

## The Massachusetts Life Sciences Center

### Knowledge in Motion Education Series

June 13<sup>th</sup>, 2013

## Massachusetts: A Global Leader in Life Sciences

### The Massachusetts Life Sciences Supercluster:

- The world's leading innovation pipeline: The Milken Institute's 2010 ratings rank Massachusetts #1 for technology innovation
- World-class academic and medical institutions leading the way in life sciences research
- A talented workforce
- 95,000 workers in life sciences; 50% biopharma job growth in past decade
- All industry sectors -- biotechnology, pharmaceuticals, medical devices, diagnostics and bioinformatics
- Government leadership, through our state's 10-year, \$1 billion Life Sciences Initiative (enacted by the Massachusetts Legislature in June 2008)

## The Massachusetts Life Sciences Center: Who We Are and What We Do

The Massachusetts Life Sciences Center develops and offers creative programs that fund innovation-driven economic development initiatives in the Massachusetts life sciences cluster, but also may have relevance for other “innovation” sectors.



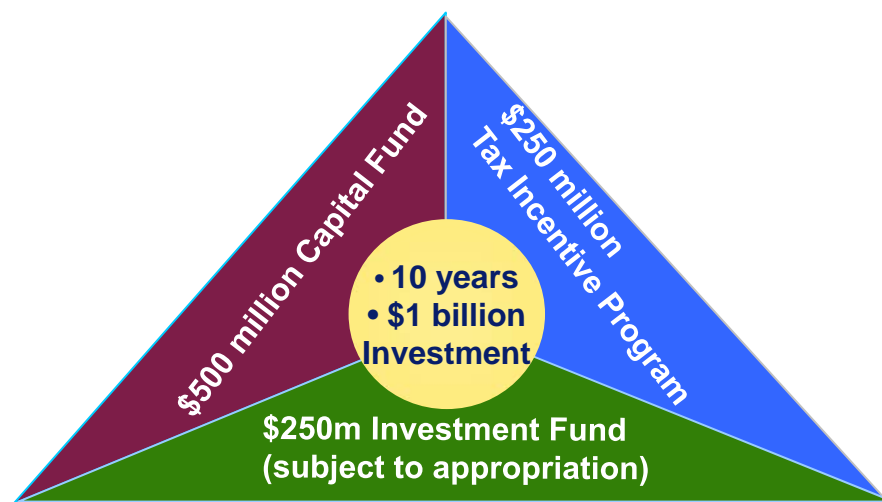
### **Mission:**

- Serve as the “hub” of the Massachusetts life sciences Supercluster
- Encourage innovation through investments in good science and good business
- Strengthen and protect Massachusetts’ global leadership position in the life sciences
- Accelerate the commercialization of promising treatments, therapies and cures
- Create jobs and drive economic development



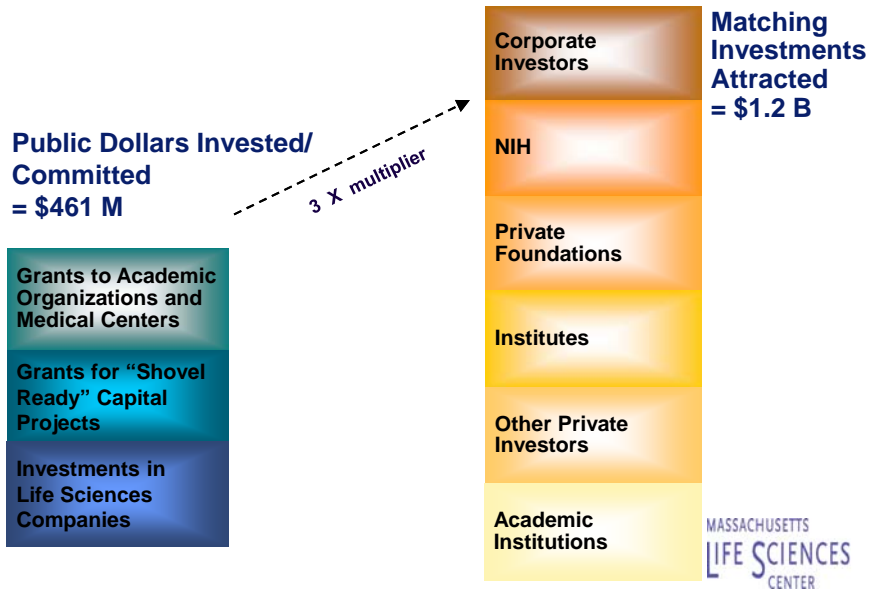
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## MLSC Investment Tools and Programming Budget



