested in capital assets	31,683	100,018
Unrestricted net assets	27,169,895	26,171,081
Total net assets	<u>27,201,578</u>	<u>26,271,099</u>
Total liabilities and net assets	<u>\$ 47,914,228</u>	<u>\$ 49,408,146</u>

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



**Massachusetts Life Sciences Center**  
**Statements of Revenues, Expenses, and Changes in Net Assets**  
**Years Ended June 30, 2012 and 2011**

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	2012	2011
<b>Operating income</b>		
Capital program revenues from the Commonwealth	\$ 43,500,000	\$ 34,000,000
Sponsorship/corporate consortium revenues	131,300	607,567
Interest income	392,911	178,864
Total operating income	<u>44,024,211</u>	<u>34,786,431</u>
<b>Operating expenses</b>		
Grant expense	50,265,235	40,564,217
Salary and related employee expenses	1,438,984	1,277,158
Professional and consulting fees	180,152	202,576
Communications programs, sponsorships and contributions	224,874	326,516
General and administrative expenses	368,248	383,184
Loan loss reserve expense, net	616,000	1,212,500
Depreciation	73,386	87,659
Total operating expenses	<u>53,166,879</u>	<u>44,053,810</u>
Operating loss	<u>(9,142,668)</u>	<u>(9,267,379)</u>
Nonoperating revenues		
Investment income	<u>73,147</u>	<u>86,330</u>
Total nonoperating revenues	<u>73,147</u>	<u>86,330</u>
Loss before capital contributions	<u>(9,069,521)</u>	<u>(9,181,049)</u>
Contributions from the Commonwealth	<u>10,000,000</u>	<u>10,000,000</u>
Increase in net assets	<u>930,479</u>	<u>818,951</u>
<b>Net assets</b>		
Beginning of year	<u>26,271,099</u>	<u>25,452,148</u>
End of year	<u>\$ 27,201,578</u>	<u>\$ 26,271,099</u>

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

**Massachusetts Life Sciences Center**  
**Statements of Cash Flows**  
**Years Ended June 30, 2012 and 2011**

	2012	2011
<b>Cash flows from operating activities</b>		
Receipts for reimbursements from the Commonwealth	\$ 45,750,711	\$ 23,952,583
Payments for grants	(52,516,708)	(30,312,008)
Payments for salary and related employee expenses	(1,424,832)	(1,268,000)
Payments for professional consulting fees	(161,574)	(173,363)
Payments for general and administrative expenses	(389,814)	(437,340)
Payments for communication programs, sponsorships and contributions	(295,091)	(253,894)
Receipts for interest income	239,363	130,587
Receipts for sponsorships	71,200	662,767
Net cash used in operating activities	(8,726,745)	(7,698,668)
<b>Cash flows from capital financing activities</b>		
Receipt of contributions from the Commonwealth	10,000,000	10,000,000
Net cash provided by capital financing activities	10,000,000	10,000,000
<b>Cash flows from investing activities</b>		
Purchase of property and equipment	(5,051)	(2,676)
Issuance of loans	(2,207,000)	(2,775,000)
Repayment of loans	1,100,000	1,000,000
Receipt of investment income	73,147	86,330
Net cash used in investing activities	(1,038,904)	(1,691,346)
Net increase in cash and cash equivalents	234,351	609,986
<b>Cash and cash equivalents</b>		
Beginning of year	27,279,085	26,669,099
End of year	\$ 27,513,436	\$ 27,279,085
<b>Reconciliation of cash flows from operating activities</b>		
Operating loss	\$ (9,142,668)	\$ (9,267,379)
Adjustments to reconcile operating loss to net cash used in operating activities		
Depreciation expense	73,386	87,659
Loan loss reserve	616,000	1,212,500
Loan interest reserve	215,599	186,484
Changes in assets and liabilities		
Accounts receivable	64,900	346,867
Grant reimbursement from the Commonwealth	2,250,711	(10,047,417)
Interest receivable	(369,147)	(234,761)
Prepaid expenses and other current assets	(11,129)	(17,956)
Accounts payable and accrued expenses	(30,067)	86,796
Grants payable and accrued grant expense	(2,251,473)	10,252,209
Deferred rent	(17,857)	(12,003)
Other current liabilities	(125,000)	(291,667)
Total adjustments	415,923	1,568,711
Net cash used in operating activities	\$ (8,726,745)	\$ (7,698,668)

