

# MassBio news

MASSACHUSETTS BIOTECHNOLOGY COUNCIL



At the LabCentral groundbreaking, top, Executive Director Dr. Johannes Fruehauf, left with MassBio President & CEO Robert K. Coughlin; above Gov. Deval Patrick gets the project started.

## GROUND BREAKING

**The cranes are back and the industry is growing in Massachusetts. See full annual MassBio Industry Snapshot findings on pages 4-5.**

**New lab spaces such as LabCentral are in development and the need for lab incubators continues to increase. Learn more on page 3.**



## BIOPHARM AMERICA™

### MASSBIO TO HOST PARTNERING EVENT

MassBio, in partnership with EBD Group, the leading partnering firm for the life sciences industry, will host the sixth annual BioPharm America™ conference September 17-19 at the Westin Boston Waterfront.

“BioPharm America brings industry executives from around the world to the best place for life sciences – the Massachusetts

supercluster,” said Robert K. Coughlin, President & CEO of MassBio. “This event is a great opportunity for the MassBio membership to showcase their cutting-edge innovations and develop new partnerships.”

BioPharm America has become a major hub for engaging new partners in the life sciences industry. The event attracts top dealmakers from biotech and pharma, as well as leading bankers and VCs. Powered by EBD Group’s sophisticated partnering system, partneringONE®, the event enables delegates to efficiently start partnerships with companies across the life sciences value chain.

BioPharm America will kick off its 2013 program with an Opening Plenary entitled “Strategic R&D Planning: The Chameleon Rubik’s Cube” on Tuesday, September 17. The plenary features moderator Vaughn Kailian, Managing Director of MPM Capital and includes speakers James Hoyes, President of EMD Serono; John Maraganore, CEO of Alnylam; David Meeker, President and CEO of Genzyme; and Barbara Yanni, VP and Chief Licensing Officer at Merck. The panel will discuss long-term pipeline planning in drug development which

See **BIOPHARM AMERICA** Page 7



# ADVOCATING FOR MEMBERS AND INDUSTRY



**ROBERT K. COUGHLIN**

Welcome to the summer edition of *MassBio News*. Inside, you will see our annual Industry Snapshot. We are proud to share that Massachusetts continues to lead the nation in research & development jobs, federal research funding and venture capital investment per capita. To maintain our position, we must continue to advocate for policy and regulatory structures that encourage innovation, and work to speed the time to market for therapies for patients around the world.

In this edition you will also read about entrepreneurs getting help to tackle significant healthcare challenges through MassCONNECT and

learn about a program that is providing critical support to veterans returning home from Iraq. These are the stories that remind us of what this industry is all about—saving and improving lives.

As we look ahead to the fall, we have a number of exciting events lined up. BioPharm America 2013 will be the most successful deal-making event on the East Coast and the primary event to showcase therapeutic and research innovation. As of now, 462 companies from 30 countries will be represented. No community is better positioned to host this than we are and I encourage you to register for BioPharm America today.

I also invite you to join us for our annual golf outing on Sept. 6 at Pinehills Golf Club in Plymouth. Registration includes 18 holes of golf, breakfast, lunch, sponsor gifts and a cocktail reception to end the day. Proceeds support MassBioEd's programs and services proven to build the Massachusetts biotechnology workforce.

Best wishes for a relaxing, enjoyable remainder of the summer.

*Robert K. Coughlin is President & CEO of MassBio.*



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## 2020 REPORT MASSBIO KICKS OFF ITS STRATEGIC PLAN

What do you see for the industry five or 10 years into the future? What is your vision for life sciences in Massachusetts come 2020?

MassBio is asking all members and industry stakeholders to consider those questions as it kicks off the 2020 Report, an industry analysis and strategic plan.

The plan will outline a clearly articulated vision for the continued growth of the life sciences

industry as economics, business models, policies and healthcare practices continue to shift through the next several years. It will assess the critical events, trends, policies and discoveries that will impact the life sciences sector through 2020 and make recommendations to ensure that the industry thrives in Massachusetts for generations to come and continues to advance science in addressing the needs of our planet.

Using dozens of stakeholder interviews, as well as analysis of market factors, business trends and competitive clusters, MassBio aims to address key issues and leverage opportunities for all industry stakeholders: life sciences and

biopharma companies, government, academia, investors, providers and patients. In addition, the report will guide MassBio in aligning resources and operations to fulfill its role in the implementation of the strategy.

MassBio has partnered with Health

**HEALTH ADVANCES**  
Strategy Consultants for the Healthcare Industry

Advances, a leading life sciences-focused strategy consulting firm, to develop the plan. The development phase will run from August 2013

through February 2014 and will be overseen by a Steering Committee and Advisory Board of industry luminaries and rising stars.

Past MassBio strategic reports have led to new programs and initiatives that have proven to bolster the industry. In fact, the state's \$1 billion Life Sciences Initiative, and the investments and programs that followed, were the result of recommendations and advocacy undertaken following the 2010 Report. This is an opportunity to voice your challenges and needs, and shape the future of the Massachusetts life sciences industry. Stay tuned to [www.MassBio.org](http://www.MassBio.org) for information on ways to get involved.

## NEW MASSBIO MEMBERS

Akston Biosciences Corporation

Autism Speaks, Inc.

Brown University  
Continuing Education

Cellay Inc

CellMosaic, LLC

Charles River Labs

Daval International Ltd

Exalpha Biologicals, Inc.

