

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

DATE: January 21, 2015

TIME: 2:00 p.m. EST

PLACE: Mack Conference Room, Room #1&2
One Ashburton Place, 21st Floor
Boston, Massachusetts

DIRECTORS PRESENT: Secretary Jay Ash
Robert Dolan (designee for Secretary Kristen Lepore)
Tom Chmura (designee for Robert Caret, Ph.D.)
Peter Parker
Adelene Perkins
Lydia Villa-Komaroff, Ph.D.

DIRECTOR(S) ABSENT: Edward J. Benz, Jr., M.D.

1. **Call to Order**

Secretary Jay Ash called the meeting of the Board of Directors (the “Board”) of the Massachusetts Life Sciences Center (the “MLSC”) to order at 2:02 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 December 17, 2014 Board meeting. Upon a motion of Dr. Lydia Villa-Komaroff, seconded and unanimously carried, the Board adopted the resolution to approve the minutes.

3. **Chair’s Update**

Secretary Jay Ash offered informal welcoming remarks. He gave his thanks to the

members of the Board and MLSC staff for their work to promote the life sciences in the Commonwealth and introduced designee Robert Dolan to offer remarks on behalf of Secretary Kristen Lepore. Mr. Dolan briefly introduced himself and offered Secretary Lepore's regrets for being unable to be present.

Secretary Ash noted for the record that he and Secretary Lepore had the opportunity to meet with staff of the MLSC to discuss a range of topics related to the life sciences industry in Massachusetts in advance of the Board meeting.

4. Update: MLSC Activities through Q3 FY2015

Angus McQuilken, the MLSC's Vice President for Marketing and Communications, updated the Board on the MLSC's business development activities. Mr. McQuilken stated that the past three quarters of the fiscal year have seen a significant momentum in attracting global leaders to Massachusetts. Over the past nine months, through the MLSC's outreach efforts and the ecosystem of innovation that the MLSC has fostered, companies such as GE Healthcare, Baxter and Shire have announced major expansions in the Commonwealth. The three aforementioned companies alone have announced more than 1,000 new jobs that they will bring to Massachusetts.

Mr. McQuilken then provided an overview the MLSC's activities with small-to mid-sized companies around the globe. He provided several examples of companies opening facilities in the Commonwealth, including Japanese medical device company Nihon Kodan, Sobi from Sweden, Oryzon from Spain, MediSapiens, and the MLSC's recent announcement that Arizona-based BioPact will expand into Massachusetts. Mr. McQuilken also highlighted several life sciences companies in Massachusetts that have announced intentions to expand their operations, including EMD Serono, Moderna, MBL & Scivax, Sarepta, and Voyager Therapeutics.

Mr. McQuilken provided a brief summary of two milestone grand openings that were

made possible by MLSC-funded Capital Projects. He shared that the Techspring facility opened in Springfield, where it will grow the region's innovation economy, and that the Forsyth Institute opened its Salivary Diagnostics Center in Cambridge to expand diagnostic testing systems that rely on less invasive saliva samples rather than blood samples that are traditionally required. Mr. McQuilken also informed the Board that AesRX, which was acquired by Baxter, and Sample6 have both repaid their MLSC Accelerator Loans before maturity and with interest.

He next highlighted newly approved funding for life sciences companies through the Universal Partnerships (UP) program, STEM Equipment and Supplies Grant Program and the Accelerator Loan program. Massachusetts-based Matrivax and Japan-based Academia Sinica received \$190,000 as the first awardees of the MLSC's UP program. The MLSC also provided \$3.7 million in STEM Equipment and Supply Grants to 44 applicants representing 70 schools across the Commonwealth. Additionally, Mr. McQuilken informed the Board of two more Accelerator Awardees that were announced as part of the 11th round of the program: Windgap Medical and Sabik Medical each received \$1 million in loan financing.

Mr. McQuilken then proceeded to discuss the second round of the Neuroscience Consortium Grants, which are funded by the consortium's member companies and represent an important public-private partnership made possible by the MLSC's coordination. The grants were provided in December 2014 and totaled \$1.5 million for research related to Multiple Sclerosis, Alzheimers, ALS, and Parkinson's Disease. He also mentioned an additional public-private partnership between the MLSC and The Partnership, Inc., a diversity-focused professional development program that will collaborate with Biogen Idec to increase representation of minority populations in the life sciences industry.

Next, Mr. McQuilken announced the re-authorization of two of the MLSC's signature programs. The Internship Challenge received additional funding of \$3 million to continue

providing paid internship opportunities in Massachusetts-based life sciences companies as a way to grow the talent pipeline in the Commonwealth and provide professional development to the state's emerging leaders. The Cooperative Research Matching Grant Program was approved for \$2 million in additional funding for the current round. To date, the program has awarded \$6 million with a 1:1 match from industry partners.

