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Boston University School of Medicine

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Campus & Alumni News | Spring 2010

Boston University School of Medicine

It starts here.

From infancy through adolescence, pediatric researchers look at new ways to help disadvantaged children and their families.

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Dear Friends,

Last November on the Medical Campus, a packed house of faculty, staff, and students listened intently as Dr. Osamu Shimomura, BUSM professor emeritus and the 2008 Nobel Prize winner for chemistry, shared his Nobel Prize lecture on discovering green fluorescent protein. (See page 8.) The science was compelling, but equally so was the story of his accomplishments, from his strategies to get an education after surviving the Nagasaki bombing, to the photos of him, his family, and colleagues catching jellyfish that are the source of the protein. His story illustrates the roles of diligence, creativity, and perseverance, as well as reflection (thinking creatively while floating in the rowboat), and even serendipity (achieving fluorescence of a discarded sample in the sink, after trying unsuccessfully to get it to glow in a test tube). In the last minutes of his talk, he reflected on the value of discovery for its own sake, as well as how discovery leads to unintended ramifications and applications. During the reception he patiently stood for pictures with happy graduate students and post-docs, pictures that will almost certainly be highlighted in their research presentations for years to come.

Illustrative of the quality of our faculty is the Arnold P. Gold Foundation's choice of Jonathan Woodson, MD, BUSM associate professor of surgery and associate dean for diversity and multicultural affairs, to receive their Humanism in Medicine Award presented at the annual meeting of the Association of American Medical Colleges. (See page 20.) His remarks were inspiring at both the luncheon in his honor and the formal black tie AAMC dinner at which he received the award, clearly a memorable event for Dr. Woodson and our institution.

This issue of the magazine also features some of the current health outcomes research on campus that is contributing to the improved health and well-being of those exposed to trauma, especially U.S. veterans. Given a major traumatic event, humans differ extraordinarily in their psychological resilience. Some of those who appear to be coping well develop disabling flashbacks and nightmares months later. For more than 20 years, BUSM researchers have been studying Post Traumatic Stress Disorder (PTSD). We have some of the best teams in the world detecting biological determinants of risk and determining more effective treatments.

Our Department of Pediatrics faculty provide outstanding clinical care to the children in our community, many of whom are low-income and resource-disadvantaged. Their work is informed by a robust clinical research agenda, which leads to both better direct clinical care as well as improved health policy and systems service for children and their families. Here, we highlight some of their studies as well.

We have filled several important positions on campus, including a new chair recruited from Johns Hopkins for our Department of Dermatology, Rhoda M. Alani, MD, who is recognized internationally for her research in melanoma. Deborah Fournier, PhD, was recruited from our own School of Dental Medicine for a wider campus role as assistant provost for institutional research and evaluation, and Ronald Corley, PhD, chair of the Department of Microbiology, is our associate provost for research.

It's easy to keep current with what is happening at the School of Medicine by checking in on the Medical Campus website at www.bumc.bu.edu. And, finally, don't miss a chance to drop by the School of Medicine if you're in Boston.

Best wishes,

Karen Antman, MD
Provost, Medical Campus
Dean, School of Medicine

TABLE OF CONTENTS

Boston University School of Medicine

Campus & Alumni News | **Spring 2010**

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Ellen Berlin, Director
Mary Hopkins, Publications Coordinator

Design & Production:
Boston University Creative Services
Designer: Garyfallia Pagonis
Photography: Boston University Photo Services, BUSM Educational Media, Marie Turley, BUSM Corporate Communications, and Frank Curran.

Please direct any questions or comments to:
Mary Hopkins
Corporate Communications
Boston University Medical Campus
85 East Newton Street, M-426
Boston, MA 02118

Phone: 617-638-8491
Fax: 617-638-8044
E-mail: mary.hopkins@bmc.org

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Boston Medical Center names new president & CEO

Kate Walsh, executive vice president and chief operating officer of Brigham and Women's Hospital, is the new president and CEO of Boston Medical Center (BMC), BUSM's primary hospital affiliate.

Walsh, who was at Brigham and Women's for the past five years, was approved by a unanimous vote of BMC's Board of Trustees in January after a nationwide search that attracted numerous candidates from across the United States.

Walsh assumed the position on March 1 and succeeds Elaine Ullian, who served as president and CEO of BMC since its founding in 1996.

"It is a privilege to be given the opportunity to lead this extraordinary academic medical center," said Walsh. "The reputation of BMC's mission combined with its delivery of outstanding clinical care has created a foundation of excellence that our city's residents depend upon in their daily lives. I look forward to working with the entire hospital community, Boston University School of Medicine faculty, and our partners in the Boston HealthNet Centers as we strive to bring the best care to people who live in our neighborhoods and beyond."

"Kate Walsh understands the complex issues that challenge academic medical centers," said Karen Antman, MD, provost of the Medical Campus and dean of the School of Medicine. "Her diverse experience combined with her vision and commitment to delivering high-quality health care will serve our campus and community well. I look forward to working with her to ensure the continued success of the shared mission of Boston Medical Center and Boston University School of Medicine in providing the highest-quality clinical, academic, and research services."

Prior to her position at Brigham and Women's, Walsh was chief operating officer for Novartis Institutes for Biomedical Research. She began her career as a summer intern at Brookside Health Center in Jamaica Plain, Massachusetts. After finishing graduate school, she worked as a shift supervisor in the emergency department at Montefiore Hospital and Medical Center in the Bronx, New York. From there Walsh moved to Columbia Presbyterian Medical Center, Saint Luke's—Roosevelt Hospital Center and the New York City Health and Hospitals Corporation. She relocated to Boston, joined Massachusetts General Hospital (MGH) as an assistant general director in medical services, and was promoted to vice president of medical services and primary care and then to senior vice president of medical services and the MGH Cancer Center.

Walsh received her Bachelor of Arts and Master of Public Health from Yale University.

BUSM at the Annual Meeting of the AAMC

BUSM was well represented in presentations and leadership at the annual meeting of the Association of American Medical Colleges (AAMC) held in Boston November 2009. Students, faculty, and administrators shared their expertise and moderating skills on a variety of topics.

Katie Spina '10 moderated the plenary session on "The Business of Medicine—Efficiency or Exploitation: The Risks and Benefits of Electronic Management of Personal Health Records."

Douglas Hughes, MD, associate professor of psychiatry, spoke to his colleagues about "Perspectives on Enhancing Medical Education in Psychiatry."

Phyllis Carr, MD, associate dean for student affairs, gave a workshop on "Mentoring Matters: Essential Components of Mentoring in Medical Education."

John Wiecha, MD, associate professor of family medicine, spoke on the "Impact of Specialty Income and Student Debt on Career Choice and Quality of Life."

Robert Witzburg, MD '77, associate dean and director of admissions, delivered a talk on "Holistic Review: Using Socioeconomic Status in Medical School Admissions."

Jonathan Woodson, MD, associate dean for diversity and multicultural affairs, spoke at the Humanism in Medicine Award Recognition & Luncheon and was on hand for the Minority Student Medicine Career Awareness Workshops and Recruitment Fair.

BUSM hosted the American Medical Association section on Medical Schools and the AAMC deans reception, and Dean Antman served as a panelist for the plenary sessions "The Ideal Academic Health Center" and "New Business Models for Academic Medical Center Research."

