



MBC NEWS

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Patient Profile

Tara Hillstrand-Lane



She does not define herself by her disease, multiple sclerosis (MS). She continues to live and learn, one day at a time, defying negativity.

"MS is my motivational spirit," she said. Read more about this remarkable woman on Page 3.



Sound investment

Panel discussion moderator Dr. Una Ryan, President and CEO of Waltham Technologies stresses the need for a mix of traditional and alternative funding methods for biotech firms at the 10th Annual MassBio Investors Forum. Pages 4-5. PHOTO: REBA SALDANHA

MBC says thank you to a steadfast supporter



MBC Board members John Hennessy, left, and Scott Gillis, second from right, joined the MBC's John Heffernan, far right, in thanking State Rep. Michael Rodrigues for his support of the industry and work as the co-chair of the Biotech Caucus.

2015 vision

Mass. Biotech Council implements strategy report and business plan

The Massachusetts Biotechnology Council has embarked on an important strategic initiative aimed at ensuring that Massachusetts maintains its position as a world-class center for the biotechnology industry.

The 2015 Strategy Report and Business Plan will define an integrated vision for the biotechnology industry in Massachusetts. This vision will tie key federal, state and local government initiatives to an implementation roadmap for academia, industry, investors, and medical centers in the state. MBC has appointed Deloitte Consulting and L.E.K. Consulting to

assist with the development of the 2015 Strategy Report.

The work for this project began in November and will go through January. Toward the end of January the MBC will release the 2015 Report's strategic imperatives, and begin to engage stakeholders in the execution of the key initiatives.

Over the past several weeks, the team has interviewed leaders within the industry, including biotech and pharmaceutical executives, investors, industry organizations and academic

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Ready to move forward after historic year



Robert K. Coughlin

As we wrap up a successful and historic 2008, we have much to be thankful for—a new \$1 billion Life Sciences Initiative, continued growth in the Massachusetts life sciences cluster and a wealth of human capital across the Commonwealth.

All of these factors will have to come into play as we prepare to weather the toughest economy many of us have seen. The economy was a big topic of the day at the 10th annual MassBio Investors Forum this month, and we reached the goal of the event: to connect biotech companies with funding sources and to help them get their products to the finish line—which is the patient. See the center spread for more from the forum.

Also in this issue, good news from the \$1.4 million Cancer Research Challenge, a partnership between the MBC and the American Cancer Society to fund postdoctoral fellowships. Three of those fellows are profiled in this edition of MBC News.

In 2008, the MBC was proud to join with the MassBioEd Foundation and announce 49 new BioTeach grants for the

Commonwealth's high schools. In this edition, you will read about how Dedham High School students are benefiting from the grant.

Above all, our mission at MBC is to drive innovation by creating a forum for the biotech community to come together and advancing the economic interests of individual companies, as well as the sector as a whole. It has certainly been a busy year at MBC, and 2009 promises to be as well. With the nation facing a troubled economy, it is more important than ever that the MBC is serving our members—with legislative advocacy, professional development and networking opportunities—so they can thrive and grow. We are the voice for biotech in Massachusetts, and we will do everything we can to help that voice grow and be heard.

Best wishes for a happy and healthy new year.

Robert K. Coughlin is president and CEO of the Massachusetts Biotechnology Council.

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TAKE THE INITIATIVE



MBC President and CEO Robert K. Coughlin, right, is joined by Congressman Richard E. Neal at Take the Initiative — a conversation on the \$1B Life Sciences Initiative — held in Springfield Nov. 10.



Congressman Neal welcomes visitors to the Pioneer Valley Life Science Institute.



Massachusetts Life Sciences Center President and CEO Dr. Susan Windham-Bannister addresses the gathering.

Patient Profile

Tara Hillstrand-Lane



Tara Hillstrand-Lane and her husband, Matt, enjoy a well-deserved rest after hiking.

MS patient will not let disease beat her

BY MEAGHAN CASEY

Tara Hillstrand-Lane does not define herself by her disease, multiple sclerosis (MS). She continues to live and learn, one day at a time, defying negativity.

