

MBC President and CEO Robert K. Coughlin checks out the Airgas cystic fibrosis chopper at the MBC Golf Classic. Pages 4-5.

PHOTO: REBA SALDANHA



Dave McLachlan, second from right, is congratulated for his years of service by, from left, Lance Hartford of MassBioEd, and MBC President and CEO Robert K. Coughlin and Board Chair Mark Leuchtenberger.

McLachlan leaves board after 17 years

By Meaghan Casey

After serving on the Massachusetts Biotechnology Council (MBC) Board of Directors for 17 years, David J. McLachlan, a former executive at Genzyme Corp, stepped down as Director Emeritus in August.

"When I joined the board in 1991, MBC was only six years old," said McLachlan. "It was a thrill to watch the organization grow as the industry grew in Massachusetts. The Council became the spokesperson, getting the public involved in what biotechnology is really about and promoting it throughout the state."

"Dave was integral in the establishment of MBC

See McLACHLAN Page 7

New drug gives cancer patient hope



Maddie Hunter is the first patient profiled in a series to be published in MBC News.

By Meaghan Casey

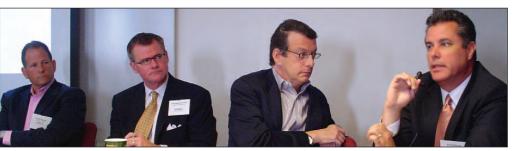
A self-described motivator, educator and story teller, Maddie Hunter is a New Jersey-based business consultant and coach. She is a former classroom teacher whose mission is now that of a patient advocate. She is a loving mother and a devoted daughter. She is an enthusiast of both the arts and the outdoors.

Today, she is also the voice of multiple myeloma. A cancer of the plasma cell, multiple myeloma is a progressive blood disease. In the U.S., almost 20,000 new cases are expected to be diagnosed by the end of this year. At present, it is an incurable but treatable disease.

"My realistic hope is that myeloma becomes a chronic yet manageable issue and we all live long, long lives," said Hunter. "My ultimate hope is that the cure is around the corner."

Hunter was diagnosed in 2001. Following a stem cell transplant, she went into remission for seven years and then

See HUNTER Page 6



From left, Scott Sarazen of Ernst & Young, Christopher Kennedy of Sturgeon Investments, Michael Lytton of Oxford Bioscience and James Kenney of MassDevelopment were panelists at the LSI forum held at MBC.

MBC kicks off LSI forums

By Meaghan Casey

From bench to commercialization, the \$1 billion benefits of Gov. Deval L. Patrick's Life Science Initiative (LSI) will fuel the Massachusetts economy.

To ensure that its member companies understand and have access to those benefits, the

Massachusetts Biotechnology Council kicked off a series of informational forums this fall. The first was held on Sept. 25, and was hosted by MBC President and CEO Robert K. Coughlin and Dr. Susan Windham-Bannister, president and chief executive officer of the Massachusetts Life Science Center.

See LSI Page 6

Thank you for your continued support



Robert K. Coughlin

It has been a little more than a year since I began my term as President and CEO of the Massachusetts Biotechnology Council, and I want to thank you for the honor of holding that title. This past year has been full of activity at MBC, across the Commonwealth and on Capitol Hill.

In this edition of *MBC News*, you will find an update on our many activities related to the \$1 billion Life Sciences Initiative. It is vital that the benefits of this legislation translate from paper into useful programs and incentives, and we are working closely with the Massachusetts Life Sciences Center to ensure our members are connected with the opportunities available to them through this new initiative.

As we embrace the opportunities made available by the Life Sciences Initiative, we continue to monitor the regulation process that resulted from the healthcare cost containment bill signed into law in August. It is imperative that we stay vigilant, as the implementation will have potentially significant costs to the Commonwealth and possibly stifle innovation in our industry and impact patients.

Earlier this year, the Massachusetts Biotechnology Council began surveying members to better understand what they want and need from their state trade association. We are thrilled to hear you value our professional development forums and advocacy activities, and are committed to improving our program offerings and member benefits to best suit your needs.

We are continuing to drill down and examine the full survey results, but initial analysis clearly identifies two challenges the industry will face in the coming years—workforce development and capital formation. Our members are looking for help in accessing the financing and human capital they will need to grow in the next decade, and MBC intends to address these issues head on.