Emily Beattie, head of Alumni Medical Library Technical Services, retires

When **Emily Beattie** came to the BU Alumni Medical Library in 1969 as a cataloger, machine-readable cataloging and the Online Computer Library Center were nascent developments in library science. When she retired last July after four decades of service to the BU Medical Campus library, Beattie had participated in the transformation of libraries and collections from the card catalog to the online library catalog, and from solely print collections of journals and books to hybrid collections of online and print materials that continue to evolve toward an electronic format.

A graduate of Simmons College School of Library Science, Beattie holds a Certificate of Advanced Graduate Study in Educational Media & Technology from the Boston University School of Education.

In 1974, she was appointed head of Technical Services. She also assumed responsibility for acquiring, processing, and cataloging materials in the BUSM archives. Her encyclopedic knowledge of the history of BU Medical Campus is legendary. She made possible retrospectives of the School of Medicine for many BUSM alumni weekends and for visual displays for the sesquicentennial celebration of the founding of BUSM.

"My 40 years at Boston University Medical Campus were as an eyewitness to history," she recalled. "I not only saw the changes in buildings, programs, students, and faculty, but, as the archivist, I was privy to the rich history of the School of Medicine and its hospitals since their founding in the mid-nineteenth century."

Beattie trained many technical services paraprofessionals over the years, some of whom were inspired to enter library science programs and become professional librarians.

"We have been very fortunate all these years to have had Emily as our colleague, with her extensive knowledge of technical services, cataloging and archives, and her special interest in the history of BUMC," said Mary Blanchard, director of the BUMC Alumni Medical Library. "The library staff has benefited from her willingness to share her knowledge with co-workers—an experience described as 'Fridays with Emily.'"

"I was fortunate to be a part of the transformation of the Medical Campus and library science," said Beattie. She is now enjoying what she calls "the gift of time."

Howard Koh, MD, MPH, is sworn in as the 14th Assistant Secretary for Health for the U.S. Department of Health and Human Services (HHS), after being nominated by President Barack Obama and confirmed by the U.S. Senate.

Koh is a former BUSM and BUSPH faculty member and a 1995 graduate of BUSPH. He served as commissioner of public health for the Commonwealth of Massachusetts from 1997–2003. He was associate dean for public health practice and director of the Division of Public Health Practice at the Harvard School of Public Health.

As the assistant secretary for health, Koh oversees the HHS Office of Public Health and Science, the Commissioned Corps of the U.S. Public Health Service, and the Office of the Surgeon General. He also serves as senior public health advisor to the Secretary of Health and Human Services. At the Office of Public Health and Science, he leads interdisciplinary programs relating to disease prevention, health promotion, the reduction of health disparities, women's and minority health, HIV/AIDS, vaccine programs, physical fitness and sports, bioethics, population affairs, blood supply, research integrity, and human research protections.

Photo courtesy of the U.S. Department of Health and Human Services

BU Alumni Council Honors Thomas Insel, MD '74

Thomas Insel, a graduate of the BU seven-year Program of Liberal Arts & Medicine, is the director of the National Institute of Mental Health (NIMH) of the National Institutes of Health (NIH) where he is charged with generating the knowledge needed to understand, treat, and prevent mental disorders.

Prior to his appointment in 2002 as NIMH director, Insel was professor of psychiatry at Emory University and founding director of the Center for Behavioral Neuroscience—one of the largest science and technology centers funded by the National Science Foundation—and, concurrently, director of an NIH-funded Center for Autism Research. From 1994 to 1999, he was Director of the Yerkes Regional Primate Research Center in Atlanta.

After completing his internship at Berkshire Medical Center, Pittsfield, Massachusetts, and residency at the Langley Porter Neuropsychiatric Institute at the University of California, San Francisco, in 1979, he began his research career at the NIMH, where he conducted some of the first treatment trials for obsessive-compulsive disorder using the selective serotonin reuptake inhibitors (SSRI) class of medications. While at Emory, he continued studying the neurobiology of complex social behaviors in animals.

He is a member of the Institute of Medicine and a fellow of the American College of Neuropsychopharmacology. Insel received the BUSM Distinguished Alumnus Award in 1997. ●

Thomas Insel receives the Boston University Distinguished Alumni Award from BU Alumni Council President David Hallowell (Eng '69, '72, GSM '74) at the 63rd annual University awards ceremony.

TIME Showcases BUSM Research:

features highlight studies on the effects of repetitive brain injury and aging well

The cover of the February 8, 2010, issue of *TIME* featured "The Most Dangerous Game. How to Fix Football," the story of the link between concussions or repetitive brain injuries suffered by football players and the neurodegenerative disease Chronic Traumatic Encephalopathy (CTE), which is being studied by BUSM researchers. The School's **Center for the Study of Traumatic Encephalopathy,** in collaboration with Sports Legacy Institute, conducts research on CTE, including its neuropathology and pathogenesis, clinical manifestations and course of the disease, genetics and other risk factors for CTE, and ways of preventing it.

"The Science of Living Longer," the cover story of the February 22, 2010, issue of *TIME,* featured the work of **Thomas Perls, MD,** the BUSM principal investigator for the Long Life Family Study (LLFS) and director of the New England Centenarian Study at BUSM. Supported by the National Institute on Aging, the studies are examining factors that contribute to a long life, including genetics and environmental determinants.

Pediatric Researchers:

On the frontlines of healthy outcomes for children

The Department of Pediatrics and the Division of General Pediatrics at Boston University School of Medicine and Boston Medical Center are dedicated to children, adolescents, and young adults in urban communities. The commitment to keeping this population healthy by promoting safety and preventative medicine, dispensing high-quality clinical care, and advocating for them at a systems level is supported by a robust clinical research program.

Led by **Howard Bauchner, MD '79,** faculty in the Division of General Pediatrics conduct an array of research whose outcomes directly affect the patients cared for on the Medical Campus and at the Neighborhood Health Centers associated with Boston Medical Center, as well as applications in the field of pediatrics.

Bill Adams, MD, BUSM associate professor of pediatrics, works in health informatics and is particularly interested in moving pre-visit information from parents, collected via the telephone, into the electronic health record (EHR). "Interactive telephony technologies offer a potentially more effective, patient-centered communication modality by guiding parents at home through interactive discussions that can gather information and actively reinforce recommendation and treatment," said Adams. "Also, interactive telephony systems are particularly well suited for use in vulnerable populations since access to the telephone is nearly universal, and the system does not rely on reading printed text."

His group has developed and implemented an integrated health information system called the Personal Health Partner (PHP). This novel model is a fully automated conversational system using synthetic speech and automatic speech recognition to gather personal health data and counsel parents before their children's scheduled visits. The patient-entered data is then shared with the child's primary care clinician via the EHR. The system also provides personalized follow-up assessment and counseling after the visit. PHP is standards-based to allow integration with standards-compliant EHR and personal health record (PHR) systems.

The project is supported by a grant from the Agency for Healthcare Research and Quality.