“MS is my motivational spirit,” she said. “I’ve always been a competitive person, and I saw this as another challenge. The best way to succeed was to educate myself, put together the best team of doctors – with myself as captain – and stay determined and focused.”

Hillstrand-Lane was diagnosed with relapsing MS in March 2000, just two weeks after her wedding. She was 28 years old.

A chronic, inflammatory condition of the nervous system, MS is estimated to affect 2.5 million people worldwide. The most common symptoms included blurred vision, numbness or tingling in the limbs and problems with strength and coordination.

“It’s not easy to tell when someone is numb or tired,” she said. “The symptoms aren’t visible, so a lot of people cannot understand what you’re experiencing.”

For Hillstrand-Lane, symptoms began appearing in June 1999. She suffered from intense migraine headaches and felt fatigued and irritable. She admits to taking as many as six caffeine pills and drinking as much as 80 ounces of soda daily. At the time, she was dedicating more than 80 hours a week to her career as skating director at an Indianapolis ice rink.

An enthusiastic athlete, Hillstrand-Lane’s early passion for figure skating and skiing evolved into a passion for coaching. In high school, she was forced to give up dreams of becoming a professional skater due to stress fractures in her shins. This time, her body was sending her other warning signals.

Her initial MRI was inconclusive, and when the symptoms faded, Hillstrand-Lane attributed them to stress. When the numbness returned while she was in Colorado for her

wedding, she immediately made an appointment with her physician and a neurologist. In the initial weeks of her diagnosis, she was filled with disbelief, fear and a multitude of questions. She set out to find information on the disease, therapies and support organizations, as well as another neurologist who would be a better fit for her long-term.

“Finding the right physician for you is so important,” she said. “It’s within your right and best interest to get the help you need. I found the perfect match for me. He was someone who talked with me, not to me. He took the time to listen.”



Tara Hillstrand-Lane

Hillstrand-Lane began her treatment as part of an evidence study, comparing two drugs approved for relapsing MS in a head-to-head trial.

“My treatment path was randomly selected for me through the trial, but I honestly felt pretty lucky,” she said. “I was scrutinized by my own physician on a regular basis, so I knew I was in good hands. I didn’t know what to expect from the therapy, but I know now that that was the right choice for me. It’s convenient and easy to use, perfect for an active person on the go.”

After several months of treatment, Hillstrand-Lane had already regained her energy. But to be completely successful, she realized she also had to commit to a lifestyle transformation.

“My diagnosis would give me reason to take a hard look at my life, and re-evaluate my priorities,” she said. “During the first year of my diagnosis, I was still trying to manage

my health, my career and my marriage; it was too much. I learned how to say no to others and yes to myself. I dictate my life and my schedule. I’m enjoying my life so much more now. It’s too bad that a disease had to be the thing to make me change, but at this point in my life, I would never trade back.”

Hillstrand-Lane remains committed to her original treatment plan and serves as an MS LifeLines Ambassador for EMD Serono — a biopharmaceutical company that has a strong market position in neurodegenerative diseases such as MS. Ambassadors act as examples and resources in the MS community, by providing inspiration and empowerment about living well with MS.

“It’s a way to present the personal side of MS,” she said. “By talking to others and letting them know they’re not alone, it gives them hope and encouragement. To have someone give you a hug and say thank you, that’s pretty powerful. I think the people I’ve met have had as much of an impact on me as I’ve had on them.”

Hillstrand-Lane has also founded MS Awareness Bling, LLC in an effort to share information about the disease in the most positive and fashionable way.

“MS has typically been portrayed in a negative way, and for most people, it doesn’t necessarily mean that,” said Hillstrand-Lane. “I wanted to create a symbol – like the breast cancer pink ribbon – that would provoke conversation and educate people about MS. It was a way to create a platform to present MS in a positive light.”

Products range from embellished T-shirts to silver earrings, and a portion of the proceeds from sales go to the Heuga Center for Multiple Sclerosis and the National Multiple Sclerosis Society. In March, she also organized a skate-a-thon, which raised \$13,000 for the Heuga Center.

In addition to her advocacy efforts, Hillstrand-Lane is continuing her coaching career, and enjoying an active life in Colorado with her husband, Matt.

