



THE MASSACHUSETTS
LIFE SCIENCES CENTER

creating **JOBS**
driving **INNOVATION**
improving **LIVES**

WELCOME

Who We Are

The Massachusetts Life Sciences Center is a quasi-public agency that serves as the hub for the Commonwealth's life sciences community. We are dedicated to expanding our state's thriving life sciences Supercluster, including biotechnology, pharmaceuticals, medical devices, diagnostics, and bioinformatics. We are the stewards of the \$1 billion Life Sciences Initiative, which was launched in 2007 by Governor Deval Patrick and advanced by the Massachusetts Legislature when it passed the Life Sciences Act in 2008. Our job is to ensure that the life sciences sectors continue to serve as a major economic engine for the Commonwealth.

What We Do

Our goals are to create jobs, drive innovation, and promote biomedical breakthroughs that improve people's lives.

How We Do It

We invest public funds in strategic opportunities that create jobs, leverage private investment, and expand scientific knowledge. We promote a competitive business environment by providing tax incentives for life sciences companies, investing in infrastructure and workforce development, providing capital to early stage companies, and making targeted grants to support critical scientific research.



Massachusetts Governor Deval Patrick signed the \$1 billion Life Sciences Act on June 16, 2008 at the Joslin Diabetes Center. (Photo: Office of Governor Deval Patrick)

Colleagues and Friends,

It is an exciting time for the Massachusetts Life Sciences Center. Since 2008, when Governor Patrick signed the \$1 billion Life Sciences Act into law, we have made great strides in our efforts to ensure that Massachusetts remains a world leader in the life sciences.



From pharmaceuticals and medical devices to diagnostics and biotechnology, the life sciences are a cornerstone of our state's economy. At the Center, we are attracting new companies and supporting the growth of existing companies by providing working capital and tax incentives. We are also providing infrastructure grants to help cities and towns across the Commonwealth become "life sciences ready." Through targeted grants, we are enhancing and accelerating the work of Massachusetts scientists. All of our investments are thoroughly reviewed by the Center's Scientific Advisory Board, which includes world class scientists and investment experts to help us identify exceptional science and outstanding business opportunities.

Our strategy for investment focuses on creating high leverage on public dollars through seeding, accelerating and matching. To date, this strategy has enabled to Center to attract hundreds of millions of dollars of private and federal investment in Massachusetts' life sciences Supercluster.

To learn more about the Center, please visit our web site at www.masslifesciences.com. When you do, I hope you will sign up for our email list so that we can keep in touch about our work going forward.

Sincerely,

A handwritten signature in black ink that reads "Susan Windham-Bannister". The signature is written in a cursive, flowing style.

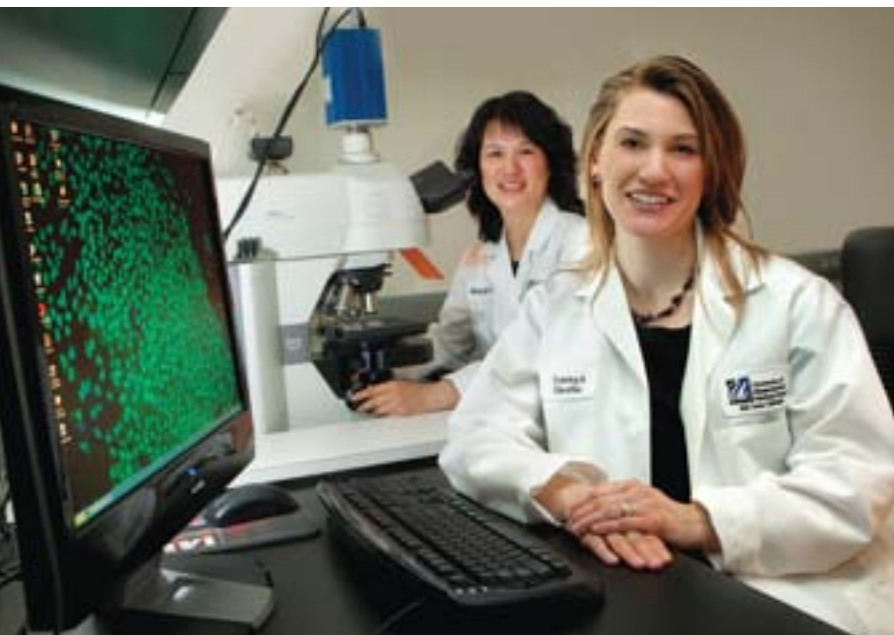
Susan Windham-Bannister, Ph.D.
Massachusetts Life Sciences Center
President & CEO

CREATING JOBS

By supporting the growth of existing Massachusetts companies, offering incentives for new businesses to locate here, and attracting talent and matching investment dollars, we are cultivating the life sciences as a major economic engine for the Commonwealth.