Last month, we teamed up with the Massachusetts

Life Sciences Center to release the results of Growing Talent, the Life Sciences Talent Initiative report, which details the challenges and opportunities we face to ensure Massachusetts has the high quality workforce we will need for generations to come. We are very proud of the strides the MassBioEd Foundation has made in this area, and are committed to partnering with industry and academia to implement solutions.

And we have retooled our annual MassBio Investors Forum to address the growing economic challenges head on. This year's event will pair companies with disease foundations, government agencies, angel investors and venture capital firms to help them identify unique opportunities available to take their research or product development to the next level.

Thank you all for your continued support.

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

MBC NEWS

A PUBLICATION OF:

Massachusetts Biotechnology Council

One Cambridge Center Cambridge, MA 02142 617-674-5100 www.massbio.org

Robert K. Coughlin, *President and CEO*Imran Nasrullah
Chief Business Officer
John Heffernan
VP of Policy and External Affairs

Board of Directors

Mark Leuchtenberger, Chair Geoffrey F. Cox, Vice Chair Michael W. O'Hara, Treasurer Glenn Batchelder, Clerk Mike Webb, Immediate Past Chair

> Mark R. Bamforth Erroll De Souza Jeffrey J. Elton Stephen Faraci Fereydoun Firouz Scott Gillis John K. Hennessy Timothy Hunt Edwin M. Kania Jr. Michael Kowolenko Laurie Bartlett Keating Judy Ozbun Steven G. Richter Una Ryan Amit Sachdev Frank Thomas Lawrence S. Wittenberg

> > PRODUCED BY:



GRANT COMMUNICATIONS CONSULTING GROUP Boston/New York 781-598-8200 e-mail: gccg@grantgroup.com

MBC Federal Policy Team looks ahead to 2009

Despite the late flurry of activity as Washington scrambled to address the nation's financial crisis, Congress adjourned in early October leaving many issues – including a number of measures critically important to MBC members – unresolved and unlikely to be addressed before next year. One thing Congress did accomplish for biotech late in the session – it passed a two-year extension of the R&D tax credit as part of the \$700 billion financial services bail-out bill.

The MBC federal policy team is

preparing for a busy start to 2009, when a new Congress and new President will settle in. The MBC will continue to be deeply involved in legislative efforts to create a pathway for approval of biosimilars, restore SBIR eligibility for venture backed companies, protect intellectual property through strong patent law, and increase NIH funding.

Health care reform, a proposal which includes extension of coverage to the nation's millions of uninsured, will be among the hottest topics when policy makers reconvene.

Senator Edward M. Kennedy has taken the lead to have health care reform legislation ready for a vote early next year. The MBC has taken a proactive stance, convening a number of high-level meetings with key members of the Kennedy team to help shape what could be the most sweeping and comprehensive health care legislation since passage of Medicare in 1965. These meetings and exchange of ideas will continue throughout the balance of this year.

Speaking of biotech ...



The MBC hosted a reception for House Speaker Salvatore F. DiMasi in September: from left, MBC board member John Hennessy from AstraZeneca, MBC President and CEO Robert K. Coughlin, Fereydoun Firouz, President and CEO of EMD Serono, MBC Board Chair Mark Leuchtenberger of Targanta Pharmaceuticals and MBC board member Scott Gillis came to thank the speaker for his consistent support for the industry.

Why Massachusetts?

RainDance Technologies celebrates decision to move here

By Meaghan Casey

As one of the first companies to relocate to the Commonwealth under Gov. Deval Patrick's innovative Life Sciences Initiative (LSI), RainDance Technologies, Inc., dedicated its new Lexington headquarters and operations building on Sept. 28.

RainDance, a provider of innovative droplet-based microfluidic solutions for human health and disease research, cited the LSI as a major factor in moving the company's operations from Conn. to Mass.

"We liked what we saw in Massachusetts," said RainDance President and CEO Chris McNary. "Its access to life science talent, state research grants, and the customer base of the greater Boston-Cambridge area were important requirements for our growing company."

RainDance was founded in 2004 by scientists from Harvard University; the Medical Research Centre in Cambridge, England; and the Industrial Physics and Chemistry Higher Educational Institution in Paris. The company cited the Massachusetts Biotechnology Council (MBC), Mass. Secretary of Housing and Economic Development Daniel O'Connell and the governor's office for making the



From left: Chris McNary, President and CEO of RainDance Technologies; Sir Richard Roberts, member of RainDance's Scientific Advisory Board and founder and Chief Scientific Officer of New England Biolabs; Daniel O'Connell, Mass. Secretary of Housing and Economic Development; MBC President and CEO Robert K. Coughlin; and Steve Becker, Vice President, Commercial Operations, RainDance Technologies.

relocation a smooth and seamless

'We are proud to have RainDance Technologies join the impressive list of life sciences companies basing their operations in Massachusetts,"

said MBC President and CEO Robert K. Coughlin. "Their innovative technology and unique knowledge will add vitality to our biotechnology community."