New Speaker Bureau links industry with community

In efforts to strengthen the pipeline between the Commonwealth's students and the biotechnology industry, the Massachusetts Biotechnology Education (MassBioEd) Foundation has launched a new comprehensive Speaker Bureau program.

"More public outreach is needed to promote the variety of exciting, challenging, rewarding and financially attractive careers available in the Massachusetts life sciences industry," said Massachusetts Biotechnology Council President and CEO Robert K. Coughlin. "Efforts to address K-12 STEM pipeline issues in Massachusetts could benefit from increased participation by life sciences employers."

MassBioEd currently has a working relationship with more than 162 public schools throughout Massachusetts, through its BioTeach program. Many teachers in those schools have requested assistance to make connections to area biotechnology companies. They would like to see more employees speaking to their students on topics such as career path/career opportunities; research and development process; manufacturing process; drug development; and DNA and forensics.

MassBioEd will manage and coordinate the Speaker Bureau, recruiting speakers and working with them to explain the program and identify specific speaking opportunities in the region.

The new MassBioEd Web site — www.massbioed.org — is set up to streamline the Speaker Bureau process, allowing requests from the schools to be processed through a speaker database with specific search capabilities for speakers by location, specialty, topic and degree.

Potential speakers are encouraged to e-mail their resume/CV to: Suzanne Grillo, MassBioEd Web site marketing manager at suzanne.grillo@massbio.org or call (617) 674-5141.



Dedham High honors biology students learn about DNA fingerprinting using equipment and training paid for with a MassBioEd Foundation BioTeach grant.

BIO TEACH

Dedham High students get hands-on experience

BY MEAGHAN CASEY

As Dedham High School students eagerly boarded a bus on a Thursday afternoon, it was clear this was not your typical yellow school bus.

Inside of the 40-foot, fully equipped traveling laboratory — known as the MobileLab — the school's honors biology students set up shop with micropipets and gel electrophoresis equipment to solve the "Mystery of the Crooked Cell," an experiment with DNA fingerprinting.

The MobileLab was developed in 1998, through a partnership between the Massachusetts Biotechnology Education (MassBioEd) Foundation and Boston University School of Medicine's CityLab, with the hope that students develop a deeper understanding of molecular biology and biotechnology through hands-on experiences. It also provides a training ground for high school teachers to practice-teach new labs with the input of CityLab educators.

"The MobileLab visit is very exciting for schools and for the students who have their laboratory instruction on the bus," said Robert Ross, BioTeach program director.



In attendance for the MobileLab's visit to Dedham were, from left, Carl Franzblau, chairman of the biochemistry department at Boston University; State Rep. Paul McMurry; Dedham School Committee member Tracy Driscoll; MassBioEd Executive Director Lance Hartford; and MBC President and CEO Robert K. Coughlin. Not pictured are School Committee members Margaret Connolly and Joanne Flatley.

"But the primary purpose is to ensure the teachers who received training during the summer have the skills and are comfortable with the equipment and techniques to effectively teach the biotech labs."

Dedham High School was one of 49 schools to be awarded a BioTeach grant by MassBioEd this year. The BioTeach program outfits school science labs with lab equipment and supplies to teach

biotechnology and provides professional development for biology teachers in biotech science. Schools receive \$7,800 in equipment and up to \$1,000 in consumables in year one.

Cancer Research Challenge spurs new studies among fellows

Dr. Adam Boutin
EMD Serono, Inc. Fellow

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committed to discovering and developing innovative products that address unmet medical needs.

Boutin's research is in colorectal cancer (CRC), the second-most lethal cancer in the U.S., with 52,180 deaths in 2007. The high mortality rate occurs when the primary tumor in the colon metastasizes to the liver, lungs, bone and brain, rather than the original tumor itself.

"My motivation now stems both from close family members and friends that have succumbed to the disease, as well as a deep scientific curiosity with a disease that is your own cells committing mutiny and killing you. I have dedicated myself to fight this disease," Boutin said.

Previous research suggests that any tumor is capable of metastasizing and becoming malignant, but new studies propose that some tumors are genetically predetermined to metastasize. To investigate this question, Boutin's team is proposing to build and refine a mouse



model for metastatic colorectal cancer.