Fish & Richardson PC

HS Pharmaceuticals, LLC

Intellimedix

JETRO  
(Japan External Trade Organization)

MaxCyte, Inc.

Neurotech Pharmaceuticals, Inc.

Scientific and Medical  
Coalition Against Cancer

Slone Partners

Sotio, LLC

The McCormack Firm, LLC

TriNet HR Corporation

Wentworth Institute of Technology

Xenetic Biosciences

XRpro Corporation

X-Rx Discovery, Inc.

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[www.youtube.com/massbio](http://www.youtube.com/massbio)

[www.massbiohq.org](http://www.massbiohq.org)

Below, MassBio's Adventures in Biotech Forum series kicked off in June with discussions on *Dreams to Reality* and *Financing the Dream*. The six-part series continues in September with topics around *Executing the Dream*. Visit [www.MassBio.org](http://www.MassBio.org) for more details and to reserve your seat for these popular Forums.







At a ceremonial swearing-in at Faneuil Hall in Boston, U.S. Sen. Edward J. Markey takes the oath of office as his wife, Susan Blumenthal, holds the Bible.

## POLICY UPDATE CHAMPIONS FOR THE LIFE SCIENCES INDUSTRY

### Federal Update

On Tuesday, July 16, Vice President Joseph Biden administered the oath of office to the now junior Senator from Massachusetts, Edward J. Markey. As a Congressman, Ed Markey was not only committed to the people of his district, but was also a true champion for innovation. Throughout his tenure, Ed Markey was a dedicated advocate for increasing NIH funding and he developed initiatives that led to advances in energy, technology, and biomedical research that helped form and grow today's innovation economy.

As he takes on his new role as U.S. Senator, we look forward to Senator Markey's continued support and partnership. Together, we can continue to build a climate that supports and encourages breakthroughs that will improve the lives of people both in Massachusetts and around the world.

We also look forward to a spirited race to fill Senator Markey's former Congressional seat, which represents a district that includes a large number of MassBio member companies and employees. Three of the candidates recognized the importance of the life sciences industry in the district and recently visited MassBio to share their views on the race and the future of innovation in this ever-changing political landscape. State Senator Katherine Clark, a Democrat from Melrose, Middlesex County Sheriff and former state Representative Peter Koutoujian, and current Biotech Caucus co-chair state Senator Karen Spilka participated in informative and passionate dialogues with MassBio Board members, staff and other stakeholders. The primary is set for October 15, with the general election to be held on December 10.

### State Update

In May, MassBio hosted an event for a great friend to the life sciences industry, Speaker of the House Robert DeLeo. Speaker DeLeo joined us for breakfast to meet with key representatives from our member companies and led an excellent discussion on the current budget process and issues of import to the industry and innovation economy including some insight on STEM education and the importance of sufficiently preparing our teachers and students to be the Commonwealth's future workforce.

# Q&A WITH LAB INCUBATOR LEADERS

Massachusetts has some of the most successful lab incubators in the world and MassBio works with their tenants to help provide programming and cost-savings on supplies. Massachusetts' incubators are well-connected to the life sciences ecosystem and can connect entrepreneurs to the supportive network that the region provides.

Lab incubators are a great option for early-stage startups. We asked local lab incubator leaders to share their advice for choosing an incubator:

**Q** Given the numerous decisions young companies must make, is there a typical decision time at which such companies seek entering a lab incubator? What guidance do you provide such early-stage companies regarding the lab incubator route at that critical time?



**William Brah**  
Founder and Executive Director  
Venture Development Center,  
University of Massachusetts

When working in industry or a university, you begin to envision that a new company can be created, and make the personal commitment to create it, it is time to enter the incubator.

You need a place where you can put your head down and crank on your business. This also helps you avoid a conflict of interest.

To make this transition smooth, the Venture Development Center offers first-class, move-in-ready private labs and offices and company building expertise. We've launched some of the best startups in Boston — Sample6, Valerion, Factor Bioscience, to name a few.



**Jack Cohan, Manager**  
BioSquare Discovery and  
Innovation Center

The decision time is when the embryonic company realizes that the infrastructure provided by a lab incubator space would reduce its startup time and expenses and allow it to focus its limited resources on research.

Our guidance highlights the necessity to have a serious game plan for a solidly researched breakthrough technology including a financial plan to achieve its designated milestones; also, advice on how to access costly high-tech tools such as cryo-electron microscopy and macromolecular X-ray crystallography through the incubator and to use the lower tech amenities provided including catering, space for on-site conferences, and hazardous and biological waste disposal.



**Kevin O'Sullivan, President & CEO, Massachusetts Biomedical Initiatives (MBI)**

MBI has enjoyed a successful tenant company "graduation" rate of 75 percent based on two criteria: the incubator company has left our facility and, is operating independently — hopefully in Massachusetts. The guidance that we provide "seed" stage companies who seek lab space is that they must raise at least a year of operational funding, need to have a Business & Science Plan "roadmap" in place and, must sign a 6-12 month lease. Given our experience, these basic requirements have proven to be essential for long term life sciences company sustainability and commercialization success.



**Martha C. Farmer, Ph.D.**  
President & CEO  
North Shore InnoVentures

Most of the companies that approach us about the incubator are very early stage — one or two people with a brilliant idea, some "friends and family" funds, maybe a provisional patent filed and/or an SBIR application. They come looking for lab space and don't yet value all the subsidized support an incubator provides — mentoring, connections, services, shared equipment. Incubators help conserve capital and offer valuable flexibility. We advise entrepreneurs to study their market and clarify their value proposition if necessary. We provide guidance on preparing their pitch. They then present to our needs-assessment team as if we were investors — we are.



