



Larry Hogan | Governor
Boyd Rutherford | Lt. Governor
R. Michael Gill | Secretary of Commerce
Benjamin H. Wu | Deputy Secretary of Commerce

December 13, 2016

The Honorable Thomas V. Mike Miller, Jr.
President, Maryland Senate
State House, H-107
Annapolis, Maryland 21401-1991

The Honorable Michael E. Busch
Speaker, Maryland House of Delegates
State House, H-101
Annapolis, Maryland 21401-1991

RE: Maryland Life Sciences Advisory Board Report

Dear President Miller and Speaker Busch:

In accordance with Economic Development Article §3-205 the Maryland Life Sciences Advisory Board, in conjunction with the Department of Commerce is pleased to submit the annual Maryland Life Sciences Advisory Board Report.

We look forward to your review of this report and will be happy to furnish any additional information that is needed. If we can be of further assistance, or if you have any questions regarding this report, please contact Brad Fackler, Executive Staff to the Maryland Life Science Advisory Board at 410-767-3619.

Sincerely,

Daniel J. Abdun-Nabi
Chairman, LSAB

R. Michael Gill
Secretary, Department of Commerce

Enclosure



Larry Hogan | Governor
Boyd Rutherford | Lt. Governor
R. Michael Gill | Secretary of Commerce
Benjamin H. Wu | Deputy Secretary of Commerce

MEMORANDUM

TO: The Honorable Larry Hogan
Governor

FROM: Daniel J. Abdun-Nabi
Chairman, LSAB

R. Michael Gill
Secretary

THRU: Roy McGrath
Deputy Chief of Staff, Governor's Office

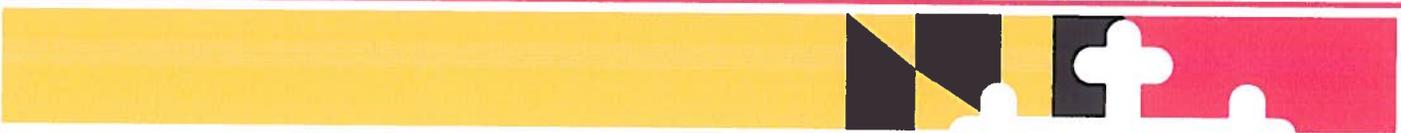
DATE: December 13, 2016

SUBJECT: Maryland Life Sciences Advisory Board Report

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Attachment



**2016 ANNUAL REPORT
OF THE
MARYLAND LIFE SCIENCES ADVISORY BOARD**

As Required by Economic Development Article

Section 3-205

Respectfully submitted to the General Assembly of Maryland by

R. Michael Gill

Maryland Department of Commerce

401 East Pratt Street

Baltimore, MD 21202

December 2016



Larry Hogan, Governor | Boyd Rutherford, Lt. Governor

OPEN *for* **Business**

Introduction

The Life Sciences Advisory Board (LSAB) was established by Chapter 304, Acts of 2007 for the purpose of maintaining Maryland's preeminence in the life sciences industry. The function of the board is to:

- 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.

2016-17 Board Composition

The current LSAB was appointed by Governor Larry Hogan on February 13, 2016 to serve a two-year term. The Board consists of the following members:

Chair: Daniel J. Abdun-Nabi, JD, LLM, *President and CEO – Emergent BioSolutions, Inc.*

Vice Chair: Jay A. Perman, M.D., *President - University of Maryland, Baltimore*
Christopher P. Austin, M.D., *Director, National Center for Advancing Translational Sciences – U.S. National Institutes of Health*
Richard A. Bendis, *President and CEO - BioHealth Innovation, Inc.*
Jarrod Borkat, *Head, External Collaborations, Biotech Hubs and Government Contracting - MedImmune*
Marco A. Chacon, Ph.D., *Founder, CEO and President - Paragon Bioservices, Inc.*
Douglas Jon Liu, *Senior Vice President, Head of Global Operations – Qiagen Sciences Inc.*
Theodore J. Olsen, *President and CEO - PathSensors, Inc.*
Patrick G. O'Shea, Ph.D., *Vice President and Chief Research Officer - University of Maryland (resigned due to move out of state)*
Wendy Perrow, MBA, *CEO - AsclepiX Therapeutics*

Karen L. Proudford, Ph.D., *Associate Professor of Management and Director, Graves Honor Program – Earl G. Graves School of Business & Management Morgan State University; President, William E. Proudford Sickle Cell Fund, Inc.*
Sanjay K. Rai, Ph.D., *Chief Academic Officer and Senior Vice President for Academic Affairs - Montgomery College*
David W. Smith, Ph.D., *Vice President, Global Business Development, Emerging Technologies – Lonza Walkersville, Inc.*
Col. Andrea Stahl, Ph.D., *Director, MRMC CBRN Defense Medical Research Coordinating Office and JPC-Radiation Health Effects - U.S. Army Medical Research & Material Command*
Frank F. Weichold, M.D., Ph.D., *Director, Critical Path and Regulatory Science Initiatives, Office of the Commissioner – U.S. Food and Drug Administration*
Christy Wyskiel, *Senior Advisor to the President and Head of Johns Hopkins Technology Ventures, Johns Hopkins University*

