



MINUTES

MEETING DATE: April 10, 2017

TIME: 12:00 – 3:30 PM

LOCATION: FastForward
Johns Hopkins University
1812 Ashland Ave. Suite 110
Baltimore, MD 21205

Welcome

Attendees were welcomed by Christy Wyskiel, Senior Advisor to the President, Johns Hopkins University. Prior to the meeting the Board toured the newly opened FastForward accelerator. FastForward is a coordinated suite of resources designed to move technologies from startup to marketplace that currently supports more than 100 startup companies.

Call to Order

Chair Abdun-Nabi convened the meeting and stated the purpose of the meeting was to agree on the final set of recommendations for Accelerating the Growth of the BioHealth Industry in Maryland to present to Governor Hogan. The Chairman reconfirmed the LSAB's desire to develop not only recommendations, but also strategies for implementation. Chair Abdun-Nabi requested feedback on the December 6, 2016 LSAB meeting. Hearing none, he asked for a motion to approve the minutes which was made by Rich Bendis and seconded David Smith. The minutes were approved.

The Chairman reviewed the LSAB's activity of the past year: establishment of the vision for Maryland to be top-3 biohealth ecosystem by 2023, evaluation of Maryland's strengths and gaps, definition of the elements of a thriving ecosystem, and establishment of the framework for attaining the vision.

Working Groups were formed with a leader and LSAB members and additional representatives from the Maryland biohealth community. Working Groups were created in the following areas:

- **Working Group A – Foundational Support**
 - Jarrod Borkat, Senior Director, Partnering and Strategy, MedImmune

- **Working Group B – Access to Capital**
 - Wendy Perrow, MBA, CEO, AsclepiX Therapeutics

- **Working Group C – Convergence of Bio and IT**
 - Rich Bendis, CEO, BioHealth Innovation (BHI)

- **Working Group D – Access to Talent**
 - Sanjay Rai, Senior Vice President for Academic Affairs, Montgomery College

- **Working Group E – Technology Transfer Acceleration**
 - Christy Wyskiel, MBA, Senior Advisor to the President and Head, Johns Hopkins Technology Ventures – Johns Hopkins University

- **Working Group F – BioManufacturing**
 - Marco Chacon, Ph.D, Assistant Vice President of Industry Alliances – University of Maryland

- **Working Group G – Medical Device Manufacturing**
 - Bob Storey, Principal, The MVP Company (invited by LSAB to lead this Working Group)

The teams worked throughout the year to develop recommendations. The Working Group recommendations were prioritized and organized into four key areas, **Assets**, **Connectivity**, **Capital** and **Talent** to facilitate implementation. The recommendations were presented by each of the working Group leads in these four key areas.

Assets Working Groups

- Technology Transfer, Christy Wyskiel, MBA
- BioManufacturing, Marco Chacon, Ph.D
- Medical Device Manufacturing, Bob Storey

Assets Recommendations

- A. Establish a Task Force to develop recommendations to overcome barriers to commercializing federal technology
- B. Provide capital support or operating support for innovation hubs to grow a thriving innovation economy
- C. Provide support to existing COE's at regional academic institutions for manufacturing of cell therapies for regenerative medicine and cancer indications
- D. Create a multi-stakeholder Medtech Demonstration Hub to support medical device innovation and investment within Maryland
- E. Incentivize developers and companies to build or expand manufacturing facilities

Connectivity Working Groups

- Foundational Support, Jarrod Borkat
- Convergence of Bio and Information Technology, Rich Bendis

Connectivity Recommendations

- A. Develop a comprehensive Maryland BioHealth asset map and interactive web site
- B. Leverage existing organization(s), or create a new organization, with a BioHealth-focused CEO / leader, and board to focus on industry advocacy
- C. Promote the BioHealth industry in Maryland and globally through the use of a brand. Emphasize not only the collective assets but also the individual industry subsectors known to be strengths

