



CITY OF WORCESTER, MASSACHUSETTS

Michael V. O'Brien
City Manager

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Attachment for Item #

8.4 B

June 1, 2010

TO THE WORCESTER CITY COUNCIL

COUNCILORS:

Per City Council's request, I have attached information relative to the economic activity and development generated by our University of Massachusetts Medical School (UMMS).

UMass Medical School is a major local employer, with more than 6,800 employees and approximately \$81M in direct purchasing power within the City. Academically, UMMS is considered one of the top 10 medical schools in the country and secures more than \$200M in research grant awards each year.

The economic impact of the UMass Medical School in the City is significant; and the medical school is an important catalyst for continued economic growth. For every 100 jobs created on campus, an additional 90 are created in the private sector; most of these are high-skilled jobs with generous salaries that have a direct impact in increasing the average disposable income level in our community. In addition, UMMS is a pioneer in the field of research and development, bringing in significant grants and funding sources for the creation of new industry and new science.

In 2001, the medical school expanded its Worcester campus and opened a research facility that resulted in the creation of 2,500 jobs and an estimated \$121 million in economic impact. Under the leadership of UMMS Chancellor Michael Collins, the medical school continues to grow, and most recently, broke ground on the Sherman Center, a 500,000-square-foot, \$405M center for cellular and gene research. This expansion will generate 3,500 construction jobs and 900 permanent jobs once operational, while complementing Worcester's prestige as a hub for life sciences research and development. Worcester is viewed by the medical school as a prime location for their growth and expansion for a number of factors, including our skilled and educated workforce, our comprehensive transportation network, our diverse array of housing opportunities, and an emerging life sciences and biotechnology environment.

Beyond the economic impact, the medical school continues to be a strong community partner and a significant resource to the City. UMMS works with the Worcester Public



Schools to prepare, educate and train K-12 students for STEM-oriented economy and provides hands-on experience in labs under the direction of UMMS scientists. In addition, the medical school provided 24 graduate student nurses who were supervised and worked alongside City public health nurses to assist in vaccinating residents against the H1N1 influenza virus. UMMS also played an important role in defining the work of the Task Force on Public Health; and as a result, Chancellor Collins has agreed to assist in conducting the first of anticipated regular health status indicator reports on behalf of the City.

The City's partnership with UMass Medical School continues to grow and we continue to look for opportunities to work collaboratively for the benefit of residents, faculty and students. We will continue to keep you apprised of economic development activity and any additional progress made at the Worcester campus.

I am grateful to Chancellor Collins and the entire UMMS team for their continued commitment to and investment in our great City.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael V. O'Brien", with a long horizontal line extending to the right.

Michael V. O'Brien
City Manager



CITY OF WORCESTER, MASSACHUSETTS
Office of Economic, Neighborhood, and Workforce Development
Economic Development Division

Julie A. Jacobson
Assistant City Manager

To: Michael V. O'Brien, City Manager
From: Julie A. Jacobson, Assistant City Manager
Date: June 1, 2010
Re: Transmitting An Informational Update Relative to the Economic Development/ Economic Impact at the University of Massachusetts Medical School (UMMS) to the City of Worcester

Per City Council's request, attached please find information and economic development activity relative to UMass Medical School (UMMS).

UMMS serves as one of the City's most significant employers, medical services providers, educational services providers, and economic drivers; its economic impact on the City is significant. UMass Memorial Health Care is a clinical partner for the medical school and currently employs 12,500 workers; combined, the health care system and the medical is the largest employer in the City of Worcester, and the second in the Commonwealth.

Founded in 1962, UMMS currently employs over 6,800 employees and spends \$81 M on goods and services in the City. It is ranked as one of the nation's best and most affordable medical schools and is also a pioneer in research and development, securing more than \$200 M in national research grant awards. UMMS also received more than \$36 M in American Recovery and Reinvestment Act (ARRA) funds. These awards will pave the way for new investment opportunities, initiatives and strategic plans that will have a direct impact on our local economy. New research will open the door for the creation of new industries in the areas of biotechnology and other sciences which have proven to create high-paying jobs and spur business activity. A prime example is the economic impact of the Lazare Research Building, a research facility which opened in 2001 at UMMS. This particular project supported 2,500 jobs and an estimated additional \$121 million in indirect economic impacts.