In the past two decades, medical advances have reduced the mortality of very low birth weight (VLBW) premature babies, which are those weighing less than 1,500 grams. However, these infants experience a myriad of serious health conditions and development issues that require regular coordinated care. These babies are vulnerable to neurological and neurosensory deficits including cerebral palsy as well as vision, hearing, and speech impairments. **C. Jason Wang, MD,** assistant professor of pediatrics and public health at BUSM and BUSPH, has authored a study that demonstrates that these infants are falling through the cracks and not receiving the treatments that can mitigate some of the most serious side effects of VLBW. "Ours is the first population-based study of ophthalmologic and audiologic follow-up in Medicaid-enrolled children with VLBW," said Wang. "These findings reinforce the Institute of Medicine's concerns regarding inadequate outcome data and health care services for preterm infants."

His group developed a set of quality-of-care indicators designed to assess the overall quality of follow-up care for this high-risk population. These include general care, physical health, vision, hearing-and-speech and language assessments, and developmental, behavioral, and psychosocial assessments. The researchers are also studying the factors influencing the enrollment of VLBW children in early intervention programs, which has implications for identifying obstacles to critical treatment for these children and developing strategies to eliminate the barriers.

Because of the complex nature of the care of VLBW infants and the stress on families of caring for these children, Wang is developing a web portal to create a social network for these families to navigate their children's care. He has received a grant from the Robert Wood Johnson Foundation and Verizon to provide laptops to families for this purpose.

Exposure to violence in childhood and adolescence is a national public health problem, and community violence disproportionately affects minority youths and youths living in urban environments. **Renee Boynton-Jarrett, MD,** BUSM assistant professor of pediatrics, studies the effects of violence on various health outcomes.

One study examined cumulative violence exposure and self-reported health from a nationally representative sample of adolescents. According to the results, witnessing gun violence, threat of violence, feeling unsafe, repeated bullying, and criminal victimization each independently and significantly increased the risk for poor self-reported health. The findings, published in *Pediatrics,* indicate that interventions promoting adolescent health and well-being cannot focus solely on changing unhealthy behaviors. "Broader social policy changes aimed at reducing violence exposure in childhood and adolescence, including promoting safer schools and communities, may have greater effects on health trajectories during adolescence and young adulthood," said Boynton-Jarrett.

Boynton-Jarrett notes that over the past two decades, the level of exposure to violence among youth and rates of childhood and adolescent obesity have increased. "The alarming rise in the prevalence of obesity among children and adults in the past twenty years suggests that environmental and behavioral influences may be fueling the present epidemic," she said. With a grant from the WT Grant Foundation, she is investigat-

"Housing goes beyond shelter and community. The creation of a home, free from housing stress, may be the best prescription for the physical and mental health of all children, and particularly those with asthma."

"Our group has focused on improving the health and well-being of disadvantaged children through clinical care, research, and advocacy."

ing the role of neighborhood and familial violence in explaining the social inequalities in obesity risk during adolescence and exploring the mechanisms by which violence affects change in body mass index over time. She is using this work to develop a pilot intervention program.

Another member of the pediatrics faculty, Assistant Professor **Shikha Anand, MD,** studies the clinical management of obesity in children and adolescents, and, with the help of private philanthropy, has established six obesity clinics around the U.S. She is working to create a system that is both clinically and financially viable.

Emily Feinberg, PhD, RN, assistant professor of pediatrics, and **Michael Silverstein, MD,** associate professor of pediatrics, collaborate to study maternal depression and explore detection and treatment options in the community setting, using, for example, programs like Head Start and Early Intervention. Both are experimenting with motivational interviewing and cognitive behavior therapy.

It has long been understood that good nutrition is essential for the growth and development of healthy children. Food insecurity is a major problem for low-income populations, especially those in high cost-of-living areas. **John Cook, PhD,** BUSM associate professor of pediatrics, studies the policy of nutrition. For the past five years, he has been a senior research scientist and principal investigator for the Children's Health Watch (formerly the C-SNAP program), a national network of clinicians and public health specialists for research, in multiple pediatric settings, on the effect of U.S. social policy on young, low-income children's health and nutrition.

His research includes examining the effects of hunger, food security, and energy security on children's health and well-being and ways to increase access to affordable, healthy food. The research looks at the implications of energy costs for low-income families' economic viability and food availability and affordability for them. Families with very limited resources are often forced to choose between heating and eating, which leads to poor nutrition, increased illness, and cognitive and developmental deficits that affect school performance.

Research has also identified social determinants like income, housing, education, and access to health care that greatly influence health and mortality. **Megan Sandel, MD,** assistant professor of pediatrics, is the National Medical Director with the National Center for Medical-Legal Partnership, and director of Pediatric Healthcare for the Homeless at Boston Medical Center. A nationally recognized expert on housing and child health, she is an environmental scientist who examines how the built environment affects the health and well-being of children, particularly those with asthma, which disproportionately affects nonwhite children living in urban areas and children living in poverty.

Lower socioeconomic status is correlated with increased housing hardships. Her research examines how housing stressors like the high cost of housing, overcrowding, neighborhood instability, and lack of control over housing, can affect health—especially asthma. She and her colleagues suggest that poor housing puts psychological stress on children and their families, which has consequences for their health and how they manage diseases such as asthma. "Housing goes beyond shelter and community. The creation of a home, free from housing stress, may be the best prescription for the physical and mental health of all children, particularly those with asthma," said Sandel.

Through the **Medical-Legal Partnership** program, which was first developed at Boston Medical Center, Sandel has studied how educating residents and physicians on the need to bring legal services into the health care setting affects the health and well-being of patients, particularly those with low and moderate incomes. Medical-legal partnerships harness the expertise of both professions to educate providers and patients on how social determinants can affect health and advocate to ensure that programs and laws that benefit health and access to health care are implemented and enforced.

Some of the other research the pediatric group is engaged in looks at pain management in children with sickle cell disease, dietary patterns and how they contribute to various health outcomes, the relationship between breast-feeding and vitamin D deficiency, early infant obesity, and methylation, a chemical process that in postnatal development may have a role in the interaction of environmental factors like maternal care with gene expression.

"Our group has focused on improving the health and well-being of disadvantaged children through clinical care, research, and advocacy," said Bauchner. "It has been my privilege to work with this extraordinary group of clinician investigators."

BUSM Hosts Conference on Integrating Health and Human Rights into Health Professions Education

I will remember that I remain a member of society, with special obligations to all my fellow human beings.

HIPPOCRATIC OATH (Modern Version)

The Physicians for Human Rights (PHR) Chapter at BUSM, in collaboration with the National Chapter of PHR, hosted a first-of-its-kind conference to focus solely on integrating the subject of health and human rights into health education.

"Given Boston University's longstanding record of expertise and leadership in the health and human rights movement, as well as the new Center for Global Health & Development, we were honored to team with the Boston University School of Medicine's Student Chapter to host this unprecedented event," said Hope O'Brien, PHR Student Program Coordinator.

PHR is a nonprofit organization founded in 1986 on the idea that health care providers—with their specialized skills, ethical standards, and professional stature—are uniquely positioned to explore the health consequences of human rights violations and work to stop them. The organization shared the Nobel Peace Prize in 1997.

Held at the School of Medicine in February, "Health & Human Rights in 2010" focused on engaging medical students as leaders of a movement to make human rights advocacy part of the educational program for health professionals. More than 120 students and faculty attended the meeting that featured human rights activists, leaders in medical education, and ethicists.