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

# **Massachusetts Life Sciences Center**

## **Notes to Financial Statements**

### **June 30, 2012 and 2011**

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#### **1. Organization**

On June 24, 2006, the Commonwealth of Massachusetts (the "Commonwealth") enacted Section 24 of Chapter 123 of the Acts of 2006, creating the Massachusetts Life Sciences Center (the "Center") and establishing the Massachusetts Life Sciences Investment Fund (the "Investment Fund") to financially support its activities.

On June 16, 2008, the Life Sciences Act enacted by the Massachusetts Legislature was signed into law by Governor Deval Patrick. The Commonwealth committed to investing \$1 billion over a ten year period to create jobs, drive innovation and promote biomedical breakthroughs that improve people's lives. The Center is the steward of the \$1 billion and uses three statutory funding vehicles to achieve the Commonwealth's mission: the Life Sciences Investment Fund (the "Investment Fund"), the Capital Program and the Life Sciences Tax Incentive Program.

The Life Sciences Investment Fund is to be used in making appropriations, allocations, grants or loans to leverage development and investments in life sciences in Massachusetts. The Capital Program is for municipalities and institutions for buildings, upgrades to roads, equipment, sewer lines and other infrastructure that supports growth in the life sciences sector. The Life Sciences Tax Incentive Program allows the Center to award tax incentives to companies at every stage of development.

All investments to be made by the Center require approval by its Board of Directors.

The Center is a component unit of the Commonwealth of Massachusetts.

#### **2. Significant Accounting Principles**

##### **Accounting and Reporting Standards**

These financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America, as prescribed by the Governmental Accounting Standards Board.

The Center applies all Governmental Accounting Standards Board ("GASB") pronouncements and Financial Accounting Standards Board ("FASB") pronouncements issued before November 30, 1989 that do not conflict with GASB pronouncements, under the provisions of GASB Statement No. 20, *Accounting and Financial Reporting for Proprietary Funds and Other Governmental Entities That Use Proprietary Fund Accounting*.

The GASB defines the basic financial statements of a business type activity as the: balance sheet, statement of revenues, expenses and changes in net assets, the statement of cash flows, and management's discussion and analysis as required supplemental information. The balance sheet is presented to illustrate both the current and noncurrent balances of each asset and liability. All revenues and expenses are classified as either operating or nonoperating activities in the statement of revenues, expenses and changes in net assets. Operating activities are those that support the mission and purpose of the Center. Nonoperating activities represent transactions that are capital, investing, legislative or regulated in nature. The GASB requires that resources be classified into three categories of net assets. Net assets represent the residual interest in the Center's assets after liabilities are deducted and consist of: invested in capital assets, net of related debt; restricted; and unrestricted. Those assets are defined as follows:

# **Massachusetts Life Sciences Center**

## **Notes to Financial Statements**

### **June 30, 2012 and 2011**

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#### ***Invested in Capital Assets***

Invested in capital assets, net of related debt, includes capital assets, net of accumulated depreciation and outstanding principal balances of debt attributable to the acquisition, construction or improvement of those assets.

#### ***Restricted***

Restricted assets are those net assets subject to externally imposed stipulations that can be fulfilled by actions of the Center pursuant to those stipulations or that expire by the passage of time.

#### ***Unrestricted***

Unrestricted assets are those net assets that are not subject to externally imposed stipulations. Unrestricted net assets may be designated for specific purposes by action of management or the Board of Directors or may be otherwise limited by contractual agreements with outside parties. The Center's unrestricted net assets include appropriations received from the Commonwealth that are restricted for the general purposes of the Center. Per its enabling legislation, the Center may not expend more than fifteen percent of the amounts to be expended from the Life Sciences Investment Fund for the fiscal year for administrative expenditures and property and equipment.