Mr. McQuilken then informed the Board of recently created programs and grants announced by the MLSC. He noted that Pamela Norton, the MLSC's Vice President for Industry Programs, announced the MLSC's new early-stage grant program, the Life Sciences Milestone Achievement Program (MAP), during the MassMEDIC MedTech Showcase. Mr. McQuilken next informed the Board of the MLSC's recent partnership with the Center for the Advancement of Science in Space (CASIS) for the Galactic Grant Program. The competitive program provides up to \$500,000 in funding to support life sciences research on the International Space Station.

Mr. McQuilken concluded his presentation with an overview of the MLSC's recent funding for the development of a new Ebola diagnostic test, spearheaded by Diagnostics for All. The \$1 million challenge requires that the project partners raise another \$4.5 million in matching funds. The matching funds will leverage the MLSC's investment in this rapid low cost diagnostic test, which represents an important new tool that will provide early detection of the deadly virus.

Mr. McQuilken then opened the discussion to the Board for questions and comments. Secretary Ash asked for clarification of the circumstances under which companies begin to repay the MLSC's Accelerator loans. Dr. Susan Windham-Bannister responded by informing the Secretary that there are two events that trigger a loan repayment. She explained that the loans are 5-year term loans which are repaid either when the loan comes to term or when the company raises a Series-A round. Dr. Windham-Bannister then introduced Ms. Norton to offer further detail. Ms. Norton offered further explanation of the interest paid on the loans. Dr. Harvey

Lodish, Chair of the MLSC's Scientific Advisory Board (SAB), then emphasized that the Accelerator Loan Program is specifically targeted to companies that need the loan for a significant achievement so they can get Series-A Financing.

5. Update: Status of MLSC Tax Incentive Program Review

Brad Rosenblum, the MLSC's Chief Financial and Administrative Officer, provided the Board with a status update regarding the MLSC's Tax Incentive Program. The Life Sciences Initiative permits the Commonwealth to utilize up to \$25 million in a variety of tax incentives. The MLSC has run five rounds of the program and has so far made \$115 million in awards. Companies that receive the tax incentives make a commitment to hire and retain employees for a period of five years and the MLSC is able to recover the awards of companies that do not fulfill their commitment. The program considers the companies' focus, geographic region and size. All tax incentive awards must be approved by the Board to ensure that appropriate life sciences companies are chosen to expand the industry's ecosystem in Massachusetts.

All applicants are screened to ensure that they meet the Life Science Initiative's criteria and are in good standing with the Secretary of the Commonwealth and the Department of Revenue. Once MLSC staff has made its recommendations, the selected companies are reviewed by the Board's Investment Committee, which will then offer recommendations to the full Board. The Commissioner of the Department of Revenue and the Secretary of Administration and Finance must sign off on the cost of the awards before the Board can provide approval. Dr. Windham-Bannister noted that the process promotes transparency.

6. Update and Proposal: MLSC International Programs

Ms. Norton provided a brief welcome and introduced Tal Dinnar, Manager of International Programs & Relations. Ms. Dinnar provided an overview of the MLSC's International Programs. She explained that "going global" is integral to the MLSC's mission of

expanding the life sciences industry in Massachusetts because leading discoveries happen all over the globe. The MLSC's International Programs started with the Massachusetts Israel Innovation Partnership (MIIP) and expanded into the International Collaborative Industry Program (ICIP). Through ICIP, the MLSC collaborated with four partner agencies across the globe: Quebec, Canada; Wallonia, Belgium; Victoria, Australia; and Alsace, France. ICIP's successful first year resulted in an expansion of the program to include the four original partners as well as Sweden's Medicon Valley and Israel. ICIP partners two life sciences companies (one in Massachusetts and one abroad) to work on an R&D project and ensures that money from Massachusetts is not being used to support a foreign company – the MLSC supports the Massachusetts company and the sister-agency abroad supports the global partner. Each partner commits to a minimum of \$75,000 for a matching grant from the MLSC.

Ms. Dinnar then provided an update of the current ICIP round. She informed the Board that all of the sister-agencies for the global partners have approved the funding for the projects on their side, which then brings the decision before the SAB for its evaluation process. The SAB will then bring its recommendations to the Board's Investment Committee and it is expected that finalists will be presented to the Board for approval at the next meeting. The ICIP received seven applications by the October 1, 2014 deadline for Phase One submissions.

Ms. Dinnar next provided the Board with an overview of the Universal Partnerships (UP) Program. UP was developed to provide the MLSC with opportunities to reach a diverse set of partners in addition to traditional companies, such as hospitals, academic and research intuitions and more. The Massachusetts companies apply through the MLSC for an R&D milestone to be accomplished with a global partner anywhere in the world. The program was built with feedback from companies that said they needed greater flexibility, so it is open year-round. Each company can apply for funds between \$50,000 and \$200,000.

Ms. Dinnar then introduced Dr. Lydia Villa-Komaroff to present a proposal by Avaxia for the Board's approval. Dr. Villa-Komaroff offered the Investment Committee's recommendation for approval of UP funding for a partnership between Avaxia and Delphi Genetics of Belgium. The companies will develop gut-targeted antibody therapeutics using milk-derived bovine polyclonal anti-TNF antibodies for inflammatory bowel disease. The partnership with Delphi will increase the yield of TNF neutralizing antibodies five-fold. After further discussion, the Board reviewed the relevant Resolution, and, upon motions duly made, seconded and unanimously carried by all voting Board members, the Board adopted the resolution approving \$200,000 for Avaxia's partnership with Delphi Genetics of Belgium.

