



Baker-Polito Administration Celebrates More than \$6 Million in Workforce and STEM Grants to Educational Institutions in Merrimack Valley Region

Massachusetts Life Sciences Center capital grants will grow the innovation economy and prepare a trained workforce

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North Andover - Today President & CEO of the Massachusetts Life Sciences Center (MLSC) Travis McCready joined leaders from Merrimack College and representatives from other local educational institutions to celebrate more than \$6 million in STEM Equipment and Capital Infrastructure grant funding for regional workforce development and STEM education projects in the Merrimack Valley. The MLSC grants will advance the Baker-Polito Administration's commitment to build a highly trained workforce and seed job creation in regions across Massachusetts.

McCready highlighted the regional grant awards at a ceremony at Merrimack College. Merrimack is receiving \$500,000 in MLSC grant funding to grow its life sciences program, which expects an immediate increase of enrollment and a further 34% increase in five years. The College works closely with STEM afterschool programs in the Lawrence Public Schools and will leverage its partnerships with Pfizer in Andover, Nexcelom Bioscience in Lawrence, and Bach Pharma in North Andover.

In addition, the MLSC has awarded a \$5,000,000 grant to UMass Lowell and more than \$632,000 through its STEM Equipment and Supplies Grant Program to seven middle and high schools in the region. The awards are part of a statewide grant round that is delivering a total of \$39 million in MLSC capital grants to 14 research and educational institutions, and 49 equipment and professional development grants benefitting 80 high schools and middle schools across Massachusetts.

"Investments in the vitality of the Massachusetts workforce are critical to ensuring longterm growth in our economy," **said Governor Charlie Baker.** "Our ongoing efforts to deliver a high-quality STEM education to middle- and high-school students, and our

focus on delivering impactful workforce training opportunities at community colleges and other institutions of higher education, will allow Massachusetts residents to access quality careers in growing fields, including robotics, advanced manufacturing, healthcare, and biotechnology.”

“These capital grants from the Massachusetts Life Sciences Center deepen our administration’s efforts to build vibrant regions, from Cape Cod to the Berkshires,” **said Lieutenant Governor Karyn Polito**. “By training middle school and high school students on state-of-the-art STEM equipment, and creating new pipelines for workforce development and scientific breakthroughs, these awards will create new economic opportunities in the Merrimack Valley, and help build a stronger Commonwealth.”

“Massachusetts is building the nation’s most competitive economy by investing in STEM development, and in the infrastructure of innovation,” **said Housing and Economic Development Secretary Jay Ash**. “By constructing new science and technology laboratories at Merrimack College, and improving the quality of STEM education for students in Andover, Westford, Dracut, Billerica, Methuen, Haverhill and Lexington, these awards will help make the Merrimack Valley a more dynamic place to live and work, and they will equip local residents with the skills needed to retain our title as the most innovative state in the nation.”

“One of our capital investment plan priorities is to make strategic investments in the future workforce of the Commonwealth, including STEM programs for our students,” **said Administration and Finance Secretary Kristen Lepore**. “By awarding these capital grants today, the administration is once again leveraging our resources to invest in the Commonwealth’s growing biotech industry.”

“The MLSC continues to make major capital investments to support education and training at academic institutions across the entire Commonwealth in order to meet the workforce needs of our state’s fastest-growing industry,” **said Travis McCready, President and CEO of the MLSC**. “Our capital grants to Merrimack College and UMass Lowell will significantly enhance their capacity for workforce training, so that our students will be better prepared for career opportunities in the life sciences. Through our STEM equipment and supply grants, area high schools and middle schools will be better positioned to connect students with jobs in the fast-growing Massachusetts life sciences ecosystem. In both cases, we are excited to play a role in supporting economic growth and workforce preparedness in the Merrimack Valley.”

Funding for the awards is drawn from the Massachusetts Life Sciences Center’s Competitive Capital Program, and the Center’s competitive STEM Equipment and Supplies Grant Program.

The MLSC's Competitive Capital Program provides grants for capital projects that support the life sciences ecosystem in Massachusetts by enabling and supporting life sciences workforce development and training, research and development, commercialization and manufacturing in the Commonwealth. The program funds high-potential economic development projects by nonprofit entities that make significant contributions to the state's life sciences ecosystem. To date, the MLSC has awarded or committed more than \$405 million to support capital projects across the state.

The MLSC's STEM (Science, Technology, Engineering and Math) Equipment and Supplies Grant Program funds the purchase of equipment and supplies for high schools and middle schools in the Commonwealth. The program helps schools train students for life sciences careers, increase student achievement and student interest in STEM fields, and support the implementation of the state's STEM standards. This year, for the first time, the program is also providing funding for teacher professional development. The competitive program is open to vocational-technical high schools, public high schools and middle schools located in Gateway Cities, and public high schools and middle schools with economically disadvantaged student populations. To date, the STEM Equipment and Supplies Grant Program has awarded more than \$16.3 million to 149 different schools and organizations throughout Massachusetts, and leveraged more than \$1 million in matching funds from industry partners.