#### ***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 disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

#### ***Cash and Cash Equivalents***

Cash and cash equivalents consist of amounts on hand and highly liquid interest investments with maturities of three months or less at acquisition.

#### ***Revenue Recognition***

Investment income is recognized as earned. Sponsorship revenues are related to the Center providing tradeshow booths and other space for companies for a trade show. Sponsorship revenues are recognized when earned upon occurrence of the event. Consortium revenues are fees paid by corporations to sponsor and participate in the Center's small business matching grant and accelerator loan programs. Fees are for a specific time period. Revenues are recognized over the specified time period.

Interest income on loans is recognized as earned. Interest income is net of any interest income loss reserve.

Capital program revenues are amounts due to the Center by the Commonwealth for related capital program expenditures by the Center for grantees of the Center. Capital program revenues are recognized in the period earned.

#### ***Contributions From the Commonwealth of Massachusetts***

Contributions from the Commonwealth are recognized when received from the Commonwealth.

# **Massachusetts Life Sciences Center**

## **Notes to Financial Statements**

### **June 30, 2012 and 2011**

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#### **Loans Receivable and Interest Receivable, Net**

Loans receivable, net, consists of loans issued by the Center to facilitate research, development, manufacturing and commercialization in life sciences by early stage companies. The loans have repayment terms of the earlier of 5 years or a qualified financing greater than \$5,000,000. The stated interest rate on each loan is 10% compounded annually.

As of June 30, 2012, \$11,207,000 of loans receivable has been authorized and \$8,382,000 has been disbursed. During fiscal year 2012, two borrowers repaid back their loans in full with a combined repayment of principal of \$1,100,000. On a periodic basis, the Center assesses the collectability of each loan and establishes a loss reserve. As of June 30, 2012, \$5,782,000 of loans receivable are outstanding and \$3,278,500 has been reserved for losses, resulting in net loans receivable of \$2,503,500. The Center has no write-offs or recoveries in fiscal years 2012 and 2011.

As of June 30, 2012, the gross interest receivable balance was \$903,607. On a periodic basis, the Center assesses the collectability of the interest receivable and establishes a loss reserve. As of June 30, 2012, \$551,933 has been reserved resulting in net interest receivable of \$351,674. Interest is due at the end of the loan term or upon repayment of the loan due to a qualified financing of these companies of greater than \$5,000,000.

#### **Grant Expense and Grants Payable**

Grant expenses are related to grant awardees in the period incurred. The Center had grant expense of \$50,265,235 and \$40,564,217 for fiscal year 2012 and 2011, respectively. As of June 30, 2012 and 2011, \$20,466,488 and \$22,717,961, respectively, was recorded as grants payable, representing grant expense incurred but not yet paid.

#### **Income Taxes**

Pursuant to Massachusetts General Laws chapter 23I §6(a), the operations of the Center constitute the performance of an essential government function and are therefore exempt from taxation by and within the Commonwealth.

#### **Defined Contribution Plan**

All employees of the Center participate in either the Commonwealth of Massachusetts State Retirement systems or the statutorily prescribed optional defined contribution plan provided by the Center. The Center makes no contributions for employees participating in the Commonwealth of Massachusetts State Retirement systems' pension plan. In fiscal year 2010, as provided by the 2008 Statute, the Center established the optional defined contribution plan. The Center annually contributes an amount equal to 12% (5% statutorily mandated) of an employee's annual gross salary less the cost of life and disability insurance. Total optional defined contribution expense by the Center for the years ended June 30, 2012 and 2011 was \$94,715 and \$80,536, respectively. Vesting is immediate upon contribution. The Center pays administrative expenses of the Plan for the plan participants and ING is the custodian of the plan's assets. The balances of the plan are not included in the financial statements of the Center.