Dean Karen Antman welcomed the group and George Annas, JD, MPH, the William Fairfield Warren Distinguished Professor and Chair of the Department of Health Law, Bioethics & Human Rights at BUSPH, and BU schools of Medicine and Law professor, served as a panelist. Congressman James McGovern (D/Mass.) hosted a town hall meeting for the participants.

"It is reassuring to know that at BUSM we have faculty and administrative support in embracing the idea that medicine transcends stethoscopes and prescriptions, but also includes issues such as human rights, that are important to the overall well-being of patients," said Doreen Gidali '12, a coordinator for the BUSM PHR Chapter.

During the daylong conference, teams of students and educators were tasked with developing a better understanding of the necessity of human rights education to improve the health professions. They discussed how to advance the mission, learned skills to strengthen advocacy efforts, and connected with experts in the field to create action plans.

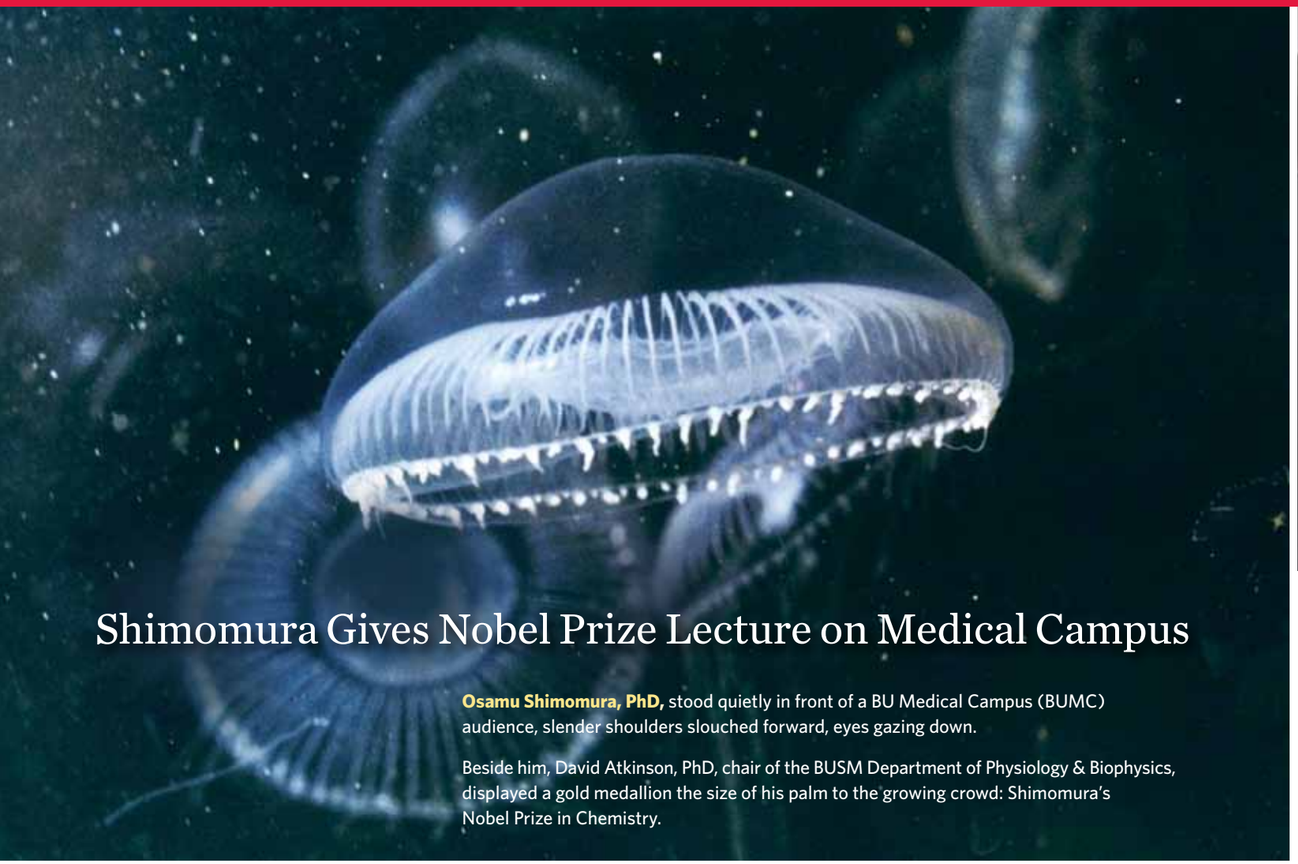
"Today, you will learn a great deal and you will have new skills and knowledge to take back to your schools," said Dean Antman. "Changing paradigms is not an easy task by any stretch of the imagination; it requires strategic thought, focus, and determination. I challenge you to think broadly and strategically. Find uncommon ways to remove traditional barriers and always remember the reasons and the spirit in which you embarked on this noble project."

Assistant Dean of Development Appointed

Karen Engelbourg has been appointed to BUSM's new position of assistant dean of development and will be responsible for the School's fundraising programs.

A veteran development professional with 20 years' experience in the field, Engelbourg previously served as assistant vice president at Brandeis University, and prior to that served for five years at Children's Hospital as the director of donor relations and principal gifts officer. She was also the director of major gifts at Harvard Medical School. A graduate of Brandeis University, Engelbourg has held development positions at Lawrence University, the Massachusetts Institute of Technology, and Tufts University.

"Karen's extensive development experience will be a major asset to BUSM as she strategically escalates our development efforts to support the missions of the School of Medicine," said Karen Antman, MD, Dean of BUSM.



Shimomura Gives Nobel Prize Lecture on Medical Campus

Osamu Shimomura, PhD, stood quietly in front of a BU Medical Campus (BUMC) audience, slender shoulders slouched forward, eyes gazing down.

Beside him, David Atkinson, PhD, chair of the BUSM Department of Physiology & Biophysics, displayed a gold medallion the size of his palm to the growing crowd: Shimomura's Nobel Prize in Chemistry.

Through the work of Chalfie and Tsien, Shimomura's proteins are now used as glowing markers to follow internal biological processes, like the development of nerve cells in the brain or how cancer cells spread.

"See that, everybody?" Atkinson asked. "That's the real thing."