**Raj Rajur**  
Chairman & CEO  
CreaGen Biosciences, Inc.

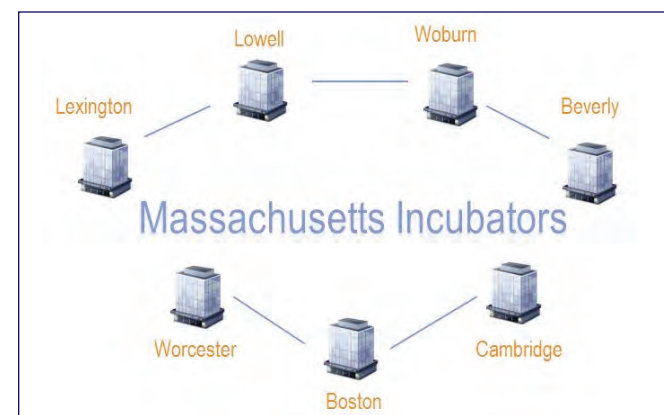
Incubator facilities enable efficient deployment of people, time and cash.

Young companies can use the space to develop their novel scientific concepts, build robust IP, and secure or maintain the confidence of investors. Start-ups at C2I enjoy ready access to valuable research equipment and tools, flexible lease terms, capital equipment, permits, waste disposal, utilities, office equipment and more. A stand-alone laboratory facility is not usually compatible with a tight budget, as each of these resources comes at significant cost in time and capital. Additionally, we provide guidance through experienced corporate consultants who have successfully navigated the path the burgeoning start-up is on.



**Steven Riesinger**  
CEO and Co-Founder  
MedChem Partners Inc.

I am a firm believer that a company has to own its core technology. I don't just mean from an IP standpoint, I mean they have to understand it inside out and sideways. You need to have confidence in your process. It's very hard to get that if you outsource everything from day one. Incubators allow you to offset the high price of setting up a lab and leverage your capital to get a solid proof of concept and a set of SOPs with your own scientists. Incubators allow you to maintain a core competency without having to maintain a lab.



Learn more about Massachusetts lab incubators at  
[www.MassBio.org](http://www.MassBio.org)



# MASSACHUSETTS CONTINUES TO LEAD BIOPHARMA INDUSTRY

Massachusetts biopharma employment continues to grow in Massachusetts, though some other clusters are outpacing the Commonwealth, according to an annual industry report published by MassBio.

The 2013 MassBio Industry Snapshot shows Massachusetts continues to lead the nation in research & development jobs, federal research funding and venture capital investment per capita, but smaller biotech clusters, such as Washington and New York are growing at faster rates as governments increasingly court the industry as an economic development engine.

“Let’s be clear, Massachusetts remains far and away the most robust cluster for industry research and investment, and we continue to grow our presence,” said MassBio President & CEO Robert K. Coughlin. “But we cannot take our eyes off the ball, as the nation and the world try to rebound from the recent recession. We must continue to advocate for policy and regulatory structures that encourage innovation and work to speed the time to market for therapies for patients in need.”

This year’s Snapshot will lay the foundation for the 2020 Report, a strategic report for the industry commissioned by MassBio every five years. The 2020 Report will be produced in partnership with Weston-based Health Advances and it will be completed by spring 2014.

Massachusetts employment in the biopharma industry rose to 56,462 in 2012, based on data from the U.S. Bureau of Labor Statistics’ Quarterly Census of Employment and Wages (QCEW) and, for the first time, factoring medical testing laboratory employment as part of the industry.

Massachusetts still leads the nation in biotechnology R&D jobs, a segment of the larger industry employment, with more than 27,800 positions in 2012, and the state maintained its position as the leader in R&D in biotechnology, as defined by industry concentration.

Since 2007, Massachusetts added 3,227 jobs in biotechnology R&D. While this number of jobs added is second only to California (4,304), Massachusetts’ 13.1 percent growth was outpaced by other clusters, including California (22.5 percent), New York (41.7 percent) and Washington (53.8 percent).

New this year, MassBio looked at medical device manufacturing in Massachusetts. With 23,151 employees in 2012, the Commonwealth has been close to the national growth rate of two percent over the last decade. Only California and Minnesota employ more in the medical device industry, while Minnesota and Massachusetts have the strongest industry concentrations across medical instrument manufacturing industries.

Venture investment in biotech declined 15 percent across the nation in 2012, and venture investment in Massachusetts biotechs declined from 2011’s all-time high to \$838 million in 2012.

Additional highlights from the report include:



BY JONATHAN GARDNER  
*EVALUATEPHARMA*

The top 12 venture capital rounds by Massachusetts biotechs in 2012 raised more than a half-billion dollars and provided the springboard for two public floats, in a year of otherwise disappointing returns on the biotech scene, according to a report published by MassBio

Fundraisings in the New England state accounted for more than one-sixth of all biotech VC rounds in the US last year, according to EvaluatePharma data. Cambridge-based Warp Drive Bio raised \$125 million in an initial funding round, of the second-highest amount raised by any American company in VC rounds in 2012.

