

UNIVERSITY OF MASSACHUSETTS

AMHERST•BOSTON•DARTMOUTH•LOWELL•WORCESTER

**MINUTES OF THE MEETING OF THE
COMMITTEE ON SCIENCE, TECHNOLOGY AND RESEARCH**

Wednesday, November 17, 2010; 8:00 a.m.

Amherst Room

225 Franklin Street – 33rd Floor

Boston, Massachusetts

Committee Members Present: Vice Chair Osterhaus-Houle; Trustees Dinan, Fox, Lawton, Santos and Thomas; Ms. Lee representing Trustee Reville; Chairman Manning

Committee Member Absent: Chair Johnston; Trustees King-Shaw, Reville and Tocco

Other Trustees: Trustee Reid

University Administration: President Wilson; General Counsel Heatwole; Senior Vice President Williams; Vice President Chmura; Associate Vice President Brancato; Chancellors Holub, Motley, MacCormack, Meehan and Collins; Executive Deputy Chancellor/Provost Flotte; Provost Langley; Vice Chancellor for Research and Engagement Malone, UMass Amherst; Vice Provost for Research Xia, UMass Boston; Assistant Vice Chancellor for Research Development Petrovic, UMass Dartmouth; Vice Chancellor for Research Sullivan, UMass Worcester; Abigail Barrow, Director, Massachusetts Technology Transfer Center; Marla Michel, Executive Director of Strategic Communications and Outreach, UMass Amherst and Director, Scibelli Enterprise Center, Springfield Technical Community College; William Brah, Assistant Vice Provost for Research and Executive Director, Venture Development Center, UMass Boston; Stephen McCarthy, Professor of Plastics Engineering and Co-Director, Massachusetts Medical Device Development Center, UMass Lowell; Kevin O’Sullivan, President and CEO, Massachusetts Biomedical Initiatives, Worcester; Lynn Griesemer, Associate Vice President for Economic Development and Executive Director of Donahue Institute; William Rosenberg, Executive Director, CVIP; John Ciccarelli, Associate Vice Chancellor for Government Relations, Public Affairs, and Economic Development, UMass Boston

Faculty Representatives: Professor Adrion, UMass Amherst; Professor May, UMass Amherst; UMass Boston; Ms. Gibbs, UMass Dartmouth

Vice Chair Osterhaus-Houle convened the meeting at 8:20 a.m. and asked for a motion to approve the **Minutes of the Previous Meeting**.

It was moved, seconded and

VOTED: To approve the minutes of the September 15, 2010 meeting of the Committee.

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She then highlighted today's agenda and commented that President Wilson returned yesterday from a week in Switzerland where he chaired an international panel evaluating the performance of a group of the leading technology and research institutes in that nation, and from Dallas where he chaired meetings of the Commission on Innovation, Competitiveness and Economic Prosperity for the Association of Public and Land Grant Universities.

President Wilson's presentation highlighted a number of encouraging developments in science, technology and research that have occurred at UMass since the last Committee meeting.

- Award of \$13.7M, 5-year NIH "U54" grant to UMass Boston and Dana Farber/Harvard Cancer Center for collaboration on addressing cancer disparities in minority populations and improving research and training opportunities for underrepresented minority students and faculty;
- Award of \$440,000 grant to UMass Medical School from Mass Life Sciences Center to continue operations of the highly successful Stem Cell Registry;
- Appointment of Dr. Joseph Laning, with 15 years of scientific and management experience in industry (Organogenesis and ViaCell), as the permanent executive director of the stem cell bank & registry;
- 6th Annual Conference on Clean Energy held on November 3-4 at the Hynes Convention Center – organized by Mass Tech Transfer Center (MTTC);
- 2nd Annual New England Marine Renewable Energy Center Technical Conference was held on November 2nd at the Microsoft New England R&D Center in Cambridge, organized by UMass Dartmouth Marine Renewable Energy Center;
- 3rd Annual Clean Energy Connections Conference on October 20 at MassMutual Center in Springfield, organized by UMass Amherst;
- Award of "proof of concept" grants to support commercialization of clean energy technology by Clean Energy Center (thru MTTC) with 2 of 5 going to UMass – Mengyan Shen at Lowell and Sankaran "Thai" Thayumanavan of Amherst;
- Official groundbreaking at the Mass Green High Performance Computing Center (MGHPCC) held in Holyoke on October 5th with Governor Patrick, Presidents or Senior Executives of the five universities (MIT, Harvard, UMass, BU, Northeastern), EMC CEO and Executive Vice President of Cisco, at which the companies announced a commitment of a \$5M contribution toward construction of the facility;
- Progress toward completion of purchase and sale agreement with Holyoke G&E for site in downtown Holyoke;
- Announcement of over \$41M in technology licensing earnings in FY 10, 2nd best year in UMass history;
- Publication of latest national rankings (2008) from the American Association of University Technology Managers (AUTM) show UMass ranking 13th in license income amongst all U.S. universities;
- Creation of two new start-ups – Dartmouth Medical Research at Lowell (use of polymers

