

MARYLAND LIFE SCIENCES  
ADVISORY BOARD

ANNUAL STATUS REPORT  
2009

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## **Introduction**

Maryland is home to more than 400 bioscience companies, and has been one of the fastest growing clusters in the United States over the past decade. Maryland's private-sector bioscience companies employ approximately 30,000 people with an additional 30,000 bioscience workers employed at federal and academic institutions located throughout the State. Maryland ranks second worldwide for initiatives aimed at drawing and retaining biotechnology companies including building research parks, investing public funds, and providing tax incentives. (*FierceBiotech, 2006*)

Much of Maryland's success and competitiveness can be attributed to the State's significant commitment and long-term investment in bioscience infrastructure – totaling more than \$750 million over the past 15 years. The recipient of \$12.2 billion in federal research and development obligations annually, Maryland continues to be a leader in per capita spending in the nation.

As evidence of its leadership, in 2008 Maryland was ranked second in the nation by the Milken Institute for biopharmaceutical innovation and a leader in Science and Technology. Maryland has also been recognized by Ernst & Young as one of the top centers for biodefense in the United States.

On May 9, 2007, to assist in maintaining the preeminence of the Maryland life sciences industry, Governor Martin O'Malley signed Senate Bill 104, establishing the Maryland Life Sciences Advisory Board (LSAB). On September 18, 2007, the Governor formally announced the members of the LSAB in a ceremony held in Annapolis.

Comprised of 15 members, the LSAB includes the Secretary of Business and Economic Development (DBED) and a representative designated by the Maryland Technology Development Corporation (TEDCO), and 13 members appointed by the Governor to include: three representatives from federal agencies with life science missions, five representatives from biotechnology businesses in Maryland, four representatives from institutions of higher education, and a member of the general public.

## **2009 Life Sciences Advisory Board Members\***

The current LSAB members are:

**Chair:**        **Mr. Thomas Watkins**, *CEO, Human Genome Sciences, Inc.*

**Standing:**    **Mr. Christian S. Johansson**, *Secretary, DBED*  
                  **John M. Wasilisin**, *Acting President and Executive Director, TEDCO*

**Appointed:**   **Dr. Norma Allewell**, *Dean, Chemical and Life Sciences,*  
                      *University of Maryland, College Park*

**Dr. Norka Ruiz Bravo**, *Deputy Director,  
Extramural Research, National Institutes of Health*  
**Ms. Francesca Cook**, *Vice President of Policy and Government Affairs,  
Pharmathene, Inc.*  
**Dr. Stephen Desiderio**, *Director, Institute for Cell Engineering,  
Johns Hopkins School of Medicine*  
**Mr. Lawrence Diamond**, *Mid-Atlantic Senior Vice President,  
Alexandria Real Estate Equities*  
**Mr. David Iannucci**, *Director, Department of Economic Development,  
Baltimore County*  
**Mr. Philippe Jacon**, *President, BD Diagnostic Systems*  
**Colonel George Korch**, *Past Commander,  
U.S. Army Medical Research Institute of Infectious Diseases*  
**Dr. Nina Lamba**, *President, CCL Biomedical, Inc.*  
**Dr. Hercules Pinkney**, *Vice President & Provost,  
Montgomery College-Germantown*  
**Dr. David Ramsey**, *President, University of Maryland, Baltimore*  
**Dr. Janet Woodcock**, *Deputy Commissioner & Chief Medical Officer,  
Food and Drug Administration*

#### **Former 2009 Members**

**Ms. Renée Winsky**, *President and Executive Director, TEDCO  
(term ended July, 2009)*  
**Mr. David Edgerley**, *Secretary, DBED (term ended Jan 2009)*

\* *New and returning Board members are in the process of being confirmed for 2010.*

#### **Duties of the Life Science Advisory Board**

As directed by statute, the LSAB is tasked with assisting the Maryland Department of Business and Economic Development with the following:

- Develop a comprehensive strategic plan for life sciences in the State of Maryland;
- Promote life sciences research, development, commercialization and manufacturing in Maryland;
- Promote collaboration and coordination among life science organizations in Maryland;
- Promote collaboration and coordination among research institutions of higher education in Maryland;
- Develop a strategy to coordinate state and federal resources to attract private sector investment and job creation in the life sciences;
- Develop a strategy to support federal life sciences facilities located in the state, including support for education, transportation, housing and capital investment needs; and

- Make recommendations to address critical needs in the life sciences, including access to venture capital and capital construction funding.