# Massachusetts Life Sciences Center

## Notes to Financial Statements

### June 30, 2012 and 2011

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#### Massachusetts Neuroscience Consortium

In June 2012, the Center announced the formation of a separate initiative, the Massachusetts Neuroscience Consortium (the "Consortium"), a collaboration between seven global pharmaceutical companies. The Consortium will fund pre-clinical neuroscience at Massachusetts academic and research institutions. Each Consortium member has agreed to contribute \$250,000 to the Consortium for the first year membership contribution. The Center is not a member of the Consortium and makes no financial contribution to the Consortium. The financial burden and administrative control does not reside with the Center. The designated members of the Consortium are responsible for all decisions regarding disbursement of funds. The Center acts solely as a custodian of the Consortium funds which are segregated in a separate bank account, the Center does not receive any fees for custodial services provided. No amounts due to the Consortium were received by the Consortium as of June 30, 2012. Subsequent to year end, the Consortium has received \$1,500,000 from membership contributions to date held within the segregated bank account of the Center. The balances of the Consortium are not included in the financial statements of the Center as of June 30, 2012. If the Consortium was to terminate, all remaining funds would be due back to the contributing members on a pro-rata basis.

### 3. Related Party Transactions

Certain of the Center's Board of Director's members have relationships with institutions that have received grants. Absent any statutory exemptions to the conflict of interest law, in circumstances where approval of such votes would create a conflict of interest, the Center's Board members are required to rescue themselves.

### 4. Cash and Cash Equivalents

The following summarizes the cash and cash equivalents of the Center and identifies certain types of investment risk as defined by GASB Statement No. 40, *Deposit and Investment Risk Disclosures*, at June 30, 2012 and 2011.

	Carrying Amount	Fair Value
<b>June 30, 2012</b>		
Cash deposits	\$ 2,913,399	\$ 2,913,399
Massachusetts Municipal Depository Trust (MMDT)		
Cash Portfolio	24,600,037	24,600,037
Total at June 30, 2012	<u>\$ 27,513,436</u>	<u>\$ 27,513,436</u>
<b>June 30, 2011</b>		
Cash deposits	\$ 3,748,111	\$ 3,748,111
Massachusetts Municipal Depository Trust (MMDT)		
Cash Portfolio	23,530,974	23,530,974
Total at June 30, 2011	<u>\$ 27,279,085</u>	<u>\$ 27,279,085</u>

**Massachusetts Life Sciences Center**  
**Notes to Financial Statements**  
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**Custodial Credit Risk—Deposits**

The custodial credit risk for deposits is the risk that in the event of a bank failure, the deposits may not be recovered. The Center's cash and cash equivalents are held by financial institutions, and exceed generally insured limits. All deposits are uninsured and uncollateralized.

**Interest Rate Risk**

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The Center manages its exposure to interest rate risk by so that investments mature to meet cash requirements for ongoing operations and investing operating funds primarily in cash equivalents.

As of June 30, 2012 and 2011, the Massachusetts Municipal Depository Trust investment maturities are summarized as follows:

2012 Investment Type	Investment Maturities (in Years)				
	Fair Value	Less Than 1	1-5	6-10	More Than 10
Certificates of deposit	\$ 8,589,201	\$ 8,589,201	\$ -	\$ -	\$ -
Commercial paper	6,191,431	6,191,431			
U.S. Government and government agency obligations	1,327,076	1,327,076			
U.S. Treasury obligations	2,869,529	2,869,529			
Medium-term notes	783,606	783,606			
Repurchase agreements	4,827,653	4,827,653			
Total investment	24,588,496	24,588,496	-	-	-
Net other assets/liabilities	11,541	11,541			
Net assets	\$ 24,600,037	\$ 24,600,037	\$ -	\$ -	\$ -

2011 Investment Type	Investment Maturities (in Years)				
	Fair Value	Less Than 1	1-5	6-10	More Than 10
Certificates of deposit	\$ 11,529,131	\$ 11,529,131	\$ -	\$ -	\$ -
Commercial paper	3,676,039	3,676,039			
U.S. Government and government agency obligations	68,100	68,100			
Federal agencies					
U.S. Treasury obligations	1,439,120	1,439,120			
Assets-backed securities	125,464	125,464			
Medium-term notes	1,195,979	1,195,979			
Municipal securities	162,217	162,217			
Repurchase agreements	5,323,346	5,323,346			
Total investment	23,519,396	23,519,396	-	-	-
Net other assets/liabilities	11,578	11,578			
Net assets	\$ 23,530,974	\$ 23,530,974	\$ -	\$ -	\$ -