"Strong public-private

partnerships have made Massachusetts a leader in life sciences and personalized medicine with a growing base of companies and research institutions," said O'Connell. "RainDance will play an important role in continuing that leadership.'

Keynoting the dedication event was Sir Richard Roberts, 2003 Nobel Prize winner for physiology and medicine and founder and chief scientific officer of New England Biolabs. Roberts is one of three Nobel Prize winners to serve on the company's Scientific Advisory Board. The others include: Marie Lehn (chemistry, 1987) and Aaron Klug (chemistry, 2002).

"The development of new technology has driven the pace of discovery in health and human disease research," said Roberts. "RainDance technology has the potential to accelerate breakthroughs in genomic research and fulfill the promise of personalized medicine."

At the event, RainDance also unveiled its new RDT 1000 instrument, the centerpiece of its new sequence enrichment solution for the targeted genomic sequencing market. McNary anticipates the technology, which has broad use in the prediction and prevention of human disease, will be commercially launched during the first quarter of 2009. The simplicity, speed, and capacity of the technology will enable numerous uses in biomedical applications, including genomics research, gene expression analysis, compound screening, and biomarker detection.

MassBioEd announces new Learning Center courses

The Massachusetts Biotechnology Education Foundation's Biotech Learning Center is pleased to announce the addition of two new courses: "Leadership Training Program for Scientists" and "Principles of Current Good Manufacturing Practices."

The two new courses join Learning Center favorites "Overview of Clinical Research" and "Biotechnology Project Management." In preparation for its latest programs, MassBioEd has worked diligently to craft modern, useful classes that would benefit biotech industry workers.

A recent survey, which collected information from more than 60 companies in Massachusetts, helped pinpoint needs in

the life sciences sector that the Biotech Learning Center could address in its classrooms. One of the most pressing needs from industry leaders was for scientists to be better equipped leaders in the workforce. MassBioEd believes the new leadership class will serve as a helpful resource.

The class, taught by consulting strategist and author of The Partnering Solution Dr. William Ronco, is comprised of four 4-hour sessions with a multi-week break halfway through the program designed to offer students the opportunity to apply what they have learned at that point in the program. The class will be held this fall on Nov. 5-6, and Dec. 3-4.

The second of the two courses — taught

by Matthew Peplowski, a senior lead trainer at Bristol-Myers Squibb — focuses on providing industry workers with cGMP training, a regulatory requirement by the FDA. The course's goal is to help companies and their personnel practice in compliance with federal requirements by informing new workers of the strict regulations of the industry. This course was scheduled to be held Tuesday, Oct. 28.

All of MassBioEd's courses are offered at its offices in Cambridge, Mass. For more information about any of the programs, please contact Hannah Yun, Manager of Education & Training Programs, at hannah.yun@massbio.org.

New Classes

Leadership **Training Program** for Scientists NOV. 5-6 and DEC. 3-4

> **Principles of Current Good Manufacturing Practices OCT. 28**

For more information contact: Hannah Yun at hannah.yun@massbio.org MBC News Fall 2008 — 5

to ing io E

From left Sean Rurns, Rob Coughlin Tony Grieco, David Rurke and Gene Holmstead at the MRC Golf Classic

HOTOS: BERA SALDANHA

MBC tournament raises \$100,000 for MassBioEd

By Meaghan Casey

More than 400 biotech professionals and suppliers teed off at the 14th annual MBC Golf Classic in efforts to build bio-science literacy, one school (and putt) at a time.

The event raised approximately \$100,000 for the Massachusetts Biotechnology Education Foundation (MassBioEd) and its BioTeach program. Since 2005, BioTeach has awarded more than \$1 million in grants to 162 schools state-wide. The program aims to enable every public high school in Massachusetts to teach biotechnology and to engage high school students with hands-on lab experiences that inspire scientific curiosity.