Under the leadership of Chancellor Michael Collins, UMMS continues to grow with the completion of the Advanced Center for Clinical Education and Science, a 258,000 square foot, \$95 million state-of-the-art clinical facility scheduled to open this summer; the construction of the Albert Sherman Center, a 500,000 square foot, \$405 million



center for cellular and gene research; and, the proposed 1,350-car parking garage for the Biotech 6 at Plantation Street and Arboretum Way. I have attached conceptual drawings of these projects for your information and I have attached a presentation that outlines in detail the economic impact and growth of the UMass Medical School.

Sincerely,

A handwritten signature in black ink that reads "Julie A. Jacobson". The signature is written in a cursive style with a large initial 'J'.

Julie A. Jacobson
Assistant City Manager



Albert Sherman Center



Lazare Research Building/
Albert Sherman Center



Advanced Center for Clinical Education
and Science



THE UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL

FROM 1962 TO 2010: UMMS THEN AND NOW

1962: The Founding Mission

Founded to provide affordable, high-quality medical education to Massachusetts residents and increase the number of primary care physicians practicing in underserved areas of the state.

2010: Fulfilling the Mission and More

- Fulfilling the founding mission: UMMS ranked as one of the nation's best *and* most affordable medical schools, with an emphasis on primary care.
- Substantial impacts beyond those envisioned in the 1960s:
 - **Three Schools**: School of Medicine; Graduate School of Biomedical Sciences; Graduate School of Nursing
 - **Massive Economic Impact**: 6,800 employees and \$1 billion in revenues
 - **Four Lines of Business**: Educational Enterprise; Commonwealth Medicine; Mass Biologics Labs; Research Enterprise
 - **Local Community Partnerships**: Leveraging our expertise to benefit the residents of Central Massachusetts