Standing: R. Michael Gill, *Secretary – Maryland Department of Commerce*
John Wasilisin, *President and Chief Operating Officer – TEDCO*

Summary of Activities

First Meeting

Chairman Dan Abdun-Nabi convened the year's first, and overall 25th meeting of the LSAB on March 7, 2016 at Emergent BioSolutions, Inc., 400 Professional Drive, Gaithersburg, MD. After team introductions, Chairman Abdun-Nabi opened the discussion regarding the challenges, opportunities and resources for the biohealth industry in Maryland. Numerous topics were included in this discussion including, workforce, access to capital, relationships with federal entities in Maryland, regulatory hurdles and others that potentially impact the growth of the industry.

Members were asked to discuss a potential vision statement for the LSAB. After deliberation, the group adopted the vision statement, "Become a top 3 biohealth ecosystem by 2023."

Second Meeting

The second meeting was held on May 10, 2016 at the University of Maryland BioPark, 801 W. Baltimore Street, Baltimore, MD. The meeting opened with a review of plans for the Maryland presence at the BIO International Conference, June 6-9th, in San Francisco by Allison Mayer, Managing Director of Marketing and Communications for the Maryland Department of Commerce. These plans included the Department of Commerce's 2000 square foot pavilion featuring exhibits with 14 Maryland organizations, a passport document promoting these exhibitors as well as 19 additional companies exhibiting outside the Pavilion, a networking reception at the Olympic Club, Leadership Launch featuring Governor Hogan's Chief of Staff Craig Williams and Commerce Deputy Secretary Ben Wu as speakers, and a stage and video wall providing extra promotion for Maryland companies inside the pavilion. More than 100 individuals from Maryland were expected to attend the Maryland luncheon and networking reception.

Board Members from BioHealth Innovation, Inc. and MedImmune then shared information regarding the 2nd Annual Regional Biotech Forum which had been held at MedImmune on April 18 and 19. This event was attended by 600 people from life sciences companies, academic institutions, non-profit organizations, investment funds and government entities.

Most of the meeting was focused on a potential framework for developing a plan and recommendations to achieve the vision created at the first meeting. The LSAB collectively decided to focus on five key areas for improvement in order for Maryland become a Top 3 biohealth ecosystem by 2023:

1. Foundational support
2. Access to capital
3. The convergence of IT and bioscience technologies
4. Workforce training and availability
5. Technology transfer acceleration.

Board members were invited to form working groups for each area to analyze key issues and prepare recommendations to share at the next meeting.

Third meeting

The third meeting of 2016 took place at Montgomery College, Germantown Campus, 20200 Observation Drive, Germantown, MD on October 31, 2016. Between the second and third meetings of the LSAB, the working groups each met multiple times to develop their plans. Bi-weekly conference calls among the group leaders were conducted to discuss progress and issues. During this time, two additional groups were added focused on bio-manufacturing and medical device manufacturing. At the third meeting, each of the working groups presented the results of their analysis and their recommendations. The LSAB agreed that the recommendations developed by the seven working groups shared four common themes which require focus moving forward:

- | | |
|----------------------------|---|
| <u>A</u>ssets | Leverage and grow the current ASSET base and accelerate commercialization |
| <u>C</u>onnectivity | Increase the CONNECTIVITY among and awareness of Maryland's biohealth assets and resources |
| <u>C</u>apital | Increase the availability and access to CAPITAL at each phase of the biohealth life cycle |
| <u>T</u>alent | Grow the talent pool of experienced biohealth entrepreneurs, business leaders, graduates and scientists with commercially relevant experience |

The LSAB adopted the acronym, *ACCT*, to frame these recommendations and agreed to reorganize the working groups to focus on these four priority areas.

Fourth Meeting

The bi-weekly conference calls with working group leaders continued through November and into early December. The final meeting for calendar year 2016 was held at the Institute for Bioscience and Biotechnology Research (IBBR), 9600 Gudelsky Drive, Rockville, MD on December 6, 2016.

At this meeting an updated set of recommendations was presented in each of the four areas; at least one recommendation from each area with a detailed action plan which could be implemented within fiscal year 2018, and a broader, more comprehensive set of recommendations to be implemented over a longer period of time. This plan was delivered to Secretary Gill for review and action by the end of December 2016.

Detailed action plans will be added to the remaining recommendations. This plan will be presented to the entire LSAB in its entirety at the next scheduled meeting, April 10, 2017.