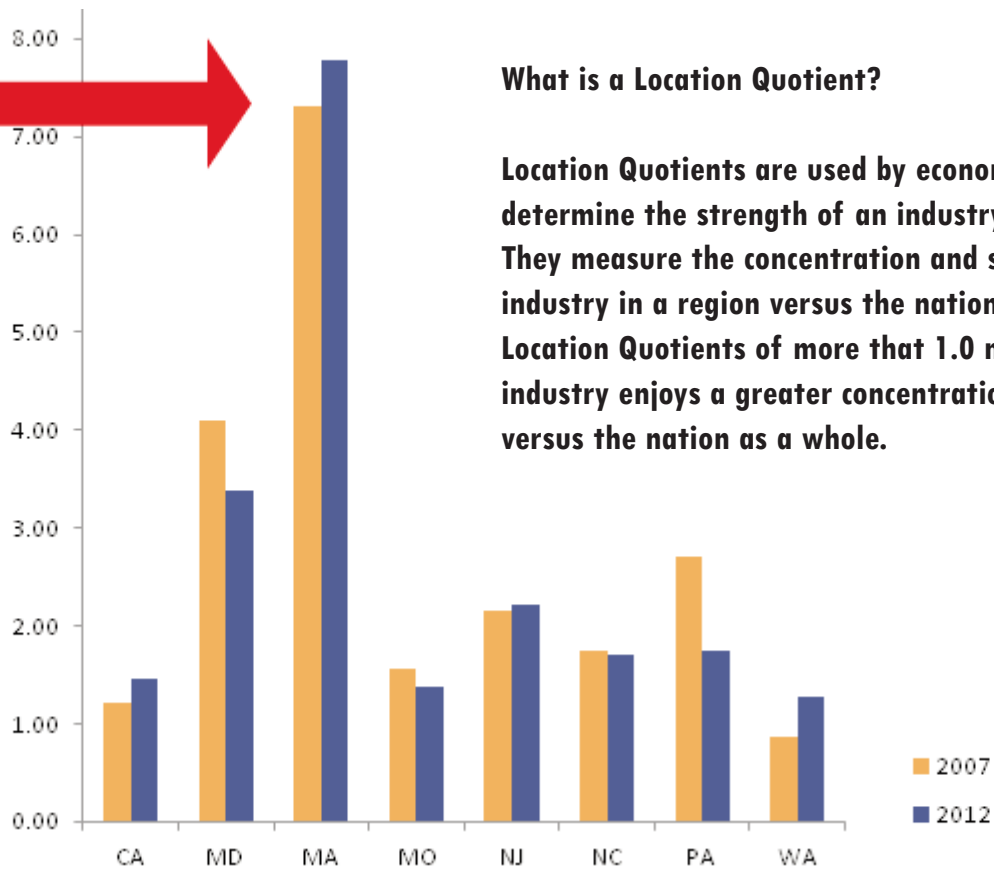
## R&D IN BIOTECH: INDUSTRY CONCENTRATION

Massachusetts holds a dominant position in terms of industry concentration in biotechnology research and development — almost twice the concentration of jobs as the next closest state.

- Nationally, biopharma manufacturing employment has declined by 8 percent since 2002. Massachusetts ran counter to the trend, as one of only four leading biomanufacturing states that grew employment since 2002.
- Massachusetts accounts for 11.3 percent of the U.S.-based drug development pipeline.
- Massachusetts-headquartered companies account for five percent of the global biologics pipeline.
- On an NIH-funding per-capita basis, Massachusetts continues to far exceed other leading NIH-recipient states.
- Since 2007, just under 2.6 million square feet of commercial lab space has

### What is a Location Quotient?

Location Quotients are used by economists to determine the strength of an industry in a place. They measure the concentration and strength of an industry in a region versus the nation as a whole. Location Quotients of more than 1.0 mean that the industry enjoys a greater concentration in a region versus the nation as a whole.

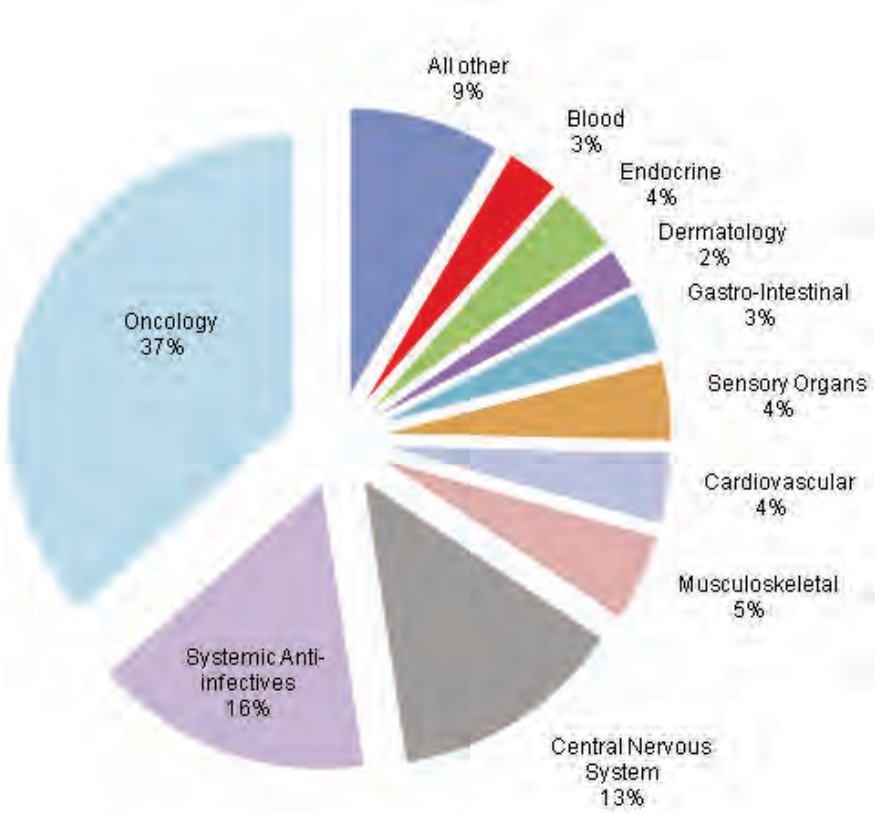


been added to inventory in Massachusetts. More than two million square feet of new lab space is currently under construction.