An Economic Engine for Worcester and Surrounding Communities

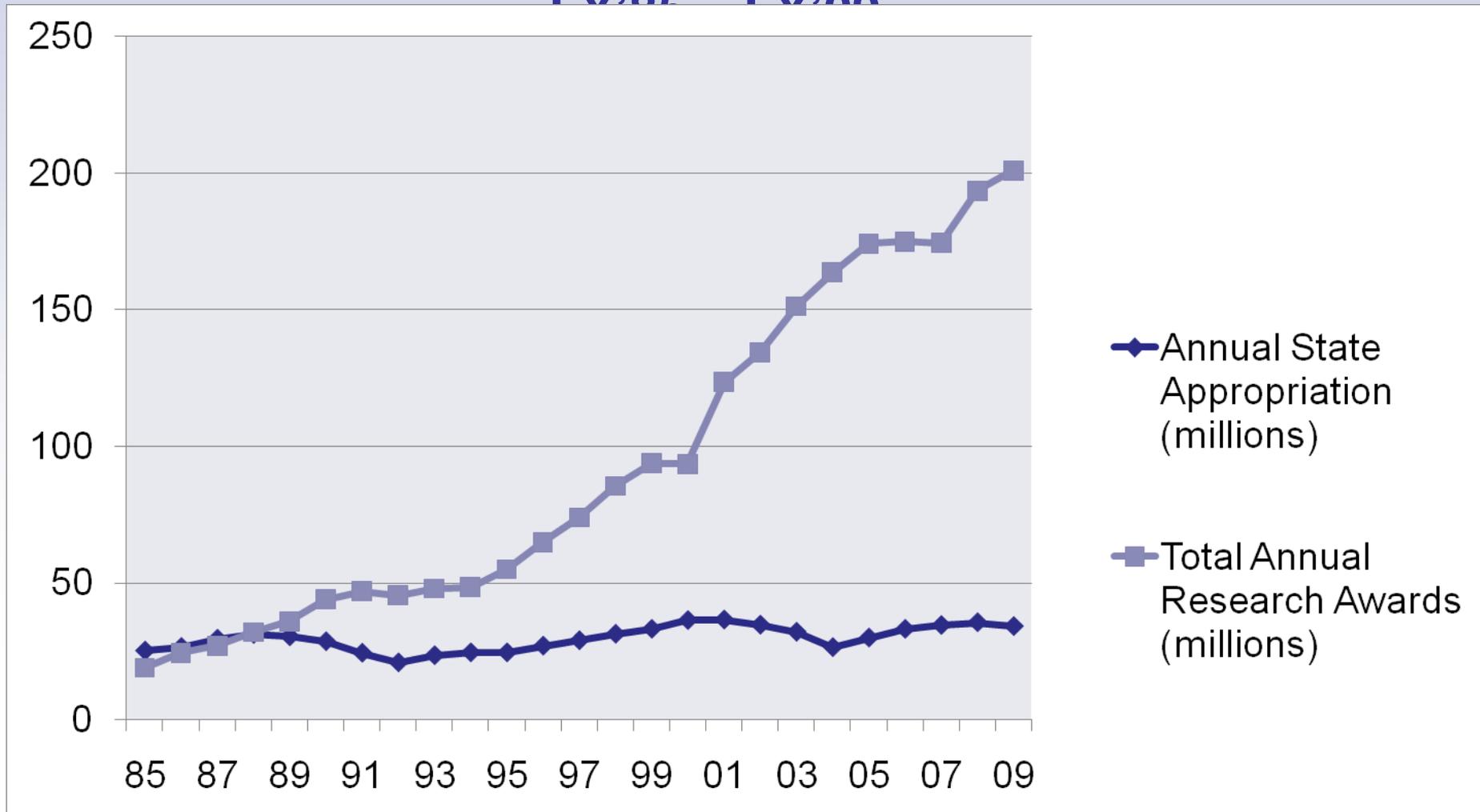
- Major local employer, with 6,800 total employees:
- Some 4,300 *work* in the City of Worcester, and 5,500 in Worcester County
- Approximately 1,700 employees *live* in the City of Worcester and 4,000 in Worcester County
- Purchasing power impacts the regional economy (FY09 numbers):
 - Spent \$81 million on goods and services in the City of Worcester and \$113 million in Worcester County
 - Accounted for \$73.1 million of annual payroll to residents of the City of Worcester and \$204.5 million to residents of Worcester County

RUNNING LIKE A BUSINESS

- Only 4 percent of the UMMS budget comes from a state appropriation.
- 96 percent of the budget is derived from entrepreneurial ventures, such as grant funded research, licensing fees, Commonwealth Medicine and Mass Biologics Labs.
- Tremendous bang for the buck: Total cost of attendance is one of the lowest of all medical schools in the nation, while our academic rank is one of the highest.
- No substantial increase in the state appropriation / educational subsidy in the past quarter century.

RESEARCH AWARDS VS. STATE APPROPRIATION

FY'85 FY'09



SCHOOL OF MEDICINE

ADDRESSING THE PRIMARY CARE WORKFORCE SHORTAGE IN MASSACHUSETTS

- School of Medicine class size increased by 21% to 125
- Tuition waiver and loan forgiveness programs
- 59% of this year's SOM class entering residencies in primary care



SCHOOL OF MEDICINE: SUCCESS IN ACHIEVING FOUNDING MISSION

- Founded with a mission of providing an affordable medical education to Massachusetts residents and expanding access to primary care.
- Ranked 9th in primary care among the nation's 131 medical schools by U.S. News & World Report.
- Ranked 17th in affordability out of 131 medical schools (measured by total cost of tuition, fees and health insurance), according to the Association of American Medical Colleges.
- Cost may be reduced even further through partial loan forgiveness for graduates who remain in Massachusetts and serve in a primary care practice; practice in an underserved area; or provide a community/public service of particular benefit to the Commonwealth.