**Massachusetts Life Sciences Center**  
**Notes to Financial Statements**  
**June 30, 2012 and 2011**

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**5. Property and Equipment, Net**

Property, equipment, and leasehold improvements are all stated at cost. Depreciation is recorded over the estimated useful lives of the assets by the straight line method. Expenditures for maintenance and repairs are charged to expense as incurred. Depreciation expense totaled \$73,386 and \$87,659 for the years ended June 30, 2012 and 2011, respectively. Estimated useful lives used for computing depreciation on property, equipment and leasehold improvements are as follows:

Computer equipment and software	3 years
Office equipment	3 years
Office furniture	3 years
Leasehold improvements	shorter of the remaining term of lease or asset life

Property and equipment, net, at June 30, 2012 and 2011 consisted of the following:

	<b>2012</b>	<b>2011</b>
Computer equipment	\$ 96,803	\$ 92,537
Office furniture	133,561	132,776
Leasehold improvements	73,459	73,459
	<u>303,823</u>	<u>298,772</u>
Accumulated depreciation	<u>(272,140)</u>	<u>(198,754)</u>
Property and equipment, net	<u>\$ 31,683</u>	<u>\$ 100,018</u>

**6. Accounts Payable and Accrued Expenses**

As of June 30, 2012 and 2011, accounts payable and accrued expenses totaled \$201,371 and \$231,438, respectively. Those expenses primarily accounted for accrued salary, professional and consulting fees and reimbursements owed for services provided by the Massachusetts Technology Collaborative.

**7. Grants and Commitments**

**Investment Fund**

The following grants were made out of the Massachusetts Life Sciences Investment Fund (the "Investment Fund"):

In October 2007, the Board of Directors voted to approve two grants for the University of Massachusetts Medical School: 1) \$570,000 for funding for a stem cell registry; and 2) \$7,665,000 for a stem cell bank. In June 2009, the Board of Directors voted to approve an additional \$695,000 for the stem cell registry. In September 2010, the Board of Directors voted to approve an additional \$440,000 for the stem cell registry. In January and May 2012, the Board of Directors voted to approve an additional \$950,000 for the stem cell bank. For the year ended June 30, 2012, the Center expensed \$994,149, of which \$519,011 was not paid as of June 30, 2012 and is included in

**Massachusetts Life Sciences Center**  
**Notes to Financial Statements**  
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grants payable and accrued grant expense on the balance sheet. For the year ended June 30, 2011, the Center expensed \$1,117,081. Remaining payments under the authorized grants are \$1,166,544 as of June 30, 2012.

In July 2008, the Board of Directors voted to approve \$6,918,378 in funding for two research matching grant programs to attract top scientific talent, spur new research opportunities and increase industry-sponsored research. Specifically, the Board of Directors awarded five new faculty grants totaling \$3,750,000 to various Massachusetts universities. The Board of Directors also awarded eleven new investigator grants totaling \$3,168,378 to a variety of research centers. For the year ended June 30, 2012, the Center expensed \$1,558,045 of which \$449,216 was not paid as of June 30, 2012 and is included in grants payable and accrued grant expense on the balance sheet. For the year ended June 30, 2011, the Center expensed \$2,207,626. Remaining payments under the authorized grants are \$1,485,533 as of June 30, 2012.

In December 2008, the Board of Directors voted to approve \$3,786,867 for six cooperative research grants over a three-year period to foster collaborations between scientists, academic institutions and industry. In fiscal year 2012, one of the awards was mutually terminated due to a change in focus by the industry sponsor. The amount remaining on the terminated grant was \$658,779. For the year ended June 30, 2012, the Center expensed \$1,061,638 of which \$650,811 was not paid as of June 30, 2012 and is included in grants payable and accrued grant expense on the balance sheet. For the year ended June 30, 2011, the Center expensed \$832,739. Remaining payments under the authorized grants are \$831,623 as of June 30, 2012.