In performing its duties, the LSAB is to give due consideration to the business, scientific, medical, and ethical aspects of the life sciences industry. The definition of “life sciences” includes the fields of biotechnology, pharmaceuticals, biomedical technologies, life systems technologies, food sciences, environmental sciences, and biomedical devices.

## **Summary of 2009 Activities**

For the past year, the LSAB has actively engaged Maryland’s bioscience community in an on-going dialogue about the State’s life sciences accomplishments and future directions. A public information and resource website for all LSAB meeting agendas and documents can be found at [www.marylandbiocenter.org](http://www.marylandbiocenter.org).

With the help and input of 100 working group members from throughout Maryland’s bioscience industry, academic, and federal sectors, the LSAB developed a comprehensive state strategic plan for life sciences, *BioMaryland 2020*. This plan and its recommendations will leverage opportunities or fill specific gaps to ensure Maryland’s ability to advance the development of its robust biosciences environment.

The strategic plan was announced by Governor Martin O’Malley and the LSAB at the BIO 2009 International Conference in Atlanta, GA in May. The plan charts an aggressive roadmap that calls for approximately \$1.3 billion in selected investments to move Maryland toward an even more vibrant bioscience industry in the year 2020 that will create new jobs, drive sustained growth, and generate biomedical innovations for the benefit of humankind. The plan identifies actions required to bolster the competitiveness and success of Maryland’s bioscience industry.

## **BioMaryland 2020 Synopsis**

Four strategic priorities and 17 specific actions are recommended by the LSAB to move Maryland forward within the *BioMaryland 2020* framework:

***Priority One:*** *Ensure the sustained growth and future competitiveness of Maryland’s bioscience industry.*

- Establish the Maryland Biotechnology Center to serve as a catalyst and central resource for spurring growth
- Establish the BioEntrepreneur Resource Program to provide one-stop assistance to bioscience entrepreneurs and emerging companies
- Strengthen and advance BioMaryland – Maryland’s bioscience brand
- Develop 21st century bioscience industry infrastructure in Maryland

**Priority Two:** Support the creation and growth of innovative bioscience companies by ensuring access to capital. Expand the Maryland Biotechnology Investment Tax Credit

- Expand the Maryland Biotechnology Investor Incentive Tax Credit Program
- Make permanent and expand the R&D tax credit and make it refundable to small bioscience companies
- Establish the Maryland Life Sciences Venture Capital Trust to advance investment in Maryland bioscience companies by pension and venture funds
- Ensure the availability of product development capital for emerging bioscience companies

**Priority Three:** Position Maryland for global leadership in cutting-edge areas of bioscience research and emerging and growth markets.

- Strengthen technology transfer at research universities and the ability to launch bioscience ventures based on university research
- Establish Bioscience Commercialization Institutes in Maryland
- Expand the Maryland Industrial Partnerships Program (MIPS)
- Invest in emerging fields of bioscience research
- Establish the Maryland Federal Lab Engagement and Collaborative R&D Program
- Support university and community college bioscience development projects

**Priority Four:** Advance bioscience talent generation and workforce development.

- Advance a systematic and coordinated statewide approach to developing bioscience career pathways
- Create the Maryland Bioscience Workforce Skill Development Fund
- Develop and retain bioscience scientific and entrepreneurial talent

Detailed information on **BioMaryland 2020** and its recommendations can be found at:  
<http://www.marylandbiocenter.org/Bioscience%20of%20Maryland/Pages/biomaryland2020strategicplan.aspx>

## **BioMaryland 2020 -- Initial Implementation**

Despite the fiscal challenges Maryland faced in 2009, initial implementation of investment in some of the recommendations in **BioMaryland 2020** was achieved. The following elements included in the plan were funded in the FY 2010 budget:

- \$4.3 million: Maryland Biotechnology Center – *Priority One*
- \$6 million: Biotechnology Investor Incentive Tax Credit Program – *Priority Two*
- \$6 million: R&D Tax Credit Program – *Priority Two*
- \$2 million for the Maryland Venture Fund - *Priority Two*