7. Proposal: Awards for 2014-15 Matching Capital Grants

Beth Nicklas, General Counsel and Vice President for Academic and Workforce Programs, provided the Board with an overview of the fourth round of the competitive Capital Program. Ms. Nicklas first gave the Board an overview of the program, including its objectives, eligibility requirements and available funding. The Capital Program enables a market-based system for the life sciences community to inform the MLSC of the best uses for capital dollars. Ms. Nicklas explained that the program is specifically designed to address funding gaps. She discussed the role that the grants play in catalyzing private and philanthropic investment to match state investment.

Ms. Nicklas next provided a brief overview of the eligibility requirements and available funding. State bonding requirements mandate that the applicant be a Massachusetts-based not-for-profit entity. Projects must support life sciences infrastructure and be eligible for funding in FY'16. Ms. Nicklas noted that on occasion institutions will apply before they are ready to begin the project, so the review process specifically targets project readiness. Project funding does not exceed \$5 million and currently there are \$35 million available for the program, which includes

the funding for the STEM Equipment and Supplies Grant Program for high schools and middle schools.

Ms. Nicklas next summarized the implementation schedule. She explained that the process began in July of last year with a two phase approach. Phase I is a high-level overview of what the company's plan is and its approach to the project. Select projects are chosen for more detailed review in the next phase, which includes thorough project descriptions, review by the SAB and Department of Capital Asset Management and Maintenance (DCAMM), presentations to the Board by finalists and the final awards from the Board.

Dr. Windham-Bannister then offered brief commentary related to the diversity of stakeholders that benefit from the MLSC's programs. She stated that the MLSC focuses on the best relative use and value of public dollars. In some cases the MLSC's investments will be used to provide funding to institutions that need to be lifted up. Other entities that the MLSC invests in are at the top of their field. Dr. Windham-Bannister reinforced the scope of the projects that are enabled by the MLSC's programs.

Dr. Lodish offered clarification regarding the nature of the capital funding awards. He stated that the funding to academic institutions is not provided if it will not have an impact for the entire life sciences community. For example, routine lab renovations would not be awarded funding. However, a new research institution that will address the needs of the industry would be given consideration. The awards the SAB recommends to the Board are those that will enhance the Commonwealth's entire life sciences infrastructure.

Ms. Nicklas then invited Dr. Lodish to offer more detail concerning the SAB review process. Dr. Lodish remarked that the SAB would more accurately be referred to as the *Scientific and Business* Advisory Board. He gave a brief history of the creation of the SAB to inform the decisions of the Board. The SAB is comprised of volunteer members who are experts in

academia, business and venture capital. He profiled several notable members of the SAB from various disciplines to demonstrate the diversity of experience represented by the Board.

Ms. Nicklas presented the list of awardees for the Board's approval and offered a brief overview of the best and highest use of capital dollars to support the life sciences industry in Massachusetts. She stated that the returns on investment for the MLSC's programs are both qualitative and quantitative in nature. She provided examples of key returns on investments in education, which included the number of students trained to industry standards who are then able to compete in the workforce, the number of citizens who have STEM literacy, and the shift away from reliance on social safety nets for those who leverage their training to find gainful employment.

Dr. Lodish then briefly discussed returns on investments in research institutions, such as the new therapies and cures generated by investment, the improved quality of life for patients, the world-class researchers attracted to the Commonwealth and new patents filed by awardees. He then briefly discussed the returns on investments in incubators. He gave examples that included the numbers of companies that benefit from affordable startup space, the number of "graduates" from the incubator, and the number of companies that are able to commercialize their products.

After further discussion, the Board reviewed the relevant Resolution, and, upon motions duly made, seconded and unanimously carried by all voting Board members, the Board adopted the resolution approving \$26,957,289 to the 2014-15 Capital Project Matching Grant program award recipients.

8. Approval MLSC Investment Committee Member and Board Treasurer

Secretary Ash introduced the resolution for Ms. Perkins to be approved as the Board Treasurer. After further discussion, the Board reviewed the relevant Resolution, and, upon

motions duly made, seconded and unanimously carried by all voting Board members, the Board adopted the resolution.

Secretary Ash introduced the resolution for Mr. Parker to be approved as a member of the Investment Committee. After further discussion, the Board reviewed the relevant Resolution, and, upon motions duly made, seconded and unanimously carried by all voting Board members, the Board adopted the resolution.

9. Update on Search for the New MLSC CEO

Dr. Villa-Komaroff provided a brief update regarding the search for the new CEO of the MLSC. She stated that since the previous meeting there has not been official action to report to the Board and that the committee continues its outreach efforts and evaluation of suitable candidates.

10. Adjourn

Dr. Villa-Komaroff, upon motion duly made, seconded and unanimously carried, adjourned the meeting at 3:28 p.m.