This year’s Snapshot was again produced in partnership with EvaluatePharma, the premier source for commercial analysis of the pharma and biotech sector. Snapshot statistics are compiled annually by MassBio from sources including EvaluatePharma, the U.S. Bureau of Labor Statistics and the Quarterly Census of Employment & Wages.

The Snapshot findings will be used in MassBio’s 2020 Report in conjunction with stakeholder interviews and analysis of market factors, business trends and

## MASSACHUSETTS PIPELINE BY THERAPEUTIC AREA, 2013



competitive clusters. The 2020 Report will include a plan that outlines a clearly articulated vision for the continued growth of the life sciences industry as economics, business models, policies and healthcare practices continue to shift through the next several years. It will assess the critical events, trends, policies and discoveries that will impact the life sciences sector through 2020 and make recommendations to ensure that the industry thrives in Massachusetts for generations to come.

For more information on the Massachusetts cluster, or the 2020 Report, visit [www.MassBio.org](http://www.MassBio.org).

## REPORT HIGHLIGHTS

◆ Mass. biopharma industry employment reached an all-time high of **56,462** in 2012, continuing the industry’s eight-year pattern of growth, and now accounts for over **\$6.5 billion** in payroll.

◆ The estimated average salary in the biopharma industry is **\$115,290, 89%** higher than the estimated state average salary of \$60,901.

◆ Mass.-headquartered companies have a total of **1,174** drug candidates at some stage of R&D. Oncology drug candidates make up **37%** of that pipeline.

◆ The top **3** NIH-funded independent hospitals in the U.S. in 2011 are in Boston. **10** of the top 18 are in New England.

SEE THE FULL REPORT AT [MASSBIO.ORG](http://MASSBIO.ORG)

# VENTURE BACKERS STILL FIND MASSACHUSETTS FERTILE GROUND

### Falling back

Along with the industry worldwide, Massachusetts VC funding rounds fell back from record levels in 2011, amounting to \$838 million in 2012. Warp Drive was the only privately held Massachusetts group to break the \$100 million barrier; two, the now-public Bluebird Bio and Rhythm Pharmaceuticals, broke \$50 million barrier, according to the MassBio report.

Two firms, Genoceia and Collegium, managed to pull off multiple rounds in a year that frustrated many companies as well as financiers trying to assemble consortia to back promising companies. The bulk of the action is in Cambridge. Sixty-one percent, roughly equalling the gross domestic product of the Caribbean island nation Dominica, went to companies based in the home of Harvard University.

Massachusetts biotechs are also going where the greatest amount of activity in the sector is – oncology. While oncology candidates represent the



biggest share of candidates in development throughout pharma, accounting for 30 percent of all R&D projects, they are over-represented in Massachusetts laboratories and clinics at 37 percent, according to an analysis of EvaluatePharma data published in the report.

### Therapeutic focus

Anti-infectives are also over-represented in Massachusetts laboratories and clinics, accounting for 16 percent of drugs in development compared to the 14% for the industry as a whole. CNS and endocrine projects are slightly

under-represented, perhaps reflecting the difficulty of getting these projects through the clinic without a big pharma partner as well as the obstacles to achieving regulatory approval.

Early stage discovery continues to be the strength of Massachusetts biotech. Some 819 drugs are in preclinical development at Massachusetts-based companies, nearly equalling the entire R&D pipeline of the European biotech hub Switzerland at 888, the EvaluatePharma data analyzed for the report reveals.

It could go some way toward explaining a healthy M&A scene, with 48 takeouts of companies in the state worth \$33.3 billion — including the \$20.1 billion Sanofi paid for Genzyme — and 57 acquisitions by Massachusetts companies worth \$9.3 billion between 2008 and 2012. With so much early stage discovery ongoing, it is not surprising that so many companies end with an exit.

Since 1996, EvaluatePharma has been the premier source for life science sector analysis, delivering exclusive, trusted commercial insight into industry performance through its proprietary platform. EvaluatePharma is staffed by a team of over 85 dedicated healthcare analysts employing rigorous methodologies to collate, organize and deliver the most-up-to-date commercial performance data available. An award-winning editorial team of journalists writing under the EP Vantage name support EvaluatePharma’s analysis. For more information please visit [www.evaluatepharma.com](http://www.evaluatepharma.com).

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# MASSBIOED AWARDED \$100,000 GRANT FROM CUMMINGS FOUNDATION



Lance Hartford, Executive Director of MassBioEd Foundation, left, and Dennis Clarke, President and CEO of Cummings Properties, the Cummings Foundation's for-profit affiliate.

MassBioEd Foundation has been selected as one of 100 local nonprofits to receive grants of \$100,000 each through Cummings Foundation's new \$100K for 100 program. This grant will allow MassBioEd to improve its BioTeach science education program and reach new schools.

