

**MINUTES OF A REGULAR MEETING
OF THE BOARD OF DIRECTORS OF THE
MASSACHUSETTS LIFE SCIENCES CENTER**

DATE: October 30, 2019
TIME: 2:00 p.m. EST
PLACE: Massachusetts Life Sciences Center
1075 Main Street, Suite 100
Waltham, Massachusetts

DIRECTORS PRESENT: Stuart Abelson
Julie Chen (designee for UMass President Martin Meehan)
Damon Cox (designee for Secretary Mike Kennealy)
Gary Kearney
Bill McNamara (designee for Secretary Michael Heffernan)
Pam Randhawa

1. Call to Order

Damon Cox called the meeting of the Board of Directors (the “Board”) of the Massachusetts Life Sciences Center (the “MLSC” or “Center”) to order at 2:05 p.m. The meeting, having been duly convened, was ready to proceed with its business.

2. Approval of Board Minutes

The Board then reviewed the minutes of the September 26, 2019 Board meeting. Upon a motion duly made, seconded and carried, the Board adopted the resolution to approve the minutes. Bill McNamara arrived at 2:15 p.m. after the vote for the minutes had occurred.

3. Chairs’ Updates

Mr. Cox began his update by explaining that the Executive Office of Housing and Economic Development (EOHED) had embarked on listening sessions across the Commonwealth to develop the new economic development plan. Based on this work, the Economic Development Council voted on recommendations for presentation to Governor Baker. Mr. Cox specifically recognized and applauded the fine work being done by the MLSC. In addition, Mr. Cox indicated that the priorities of artificial intelligence, quantum computing, and cyber security can be supported within the life sciences sector and encouraged greater collaboration with MassTech. Dr. Julie Chen asked about the potential crossover between the MLSC and MassTech regarding digital health. Mr. Cox expressed appreciation for the question and reported that significant opportunities are being explored currently. Board members then had a robust discussion about how to encourage convergence among different organizations and stakeholders to advance innovation in these priority areas.

Mr. McNamara reported on efforts to close the FY19 books with the supplemental budget.

4. CEO Update

Mr. McCready directed a portion of his time to Cheryl Sadeli, Vice President of Finance, who reported on the Center's financials as of the end of September, 2019. Ms. Sadeli reported that the Center is \$200,000 below budget due to delays in rebranding of the website and several open positions that remain open. Ms. Sadeli indicated that the Center has a healthy balance sheet and that \$43 million in capital funds have been deposited in a separate bank account due to a change in operations with EOHEd. She finished by explaining the funding and operation of the Investment Fund for the benefit of the new Board member, Stuart Abelson.

Mr. McCready began his remarks by complimenting Dr. Julie Chen and the University of Massachusetts at Lowell on the ribbon-cutting for the opening of the lyophilization facility that was funded in part by a grant from the MLSC as part of NIIMBL. Mr. McCready then noted the positive developments in the Berkshires with the impending opening of the Berkshire Innovation Center and increased activity and interest such as tenants signing leases, the presence of a VC firm interested in investing in companies in the area and a robust workforce training program with academic partners in Massachusetts and New York. In addition, Mr. McCready referenced the MLSC's investments in Lever, an incubator and accelerator, and the growth of Berkshire Sterile, a long-time host of subsidized interns and employer of some of these interns on a full-time basis, which has recently reached 100 employees and therefore is no longer eligible for the Internship Challenge.

5. Seed Fund Investment

Dr. Jennifer Griffin, Vice President of Industry Strategy and Investments, next presented an overview of the Seed Fund as a reminder for Board members and then presented the opportunity for investment provided by 149 Medical through a convertible note. 149 Medical is developing a non-invasive medical device that will measure real-time brain hemodynamics in preterm newborns. Dr. Griffin explained the due diligence conducted by the Industry Team. With respect to the review process, she explained that the MLSC has reached out to neo-natal experts and also has an expert panel to assist in the decision process. Dr. Griffin reported that the target market is \$700 million within the U.S. and \$1.5 billion worldwide. Furthermore, if the technology is successful, other applications include ischemic stroke, Alzheimer's, concussions, and TBI. Board members then engaged in an in-depth discussion with Dr. Tony Fantana, Co-Founder and CEO of 149 Medical, with respect to NICU care, quality or intrusiveness of measurements of blood flow, applications to broader populations, precision of the

technology, and responses of care based on the fluctuating blood flow. Dr. Griffin added that 149 Medical has partnered with a large bio-pharmaceutical company to test the technology in one of its clinical trials.

Upon a motion duly made, seconded and carried, the Board adopted the resolution to approve a \$250,000 equity investment in 149 Medical through a convertible note provided that 149 Medical meets certain conditions.

6. District STEM

Ryan Mudawar, Senior Director of Academic and Workforce Programs, provided an overview of five rounds of prior funding for equipment and supplies in high schools and middle schools with a focus on economically-disadvantaged schools throughout the Commonwealth. Mr. Mudawar then explained the rationale for the MLSC's efforts to increase educational equity by providing data on the funding and achievement gaps in these schools. He then reported on the impact of the program by demonstrating the geographic distribution across the state, the eligibility of schools to receive funding, and the racial diversity of the students benefitting from the program.

Mr. Mudawar then explained the new approach that the MLSC adopted in FY19 to target school districts rather than individual schools to support strategic planning for STEM education across the district and greater vertical alignment between the middle school and high school STEM curricula. Pam Randhawa and other Board members recommended that information regarding these investments to schools and the availability of STEM resources be made available on the MLSC's website. In response to a question from Stuart Abelson regarding coordination with other state organizations, Messrs. Mudawar and McCready reported on the MLSC's regular engagement with the Secretariat of Education.

Mr. Mudawar provided information about the first round of district grants with a case study of the Brockton public school district and introduced Martha Cohn, Coordinator of Science for the Lowell public school district. Ms. Cohn explained how the funding enabled the introduction of equipment such as microscopes and cameras into every 6th grade together with professional development for the teachers. She explained that by spurring excitement as early as middle school – especially for English language learners – and updating teachers' familiarity with technology, there is an opportunity to transform STEM education. Mr. McNamara inquired about learning the fundamentals of science and Ms. Cohn responded by indicating that students experience engineering challenges beginning in elementary school and are required to keep notebooks and writing journals to build skills in describing data. Mr. Kearney asked about collaborations with the University of Massachusetts at Lowell and Ms. Cohn described how students participate in a full week on campus during the summer.

Mr. Mudawar reported on the ranking analysis of school districts conducted by the MLSC based on graduate rates, dropout rates, percentage of economically disadvantaged and minority students, and MCAS performance. Based on these rankings, six districts were selected for in-depth engagement and potential investments in this current round. Mr. McNamara requested that the MLSC provide the average cost per student as the program progresses.

Upon a motion duly made, seconded and carried, the Board adopted the resolution to approve a total of \$150,000 in funding to support professional development for District STEM grants.

Adjourn

Co-Chair Damon Cox adjourned the meeting at 4:02 p.m.

List of Materials and Exhibits Used During Meeting:

- Board Agenda
- Minutes from September 26, 2019 Board Meeting
- Motion to Approve September 26, 2019 Minutes
- Presentation of FY20 Q1 Financial Report
- Presentation of 149 Medical Seed Fund Investment
- Motion: To approve 149 Medical Seed Fund Investment
- Presentation of District STEM Investment
- Motion: To approve District STEM Investment for Professional Development
- October 24, 2019 Marketing & Communications Report to the Board