In April 2011, the Board of Directors voted to approve \$1,000,000 for two cooperative research grants. For the year ended June 30, 2012, the Center expensed \$127,897 of which all was not paid as of June 30, 2012. For the year ended June 30, 2011, the Center did not incur any expense or make any payments under the grants. Remaining payments under the grants are \$1,000,000 as of June 30, 2012.

In December 2011 and June 2012, the Board of Directors authorized \$3,200,000 for the 2012 Internship Challenge Program which is a year round program. For the year ended June 30, 2012, the Center expensed \$949,876 of which all was not paid as of June 30, 2012 and is included in grants payable and accrued grant expense on the balance sheet. Remaining payments under the authorized program are \$3,200,000. In the winter and spring of 2011, the Board of Directors authorized up to \$2,200,000 for the expenditures for the 2011 Internship Challenge Program. For the 2011 program \$1,327,048 was expensed of which \$107,448 was not paid as of June 30, 2012 and is included in grants payable and accrued grant expense on the balance sheet. For the year ended June 30, 2011, the Center expensed \$535,665. Remaining payments under the authorized program are \$444,735. For the 2010 Internship program, \$615,400 was expensed and paid in fiscal year 2011 with no remaining payments as of June 30, 2012.

In June 2009, the Board of Directors voted to approve \$1,380,256 for seven new investigator grants to various research centers. For the year ended June 30, 2012, the Center expensed \$210,597 of which \$122,681 was not paid as of June 30, 2012 and is included in grants payable and accrued grant expenses on the balance sheet. For the year ended June 30, 2011, the Center expensed \$603,783. Remaining payments under the authorized program are \$177,524 as of June 30, 2012.

## **Massachusetts Life Sciences Center**

### **Notes to Financial Statements**

#### **June 30, 2012 and 2011**

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In July 2009, the Board of Directors voted to approve \$600,000 for three new investigator matching grants. For the year ended June 30, 2012, the Center expensed \$144,606 of which \$36,657 was not paid as of June 30, 2012 and is included in grants payable and accrued grant expense on the balance sheet. For the year ended June 30, 2011, the Center expensed \$278,591. Remaining payments under the authorized program are \$45,485 as of June 30, 2012.

#### **Other Grants**

The Center has also made \$1,325,000 of grants to various business plan competitions, international collaborations and workforce development and educational programs to foster company development foster collaboration between Massachusetts and international organizations and expand life sciences education and workforce within the Commonwealth. For the year ended June 30, 2012, the Center expensed \$354,586 of which \$40,104 was not paid as of June 30, 2012 and is included in grant payable and accrued grant expense on the balance sheet. For the year ended June 30, 2011, the Center expensed \$139,371. Remaining payments under the authorized grants are \$751,148 as of June 30, 2012.

In fiscal 2012, the Center made an additional \$50,000 grant to the Massachusetts Life Sciences Collaborative to launch and develop a formal Massachusetts Biomanufacturing Roundtable to support and promote the retention and growth of biomanufacturing in Massachusetts. The total amount of awards provided to the Massachusetts Biomanufacturing Roundtable is \$100,000. For the year ended June 30, 2012, the Center expensed \$36,792 of which \$36,792 was not paid as of June 30, 2012 and is included in grant payable and accrued grant expense on the balance sheet. Remaining payments under the authorized grant are \$55,042 as of June 30, 2012.

Pursuant to the Massachusetts fiscal year 2011 state budget, the Center made a \$210,000 grant to the Massachusetts Biomedical Initiative which shall be expended for the operation and maintenance of the Massachusetts Biomedical Initiatives for the purpose of promoting the commercialization of new, academic-based research and development and raising the scientific awareness of the communities of the Commonwealth. The award amount was expensed and paid in the year ended June 30, 2011. There are no remaining payments as of June 30, 2012 under the authorized grant.