Merrimack Valley Regional 2017 MLSC Competitive Capital and STEM Equipment Awards

Merrimack College (\$500,000)

Merrimack College is a first time awardee. Funding will support the development of Merrimack's Center for Innovation in Science and Engineering. The grant will also provide programming to train students for work in the life sciences with the purchase of a confocal microscope, an ICP spectrophotometer, and a bone densitometer for an interdisciplinary imaging and analytical science laboratory.

University of Massachusetts Lowell (\$5,000,000)

The impact of this investment is to provide the necessary infrastructure to support the Biomedical Engineering (BME) program at UMass Lowell that will generate the future workforce for the medical device industry. Our funding request is spread over a three-year period. In the first year, we expect to make significant headway on building-out the teaching and industry research labs for the program. While this work is underway, we will secure funding and equipment from our identified industry partners to support the lab. Students will gain access to the labs in the third year of their program. Within five years, we expect to graduate roughly 100 students (two cohorts) from the BME program, with 95% moving into positions with medical device firms or pursuing

advanced degrees in related fields. Furthermore, by that time, we will submit our application for accreditation and grow our program to 100 students per year.

Greater Lawrence Technical High School (\$93,410)

The Biotechnology program provides students with a strong foundation in lab sciences, including the understanding of fundamental scientific principles of biotechnology, the ability to work effectively and collaboratively in a lab setting, and utilization of critical thinking skills and scientific methodology. The MLSC grant will enable the purchase of molecular biology and biomanufacturing equipment for its laboratories. The new high-tech equipment will better prepare students for positions in the biosciences field. The equipment and its accompanying curriculum will offer students the opportunity to problem-solve utilizing real-world projects that challenge them to think and act as scientists.

Minuteman High School (\$108,172)

The MLSC grant will enable the school will expand its bio-manufacturing capability for both upstream and downstream processing by purchasing laminar flow hoods (BSC Class II) and single stage vacuum pumps to allow students to do mammalian cell culture. In addition, they will update the program's water purification system to meet industry standards for bio-manufacturing. The program will introduce students to cutting edge technologies such as 3D printers which are being leveraged in the biotech industry in 3D micronutrient research and production and in 3D tissue culture. Also, teachers will update their own skills by taking an intensive, 4-day certificate program at Worcester Polytechnic Institute.

Nashoba Valley Technical High School (\$101,476)

The MLSC grant will transform and connect Engineering, Robotics, and Biotechnology programs through the creation of an Automated Bio Lab. Equipment purchased will introduce students to the emerging world of high precision robotics for faster and more cost effective DNA and pharmacological testing. This is a growing field which will allow scientists and doctors to customize treatment while opening job markets for trained engineers and technicians in both the Robotics and Biotechnology fields.

Richardson Middle School (\$60,000)

The MLSC grant will equip the new Science, Technology, Engineering, Arts, Mathematics (STEAM) program and update science classrooms to reflect the Next Generation Science Standards. The grant will create a space where students can learn, be creative and expand their thinking through collaborative, inquiry and project based opportunities. The school will obtain supplies and machinery that would otherwise be unobtainable.

Shawsheen Valley Technical High School (\$110,000)

The MLSC grant will equip a new Advanced Manufacturing Medical Device and Robotics Technicians' Lab complete with a four-axis CNC milling machine, a mechatronic robotic assembly arm, 3D printers and other tools that will support the improved preparation of students for this growing, highly technical workforce sector.

This investment will increase student achievement and interest in STEM fields and lead to a notable increase in employment opportunities for students in this vital life science industry.

Tenney Grammar School (\$49,678)

The MLSC grant will bring new technology into the Science classroom and the Science lab, allowing for the purchase of thirty Surface Pro 4 devices, digital microscopes and class sets of slides. The curriculum will incorporate Science, Technology, Engineering, and Mathematics as well as English Language Arts.

Whittier Regional Vocational Technical High School (\$109,342)

The MLSC grant will enable the purchase of equipment and provide professional development for a new Engineering Technology Program and MakerSpace. The equipment will expose students to the Biomedical Science/technology professions through the Project Lead the Way program. Students will understand how math, science, and engineering work together to create solutions for the various medical challenges faced today. In addition, the equipment will be made available within the MakerSpace to other departments to provide greater opportunities for students who may not be specifically in the Engineering. The MakerSpace program offers the opportunity for students to work in a collaborative space where they will be exposed to biotechnology learning experiences that will enable them to develop prototypes and design tools and devices to be used in the medical field.

About the Massachusetts Life Sciences Center

The Massachusetts Life Sciences Center (MLSC) is an investment agency that supports life sciences innovation, education, research & development and commercialization. The MLSC is charged with implementing a \$1-billion, state-funded investment initiative. These investments create jobs and support advances that improve health and well-being. The MLSC offers the nation's most comprehensive set of incentives and collaborative programs targeted to the life sciences ecosystem. These programs propel the growth that has made Massachusetts the global leader in life sciences. The MLSC creates new models for collaboration and partners with organizations, both public and private, around the world to promote innovation in the life sciences. Learn more at <http://www.masslifesciences.com/>

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