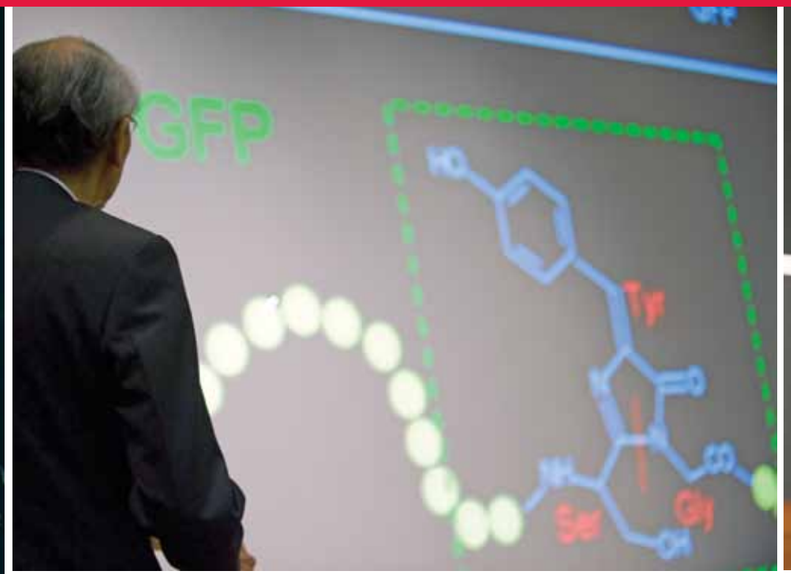
Shimomura, a professor emeritus of physiology and a former senior scientist at the Marine Biological Laboratory in Woods Hole, MA, was one of three who won the prize in 2008 for his discovery of green fluorescent protein in the jellyfish *Aequorea victoria.* He shared the prize with Martin Chalfie of Columbia University and Roger Y. Tsien of the University of California, San Diego, two researchers who pioneered cellular research techniques using the proteins Shimomura identified.

Shimomura returned to BUMC to present *Discovery of Green Fluorescent Protein, GFP: My Nobel Prize Lecture* before dozens of BU faculty, staff, and students.

"We are honored today to welcome Dr. Shimomura, emeritus professor of physiology and recipient of the 2008 Nobel Prize in Chemistry," said Dean Karen Antman. "Not only is the science of his work fascinating, but the story of how the research came to be done is equally compelling."

President Robert A. Brown introduced him and noted that without the researcher's discovery of "tiny molecular flashlights," many of the experiments performed in laboratories around the world—in fields ranging from biophysical chemistry to ecology and evolution—would not be possible.

Dr. Shimomura and his wife, Akemi (green jacket), with students who attended his lecture.



All this from a man who saw the horrors that scientific experimentation can bring. At 16, Brown recounted, Shimomura was 15 kilometers from the epicenter of the atomic bomb dropped on Nagasaki at the end of World War II.

"It would not be a stretch to imagine that a teenager from Nagasaki or Hiroshima might reject science because of its role in the Manhattan Project," Brown said. "We are fortunate that Dr. Shimomura did not succumb to such thoughts."

Shimomura took the podium, pulling out a wad of papers neatly folded in half, and began to read his Nobel lecture, his deliberate, Japanese-accented English mingling with the language of chemistry.

The 81-year-old Nobel winner stumbled into chemistry studies in Japan. Few schools were left standing after the war's destruction, and years passed before the Nagasaki College of Pharmacy opened a temporary campus near his home.

"I didn't have any interest in pharmacy," said Shimomura. "It was the only way that I could have some education."

Fast forward to 1959, when Princeton University invited Shimomura to join their faculty as a research biochemist. By then he had a doctorate in organic chemistry and acclaim for his work at Nagoya University with biofluorescent molecules.

Alongside Princeton University Professor Frank Johnson, in 1961 Shimomura started to make regular summer pilgrimages to Friday Harbor Laboratories at the University of Washington. Their job was to extract the bioluminescent substance from the *Aequorea victoria* jellyfish abundant in the region. The netting and extracting were family affairs, as both Johnson's and Shimomura's families shared the work.

It was only after some soul searching in a rowboat, and what he described as a little luck in the lab, that Shimomura discovered how to extract two proteins from the jellyfish rings. The first protein glows blue when exposed to calcium; the second, GFP, produces a green light when exposed to the first.

Shimomura held up a test tube filled with green liquid. He flicked on a handheld ultraviolet light, and the tube glowed. "There are 20,000 jellyfish in this test tube," he said.

Shimomura, Johnson, and their families worked tirelessly that summer, from early morning to early night, collecting and processing 50,000 jellyfish, about 2,000 to 3,000 a day. "Our laboratory looked like a factory and was filled with a jellyfish smell," he said to a burst of laughter.

Their labor produced enough material to study the chemical structure of the two proteins, which Shimomura mapped in 1972.

Through the work of Chalfie and Tsien, Shimomura's proteins are now used as glowing markers to follow internal biological processes, like the development of nerve cells in the brain or how cancer cells spread.

Sadly, the population of his subject jellyfish *Aequorea victoria* has drastically dropped in recent years—although not because of his research, he said to more laughter.

"I have not tried nor intended to discover" a glowing marker that proved so helpful to medicine, Shimomura said.

"This is a good example showing the importance of basic research that, at first, appears to have no practical value." ●

(This story originally appeared in *BU Today.*)

With Dr. Shimomura from left: David Atkinson, PhD; James Head, PhD; and Dean Karen Antman.

A New Voice for Graduate Medical Sciences

Linda Hyman, PhD, associate provost for the Division of Graduate Medical Sciences (GMS)

What would make you leave an interesting, challenging job and move away from vistas that stretch for miles and mountain views out your front door? It would have to be something very special and impressive. Linda Hyman, PhD, the new associate provost for the Division of Graduate Medical Sciences (GMS), did precisely that when she left Montana State University and the beauty of Big Sky country to come to BUSM.

"My first inclination was to say no way, but as I kept coming back here for visits, and as I got to know the people and the programs, I was sold on this really wonderful institution," said Hyman.

Hyman saw an opportunity to enhance and expand an already high-quality program, and work with excellent scientists, teachers, and students. Most impressive to her was that a majority of the faculty and staff she talked with had been part of the BU community for many years. Initially she thought that this could be viewed as a negative. "But not here," she said. "These are very talented people with many choices. They stay at BU not because they have to but because they want to be here. They are committed to the University and the students. This is a rare and valuable commodity."

Hyman oversees curricula and execution of all graduate programs at the medical school including recruitment, admission, ongoing program activities, new program development, student outcomes, and graduate alumni relations.

From the Big Apple, to the Big Easy, to the Big Sky

Born in New York City, Hyman became fascinated with biology in high school and considered going to medical school. However, as an undergraduate at the State University of New York at Albany, she got a taste for research that convinced her that being a scientist was what she really wanted to do. "I really felt that I could make a difference in science," she recalls. "I never saw science as something insular, where you work alone in your lab. I felt that a career in science offered the potential to impact far more people even than one-on-one medical care."

Hyman spent the next 15 years in Boston earning her master's and doctoral degrees from Brandeis University and completing a postdoctoral fellowship with Claire Moore, professor of molecular biology and microbiology at Tufts University School of Medicine, as well as working at a start-up biotech company.

After completing her postdoctoral training, she moved to Tulane University School of Medicine in New Orleans, rising through the ranks to become a tenured associate professor in 2003. While there, she was offered a sabbatical at the National Science Foundation (NSF) as program director in the division of molecular and cellular biology for genetics. "During my stay at NSF, I got bit by the administrative bug and came to appreciate the important role of administrators in promoting science, science policy, and scientists themselves. It completely changed the trajectory of my career path," she explained.

After 10 years at Tulane, Hyman accepted the position of vice provost for the Division of Health Sciences at Montana State University in Bozeman, Montana. She simultaneously held the position of assistant dean at the University of Washington School of Medicine in Seattle and director of the WWAMI (Wyoming, Alaska, Montana, and Idaho) cooperative medical education program. The cooperative makes medical school accessible to students in these four northwestern states that lack medical schools by decentralizing the educational process and sharing existing facilities and personnel in universities and communities in the WWAMI states.