Building Infrastructure

Our grants for public infrastructure projects are designed to promote significant long-term job creation throughout the Commonwealth. Funded through the Life Sciences Act's 10-year \$500 million capital fund, the grants are directed to municipalities and institutions for upgrades to roads, buildings, sewer lines, wastewater treatment systems, and other infrastructure that supports growth in the life sciences sectors.



Lab Manager Meng-Jiao Shi (left) and Education and Training Director Maria Borowski are staff members at the new Massachusetts Stem Cell Bank, which was created in 2007 through a grant from the Massachusetts Life Sciences Center. Located on the Shrewsbury campus of UMass Medical School, the Bank will help strengthen the Commonwealth's position as a global leader in stem cell research.

Life Sciences Tax Incentive Program

This program allows the Center to award tax incentives to companies at every stage of development. Nine different tax incentives are available to foster growth and expansion, with a cumulative annual cap of \$25 million. To qualify, companies must receive certification from the Center and must demonstrate both the economic and scientific merit of their expansion plans.

Life Sciences Accelerator

The Accelerator loan program provides working capital to early-stage companies at a critical stage of their development cycle. The program seeks to de-risk these companies in order to encourage private investment, while helping them commercialize scientific research into jobs, products and therapies.

“The Massachusetts Life Sciences Center is providing the capital that early stage companies need in order to create jobs and economic opportunity.”

—Lydia Villa-Komaroff, Ph.D.
CEO, Cytonome, Inc.,
CSO, Cytonome/ST, LLC,
and MLSC Board Member

Innovation Fund

The Innovation Fund is designed to ensure that we can respond to opportunities that do not fit into existing program categories. Through this fund, the Center invests in growth opportunities with potential for substantial returns in job creation, revenue enhancement, and scientific advancement.

Moving to the Bay State

When Chris McNary accepted the position of president and CEO at RainDance Technologies, Inc., his first task was to relocate the company from Connecticut to Massachusetts. “The investors who founded RainDance were convinced that relocating was essential for the company to reach its full potential. I agreed completely – and Massachusetts was my top choice.”

In September of 2008, that decision came to fruition when RainDance dedicated its new 28,000 square-foot headquarters and manufacturing facility in Lexington. “We are delighted to be doing business in Massachusetts. It provides all of the critical elements for our growing company, from access to a skilled workforce to the customer base of the greater Boston-Cambridge area and the availability of research grants through the Massachusetts Life Sciences Center,” explains McNary. Since making the move, RainDance has announced plans to grow its workforce from 50 to 80 employees.

The company provides microdroplet-based solutions for human health and disease research. The company’s RainStorm™ technology produces picoliter-volume droplets at a rate of 10 million per hour. Each droplet is the functional equivalent of a test tube and can contain a single molecule, reaction, or cell. This new technology platform enables researchers to design experiments that were previously impossible.

The company is also working to develop other new research technologies. In 2008, the Center awarded a cooperative research grant of \$250,000 per year for three years to fund a collaboration between RainDance and Dr. David Weitz of Harvard’s School of Engineering



Chris McNary is the president and CEO of RainDance Technologies, Inc., which was one of the first companies to move to Massachusetts after the launch of the state’s new Life Sciences Initiative. The company cited the initiative as a major factor in its decision to relocate to Lexington.

“We are delighted to be doing business in Massachusetts. It provides all of the critical elements for our growing company.”
– Chris McNary

and Applied Sciences and Physics Department. The grant will support the development of a new form of fluorescence activated cell sorter (FACS), used to collect biochemical information about individual cells.

“We are excited to be working with the Massachusetts Life Sciences Center,” says McNary. “Their innovative approach says a tremendous amount about Massachusetts’ commitment to the life sciences. That is going to help the state maintain its position as a world leader in this arena.”