MassBioEd also offers courses, seminars and online resources through its Biotechnology Learning Center. In 2007, more than 170 professionals from 70 member companies participated in these career-enriching opportunities, designed to build and strengthen the biotech workforce.

"The future growth the Life Science sector is in large part determined by our ability to provide an educated and innovative workforce," said MassBioEd Executive Director Lance Hartford. "The MassBioEd Foundation is committed to linking academia, government agencies and industry leaders to develop initiatives and systems to ensure life science employers have the talent they need to

succeed in Massachusetts. The MBC and its member companies' support is critical to the foundation and to our ability to prepare the future workforce."

This year's golf tournament was held on Sept. 5 at Stow Acres Country Club and Butternut Farm Golf Club. Participants enjoyed 18 holes of golf, food, drinks and networking. The event also featured live and silent auctions. Platinum sponsors included Airgas, a distributor of industrial, medical and specialty gases and related equipment and safety supplies; The Linde Group, a worldwide supplier of industrial and medical gases; and VWR International, a diversified supplier in the global research laboratory industry.



Greg Dombal of Halloran Consulting tees off.



From left, Peter Pedro, Phil Litos and Warren Nelson enjoy the reception after golf concluded.



Walsh, Peter Abair, Bobby Mathews and Curtis Cole celebrate a good shot; at left, Bob Coughlin, right, and William Gittler of Airgas pose with the Airgas cystic fibrosis chopper at the MBC Golf Classic.

Above from left, Jason

Thank you to our sponsors

PLATINUM SPONSORS

Airgas Linde VWR

GOLD SPONSORS

Charles River Covance

SILVER SPONSORS

Edvotek Finnegan Veolia

COPPER SPONSORS

Astrazeneca
iMarc
Microtest
Parexel
Patriot Partners
Polachi
World Courier

MEDIA SPONSORS

CBS Radio - Boston

HOLE SPONSORS

Aerotek
Alexandria Real Estate
Equities
Amgen
Freeman
KPMG
MPI Research
Perkins & Will

MBC kicks off LSI forums

LSI: from Page 1

"This is an exciting time for us in the life sciences industry," said Coughlin. "MBC aims to serve as the source of information for members looking to access the LSI's benefits. Today is an opportunity to come up with strategies to ensure our investments are made wisely to create jobs and cures."

Windham-Bannister outlined some of the major objectives of the initiative, which include promoting economic development and supporting the state's world-class academic medical centers, research institutions, universities and industry leaders. She also broke down the legislative package, which includes \$500 million for capital projects, \$250 million in research grants and workforce training initiatives and \$250 million in tax incentives targeted toward job creation.

As president and CEO of the Massachusetts Life Sciences Center, the agency charged with overseeing the \$1 billion, Windham-Bannister is at the center of connectivity for all sectors of the life sciences community. The center is making strategic investments in the life sciences workforce and in research at critical stages of the development cycle. Windham-Bannister has traveled across the Commonwealth, listening to stakeholder groups.

"My job right now is to be an active listener," she told attendees at MBC's forum. "I'm really trying to understand where we can make an impact. What investments will be broadly responsive to the needs of the life sciences community? "How do we balance competing targets for investments? My mantra is seeding, accelerating, matching."

The forum also included a panel discussion on the LSI tax incentives. There are nine tax benefits and incentives available to qualifying companies showing a demonstrable job-growth profile. Benefits include an increase in the investment tax credit to 10 percent and an extension of the net operating loss carry-forward from five to 15 years. For the first time, qualifying life sciences companies can opt to redeem state tax credits for up to 90 percent of face value, and the LSI establishes a 100 percent tax credit for FDA user fees, also redeemable for cash if the company so chooses.

"The benefit of LSI is its flexibility and its ability to paint with a very broad brush to make Massachusetts as attractive as possible," said panelist Scot Butcher, managing director of Duff & Phelps. "The previous tax incentives were very strict with corporations. The intent now is to lift the restrictions of the first 15 years."

Other panelists included Joseph X. Donovan of Sullivan & Worcester; Christopher Kennedy, CEO of Sturgeon Investments; James Kenney, vice president for commercial lending for MassDevelopment; Michael Lytton, general partner of Oxford Bioscience; Scott Sarazen, global biotechnology markets leader for Ernst & Young; and Jason Zorfas of Ernst & Young.