GRADUATE SCHOOL OF BIOMEDICAL SCIENCES



- Established in 1986
- 324 jointly appointed (with School of Medicine) faculty
- 351 students, from all over the nation and the globe
- Two divisions:
 - Basic & Biomedical Sciences
 - Clinical & Translational Sciences



GRADUATE SCHOOL OF NURSING

- Established in 1986
- 163 faculty
- 155 students
- 853 alumni
- Doctoral programs:
 - PhD (23 students in 2009)
 - Doctor of Nursing Practice (4 students in 2009)
- Master's programs & post master's certificates
- Graduate Entry Pathway (GEP) – an alternate pathway into the MS program for non-nursing students with a baccalaureate degree in another field



COMMONWEALTH MEDICINE

- A public, non-profit consulting organization working with over 20 other states and foreign countries
 - \$336.7 million in revenues in FY'09
 - 1,800 employees
- Has yielded over **\$15 billion** in savings or revenues for the Commonwealth of Massachusetts since 1996
- Works with state agencies and other health care entities to:
 - increase the value & quality of publicly funded health expenditures
 - improve access and delivery of care to at-risk and uninsured populations



MASSBIOLOGICS

- Located in Mattapan section of Boston
- The nation's only non-profit FDA-licensed vaccine and biologics manufacturing facility
- \$100 million in annual revenue
- Produces 30 percent of the U.S. supply of tetanus/diphtheria vaccine, and distributes for free to Mass. residents
- Has developed therapeutic monoclonal antibodies (MAb) for:
 - *C.difficile* diarrhea
 - Post-exposure rabies
 - Hepatitis C virus (HCV)
 - Severe acute respiratory syndrome (SARS)



UMMS RESEARCH ENTERPRISE

- Total annual research awards \$245 million as of December 2009
- Economic multiplier of 2.14 for every dollar of NIH grant funding
- Focused on building a robust clinical and translational research program upon the foundation of a world-class basic science enterprise
- Goal to move scientific discoveries into clinical applications



ENTERPRISE: THE SHERMAN CENTER

The Sherman Center Project will:

- **Contribute a \$1 billion state-wide economic impact;**
- **Generate 3,500 direct new jobs during construction and almost 900 jobs when facility is operational.;**
- **Leverage state investment to acquire new NIH funding;**
- **Solidify Worcester as a hub for the life sciences;**
- **Focus on bench-to-bedside research to catalyze invention and commercialization of new therapeutic products.**



SUMMARY OF THE ECONOMIC IMPACTS OF THE SHERMAN CENTER

Construction Impacts

- Direct Impact

- \$423 million

- 3,500 jobs



- Total Impact

- \$761 million

- 5,870 jobs

Statewide Annual Operational Impacts

- Direct Impact

- \$130 million

- 870 jobs



- Total Impact

- \$264 million

- 1,600 jobs

LOCAL COMMUNITY ENGAGEMENT HARNESSING OUR STRENGTHS FOR THE COMMON GOOD

UMass Medical School is engaged in various local community outreach initiatives, among them:

- **Worcester Pipeline Collaborative (WPC)**

- A national model of teamwork among many constituents to prepare, educate and train K-12 students for the STEM-oriented economy of the 21st Century.
- Covers the Worcester Public Schools' entire North Quadrant, including eight elementary schools, a middle school and two high schools, with a total of 6,000 students.

- **Worcester DPH Task Force**

- Charged by the City Manager with researching and developing a mission for the city's Division of Public Health based upon national best-practices and a sustainable financial model
- 15 members of the UMMS community were engaged on the task force
- Dedicated thousands of hours to the effort, with an estimated value of over \$160,000

LOCAL COMMUNITY ENGAGEMENT (CONT.)