This new model will incorporate the three most common and biologically important CRC gene mutations in humans and limit their activity to the mouse large

intestine, the site of CRC in humans.

"Models of cancer are common, but bona fide genetic models of late stage and metastatic cancers are very rare," said Boutin. Using advanced genomic profiling and gene expression analysis, this study will attempt to identify key genetic alterations that permit cancerous cells to become metastatic. Such knowledge will be critical for the early diagnosis and stratification of would-be metastatic tumors and will have an enormous impact on the management of early stage and advanced disease.

"The American Cancer Society grant not only provides me with the necessary funds to support my research costs, it also provides me with the moral support that I am pursuing a valid and relevant research goal," Boutin said. "The ACS grant is an important honor for me personally, and hopefully for my career in cancer research as well."

Dr. Paul L. Boutz
Novartis Institutes for
BioMedical Research Fellow

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he said.

Currently, Boutz is working to develop a method that will "trick" cells to take up double-stranded RNA. This technique will turn off specific genes, causing cell death and destruction of the cancerous tumors.

"This is a completely novel phenomenon. At present RNAi therapies are not feasible, but if we can develop a system for enhancing the delivery of double-stranded RNA into cells, we can create therapeutic uses of RNA to combat cancer and



other diseases caused by gene expression," he said.

"If I didn't get this grant, I would probably be out of a job next year," said Boutz. "With this money I have been able to continue working on my project and make great progress this year."

Boutz was born in Albuquerque, N.M., and received his bachelor's in Biochemistry from Rice University in Houston. He has published six major papers since 1997 and continues to excel in his field.

Boutz moved to Boston in July with his wife, Abby, and is working as a post-doctoral associate in Dr. Philip Sharp's laboratory at MIT. In his free time Boutz enjoys camping, backpacking, skiing and sailing.

Dr. Matthew Ramsey
AstraZeneca Pharmaceuticals

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Council Challenge AstraZeneca Pharmaceuticals Fellow, has dedicated himself to identifying the molecular abnormalities that give rise to this form of cancer and to providing a more effective means of treating patients with SCC.

Ramsey focuses his research on a protein known as p63 that controls the fate of squamous carcinoma cells and functions as a master regulator of growth and survival in normal and cancerous squamous epithelial cells. His time is split between two projects, one working with a sophisticated genetic mouse model of SCC and the other using human SCC cell lines. Ramsey anticipates his findings will aid in designing cancer therapies that perhaps could be a more effective and less toxic form of treatment, as well as providing higher cure



rates for patients with SCC.

"The good thing about my job is that in many ways there is no 'standard day' as each day has different experiments to do," Ramsey said. "This grant has given me many new opportunities, provided me with valuable learning experiences and has given me

the chance to talk to patients, families, and donors through the association with the American Cancer Society, which I would otherwise not have had."

Ramsey graduated from Boston College with a bachelor's degree in biology in 2000, and received his Ph.D. in Genetics and Molecular Biology from the University of North Carolina in 2007. It was not until working as a technician at Brigham and Women's Hospital in the department of Dermatology, alongside scientist James Rheinwald, that he really found his niche in cancer research. He is currently a post-doctoral research fellow in cancer biology at Massachusetts General Hospital.

CAREER OPPORTUNITIES



The MBC's annual Career Fair was held Nov. 12 at the Sheraton Boston Hotel. More than two dozen biotechnology, research institutions and other industry related companies had the opportunity to highlight their job openings to interested participants. Leslie Greenfield of Millennium Pharmaceuticals shares information with Ed LeDuc.

Mass. Biotech Council implements strategy report and business plan

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leaders, to understand their operational and policy needs. These interviews and the assessment that the team is conducting have already started providing insight and perspective about future industry trends and their potential impact on the state and global biotechnology industry, as well as an understanding of the competitive positioning of the Massachusetts cluster. In addition, the report will explore strategic opportunities for helping the biotechnology sector address the current economic environment and for continuing to meet the most pressing needs of the industry.

The last month of the year is a very

busy one at the MBC, and 2009 looks to be no different. Therefore, it is more important than ever that the MBC remain in close communication with its members in order to continue strengthening the commitment for biotech in Massachusetts. If you have any comments or suggestions to include in the 2015 Report, feel free to e-mail them to 2015Report@massbio.org.