Spreading the good word

From left, MBC President and CEO Robert K. Coughlin, Donna Lavoie of Lavoie Strategic Communications Group and Dr. Christoph Westphal, CEO of Sirtris Pharmaceuticals, gather at a meeting hosted by the MBC Marketing and Communications Committee. Dr. Westphal spoke about his experience leading an organization through acquisition.

MBC releases collaborative report on Growing Talent

By Meaghan Casey

Essential to the growth of the Commonwealth as a global powerhouse in the life sciences industry is the growth of its talented workforce.

In September, the Massachusetts Life Sciences Center and the Massachusetts Biotechnology Council (MBC) released the findings of their co-sponsored Life Sciences Talent Initiative (LSTI) study, entitled "Growing Talent: Meeting the Evolving Needs of the Massachusetts Life Sciences Center." The study lays out recommendations for the state to improve, expand and tailor its educational programs and resources designed to prepare students and workers for jobs in the life sciences sector.

"Massachusetts' world-class workforce is the number one reason that life sciences companies and research institutions grow or locate in the state," said Dr. Susan Windham-Bannister, president and chief executive officer of the Massachusetts Life Science Center. "The Commonwealth needs to build upon its strengths if it is to remain the world leader in discoveries, patient care and private sector investment in the life sciences."

"In order to continue to enjoy strong growth, the industry's pipeline of workers – from skilled technicians, engineers and scientists, to the many professional positions that support life sciences – needs to grow as well," said MBC Board Chairman Mark Leuchtenberger.

"We must work together to ensure that we are educating and preparing our future workforce for this vital industry."

The study's findings reveal that 85 percent of the state's life sciences employers expect to expand in the next two years, but 90 percent find it difficult to fill clinical research jobs. More than 75 percent of respondents also reported difficulty finding engineers and employees with regulatory and marketing experience.

Kev recommendations include:

- Produce and retain more graduate students with interdisciplinary training in the sciences, mathematics, business, and legal and regulatory affairs
- Strengthen the interdisciplinary curriculum and experiential learning programs in undergraduate education
- Improve and target technical training to existing and emerging employer needs
- Expand the pipeline of K-12 students motivated and prepared to enter higher education and careers in science, technology, engineering and math fields
- Improve communication and coordination between the life sciences industry and higher education

Built into the state's landmark \$1 billion life sciences legislation is a \$25 million investment fund that will help to address some of these issues by providing support for workforce training, along with funding for research grants, fellowships and other educational programs.

New drug gives cancer patient hope

HUNTER: from Page 1

relapsed in January 2008. Since then, her treatment path has included Revlimid to regulate the functioning of her immune system; dexamethasone, a steroid-based anti-inflammatory and immunosuppressant; and Velcade, part of a class of cancer drugs called proteasome inhibitors.

Developed by the Cambridge biopharmaceutical company Millennium Pharmaceuticals, Inc., Velcade was launched in May 2003 for patients with relapsed and refractory myeloma. In June of this year, the FDA approved Velcade as a treatment option for newly diagnosed or untreated patients.

After two cycles of Velcade, spanning two months, Hunter went back into complete remission. Ironically, her relationship with Millennium began years before she began using

Velcade. Through events and networking, Hunter befriended Ronny Mosston, senior director for patient advocacy and professional relations at Millennium. In June 2007, Mosston presented Hunter with the opportunity to attend the International Myeloma Workshop, which was held in Kos, Greece and sponsored by Millennium. It was Hunter's dream destination and a major opportunity for her to serve as an international ambassador for myeloma patients.

During a live Webcast at the workshop, Hunter expressed an overall sense of optimism regarding the pipeline for future discoveries.

"I never come away from these meetings without having incredible hope and encouragement," she said. "Not only do we have many more options, but the whole world of genetics is pulling us closer to understanding how to personalize therapies. And, frankly, the dedication and commitment of folks that I see

who are collaborating across boundaries of countries and languages to really devote themselves — it gives me goose bumps."

This year, Hunter was chosen to speak at Millennium's annual meeting. She shared her story, along with the stories of fellow myeloma patients. Since reaping the benefits of Velcade, her relationship with the company has grown.

"It's not an accident I've become such a strong supporter of Millennium," said Hunter. "They're helping me to stay alive. But it's not just that; it's a very special company. They have a strong culture of connection and affirmation of one another that's very unique and that shows up in the quality of what they do in the world."

Hunter's father, William, also experienced the positive effects of Velcade, in the first year that in became available to patients. He was diagnosed with multiple myeloma in 1999, at age 83, and passed away in 2004.