Total remaining payments for all Investment Fund grants as of June 30, 2012 are \$9,157,634.

#### **Capital Program Grants**

The following grants were made under the Capital Program:

In October 2008, the Board of Directors voted to approve \$5,200,000 for the replacement of a wastewater pump station that will help support the expansion of Genzyme Corporation's manufacturing facility in Framingham, Massachusetts. This grant is the first installment of approximately \$12,900,000 that has been allocated to the Framingham project in connection with the Life Sciences Statute. In October 2009, the Board of Directors voted to approve the second installment of \$7,700,000 for the \$12,900,000 grant. In May 2011, the Board of Directors voted to approve an additional \$1,400,000 for the town of Framingham. For the year ended June 30, 2012, the Center expensed \$4,328,321 of which \$1,255,322 was not paid as of June 30, 2012 and is included in grants payable and accrued grant expense on the balance sheet. For the year ended June 30, 2011, the Center expensed \$2,883,475. Remaining payments under the authorized grant are \$2,694,788 as of June 30, 2012.

## **Massachusetts Life Sciences Center**

### **Notes to Financial Statements**

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In September 2009, the Board of Directors voted to approve \$90,000,000 for the design, construction, development and related infrastructure improvements for an advanced therapeutics cluster to be constructed at the University of Massachusetts Medical School in Worcester. The payments are to be paid over four fiscal years beginning in fiscal year 2010 and concluding in fiscal year 2013. For the year ended June 30, 2012, the Center expensed \$34,196,102 of which \$12,434,062 was not paid as of June 30, 2012 and is included in grants payable and accrued grant expense on the balance sheet. For the year ended June 30, 2011, the Center expensed \$25,888,094. Remaining payments under the authorized grant are \$29,069,809 as of June 30, 2012.

In February 2010, the Board of Directors voted to approve \$6,600,000 towards the next phase of development of Gateway Park in Worcester. The grant was subsequently reduced to \$5,150,000 due to a reconfiguration of the project. The grant supports the development of WPI's Biomanufacturing Education and Training Center (BETC) and a new incubator for Massachusetts Biomedical Initiatives (MBI). For the year ended June 30, 2012, the Center expensed \$2,447,395 of which \$1,691,208 was not paid as of June 30, 2012 and is included in grants payable and accrued grants expense on the balance sheet. For the year ended June 30, 2011, the Center expensed \$377,536. Remaining payments under the grant are \$4,016,278 as of June 30, 2012.

In January 2011, the Board of Directors voted to approve \$2,000,000 for the purchase of state-of-the-art equipment, renovations and related expenses to support the Center for Personalized Cancer Therapy at the University of Massachusetts at Boston and the Dana-Farber/Harvard Cancer Center. For the years ended June 30, 2012 and 2011, the Center did not incur any expense or make any payments under the grant. Remaining payments under the grant are \$2,000,000 as of June 30, 2012.

In February 2011, the Board of Directors voted to approve \$3,466,158 for thirty-two equipment grants for purposes of providing grants for purchasing or leasing equipment to train students in life sciences technology and research. For the year ended June 30, 2012, the Center expensed \$482,780 of which all was paid prior to June 30, 2012. For the year ended June 30, 2011, the Center expensed \$2,850,896. There are no remaining payments as of June 30, 2012 under the authorized grant.

In January 2012, the Board of Directors voted to approve \$14,600,000 for the construction of the Bio-Manufacturing Center at the University of Massachusetts at Dartmouth to enable companies to set up small scale manufacturing operations for bio-processing operations. For the year ended June 30, 2012 the Center expensed \$971,003 of which all was not paid as of June 30, 2012 and is included in grants payable and accrued grant expense on the balance sheet. Remaining payments under the grant are \$14,600,000 as of June 30, 2012.