"MassBioEd Foundation is thrilled to receive this generous grant from the Cummings Foundation," said Lance Hartford, Executive Director of the MassBioEd Foundation. "This funding will allow us to increase the number of Middlesex County high schools in the BioTeach program. In addition, we will expand the reach and impact of our BioTeach program by creating new video resources, provide schools with consumable reagent kits, and develop new labs specifically tied to Next Generation Science Standards."

With the Cummings Foundation \$100,000 grant, MassBioEd will:

- Develop a video library of the BioTeach curriculum techniques. The series of support videos will demonstrate key techniques, best practices and tips for dealing with the most common issues that arise when implementing new labs in schools. The video library will allow veteran and new teachers access to

critical technical information in real time, helping to improve the quality of their teaching and their student's learning.

- Launch a new BioTeach program to address the ongoing need for consumable reagents. In partnership with local universities and biotech companies associated MassBioEd's parent organization, MassBio, MassBioEd will prepare buffers and other reagents in bulk, dispense them into appropriate volumes, and package the components into kits ready for use by Middlesex County BioTeach schools.

- Develop a series of new labs specifically tied to the new Next Generation Science Standards (NGSS) just released this month. These labs will be developed in collaboration with Middlesex County BioTeach teachers and university students in Boston area science teacher certification programs.

- Invite the 24 Middlesex County schools which are not currently participating in the BioTeach program to receive, on a competitive basis, laboratory capital equipment, consumables, and teacher professional development. Through this outreach, MassBioEd seeks to add four new Middlesex County schools to the BioTeach program.

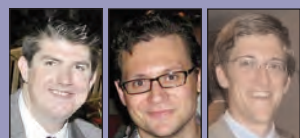
The Cummings Foundation recognized MassBioEd and the other grant recipients at its first Grantee Reception on June 19 at TradeCenter 128 in Woburn.

Learn more about MassBioEd at [www.MassBioEd.org](http://www.MassBioEd.org).

## ENTREPRENEURS WORKING IN OBESITY, STEM CELL TREATMENTS, CYSTIC FIBROSIS AND NEUROSCIENCE SPEND SUMMER WITH INDUSTRY MENTORS

Entrepreneurs tackling significant healthcare and research challenges including nonsurgical alternatives to gastric bypass surgery, adherence to treatment in cystic fibrosis, boosting stem cells anti-inflammatory responses, and tracking complex patterns in mice used for neuroscience research have been working with industry mentors in the latest round of MassCONNECT, MassBio's life sciences and healthcare entrepreneur mentorship program.

For 8-10 weeks, these entrepreneurs—selected for their innovative technologies, products, or services—are paired with seasoned life sciences professionals for evaluation and advice as they work toward developing business plans, launching companies, and raising capital. The applicants chosen for the latest round of mentorship include:



### AWARE Engineering, LLC:

**Integrated modular health platform (IHP) for CF patients**  
**ROBERT SCHULTZ, ELI GOLDBERG & SCOTT LUCHAU** | Boston, MA & Zurich, Switzerland

The Aware Engineering IHP integrates the various CF health management equipment and components such as a pill organizer; a medical grade air compressor, steam sterilizer and refrigerator; and a chest physical therapy or compression vest system — all of which are required for compliance with state-of-the-art CF therapy.



### Nivarta: Novel target drug development company for diabetes and obesity

**MURALI VEMULA** | Cambridge, MA

Nivarta (<http://www.nivarta.com>) is an early-stage drug discovery company that is focused on identifying novel gut secreted proteins that are involved in gastric bypass surgery mediated alleviation of diabetes and weight loss.



### Machine Vision for Morphological Tracking: A comprehensive and quantitative animal behavior monitoring platform for CNS target and drug discovery and preclinical development

**SANDEEP ROBERT DATTA & ALEXANDER BAME WILTSCHKO**  
Cambridge, MA

Investigators have created a 3D machine vision system that reveals the actions and action assembly statistics that define the behaviorome via depth cameras to image and capture the 3D morphology of a mouse in real-time as it behaves.



### Tufts Medical School and JouR, Inc: NGF and NT-3 mimicking synthetic peptide technology that stimulate progenitor cell growth, survival and immunomodulation

**MERCIO PERRIN** | Boston, MA

Research at Tufts has led to the discovery of a protein made by T cruzi, called parasite-derived neurotrophic factor (PDNF), that functionally mimics nerve growth factor (NGF) and neurotrophin-3 (NT-3), thereby potentially triggering cardiac stem/progenitor cell (CPC) growth, survival and immunomodulation.

This cycle of MassCONNECT is sponsored by Choate Hall & Stewart LLP, which is providing eight mentors for the cycle: William P. Asher Jr., Brian D. Goldstein, Daniel S. Matthews, Rolando Medina, Ph.D., Atsuko N. Polzin, Ph.D., Gerald E. Quirk, David G. Rickerby and Arun P. Swain.

Learn more about this cycle's entrepreneurs at [www.MassBio.org](http://www.MassBio.org). For more information on the MassCONNECT program, or to apply to be a mentor, mentee, or MBA intern, visit [www.MassBio.org/innovation/massconnect](http://www.MassBio.org/innovation/massconnect).

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Delivery

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- mHealth Solutions
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# MASSBIO TO HOST LIFE SCIENCES PARTNERING EVENT

**BIOPHARM AMERICA:** from Page 1

can be likened to a Rubik's cube that changes colors with its surroundings.