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technology in reconstructive surgery) and Therapeutic Systems at Amherst (assistive technology for individuals with autism and mental illness);

- Release of the 8th annual solicitation for CVIP Technology Development Awards to fund researchers with commercially promising technologies;
- Announcement of awards for the 7th year of the President's Science and Technology Initiative Fund, with over \$140M of federal, state and industry funding generated through approximately \$6M of investment:
 - Commonwealth Center for Digital Forensics & Society at Amherst;
 - Collaborative Institute for Oceans, Climate and Security at Boston;
 - Consortium on Anytime-Anywhere Transportation Information at Dartmouth;
 - Wind and Clean Energy Initiative at Lowell;
 - Data Management Platform & Software Tools for Patient Care and Clinical & Translational Science at Worcester; and
 - System-wide – MGHPCC Seed Fund for support collaborative High Performance Computing-related research proposals.

President Wilson also provided preliminary highlights on the University's economic impact in the Commonwealth, with final data to be released in December.

- In FY2010, UMass contributed at least \$4.5 billion of economic activity to the Commonwealth, significantly greater than its \$2.66 billion budget:
 - One-time construction project expenditures totaled over \$74 million and they generated \$129 million in economic activity and over 800 jobs;
 - Spending by UMass, employees and students supported nearly as many jobs (15,230) as UMass's direct full- and part-time employment (16,465);
 - Supported jobs occur across many sectors, especially trade/transportation/utilities (over 3,100 jobs), education/health services (2,700 jobs) and hospitality/leisure, including contracted food services (over 2,500 jobs).
- State FY2010 appropriation was \$429 million (excluding federal stimulus) for a ratio of UMass contribution to Commonwealth investment of over 10:1.

Vice Chair Osterhaus-Houle thanked President Wilson for another outstanding presentation. As part of the University's strategy to continue developing as a top-tier public research university, President Wilson has highlighted the importance of emphasizing entrepreneurship and commercialization. One important tool that colleges and universities around the country have for doing this is the development and operation of high tech incubator facilities. Incubators serve as resources in which to launch and grow new companies, both those developed around UMass technology and those developed around non-University technology.

A group of leaders in technology transfer, entrepreneurship and new business development, from around the UMass system reviewed how every UMass campus is involved in helping support the growth of new businesses in their region of the Commonwealth.

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Vice President Chmura introduced the **UMass Incubator Panel** and moderated the session, noting that the panel of representatives from across the University will provide an overview of UMass activities with incubators. While each facility has distinct characteristics derived from campus priorities and regional needs and opportunities, they collectively provide important benefits to UMass faculty and students, their regions and the Commonwealth.

Vice President Chmura then introduced the panel: Abi Barrow, Director, Massachusetts Technology Transfer Center (MTTC); Marla Michel, Executive Director of Strategic Communications and Outreach, UMass Amherst and Director, Scibelli Enterprise Center, Springfield Technical Community College; William Brah, Assistant Vice Provost for Research and Executive Director, Venture Development Center, UMass Boston; Assistant Vice Chancellor Louis Petrovic, UMass Dartmouth; Stephen McCarthy, Professor of Plastics Engineering and Co-Director, Massachusetts Medical Device Development Center (M2D2), UMass Lowell; Kevin O’Sullivan, President and CEO, Massachusetts Biomedical Initiatives, Worcester.

Ms. Barrow noted that MTTC is housed within the President’s Office and facilitates and accelerates technology transfer between research institutions and companies within the Commonwealth; assists in the growth of Massachusetts companies, including startups; provides small grants to support ‘proof of concept’ research or consulting assistance to move technologies closer to market readiness; provides entrepreneur mentoring—inventors have an opportunity to present at ‘The Platform’ a roundtable of industry experts to discuss possible commercialization and funding paths; host networking events showcasing early-stage technologies developed at various institutions.

Ms. Michel provided background information on the Incubator housed at the Scibelli Enterprise Center located at the STCC (Springfield Technical Community College). She then noted that last spring an Agreement was signed with STCC to partner with the University to help the Springfield incubator and the Enterprise Center. Part of the Agreement allocates space for UMass spin-offs and opportunities for grant collaboration. The Enterprise Center looks at ways to connect entrepreneurship activities to innovation programs at UMass Amherst. In 2008, eleven incubating clients produced more than \$7M in revenue, more than \$2M in annual payroll and a combined yearly revenue of \$20M.