With this strategic report, the MBC hopes to highlight the common goals and concerns of MBC member companies, as well as to provide a framework for joint activities by all industry stakeholders. The MBC will continue to do everything it can to further enhance the Massachusetts biotechnology industry's competitive position and future growth.

Please welcome MBC's newest members

ABM Associates, LLC
Accelerated Cure Project for
Multiple Sclerosis
Affomix Corporation
Agius Pharmaceuticals
AllerQuest LLC
Anterion Therapeutics, Inc.
ApoConsult LLC
Arch Therapeutics, Inc.
Ash Stevens, Inc.
Biotechnology Center for
International Service Ltd/BIOCIS
Bridge Laboratories
CellDesign, Inc.
CellThera, Inc.
Choose Worcester, Inc.
Conner Strong Companies
DENS Facility Services, Inc.
Eutropics Pharmaceuticals Inc.
Gilbane Building Company

Halloran Consulting Group, Inc.
Hepregen Corporation
iQuest Analytics, Inc.
Marchon Partners
Medidata Solutions, Inc.
Musa Technology Partners LLC
OCT USA, Inc.
Patriot Partners, LLC
PearTree Pharmaceuticals, Inc.
PM Solutions
Proteostasis Therapeutics, Inc.
Provenance Biopharmaceuticals
Corp.
Quintiles
Ricerca Biosciences, LLC
Sagamore Plumbing & Heating, Inc.
The Victory Group, Inc.
VivoPath, LLC
Wise Construction Company
Wyman Street Advisors

Questions about your company's membership? Contact our member services team, Lauren Laidlaw and Kathryn Kilroy, at 617-674-5100.



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Up for the Challenge

MBC funds cancer research fellowships for top-ranked postdoctorates

Working with the American Cancer Society, the Massachusetts Biotechnology Council issued an unprecedented \$1.4 million cancer research challenge to life science companies to fund the region's most

promising postdoctoral fellowships. The goal of the challenge, announced in May, was to fund 12 three-year ACS postdoctoral fellowships worth \$140,000 each. With cancer research on the rise, but federal funding for basic

science research on the decline, the ultimate goal is to fund 100 percent of AMS top-ranked postdoctoral fellowships in New England. MBC members AstraZeneca Pharmaceuticals, Novartis Institutes for BioMedical

Research and EMD Serono, Inc., generously stepped forward with the lead commitments to each fund a three-year ACS fellowship. Below, you will read about the critical work of three fellows who received funding this year.



Dr. Adam Boutin
EMD Serono, Inc. fellow

BY SHANNON MULLEN

Dr. Adam Boutin of the Dana-Farber Cancer Institute has been chosen the American Cancer Society/Massachusetts Biotechnology Council Challenge EMD Serono, Inc. Fellow.

EMD Serono provided an unrestricted educational grant for this fellowship. EMD Serono is a leading biopharmaceutical company focused on specialized therapeutic areas, including neurodegenerative diseases, fertility and endocrinology, as well as oncology as an emerging area of expertise. The company is

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Dr. Paul L. Boutz
Novartis Institutes for
BioMedical Research fellow

BY NATASHA GILL

Dr. Paul L. Boutz, a post-doctoral associate at MIT, has been named the American Cancer Society/Massachusetts Biotechnology Council Challenge Novartis Institutes for BioMedical Research Fellow.

Boutz joined MIT after receiving a Ph.D. in Immunology and Molecular Genetics from the University of California at Los Angeles.

"Growing up I always had an interest in the natural sciences. I actually wanted to be a paleontologist,"

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Dr. Matthew Ramsey
AstraZeneca
Pharmaceuticals fellow

BY LAURA HERSHEY

It is estimated that every year 250,000 new cases of Squamous Cell Carcinoma (SCC) — a cancer that can arise in many organs including the lung, esophagus, and head and neck regions — are diagnosed in the United States. Unlike some other cancers, relatively little progress has been made in either improving the cure rate or increasing the survival of patients afflicted with this disease.

Dr. Matthew Robert Ramsey, the American Cancer Society/Massachusetts Biotechnology

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