Other highlights of the 2013 program include a new spin on a conference favorite, Doug MacDougall's "The Perfect Pitch: Do you have what it takes to win over investors?" and the workshop "Why can't big pharma invest in my company?" moderated by David Collier, CEO of Velocity Pharmaceutical Development.

"This year we have changed the program to include a full afternoon of roundtable discussions to engage conference attendees as well as the executive panelists," said Carola Schropp, President of EBD Group. "The new roundtable format will promote discussion and interaction among discussion leaders and audience members, and therefore provide yet another networking opportunity for participants."



The 16 roundtable discussions fall into four tracks: The Future of Dealmaking, External and Internal Drivers, Therapeutic Spotlight, and Welcome to the Digital Age.

In 2012, BioPharm America saw more than 750 international biotech and pharma leaders from 462 companies engage in 1,846 one-to-one partnering meetings. There were 30 countries represented and 652 licensing opportunities posted on partneringONE.

MassBio members receive a \$200 discount by adding the code 'MassBio' in the comments field of the online registration form. Registration information and the full program for BioPharm America can be found online at <http://www.ebdgroup.com/bpa>.



BioPharm America is the place to meet face-to-face with industry executives from around the world.

## HOT IN BOSTON

These companies are representative of the quality of innovation and creative business models that characterize the Boston-area biotech region. Meet with these companies, and many others, at BioPharm America 2013, Sept. 17-19.



### **RANA THERAPEUTICS: EPIGENETIC APPROACH TO SELECTIVELY ACTIVATE THERAPEUTIC PROTEIN EXPRESSION**

RaNA Therapeutics is leveraging 20 years of oligonucleotides research to target a new, unexplored, druggable space. Fundamentally, RaNA's approach selectively activates therapeutic protein expression to treat or prevent disease.

"We're trying to expand beyond the starting point of the platform and identify its limits. This approach has so much potential," said President and CEO Arthur Krieg. "We have eight programs we're actively working on and taking forward. We want to develop this as broadly as we can."

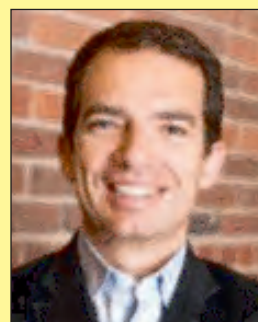


**Arthur M. Krieg,**  
President and CEO,  
RaNA Therapeutics

RaNA plans to have the first program in clinical trials in 2015. Ultimately, the company would like to keep a few programs in-house and partner the rest.

To expand partnering and acquisition options, RaNA was formed as a limited liability corporation. This enables partners to acquire the programs they want without also purchasing other, unwanted programs or acquiring staff. Instead, the staff remains with RaNA's operating company and continues to work on other

programs. This structure enables RaNA and its partners to gain maximum value and increases the flexibility for the involved companies, thus efficiently generating returns to shareholders.



**Stéphane Bancel,**  
President and Founding  
CEO, Moderna  
Therapeutics

### **THE MODERNA/ ASTRAZENECA DEAL BODES WELL FOR BIOTECH**

When Moderna Therapeutics and AstraZeneca partnered this spring to develop a disruptive early stage therapeutic technology, it signaled a significant shift in the life science investment ecosystem. "This shows that when pharmaceutical teams see a company with innovative science and an experienced management team to make the promise a reality, they are willing to invest and take risks," noted Stéphane Bancel,

President and Founding CEO, Moderna Therapeutics.

Going against the trend to focus upon late-stage development, AstraZeneca paid Moderna Therapeutics USD \$240 million up front to access Moderna's messenger RNA Therapeutics™ platform, which is still in preclinical development. The technology enables the body to produce therapeutic protein in vivo, making it possible to treat thousands of diseases that otherwise are undruggable.



### **TETRAPHASE REINVIGORATES TETRACYCLINES FOR MULTIDRUG BACTERIAL RESISTANCE**

All previous tetracyclines now on the market were developed with semi-synthetic methods that begin in bacteria and were followed by limited chemical modification. That traditional process limited the chemical diversity, he explained. That lack of diversity makes it very difficult to create tetracycline antibiotics that address multidrug resistant bacteria. As a case in point, only one tetracycline antibiotic has received FDA approval in the past 42 years.

In contrast, since its inception in 2006, Tetraphase has identified more than 50 novel chemical scaffolds and more than 2,800 novel analogs of tetracycline, enabling them to address many more infectious threats than the tetracyclines currently on the market. This explosion of possibilities is based upon the discoveries of Andy Myers at Harvard University. Tetraphase licensed exclusive, worldwide rights to Myers' proprietary technology and has further developed this in-house. Guy Macdonald, President and CEO of Tetraphase Pharmaceuticals, Inc. said, "we have the opportunity to take an efficacious and safe class of drugs and then reinvigorate it."

*Stories above excerpted from partneringNEWS.*

**Registration for BioPharm America is now open and partnering has begun. Visit [www.MassBio.org](http://www.MassBio.org) for more information.**

**MassBio members receive \$200 off of registration by using the code MassBio in the comments field.**



## GOLF CLASSIC FUNDS BIOTECH EDUCATION

On Sept. 6, MassBio will return to the prestigious Pinehills Golf Club in Plymouth for the 19th Annual Golf Classic to benefit MassBioEd Foundation. The tournament includes 18 holes of golf with a fun networking reception at the end of the day that includes raffles and an auction.