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## Gaining Leverage: Public-Private Partnership Life Sciences Center's Impact: June '08 – May '13



## Massachusetts Life Sciences Center roles

- A funding agency
- The state's marketing arm toward life sciences companies
- A convener

## Supporting Promising Early-Stage Companies

### *InVivo Therapeutics*

- Developing groundbreaking technology to treat paralyzed individuals with spinal cord injuries and restore motor function
  - Through the use of biomaterials containing a combination of polymers and stem cells
- Received a \$500,000 Accelerator loan from the MLSC in 2009
- Repaid loan to MLSC in 2011, company has raised more than \$30M in private capital, and now has more than 50 employees
- In April, FDA approved InVivo to begin human trials



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## Supporting Promising Early-Stage Companies

### *Myomo*

- Myomo®, Inc. is a medical technology company leading the way in extending Myoelectric Prosthetic Technology to powered bracing devices that restore an individual's mobility.
  - Mission is to improve mobility and restore independence for individuals who suffer from debilitating muscle weakness due to conditions such as stroke and other neuro-muscular conditions.
- Won MassTLC's Product of the Year Award in 2011
- Accelerator Program winner, MLSC loan of \$750,000 helped fund creation of revolutionary product

**myomo**™  
my own motion



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- A funding agency
  - **The state's marketing arm toward life sciences companies**
  - A convenor

## Recruiting Promising Companies to Massachusetts

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### *ARGO Medical technologies*



*Demonstration of ReWalk at Advamed 2012*

- **ReWalk technology**
  - Exoskeleton suit that enables people with lower limb disabilities to stand and walk independently
- **Founded in Israel, US headquarters in MA**
- **ReWalk has the potential to help millions of people with neurodegenerative diseases and spinal cord injuries**
- **Available in rehabilitation centers, awaiting FDA clearance for personal use**

## Recruiting Promising Companies to Massachusetts

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### *BioAxone*



*BioAxone welcoming ceremony at the Cambridge Innovation Center*

- **Cethrin**
  - Developing a protein therapeutic drug to improve patient recovery from spinal cord injury.
- **Founded in Florida, opened clinical headquarters in Cambridge, MA in 2012.**
- **Selected by Windhover conferences as one of the “Top Ten” Neuroscience Companies for Partnership.**

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## Public-Private Partnerships

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Collaborations that are:

- Focused on *shared challenges* that are critical for progress...
- ...and are *increasingly difficult for a single sector to tackle, and/or finance alone...*
- ...where solutions can benefit *both the public and private sector* (and the broader economy)

## Pre-competitive Consortia

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Collaborations that are:

- Focused on *shared challenges* that are critical for progress...
- ...and are *increasingly difficult for a single organization to tackle alone...*
- ...but *cannot be exploited as a standalone profit-making opportunity* for any individual participant

## MLSC Neuroscience Consortium (launched June 2012)

**Objective:** *Create a pioneering new model of collaboration designed to leverage Massachusetts' rich neuroscience environment to:*

- Accelerate pre-clinical research available to the pharmaceutical industry
- Introduce academic researchers to targeted research
- Facilitate new models of industry-academic partnership

■ **Massachusetts' basic neuroscience, translational, and clinical research distributed across more than a dozen world-renowned institutions amounts to what may be the *highest density of neuroscience research in the world.***

■ **Neuroscience Consortium Charter members:**

- |  |                                 |
|--|---------------------------------|
| ✓ Abbott                                 | ✓ Merck                         |
| ✓ Biogen-Idec                            | ✓ Pfizer                        |
| ✓ EMD Serono                             | ✓ Sunovion (Dainippon Sumitomo) |
| ✓ Janssen Research (Johnson and Johnson) |                                 |