Capital Working Group

- Capital working Group, Wendy Perrow, MBA

Capital Working Group Recommendations

- A. Ensure existing State BioHealth funding programs are adequately capitalized
- B. Establish a State funded Life Sciences Venture Capital (VC) Investment Fund
- C. Gain private sector (VC / Angel) commitment to match new State life sciences VC Fund
- D. Establish public-private competition to increase scalable risk capital
- E. Establish a network of high-net individuals and experienced life sciences investors
- F. Establish Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) matching fund as a vehicle for additional early fund, and provide SBIR assistance reimbursement to increase win rate of non-dilutive capital

Access to Talent Working Group

- Access to Talent Working Group, Sanjay Rai

Access to Talent Recommendations

- A. Fund commercially relevant experiential learning programs in Biomedical Engineering, Biotech and related disciplines
 - 1. Establish a State-funded Maryland life sciences VC investment fund
 - 2. Convene a statewide Training Task Force to leverage existing programs and facilities with four pilot projects:
 - i. Small BioHealth Company Internships
 - ii. Industry Training Resource
 - iii. BETC's – Pharma
 - iv. Growing a commercially relevant talent pool – Medtech
- B. Create an incentive program to attract, retain and support C-level entrepreneurs

After questions and discussion, the LSAB voted to approve the recommendations as presented.

Next Steps

A document detailing all the recommendations is to be created and a summary version that will be distributed at Dan Abdun-Nabi's presentation to the BioHealth Capital Region Forum on April 19, 2017.

Secretary Mike Gill thanked the Board members for their work throughout the past year in evaluating the Maryland bio-ecosystem and for developing an actionable set of recommendations for growth. The recommendations will be discussed with the Governor and his staff in advance of Governor Hogan's address to the BioHealth Capital Region Forum.

Adjourn

Chair Abdun-Nabi thanked everyone for their participation and adjourned the meeting.

Board Members in Attendance

Chair: Daniel J. Abdun-Nabi, President and CEO --Emergent BioSolutions
Vice Chair: Jay A. Perman, M.D., President – University of Maryland, Baltimore
Members: Christopher P. Austin, M.D., Director, NCATS, 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., Assistant Vice President of Industry Alliances – University of Maryland
Douglas Jon Liu, Senior Vice President, Head of Global Operations – Qiagen Sciences Inc.
Theodore (Ted) J. Olsen, President and CEO – PathSensors, Inc.
Wendy Perrow, MBA, CEO – AsclepiX Therapeutics
Karen L. Proudford, Ph.D., President, William E. Proudford Sickle Cell Fund, Inc.; Associate Professor of Management and Director, Graves Honor Program - Morgan State University
Sanjay K. Rai, Ph.D., 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, MPMC CBRN Defense Medical Research Coordinating Office and JPC-Radiation Health Effects – USAMPMC
Frank F. Weichold, M.D., Ph.D., Director, Critical Path and Regulatory Science Initiatives, Office of the Commissioner – U.S. FDA
Christy Wyskiel, MBA, Senior Advisor to the President and Head of Johns Hopkins Technology Ventures-- Johns Hopkins University
R. Michael Gill, Secretary – Maryland Department of Commerce
John M. Wasilisin, President and Chief Operating Officer – TEDCO

LSAB Staff

Judy Costello, Director, BioHealth & Life Sciences, Maryland Department of Commerce

Speakers and Guests in Attendance

Britta Vander-Linden, Deputy Chief of Staff, Governor's Office

Benjamin H. Wu, Deputy Secretary/Chief Operating Officer, Maryland Department of Commerce

Bob Storey, Principal, MVR Company

Martha Schoonmaker, Executive Director at Pinkney Innovation Complex, Montgomery College

Thomas R. Fuerst, Director, Institute for Bioscience and Biotechnology Research

Brad E. Fackler, Senior Director, BioHealth & Life Sciences, Maryland Department of Commerce

Steve Pennington, Managing Director, Business and Industry Sector Development, Maryland Department of Commerce

Virginia Crews, Business Development Manager, BioHealth & Life Sciences, Maryland Department of Commerce

Nina Lamba, Business Development Manager, BioHealth & Life Sciences, Maryland Department of Commerce

Bret Schreiber, Director, Education and Innovation, Maryland Department of Commerce