Proceeds from this annual event directly support the critical work of the MassBioEd Foundation in strengthening biotech education throughout the state, including the BioTeach

equipment and teacher professional development program for public high schools.

"Being a BioTeach school presents endless possibilities for both teachers and students," said Whitney Hagins, the former science department head of Lexington High School, which has trained hundreds of students in biotechnology with BioTeach support. "My school has been fortunate to have a longstanding cooperative partnership that has included equipment grants, teacher training and

career exploration days for the students. What makes BioTeach such a powerful program is the commitment to both teacher and student learning. This model helps foster an exciting learning partnership between students and teachers as they share their experiences and learn together."

Hagins will join the nearly 300 golfers at the Golf Classic closing reception. Space in the tournament is limited, so register today at [www.MassBio.org](http://www.MassBio.org).



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# SAFE AT HOME

## MGH, RED SOX PROVIDE SERVICES FOR VETERANS

BY MEAGHAN CASEY

As many as one in three returning Iraq and Afghanistan veterans suffer the invisible wounds of war— post traumatic stress and traumatic brain injury.

Fortunately, some local veterans are finding help at the Red Sox Foundation and Massachusetts General Hospital Home Base Program. Created in 2009, Home Base is a partnership between academic medicine and Major League Baseball. It is the first program of its kind to provide clinical care, community education and research in support of Iraq and Afghanistan veterans and families who have been affected by combat or deployment-related stress.

“Military-connected families are extremely resilient, but the past decade of war and repeated deployments has taken a toll on even the strongest families,” said Brigadier General (ret.) Jack Hammond, executive director of Home Base. “For many, coming home is the most stressful time, with nightmares and difficulty sleeping, no longer feeling safe in everyday places, trouble concentrating, severe headaches and family stress.”

Since its founding, Home Base has provided clinical treatment for more than 600 veterans and family members, and educated more than 7,500 clinicians across the U.S. to recognize post traumatic stress and traumatic brain injury, as well as the challenges faced by military families.

Home Base clinicians are based at Massachusetts General Hospital and are affiliated with Spaulding Rehabilitation Hospital. The physicians, psychologists and social workers understand the military culture and the unique needs of veterans and military families. The program’s veteran outreach team is a key component; composed of combat veterans who served in Iraq and Afghanistan, the team works alongside the clinicians to support throughout the treatment process.

“Vet-to-vet contact is the real heart of this program,” said veteran outreach coordinator Bob Davis, an Iraq War veteran who was working as a medic and mental health specialist at Fort Devens when Home Base was launching. “I know how difficult it is when you get back and I wouldn’t recommend a program I wouldn’t go to myself.”

Davis, who is now retired from the Army Reserves, served two tours of duty in Iraq and was awarded the Bronze Star, two Army Commendation Medals, the Combat Action Badge and the Combat Medical Badge for his service. In addition to his time in Iraq and at Fort Devens, he also worked as a member of the 883rd Medical Company Combat Stress Control Unit based in Boston. Having undergone counseling



Bob Davis, an Iraq War veteran, now serves as a Home Base veteran outreach coordinator.

from the Department of Veterans Affairs (VA) after he returned from Iraq, Davis developed the tools to better understand and control his own memories. He hopes that talking about them will help other veterans deal with their own experiences.

“Our first step is reaching out to veterans and finding out where they’ve been and what they’ve done,” said Davis. “Most have an appointment set up within two weeks where they’ll meet a clinician, a social worker and one of us. Some military injuries have little to do with combat and more to do with circumstances—like being away from home. We see whole families who have had separation issues.”

Spouses, parents, children, siblings, grandparents, significant others and other loved ones are all eligible for services at Home Base. Treatment is tailored to the individual and will last for as long as the support is needed. If they wish, patients can also participate in cutting-edge research aimed at improving treatment and understanding of Post-Traumatic Stress and Traumatic Brain Injury (TBI).

Home Base routinely works with the VA and the Department of Defense to make certain that veterans and families receive the care they need in a timely manner, and in the correct and most convenient setting. The program also works with long-standing veteran-serving organizations in Massachusetts including the Massachusetts Department of

Veterans Services, the Massachusetts National Guard and student veteran organizations at New England colleges

“Part of the process is making sure their secondary needs are taken care of, whether it’s assisting them with job searches or adjusting back to a non-military routine,” said Davis, who utilized his GI Bill benefits to complete his bachelor’s degree in fire science management. When not at Home Base, he works as a firefighter in Newton.

“Leaving the military after 16 years was difficult for me, but it’s been an easier transition being able to give back to this program and maintain contact with fellow veterans,” he said.

*To learn more about supporting the Home Base Program, visit [www.homebaseprogram.org](http://www.homebaseprogram.org) or contact Tracy West at 617.643.6789 or [tawest@partners.org](mailto:tawest@partners.org). There are many ways in which to get involved at Home Base, including tickets or sponsorship of its benefit concert ([www.missiongratitude.com](http://www.missiongratitude.com)) at Boston Symphony Hall Sept. 23 featuring performances by comedians Sarah Silverman and Darrell Hammond, musical artists Willie Nelson, Jewel, The Band Perry, Big & Rich, Cassadee Pope, and performer Rita Wilson; or sponsoring or placing corporate teams into its 9K run and 2-mile walk in May that ends at Fenway Park ([www.runtohomebase.org](http://www.runtohomebase.org)).*