Hyman's research interests focus on yeast genetics and cell biology, and she was principal investigator of the Hyman Laboratory at Montana State University. Funded by NASA, her research examined the effects of microgravity on gene expression and cell function; one of her experiments was recently included on the space shuttle.

Leadership

"By number of students, Graduate Medical Sciences (GMS) is the largest educational program on the Medical Campus," notes Hyman. "My vision is to make GMS an integral part of the campus and community life in every respect—intellectually, professionally, and socially." She believes the division should integrate more with the other schools on the Medical Campus as well as with the programs on the Charles River Campus. She also sees her role as provost as a promoter for the Division of Graduate Medical Sciences. "First and foremost I feel that I am the voice of this division," she said. "My role is twofold; to get the word out about our outstanding programs and to be an advocate for the doctoral and master's students."

"We live in challenging times, which means we need to evaluate what and how we operate. This includes everything from how we use technology to how we market our programs if we want to continue being successful in a very competitive world," Hyman adds. "So, we are taking a hard look at the way we do things, and determining what and how we can do better." Specifically, she has tackled enhanced use of online tools to streamline the operations of the division including the admissions and registration processes. "We need to make it seamless and less labor-intensive for our students," said Hyman. She also sees the need to examine the structure of the doctoral programs and how they are administered. "Right now we have department-based programs, umbrella programs, and training programs. I want to make sure that these alignments are the best way to serve our students and our faculty."

In addition to enhancing the already strong relations with clinical programs on the Medical Campus—especially in the area of translational research—Hyman is committed to expanding collaborations with programs on the Charles River Campus: "We need to break down boundaries, most of which are administrative, between the two campuses so that our students feel part of one institution." She points to the inter-campus shuttle as an excellent, although seemingly small, example of an important step forward in connecting the campuses.

Teaching and Professionalism

Hyman's other priorities are mentoring and professional development for students and postdocs. "Teaching and mentoring students keep you grounded and keep you young," she said. "Passion for your work in both the classroom and the lab is essential to good teaching. Students looking at a career in research need to see why faculty are so keen on the choices they have made. I believe an inner sense of joy for what you do is necessary to sustain yourself, particularly when competition for grants is ferocious."

One area Hyman would like to focus on is the role of postdoctoral fellows. She points out that it is recognized nationally that postdocs are "lost" between being students and faculty members. "The division can take a leadership role in engendering a sense of professionalism among them that can have a major impact on the scientists they become and the science they produce," said Hyman. "If we nurture our postdocs, everyone in the institution will benefit. Our predoctoral students will appreciate that the next step in their training is fully supported by the scientific community, and that professional development is a continuum of practice."

Looking to the Future

Hyman hails the existing entrepreneurial spirit in the division as a strength that she hopes to build upon. "With collaboration and integration, the division will flourish as long as the drivers remain quality and service," she predicts. "As we develop new programs, this must always be at the core of what we do so that we best serve our students, faculty, and society."

Hyman lives in Boston's South End with her husband and a golden retriever. She walks to the Medical Campus every day. "I like to say that I have gone from the Big Apple, to the Big Easy, to the Big Sky and now I am in the Big Time. We decided that if we were going to leave our rural paradise, we wanted to be in the heart of a great city and take full advantage of all it has to offer."

Major Research Grants

$11 Million Awarded for Creation of Molecular Road Map for Chronic Lung Disease

Researchers from BUSM and four other institutions have been awarded an $11 million, two-year grant from the National Heart, Lung, and Blood Institute (NHLBI) as part of the National Institutes of Health (NIH) Recovery Act. This grant will allow scientists to study the biology of two fatal lung diseases, chronic obstructive pulmonary disease (COPD) and pulmonary fibrosis.

COPD is the fourth-leading cause of death in the United States. The incidence of pulmonary fibrosis has doubled over the past decade and now kills about 40,000 Americans each year. There are few effective treatments for either disease and both diseases are fatal.

The Multi-Center Lung Genomics Research Consortium consists of BUSM, Dana Farber Cancer Institute, National Jewish Health, University of Colorado Denver School of Medicine, and University of Pittsburgh School of Medicine. They will use advanced genetic and molecular tools to characterize and better understand COPD and pulmonary fibrosis, sharing discoveries with researchers around the world in a web-accessible data warehouse. This will allow researchers to make fundamental discoveries that help identify individuals at risk for lung diseases, while diagnosing them earlier and developing more effective, personalized treatments.

Researchers will study tissue samples from the NHLBI Lung Tissue Research Consortium biorepository and combine the data they generate with pathobiological, clinical, and radiological data already gathered for these samples. The biorepository now contains almost 1,300 well-characterized tissue samples and collects about 250 additional samples per year from patients with COPD, pulmonary fibrosis, and other chronic lung diseases.

"BUSM's role will be sequencing the transcriptome of 600 to 800 lung tissue samples, which includes cataloging, with unprecedented resolution, gene expression changes that occur across all major forms of lung disease with the newest generation of deep sequencing technology," said Principal Investigator **Avrum Spira, MD,** associate professor of medicine and pathology at BUSM. "We are very fortunate to have financial support from the NHLBI to study these fatal diseases that affect more than 400,000 people a year."

Pulmonary Center Receives $1.4 Million Grant

BUSM's Pulmonary Center has received a two-year, $1.4 million grant from the National Heart, Lung, and Blood Institute to derive stem cells and lung progenitors from patients with lung disease.

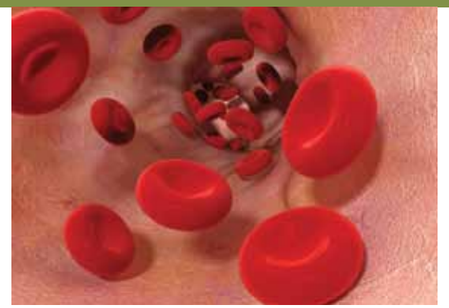
Darrell Kotton, MD, BUSM associate professor of medicine and pathology, and **Gustavo Mostoslavsky, MD, PhD,** BUSM assistant professor of medicine, are the principal investigators of this new grant award. Together Kotton and Mostoslavsky lead a multicenter investigative team of five Boston University laboratories together with two labs at the University of Pennsylvania and the University of Vermont.

The grant will support the investigators' research to derive induced pluripotent stem (iPS) cells from skin cells taken from individuals with inherited lung diseases and use them to derive new lung precursor cells. The newly derived cells will be compared to the cells made from individuals without inherited lung diseases and will also be compared to cells made from embryonic stem cells in an effort to better understand the biology of pluripotent stem cells and to develop novel treatments for lung diseases such as emphysema and cystic fibrosis.

"It is a tremendous privilege to receive this grant from the National Heart, Lung, and Blood Institute," said Kotton. "We now have the opportunity to make major headway in understanding how the lung develops as well as regenerates after injury."

This year, Kotton and Mostoslavsky became co-directors of the Boston University Center for Regenerative Medicine (CReM), bringing together several research groups to focus on various aspects of stem cell biology and regenerative medicine. CReM's goal is to advance research in stem cell biology using the embryo's normal development as a 'road map' for how to control the development of stem cells.

