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

DATE: October 26, 2011

TIME: 2:00 p.m. EST

PLACE: One Ashburton Place, 21st Floor

Boston, Massachusetts

DIRECTORS PRESENT: Secretary Jay Gonzalez

Edward Benz, M.D. Josh Boger, Ph.D

Tom Chmura (Designee for Robert Caret)

Eric Nakajima (Designee for Secretary Greg Bialecki)

Lydia Villa-Komaroff, Ph.D.

DIRECTOR(S) ABSENT: Secretary Greg Bialecki

Robert Caret, Ph.D. Abbie Celniker, Ph.D.

1. Call to Order

Eric Nakajima, designee for Secretary Greg Bialecki, presiding as Chairman of the meeting, called to order the meeting of the Board of Directors (the "Board") of the Massachusetts Life Sciences Center (the "Center") at 2:10 p.m. and announced that a quorum of directors was present. 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 28, 2011 Board meeting. Upon motions duly made, seconded and unanimously carried, the Board adopted the resolution to approve the minutes.

Secretary Jay Gonzalez joined the meeting 2:11 p.m. and henceforth presided as Chairman.

3. Chairs' Updates

Secretary Jay Gonzalez stated that he did not have any updates for this meeting.

4. Executive's Report

Dr. Susan Windham-Bannister, the Center's President and CEO, began her report to the Board by describing the two recent awards she made using her discretionary spending authority. The first was a \$50,000 grant to expand the programs offered by the Urban MA Louis Stokes Alliance for Minority Participation (UMLSAMP) program at UMass Boston. She explained that this program is a consortium of seven pubic and one private academic institutions of higher learning in Massachusetts. The Center's funds will be used for the design, development, and implementation of two undergraduate Biotechnology Research Skills Development workshops to be delivered in April 2012 for the metropolitan areas of Boston and New Bedford/Fall River. The second award, she explained, was a \$10,000 grant to seed a life sciences track in the Worcester Polytechnic Institute (WPI) Venture Forum Business Plan Contest. This contest will offer a new and separate track for life sciences applicants.

Dr. Windham-Bannister went on to update the Board on the recent visit from the Northern Ireland Massachusetts Connection (NIMAC) delegation, which also included senior representatives from Finland and Catalonia. She also provided updates on the Center's programs, including the Accelerator Loan Program, the Capital Project Matching Grant Program, the Internship Challenge Program, the Massachusetts-Israel Innovation Partnership (MIIP), and the Tax Incentive Program.

5. **Update: WEST Grant**

Ilene Fischer, Executive Director of Women Entrepreneurs in Science and Technology (WEST), presented to the Board on her organization, which recently received a \$30,000 award

from the Center. She began by explaining that WEST's mission is to develop women that are in science and technology so that they can become leaders in their organizations. WEST provides a forum for women to engage with peers and learn from leaders who drive innovation, and offers programs that are designed to develop skills, build and expand professional relationships. The Center's grant, she explained, will allow WEST to expand its educational offerings (by twelve programs) to communities outside of Cambridge/Boston, including the Route 128 Belt, Central Massachusetts, and north and south of Boston.

6. <u>Update: Massachusetts Biomanufacturing Roundtable</u>

Dr. Elisabeth Reynolds, Executive Director of the MIT Industrial Performance Center, updated the Board on the Massachusetts Biomanufacturing Roundtable, which the Center became official sponsor of as of July 2011. She began by providing an overview of the Roundtable's history and mission, which is to support and promote the retention and growth of biomanufacturing in Massachusetts. She went on to provide an overview of worldwide biomanufacturing capacity, industry trends and regional impact. Her analysis found that there is excess capacity for large-scale production, which means that fewer companies are engaged in significant expansions and that the region is better positioned for smaller, more niche production. Also, these changes will lead to a higher demand for a more educated workforce. She continued describing the increased use of contract manufacturing organizations (CMO's) at all stages, the increased focus of compliance and enforcement, and the significant innovation taking place in the industry providing an opportunity fir the region to become a world leader in emerging technologies.

Dr. Reynolds also described for the Board the Roundtable's current strategic priorities. The top two priorities, she explained, are to enhance the regional capabilities and innovation ecosystem and improve human capital/talent in the region. The Roundtable is also focused on

expanding bio-related networks, improving communication within and outside the region, and creating a supportive policy environment (such as the Center's tax incentives).

Dr. Lydia Villa-Komaroff left the meeting at 2:50 p.m.

7. <u>Update: MLSC Cooperative Research Matching Grant</u>

Dr. Todd Vannelli, Senior Scientist at IPSEN/Biomeasure, and Dr. Parth Patwatwari of Brigham & Women's Hospital, presented to the Board on their research project funded by the Center's Cooperative Research Matching Grant. Dr. Patwatwari began by stating that their research on cartilage therapy was motivated by the fact that post-traumatic joint injuries lead to osteoarthritis and that there are no interventions shown to decrease this risk. He explained that Ipsen/Biomeasure provided the expertise in HB-IGF protein engineering, production and therapeutic use and that the Center's funding allowed them to move their idea from laboratory studies to preclinical testing by determining the kinetics and function of HB-IGF in small animal studies. He went on to describe the preliminary results of this testing, which showed that adding a heparin-binding domain to IGF-1 allows extended, local delivery to cartilage and that HB-IGF-1 is a candidate therapy for cartilage repair with demonstrated efficacy in small-animal model of osteoarthritis.

8. Other Topics

Dr. Windham-Bannister, on behalf of the Center, expressed how proud she was that the Center supported the MassChallenge competition and that there were two life sciences companies that won grants. She also noted that one finalist company, Abazyme, was voted "Highest Impact" company and that it is also a participant in the Center's Internship Challenge Program.

9. Adjournment

Secretar	y Gonzalez,	upon	motion	duly	made,	seconded	and	unanimously	carried,
adjourned the m	neeting at 3:30) p.m.							
APPROVED:					Secretary Jay Gonzalez Chairman of the Meeting				
Secretary Gregor Co-Chair of the	•			-					

List of Materials and Exhibits Used During Meeting:

- Minutes from September 28, 2011 Board Meeting
- Executive Report to the Board of Directors
- "WEST Grant Proposal to MLSC Board Meeting" PowerPoint presentation (in Board binder; to be presented at next meeting)
- "Massachusetts Biomanufacturing Roundtable Update" PowerPoint presentation
- "Engineering IGF-1 for Cartilage therapy: A Cooperative Research Project" PowerPoint presentation