In January 2012, the Board of Directors voted to approve \$20,000,000 to three awardees under the Center's FY12 Capital Project Matching Grant Program. These grants will be used to fund the Molecular Cancer Imaging Facility at the Dana Farber Cancer Institute which systematically examines patient tumors and matches targeted therapy to specific molecular changes in cancer cells; the Transitional Center for the Cure of Diabetes at the Joslin Diabetes Center, which focuses on the acceleration of basic discoveries into clinical research and care; and the Hall of Human Life Exhibit at the Museum of Science Boston, allowing the public a view into the innovative work being carried out in the life sciences community and inspire the next generation of researchers. For the year ended June 30, 2012 the Center expensed \$574,400 of which all was not paid as of June 30, 2012 and is included in grants payable and accrued grant expense on the balance sheet. Remaining payments under the grants are \$20,000,000 as of June 30, 2012.

# Massachusetts Life Sciences Center

## Notes to Financial Statements

### June 30, 2012 and 2011

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In April 2012, the Board of Directors voted to approve \$10,000,000 to construct and equip Nanomedicine and Nanobiomedical laboratories within the Emerging Technologies and Innovation Center at the University of Massachusetts at Lowell to be utilized for hands on student learning, research, development and industry partnership activities. For the year ended June 30, 2012, the Center did not incur any expense or make any payments under the grant. Remaining payments under the grant are \$10,000,000 as of June 30, 2012.

In April 2012, the Board of Directors voted to approve \$11,400,000 for the benefit of the University of Massachusetts at Dartmouth for the acquisition of land, improvements and related parking for the Advance Technology Manufacturing Center in Fall River from the Massachusetts Development Finance Authority in fiscal year 2015, pursuant to the Life Sciences Act. For the year ended June 30, 2012, the Center did not incur any expense or make any payments under the grant. Remaining payments under the grant are \$11,400,000 as of June 30, 2012.

In May 2012, the Center's Board of Director awarded \$500,000 in a Small Business Matching grant to one life sciences company in Massachusetts. To qualify for the program companies must have received a Phase II or Post Phase II small business innovation research (SBIR) or small business technology transfer (STTR) grant from federal agencies such as the National Institutes of Health (NIH), National Science Foundation (NSF), or Department of Defense (DOD). For the year ended June 30, 2012 the Center expensed \$500,000 of which all was not paid as of June 30, 2012 and is included in grants payable and accrued grant expense on the balance sheet. Remaining payments under the grant are \$500,000 as of June 30, 2012. In May 2010, the Board of Directors awarded \$1,500,000 in Small Business Matching Grants to three life science companies in Massachusetts. In May 2011, the Center's Board of Director awarded \$2,000,000 in Small Business Matching grants to four life sciences companies in Massachusetts. For the year ended June 30, 2011 the Center expensed \$2,000,000. There no remaining payments under the grants as of June 30, 2012.

Total remaining payments for all capital program grants as of June 30, 2012 are \$94,280,875.

#### Facility Lease

In December 2008, the Center entered into a 5 year noncancelable operating lease through March 2014 for its facilities in Waltham, Massachusetts. The lease agreement provides for certain months of nonpayment of rent ("free rent") and includes escalating rent payments. Rent expense is recorded on the straight line basis, and therefore, as of June 30, 2012 and 2011, deferred rent in the amount of \$44,791 and \$62,648, respectively, has been recorded. Rent expense under the operating lease was \$159,256 for the year ended June 30, 2012 and 2011.

Future minimum lease payments under all operating lease agreements are approximately:

	<b>Amount</b>
2013	\$ 183,000
2014	141,000
2015	-
2016	-
2017	-
Thereafter	<u>\$ 324,000</u>

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**Notes to Financial Statements**  
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**8. Subsequent Events**

Management has evaluated subsequent events through September 26, 2012.

In July 2012, the Center disbursed \$750,000 to one of the April 2012 Accelerator loan program awardees.

In August 2012, the Center disbursed \$1,080,000 to two of the April 2012 Accelerator loan program awardees.

In September 2012, The Center entered into a Memorandum of Agreement (MOA) with the Economic Development and Industrial Corporation of Boston to operate an internship program. The MOA provides up to a maximum of \$800,000 through March 2016.