"At that time, the options were very limited," said Hunter. "He was not a candidate for a transplant, and in 2003, he stopped responding to the treatment protocols he had been taking."

Hunter said her father was being treated at Dana-Farber Cancer Institute and gained access to Velcade, which was then only available in clinical trial. "Velcade offered him a year of energy and focus. That last year of his life was a high-quality one for him," she said.

Hunter is amazed not only at the medical progress she has witnessed since her father's diagnosis, but also since her own.

"The box of chocolates is very full for us with myeloma," she said, referring to the variety of treatment options now available. "It's really dramatic. Seven years ago, there was really only one option to prep me for my transplant. Now, there are a zillion combinations, and transplants aren't even the only course of action."



Register now for New England's largest biotechnology investors forum at www.MassBio.org

New this year--

Expand your portfolio of financing opportunities!

- A focus on non-dilutive funding, from disease foundations, government programs as well as corporate venture sources.
- State-of-the-art partnering software, matches you to the people you'd like to meet.

Keynote remarks from

Dr. Robert Beall, President and CEO of the Cystic Fibrosis Foundation

Dr. Joshua Boger, President and CEO of Vertex Pharmaceuticals

Dr. Christoph Westphal, founder and CEO of Sirtris

Dr. John Kao, author of Innovation Nation

And don't forget the ...

Investor panels
Public/private company presentations
Networking cocktail reception

Who should attend:

Portfolio managers, Analysts, Venture Capitalists and International Investors Biotechnology and Pharmaceutical Executives Academic, Clinical and Industry Technology Transfer Specialists

Now accepting applications for Featured Company presentations. Sponsorship opportunities

are available. Contact Lauren Laidlaw at 617-674-5100 or investorsforum@massbio.org.

Agawam High fosters early exposure to biotech careers

AGAWAM: from Page 8

August and spoke to professionals from companies such as Abbott and Wyeth, and they predict that in 10 years most of the biotech jobs that are being outsourced will be back in this country," said Watson. "We should be preparing our students for that."

Last year, Watson and Bobskill piloted a unit on biotechnology careers in two of their sophomore biology classes. With the grant funding, they purchased lab materials such as electrophoresis equipment and a polymerase chain reaction (PCR) machine (also known as a thermal cycler). In year two, the unit is now part of the general curriculum for all 10th graders. The school is also offering a popular new elective course on bio ethics. Next year, the department hopes to offer a semester-long biotechnology course.

In addition to the MassBioEd funding, Agawam High's biotechnology component is being supported by the school's partners: Microtest Laboratories in Agawam, which provides contract manufacturing and testing services for the medical device, pharmaceutical and biotechnology industries; Springfield Technical Community College (STCC); and Westfield State College. Watson and Bobskill were able to develop the curriculum using the framework of STCC biotechnology department professors. STCC also allowed the high school to borrow lab equipment until the teachers were able to purchase their own.

The partners were also actively involved in the school's guest speaker series last year. A professor from STCC led a DNA electrophoresis lab with students, while Microtest presented on careers in biomanufacturing. Other speakers included a local police officer who talked about forensics and criminal justice, a zookeeper who spoke about exotic pets and parasites, a doctor from Noble Hospital in Westfield who described the role of biotechnology in emergency medicine, and a lab researcher who detailed a trial involving insulin resistance in rats. Students also had the opportunity to participate in job shadowing at Noble Hospital and Ludlow Animal Clinic. In May, Hunter organized a job expo with nine area businesses. Representative talked candidly with students and presented on different careers in the life sciences industry and employee expectations.

Q & A with Dr. John Kao



Dr. John Kao

The 10th annual Massachusetts Biotechnology Investors Forum on Dec. 9 will feature a lunchtime keynote speech by Dr. John Kao, who was dubbed "Mr. Creativity" and "a serial innovator" by *The Economist*

Dr. Kao is considered a leading authority on the subjects of innovation, organizational transformation, and digital media. He is author of the best-selling "Jamming: The Art and Discipline of Business Creativity," a *Business Week* best-seller that has been published in a dozen languages, and "Innovation Nation," published in October 2007.

Dr. Kao has a bachelor's from Yale College, an MD from Yale Medical School, and an MBA from Harvard Business School. He taught at Harvard Business School from 1982-96, where he specialized in innovation and entrepreneurship. He has also held faculty

appointments at the MIT Media Lab, Yale College, and the US Naval Postgraduate School.