For more information on the BUSM Pulmonary Center, please visit **www.bumc.bu.edu/pulmonary.** For information on the CReM, please visit **www.bumc.bu.edu/stemcells.**



Vasculitis Center Receives $6 Million Grant From National Institutes of Health (NIH)

The Vasculitis Center at BUSM received a five-year, $6 million grant from the NIH that is being used to research new biomarkers for vasculitis disease activity and prognosis. The research will also develop and standardize outcome measures for the different types of vasculitis, and develop and standardize imaging techniques for the large vessel vasculitides. Clinical trials of new therapeutic agents will also be examined.

Vasculitis is an inflammation of the blood vessels, arteries, veins, or capillaries. When such inflammation occurs, it causes changes in the walls of blood vessels, such as weakening and narrowing, that can progress to the point of blood vessel blockage. It is a rare disease that exists in different forms. While some forms are due to infection or are associated with other diseases, the causes of six kinds of vasculitis are unknown.

The center is part of the Vasculitis Clinical Research Consortium (VCRC) of the NIH Rare Diseases Network. The VCRC is an integrated group of academic medical centers, patient support organizations, and clinical research resources. The VCRC's operations are directed from Boston University. VCRC study sites include Boston University, the Cleveland Clinic Foundation, Johns Hopkins University, the Mayo Clinic, the University of Pittsburgh, the University of Toronto, the University of Utah, and several research partners in Europe.

"We are extremely grateful for the ongoing generous support from the National Institutes of Health," said VCRC principal investigator **Peter Merkel, MD, MPH,** BUSM professor of medicine and director of the BU Vasculitis Center. "They have provided us with the resources necessary to create this ongoing clinical research infrastructure and continue our work to improve our understanding of the causes of vasculitis and find new treatments for our patients who suffer from these complex and serious diseases."

New Addiction Research Lab Studying Substance Abuse and Eating Disorders

The BUSM Department of Pharmacology & Experimental Therapeutics has a long and storied history of leadership in addiction research. Starting with the chairmanship of Edward Pelikan, PhD, in 1960, researchers in the department began investigating the pharmacology of drug abuse. Under the present chairman, David Farb, PhD, the department recently developed a structure for this tradition by adding the Laboratory of Addictive Disorders. "We decided to expand our addiction studies to formally establish a laboratory that reflects the broader interest beyond drug abuse to include obesity and addictive eating disorders," said Farb.

The emphasis is on interdisciplinary approaches to these disorders with a focus on translational research. The new laboratory is contiguous with neurological and psychiatric research space in an effort to create an exchange of ideas that can substantially enhance the research and outcomes. It uses environmental and genetic animal models of disease with a multidisciplinary approach to understand the neurobiology of psychiatric disorders and develop novel therapies. The lab will draw upon neurodegenerative disease research being conducted on campus as well as research on genetic variants associated with obesity and addiction behaviors.

Adding to the rich array of researchers in the department, two top young scientists were recruited from Scripps Research Institute to lead the lab. "They are the perfect choice because they offer first-rate research in both substance abuse and compulsive eating disorders," added Farb.

Pietro Cottone, PhD, and **Valentina Sabino, PhD,** are the co-directors of the Laboratory of Addictive Disorders; both are assistant professors of pharmacology and are behavioral neuroscience and molecular biology scientists. "We were attracted to Boston University Medical Campus because of the expanded research facilities," said Cottone. "We appreciate the close working relationship with the Department of Psychiatry," added Sabino.

Cottone concentrates on the neurobiological substrates of motivated behaviors, including feeding and addiction. His major focus is on identifying the biological bases of and potential treatments for obesity and eating disorders. His current studies concern the role of stress in compulsive eating and palatable food dependence, and investigate the neurobiological bases of stress-related disorders such as anxiety and depression.

Sabino is currently researching the neurobiology of addiction and stress-related disorders. Her studies aim to understand the neurobiological substrates of alcohol abuse and dependence by exploring the role of central neurochemical systems in excessive alcohol drinking. She is working toward the development of new therapeutic agents to alleviate alcohol addiction. Like Cottone, she is examining the neurobiology of stress-related disorders such as anxiety and depression.

Other members of the lab are focusing on cocaine and heroin addiction. **Conan Kornetsky, PhD,** professor of psychiatry and pharmacology, is looking at the determination of neuronal mechanisms involved in the behavioral effects of drugs. Much of his research is focused on the brain's motivational systems that are directly related to the rewarding effects associated with abused psychomotor stimulants and opioids.

The work of **Vidhya Kumaresan, PhD,** research assistant professor of pharmacology, focuses on understanding the neurobiological bases of addiction to psychostimulants. Recidivism to drug abuse is a major hurdle in the successful treatment of addiction. Illicit drug use interferes with the neural circuits identified with survival-enhancing behaviors. The goal is to elucidate the cellular and molecular underpinnings of drug-induced plasticity in these circuits using a combination of behavioral, cellular, and molecular approaches. These approaches are expected to lead to successful treatment of relapse precipitated by drug reexposure, drug-associated cues, and stress.

"The new lab represents a translational focus for the department, which is a modern restatement of our historical name," noted Farb. "We are the Department of Pharmacology *and* Experimental Therapeutics, which today is called translational science."

Research in Brief

Endoscopic Surgery as Effective as Open Surgery for Nasal Cancer

BUSM researchers have shown that endoscopic surgery is a valid treatment option for treating esthesioneuroblastoma (cancer of the nasal cavity) in addition to traditional open surgery and nonsurgical treatments. Esthesioneuroblastoma is a very rare cancer that develops in the upper part of the nasal cavity and is thought to derive from neural tissue associated with the sense of smell.

The study examined recent literature regarding outcomes of esthesioneuroblastoma treatment between 1992 and 2008 and found, overall, surgery yielded more disease-free outcomes and better survival rates than nonsurgical treatment modalities. Endoscopic surgery produced better survival rates than open surgery. In addition, there was no significant difference between follow-up times in the endoscopic and open surgery groups.

The lead author is **Anand K. Devaiah, MD,** assistant professor in the departments of Otolaryngology—Head & Neck Surgery and Neurological Surgery. He and his co-author, BUSM student Michael Andreoli '11, presented their work at the Triological Society Eastern Section Meeting.

These findings appear in the July 2009 issue of *Laryngoscope.*

Fat Collections in Certain Body Areas Linked to Decreased Heart Function

According to BUSM researchers, fat collection in different body locations, such as around the heart and the aorta and within the liver, are associated with certain decreased heart functions.

The researchers compared fat volumes in obese persons (BMI over 30), all of whom had high blood pressure and/or diabetes, and lean, healthy persons (average BMI of 22). "Our study found that fat collection around the heart, the aorta, and within the liver is clearly associated with decreased heart functions and that an MRI can quickly and noninvasively measure fat volume in these areas," said **James Hamilton, PhD,** BUSM professor of biophysics, physiology, and biomedical engineering, and the senior author and project leader. "Our study also found that looking at BMI of the individual does not reliably predict the amount of undesired fat in and around organs."

The study appeared online in *Obesity.*

Genes Associated with Onset Age of Parkinson's Disease Identified

BUSM researchers have identified genes which may influence the onset age of Parkinson's Disease (PD). The findings are the first to identify genes contributing to the variation in onset age and may help identify mechanisms and therapeutic targets capable of delaying symptoms.