The STCC/UMass Agreement continues to build depth to the Greater Springfield/UMass Partnership; the Enterprise Center and the Incubator have become an outlet for the campus and the region for entrepreneurship activity; new alliances are being formed to mobilize entrepreneurship for the region and state; the incubator is looking for clients.

Mr. Brah noted that Venture Development Center (VDC) is a new kind of startup incubator. It is more than a state-of-the-art office and laboratory workspace—it is currently the only mentorship driven incubator in the City of Boston. The Center helps UMass Boston recruit entrepreneurial faculty, train entrepreneurial students, and will help faculty inventions become sources of revenue for the campus. The Center was designed to meet the technology and talent

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needs of three key industries with potential to fuel growth in the Boston area: information technology, bioscience and environmental technology. An Entrepreneurship Center was created last year by faculty to train students to assume careers in bioscience, information technology and environmental technology.

Xconomy, a national news organization focusing on the innovation economy, recognized the VDC as one of the top high tech resources in New England; the VDC has become an entrepreneur point for UMass as a system in Boston with over 1,000 people visiting from around the region and the world in its first year to look at how the innovation economy works. Two new R&D centers are being launched in the VDC, the Developmental Science Research Center and the Collaborative Institute for Oceans, Climate and Security (supported in part by the President's S&T Fund). Mr. Brah commented on Chancellor Motley's involvement with the VDC leading to Mayor Thomas Menino announcing an Innovations District in South Boston and Harvard President Drew Faust announcing the first-ever business incubator in Allston, Mass. Next year the VDC will open the Center for Personalized Cancer Therapy, a joint venture with Dana Farber/Harvard Cancer Center.

Mr. McCarthy commented on the Massachusetts Medical Device Development Center (M2D2), a joint center between UMass Lowell and UMass Worcester. Its mission is to connect the resources of the University of Massachusetts to medical device firms in Massachusetts. Incubation began with a \$4M commitment from Governor Patrick. M2D2 Center is currently housed in the Wannalancit Mills.

Start-up companies within the M2D2 Incubator focusing on medical devices include Aura MedSystems (photochemical tissue bonding technology), Vista (drug delivery device on contact lens), Vaso Tech (biodegradable drug eluting stent), Safe Path (safety suture needle), CMB Biosciences (electrospun silk bandages for wounds), Nano BPS (blood pressure sensor), and Dartmouth Medical (biodegradable bonding system). M2D2 will focus on more start-ups, growing licensing through CVIP, creating new spinoffs and spurring economic growth in Massachusetts.

Assistant Vice Chancellor Petrovic provided background information on the Technology Venture Center (TVC) housed in the Advanced Technology and Manufacturing Center (ATMC). Faculty, facilities, and students leverage University resources for regional economic development. The TVC screens and accepts individual ideas, and provides a supportive environment and helps with resources. Laboratory services such as the Marine Renewable Lab, the Clean Energy Lab, Advanced Chemistry Lab and Prototype Shop provide a supportive environment. In one year four former start-ups in the community had \$20M in revenues (MicroMagnetics, MIKEL, Inc., Micro-Ant, and Ocean Server Technology).

ATMC and TVC priorities are one in the same, to engage faculty and support research, support technology venture start-up companies, provide educational opportunities for students, encourage faculty to commercialize their research, and host conferences, workshops and

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symposia which provide a venue for information sharing and exposure to a broad spectrum of clients.

Mr. O’Sullivan noted that Massachusetts Biomedical Initiatives (MBI) is a catalyst for economic development and healthcare innovation. It is a private independent economic development organization dedicated to job creation and innovative healthcare throughout Massachusetts by promoting the growth of start-up biomedical companies. MBI offers support to creative entrepreneurs with sound scientific business plans. Through its three Incubator facilities located in Worcester (the Life Sciences Business Incubator at Gateway Park, Massachusetts Biotechnology Research Park, and MBIdeas Barber Avenue), MBI lowers barriers to success for emerging companies by providing cost-effective, high quality laboratory space and support services. He then provided a quick overview of National Life Science Incubator Industry Operation vs. MBI Incubator Operations.

Vice President Chmura then commented that when one thinks of entrepreneurship and incubators in Massachusetts, one tends to think of Cambridge and Kendall Square. Historically, UMass campuses have not been active in this area, with the first incubator (at Lowell) not opening until the late 1990s. UMass has evolved – particularly in recent years – as one of the leading sponsors of incubators and related entrepreneurship programs in the Commonwealth.

After a brief Q&A John Ciccarelli, Associate Vice Chancellor for Government Relations, Public Affairs, and Economic Development at UMass Boston, acknowledged Vice Chancellor Petrovic and Kevin O’Sullivan for their collaboration. A round of applause followed.

Vice Chair Osterhaus-Houle thanked the Panel for their presentation.

The meeting adjourned at 9:49 a.m.

Zunilka Barrett
Assistant Secretary to the Board