DRIVING INNOVATION TO IMPROVE LIVES

By fostering innovative research and supporting scientific progress, we are helping translate life sciences research into therapies and cures.

Cooperative Research Grant Program

This program is designed to increase industry-sponsored research at academic institutions in Massachusetts in order to accelerate scientific discoveries that lead to commercially-viable products and therapies. Applicants may receive up to \$250,000 per year for up to three years, with grants matched by the industry partner. Recent awards have funded research into treatment options for cardiac conditions, diabetes, HIV, lupus and osteoarthritis.

New Investigator Matching Grant Program

Through this program, the Center seeks to advance the work of individuals who are doing cutting-edge scientific work, but have not yet received major funding from NIH. Applicants may receive up to \$250,000 per year for up to three years, with grants matched by the sponsoring institution. The program has funded a wide range of projects, including research on the chemical pathway that controls a key tumor suppressing gene in humans and development of more effective treatments for virulent toxoplasma infections.



Dr. Nagendra Yadava is a principal investigator at the Springfield laboratory of the Pioneer Valley Life Sciences Institute, which is slated to receive an Infrastructure Grant from the Massachusetts Life Sciences Center. His research focuses on mitochondrial dysfunction and provides insights into a number of disorders, including Parkinson's Disease, diabetes, and cancer.



Dr. Xingwei Wang heats an optical fiber taper in her lab at UMass Lowell. She received a 2008 New Investigator Grant from the Massachusetts Life Sciences Center to support her efforts to create a miniature label-free biosensing probe for the rapid detection of viruses, bacteria, and cells.

Workforce Development

Our Life Sciences Talent Initiative is helping to ensure that Massachusetts continues to provide the highly skilled workforce needed to support scientific innovation. In 2007, the Center helped launch a year-long study of the higher education and workforce challenges facing the life sciences Supercluster. The resulting report, *Growing Talent*, incorporates input from hundreds of leaders in the field. To begin building upon the study's recommendations, the Center has launched the Life Sciences Internship Challenge, which will provide matching funds for hundreds of life sciences interns at companies and research institutions across the state.

Turning Discoveries into Cures

When MIT Professor Harvey Lodish and Governor Deval Patrick met at a reception in 2007, they began a discussion that has since reshaped the landscape of the state's life sciences community. At the time, the Governor had just proposed his \$1 billion Life Sciences Initiative, and Lodish offered some advice for building support for the proposal. "I felt it was critical that scientists be involved from the beginning to ensure a transparent, merit-based process and to direct funding to the most appropriate projects," he recalls.

“We have been fortunate in being able to recruit Scientific Advisory Board members with tremendous technical expertise.”
—Harvey Lodish, Ph.D.



Harvey Lodish, Ph.D. is the Chair of the Scientific Advisory Board for the Massachusetts Life Sciences Center. He is a professor of both Biology and Bioengineering at MIT and a Founding Member of the Whitehead Institute for Biomedical Research. (Photo: John Soares)

A few months later, Dr. Lodish found himself tapped to help the Massachusetts Life Sciences Center assemble a 15-member Scientific Advisory Board, of which he was named the chair. "We have been fortunate in being able to recruit members with tremendous technical expertise, including leading academic researchers with significant business experience and outstanding scientists and engineers who direct research in Massachusetts companies," he explains.

A leader in the field of membrane biology, Dr. Lodish has been on the faculty of MIT for more than 40 years. He is a professor of both Biology and Bioengineering and a Founding Member of the Whitehead Institute for Biomedical Research. He has also helped found several pharmaceutical and biotech companies, including Genzyme, Inc., now one of the largest employers in Massachusetts. As a result, he has a unique perspective on what it will take for Massachusetts to maintain its leadership position in the industry.

"Massachusetts has worldwide recognition in the life sciences," he says. "But one of our continuing challenges is translating lab discoveries into products that improve people's lives. That's the big gap we have to overcome, if we want life sciences to continue to flourish here." Under his leadership, the Center is maintaining a strong focus on helping researchers and startup companies succeed in bringing new medical devices, therapies, and drugs to market. "This is where the state's Life Sciences Initiative can really make a difference," he says, "and these investments will help drive the Massachusetts economy for many years to come."



1000 Winter Street
Suite 2900
Waltham, MA 02451
Tel: 781-373-7777
Fax: 781-622-1530

www.masslifesciences.com