Innovation is definitely a buzzword these days. What does it really mean?

Innovation is defined in dictionary terms as creativity applied to a purpose to realize value. I like the definition: the capabilities of continuously realizing a desired future. Can you teach creativity?

Definitely – what you can't teach is talent.

In these tough economic times, the first to go is the R&D budget, how can companies maintain their competitive edge if the engine of innovation is curbed?

Smart companies understand that innovation investment continues or even accelerates in recessionary times. In some respects, innovation becomes easier (greater availability of talent, declining costs, less competition for deals).

Regionally and internationally, what are others doing that Boston/Cambridge is not doing well? To what result?

I see other countries investing in what you might call "focused factories" for R&D – focus enables results, obviously. It remains to be seen whether integrated facilities—such as Singapore's Biopolis with its relatively top-down strategy—will survive, but what is clear is that the quantity of innovation capability outside the US is increasing. And if you combine a different regulatory framework, easier clinical trials, and potentially reinvented IP systems, that poses a significant competitive threat.

In the bio-pharmaceutical space, do you see patents as inhibiting innovation or enhancing innovation? Do you see Open Source licensing as freeing up resources to foster biomedical innovation?

This is one of those "yes, and" topics. Obviously patent protection is required to realize the revenue streams that justify large scale investment in drug discovery and testing. On the other hand, a parallel open source licensing market is likely to emerge that will likely accelerate the pace of biomedical innovation in certain slices. I see a hybrid open-closed system emerging.

McLachlan leaves MBC board after 17 years

McLACHLAN: from Page 1

and has played an ongoing supportive role as we continue to grow," said MBC President and CEO Robert K. Coughlin. "He has helped lead this organization with a steady voice and a clear vision of a bright future. He is a true hero to the industry and, more importantly, to the patients the industry provides hope for."

McLachlan, a Chelmsford resident, served as executive vice president and chief financial officer at Genzyme from 1989-2001. During his tenure, he was instrumental in assisting the company in becoming a global, diversified, fully integrated enterprise. He maintained his involvement as a senior advisor to Genzyme's chairman and chief executive officer through June 2004.

Prior to joining Genzyme, McLachlan was employed as vice president of finance at

Adams-Russell Company, an electronic component supplier and cable television franchise owner. He holds a bachelor's and master's degree from Harvard University.

McLachlan is currently a director on the boards of Dyax Corp., a biotherapeutics company, and HearUSA, Ltd., a hearing care services company. He is also chairman of the board of Skyworks Solutions, Inc., which offers a diverse portfolio of products that support automotive, broadband, cellular infrastructure, industrial and medical applications. He has served on the Skyworks board since 2000 and was elected chairman in March of this year.

"David has been a strong voice for the biotech industry and an invaluable member of MBC since its inception. We all owe him a debt of gratitude for his years of service, and wish him well in his new endeavors," said MBC Board President Mark Leuchtenberger.



One Cambridge Center, Cambridge, MA 02142

NON-PROFIT ORG. U.S. POSTAGE PAID CAMBRIDGE, MA 02142 PERMIT NO. 981

Students FIRST



Agawam High student Erik WIIson looks at fungi during biotech class.



Students Ryan Muller and Mehreen Hafeez work with teacher Tammy Watson at Agawam High School.

Agawam High fosters early exposure to biotech careers

By Meaghan Casey

True to the mission of the Agawam Public Schools, the Massachusetts life sciences industry is "putting children first."

Industry leaders recognize that today's students will be tomorrow's scientists, researchers and biotechnicians. To inspire and support them along that path, the Massachusetts Biotechnology Education Foundation (MassBioEd) has awarded BioTeach grants to 162 public high schools throughout the Commonwealth since 2005.

Agawam High School was selected as a Life Science Career Development Initiative grant recipient in 2007. As part of the BioTeach program, this competitive grant supports the development of academic, personal and employability skills for students pursuing careers in the life sciences and biotechnology field at the post-secondary level. In Agawam, Principal Steven Lemanski, Career Center Coordinator Debra Hunter and science teachers Nancy Bobskill and Tammy Watson have spearheaded the efforts to teach students first-hand about the careers and opportunities in biotechnology.

"It's a perfect opportunity to dovetail with our career center," said Hunter. "Biotechnology is the wave of the future, and this grant allows us the chance to bring the concept to life in the classroom."

"Nancy (Bobskill) and I attended a seminar in

See AGAWAM Page 7