**First Solicitation for Proposals was Released  
September 24, 2012. Nearly 100 proposals received!!**

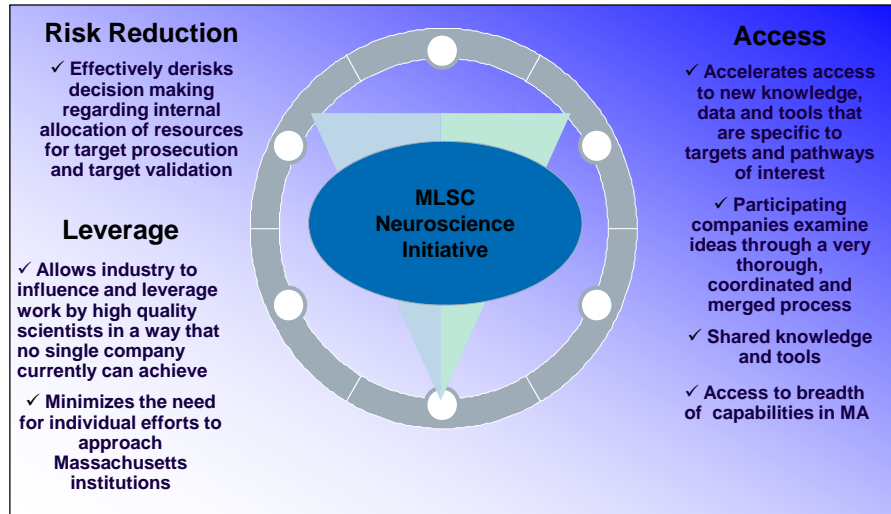
## What is the MLSC Neuroscience Consortium?

- A pioneering new model for *accelerating pre-clinical research* available to the pharmaceutical industry, introducing academic researchers to the challenges of targeted research, and facilitating industry-academic partnerships.
- A one-stop shop approach (a “virtual Center”) *for identifying and evaluating the best pre-clinical targets for development by industry, drawing from participating research institutions across Massachusetts.* Projects funded through the ‘Center’ will follow commonly – accepted industry standards for preclinical validation of these targets to test all possible applications and indications.
- Accelerated access by the pharmaceutical industry to *new knowledge, data and tools* that are emerging from the Massachusetts academic neuroscience community
- Sponsored research funding that *enables academic research teams to follow their discoveries further down the path* toward commercial application



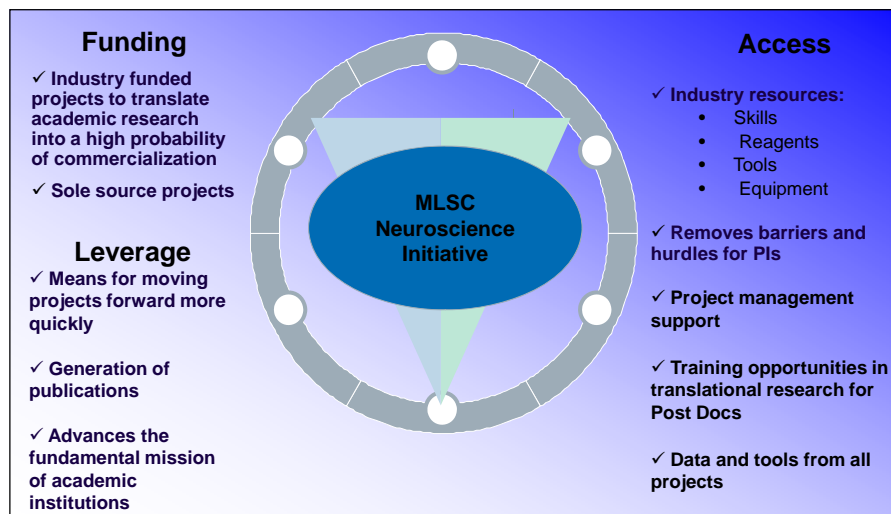
## MLSC Neuroscience Consortium – Value Proposition to Industry

- Benefits to industry include reduced costs, and greater efficiency, speed and access



## MLSC Neuroscience Consortium – Value Proposition for Academia

- Benefits to academia include funding, access and prestige



## MLSC and SCI Awareness Day

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- The Massachusetts Life Sciences Center co-sponsors SCI Awareness day at the State House every year
- Brings awareness to the developments in the spinal cord injury field and promotes a sense of community