- **UMass Labs for Worcester High Schools**
 - Some 200 Advanced Placement (AP) Biology students from public high schools in Worcester participate in hands-on projects in the labs of UMMS scientists under the guidance of our leading researchers.
 - Invaluable experience that helps students to potentially place in higher-level science courses in college.
- **Regional Science Resource Center**
 - Works with 138 Massachusetts school districts to enhance K-12 math and science education via five programs - teacher networks, professional development, math and science library, student lab, and *Science-To-Go*.
 - The **Central Mass. STEM Pipeline** engages middle school students in STEM (science, technology, engineering and math) careers by introducing them to role models and teaching them what the careers entail; helping students create parent- and peer-friendly messages about STEM careers and the pathways leading to them; and developing networks of minority, low-income or first-generation college families to foster discussion of STEM career choices

LOCAL COMMUNITY ENGAGEMENT (CONT.)

- **Massachusetts Area Health Education Centers (MassAHEC)**
 - UMMS hosts MassAHEC's six centers across the state. AHEC focuses on eliminating health disparities through community engagement and fostering an ethnically and linguistically diverse, culturally competent health care work force. Funding for the Model AHEC program includes \$500,000 from HRSA/Title VII and \$1,028,324 from UMass Medical School via appropriation from the state.
- **Work Development Program in Plumley Village**
 - UMMS partners with Plumley Village to provide unemployed or underemployed residents with employable skills, responsibility and confidence in the working world. Workshops focusing on work readiness training are developed and facilitated by both partners, and are available to residents ages 18 to 55 who have a high school diploma or a GED. Sixty to seventy percent of the participants have found jobs, and 30 percent have pursued additional education or training.

LOCAL PARTNERSHIPS (CONT.)

- **Worcester Communities of Care**
 - UMass Medical School's Communities of Care program provides comprehensive mental health and support services to youth with complex emotional and behavioral problems, thereby reducing juvenile justice involvement and enabling youth to live productive and healthy lives at home. Worcester Communities of Care serves youth ages 3 to 21 through the Coordinated Family-Focused Care (CFFC) program of the Massachusetts Behavioral Health Partnership.
- **Building Brighter Futures program**
 - UMMS participates in Building Brighter futures, a citywide youth summer jobs program. High school juniors and seniors from Worcester work in a variety of medical school departments where they are mentored and supervised by professional staff, develop lifelong work skills, and gain valuable experience in a professional environment.

LOCAL COMMUNITY ENGAGEMENT (CONT.)

- **Genesis Clubhouse**

- UMMS has a longstanding partnership with *The Genesis Clubhouse*, a comprehensive mental health services program in Worcester. Numerous UMMS employees serve on the board and we are one of the most active partners in Genesis's transitional and supported employment programs, employing over 280 clients since 1991.

- **Department of Family Medicine & Community Health**

- **UMMS Dental residency program:** One of the few in the country that integrates dental education into the medical school curriculum, training practitioners at long-standing and well-established community health centers in Worcester: Family Health Center and Great Brook Valley Health Center. Since 2003, a grant-funded forgiveness program has placed 34 dentists in 18 community health centers throughout Massachusetts.
- **Common Pathways:** UMMS executive leadership and faculty are represented at Common Pathways, a local coalition of people interested in improving the health of local residents. The group is deeply committed to conducting a community-wide assessment, and UMMS researchers, faculty and staff are encouraged to work with Common Pathways.

OTHER PUBLIC SERVICE PARTNERSHIPS

- UMass Medical School participates in numerous other community outreach initiatives, among them:
 - Infant Mortality Reduction
 - Newborn Screening
 - Foster Child Health
 - Injury-Free Coalition for Kids
 - Latino Community Partnerships
 - Teacher Development
 - Cultural Immersion Medical Education
 - Career Success in Science and Health
 - Vaccine Research and Development

PAYMENT IN LIEU OF TAXES

- Worcester receives an annual appropriation from the Commonwealth for state-owned land, including the UMMS campus, in accordance with Massachusetts General Law.
- Of the \$594,453 appropriated for Worcester in Fiscal Year 2010, \$211,510 was attributable to UMMS land.
- Because it is mandated by law, the PILOT payment occurs annually and is factored into Worcester's municipal receipts and charges (so called 'Cherry Sheets') issued by the Department of Revenue.