- \$16.1 million: Montgomery College/Germantown Science and Technology Park – *Priority Three*
- \$12.4 million: Maryland Stem Cell Research Fund - *Priority Three*
- \$3.6 million: TEDCO for technology transfer and commercialization - *Priority Three*
- \$1.7 million: MIPS program at the University of Maryland –*Priority Three*

## **The Maryland Biotechnology Center - Centralizing Maryland’s Efforts in the Life Sciences**

The Maryland Biotechnology Center was created in 2009 as one of the first initiatives of ***BioMaryland 2020***. The Center was a primary recommendation of the Maryland Life Sciences Advisory Board in ***BioMaryland 2020*** based upon the consolidated feedback from more than 200 stakeholders serving on working groups and attending public forums:

*“The centerpiece for implementing the actions recommended by the LSAB is the creation of a Maryland Biotechnology Center (MBC). This Center is critical to bring a more integrated statewide focus to the state’s bioscience development efforts, address the fragmented maze of programs that have emerged over the past 15 years, and create a results-driven approach that can propel Maryland’s bioscience efforts forward as a model for the 21st century.*”

*Maryland has lacked an organizational focus to advance development of the Maryland bioscience cluster. The state has a rich environment of innovative and leading bioscience companies, world-class bioscience research institutions, and a significant base of bioscience talent; but, it needs to be a more integrated, highly functioning community to succeed in the future and seize its untapped potential.”*

In addition, The Center is the biosciences community’s portal to programs and resources intended to grow and strengthen the State's bioscience community. The Center, in collaboration with other State entities, will serve to integrate entrepreneurial strategies to stimulate the transformation of scientific discovery and intellectual assets into capital formation and business development.

- Programs are also aimed at encouraging workforce training and development, as well as connecting Maryland’s federal and academic life sciences research centers to the industry.
- The Center provides investments in talent, infrastructure and future commercialization opportunities, through its grant programs.

With funding of \$4.3 million for FY 2010, the Center is on track to implement most of its intended programs this fiscal year. It is expected that the greatest impact of the Center resources will be in the area of Bioentrepreneurial and Biotechnology Development.

- The *BioEntrepreneur Program* provides guidance to individuals seeking to start bioscience companies in the State on the variety of programs in partner organizations that can be accessed.

- The Center has additionally created a database library that is intended to provide bioentrepreneurs with informational resources at no cost that will enable them to better succeed in raising capital, forming strategic partnerships, and participating in other state programs designed to assist their business strategies (e.g. TEDCO, MIPS, incubators, etc.).
- The *Biotechnology Development Program* provides funding to organizations and individuals to promote academic-industry collaboration on translational research initiatives that drive bioscience commercialization. In all instances, leveraging additional institutional monies and an increased participation in existing state programs is an intended outcome.
- The *Workforce Program* of the Center links Maryland companies with in-state providers. There has never been a focused effort on bioscience workforce development at the state level.
- The *Federal Connect Program* under development aims to better link Maryland's federal life sciences research institutes and centers to our industry and academic centers. The first phase of this is a virtual network site for researchers, especially targeting translational research and commercialization efforts.

Lastly, as pointed out in *BioMaryland 2020*, the Center oversees the efforts to raise Maryland's bioscience "brand" locally, nationally and internationally as it assists DBED in its economic development efforts.

## **2009 Calendar of Activities for the Life Science Advisory Board**

All meeting agendas, presentations, minutes, and public comments can be found on the LSAB website: [www.choosemaryland.org/businessinmd/Biosciences/lsab/lsab.html](http://www.choosemaryland.org/businessinmd/Biosciences/lsab/lsab.html)

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|------------------------|---|
| <b>January 8, 2009</b> | <b><i>Ninth Meeting of the LSAB</i></b><br>Maryland Department of Business & Economic Development<br>Baltimore Maryland                 |
| <b>March 23, 2009</b>  | <b><i>LSAB Governor Briefing on Draft BioMaryland 2020 Strategic Plan</i></b><br>Governor House<br>Annapolis, MD                        |
| <b>May 20, 2009</b>    | <b><i>Governor O'Malley and LSAB Release of BioMaryland 2020 Strategic Plan</i></b><br>BIO 2009 International Conference<br>Atlanta, GA |