PD is the second most common neurodegenerative disorder, and while the average age of onset of PD is approximately 60 years, there is wide variation, with some individuals experiencing onset before age 20 and others not until after age 90.

"Important distinctions can be made between those genes that influence susceptibility for developing disease and the genetic modifiers that influence onset age," said joint lead author **Jeanne C. Latourelle, DSc,** from the Department of Neurology at BUSM.

The findings appear online in *BMC Medical Genetics.* Funding for the study was provided by R01 NS37167, R01 NS036711; the Robert P. & Judith N. Goldberg Foundation; the Bumpus Foundation; the Harvard NeuroDiscovery Center; Italian Telethon grant n. GTB07001, and by the Fondazione Grigioni per il Morbo di Parkinson.

New Discovery to Aid in Diagnosis and Treatment of Kidney Disease

BUSM researchers—in collaboration with scientists at the University of Louisville and the University of Nice Sophia Antipolis in France—have identified the target antigen PLA2R in patients with idiopathic membranous nephropathy (kidney disease), which has implications for the diagnosis and treatment of this disease.

Kidney disease involves the thickening and dysfunction of the filtering parts of the kidneys called glomeruli. Antibodies attack the glomeruli, causing large amounts of protein to leak into the urine. This is a relatively common cause of adult-onset kidney disease that can progress over time to cause kidney failure. Until now, the diagnosis of membranous nephropathy required a kidney biopsy, as there are no blood or urine tests to specifically distinguish membranous nephropathy from other causes of kidney disease. This is because, up until now, the protein that is the target of the circulating auto-antibodies has never been identified.

According to the researchers, this discovery has important implications for both the diagnosis and treatment of membranous nephropathy. "Identifying the antigen will enable development of a simple blood test that could replace the need for a kidney biopsy and establish which patients are most likely to benefit from immunosuppressive treatment," said senior author **David Salant, MD,** a BUSM professor of medicine and chief of the renal section at Boston Medical Center.

These findings appeared in the July 2, 2009 issue of the *New England Journal of Medicine.* Funding for this study was provided by the National Institute of Diabetes and Digestive and Kidney Diseases, Amgen, the Halpin Foundation, Centre National de la Recherche Scientifique and Association pour la Recherche sur le Cancer, and the Department of Veterans Affairs.

Yoga May be Effective for Chronic Low Back Pain in Minority Populations

Researchers from BUSM and Boston Medical Center found that yoga may be more effective than standard treatment for reducing chronic low back pain in minority populations.

Individuals from low-income, minority backgrounds with chronic low back pain (CLBP) may be more affected due to disparities in access to treatment. Although many CLBP patients seek relief from complementary therapies such as yoga, use of these approaches is less common among minorities and individuals with lower incomes or less education.

The researchers recruited adults with CLBP from two community health centers that serve racially diverse, low-income neighborhoods of Boston. They were randomly assigned to either a standardized 12-week series of hatha yoga classes or standard treatment including doctors' visits and medications.

As part of the trial, the researchers asked participants to report their average pain intensity for the previous week, how their function is limited due to back pain, and how much pain medication they are taking. The yoga group participated in 12 weekly 75-minute classes that included postures, breathing techniques, and meditation. Home practice for 30 minutes daily was strongly encouraged.

Pain scores for the yoga participants decreased by one-third compared to the control group, which decreased by only 5 percent. Whereas pain medication use in the control group did not change, yoga participants' use of pain medicines decreased by 80 percent. Improvement in function was also greater for yoga participants but was not statistically significant.

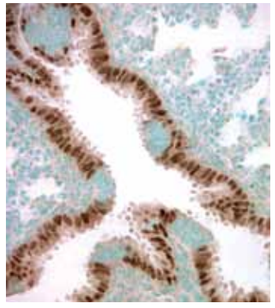
"Few studies of complementary therapies have targeted minority populations with low back pain," explained lead author **Robert B. Saper, MD, MPH,** an assistant professor of family medicine at BUSM and director of integrative medicine at Boston Medical Center. "Our pilot study showed that yoga is well-received in these communities and may be effective for reducing pain and pain medication use."

This study appears in the November 2009 issue of *Alternative Therapies in Health and Medicine.* This study was funded by the National Center for Complementary and Alternative Medicine and the National Institutes of Health.

Top-notch Decisions in the Developing Airways Bring Insights into Lung Disease

In the normal lung, the airways are lined by a balanced mixture of ciliated, secretory, and neuroendocrine cells which perform functions as diverse as air humidification, detoxification, and clearance of environmental particles. This balance can be altered dramatically by faulty adaptation responses of the lung to cigarette smoke or allergens in patients with Chronic Obstructive Pulmonary Disease (COPD) and asthma.

How these different cell types emerge from lung progenitor cells and how these fates are balanced in developing airways remain open questions. A study from a research team led by **Wellington Cardoso, MD,** a professor at the Pulmonary Center of Boston University School of Medicine and director of the Program in Lung Development & Progenitor Cell Biology, sheds light into this problem.



The Notch pathway is a major regulator of cell fate decisions in developing cells from fruit flies to humans. Using mouse genetic models, the BUSM researchers inactivated Notch signaling in the lung and discovered that airways no longer formed secretory cells. Instead, they became populated almost exclusively by ciliated cells. The researchers showed that this imbalance seems to result from the loss of a mechanism of cell fate choice triggered by the Notch called lateral inhibition.

"When you lose Notch signaling, you lose the ability to generate secretory cells that make the lining fluid critical for protection and integrity of airway, and the other fate, of ciliated cells is de-repressed," said Cardoso.

These findings help to understand how airways form and provide insights into how interfering with Notch signaling may be potentially useful as a therapeutic intervention in respiratory diseases, such as asthma and COPD, in which airways have an overabundance of secretory cells and paucity of ciliated cells in the airways. The link between hyperactive Notch and excessive secretion is now rapidly emerging from other recent reports.

In addition to Cardoso, the study titled "Notch Signaling Controls the Balance of Ciliated and Secretory Cell Fates in Developing Airways" was authored by **Po-Nien Tsao** and **Michelle Vasconcelos.** It appeared in the June 2009 online edition of *Development.*

Research in Brief

High Leptin Levels May Protect Against Alzheimer's Disease and Dementia

Sudha Seshadri, MD, BUSM associate professor of neurology and an investigator at the Framingham Heart Study, is the senior author for a study that has has found that higher leptin (a protein that controls weight and appetite) levels were associated with a lower incidence of Alzheimer's Disease (AD) and dementia. The study may open pathways for possible preventive and therapeutic interventions.

Given the rapid aging of developed and developing societies, it is projected that the prevalence of dementia will dramatically increase during the next five decades. Therefore, it is a public health priority to explore pathophysiological pathways underlying the development of dementia and its most common cause, AD.

According to the researchers, a growing body of evidence suggests that leptin has beneficial effects on brain development and function. Using participants from the original cohort of the Framingham Heart Study, the researchers measured leptin concentrations in 785 persons without dementia. A subsample of 198 dementia-free survivors underwent volumetric brain MRIs between 1999 and 2005, approximately 7.7 years after leptin levels were measured. Two measures of brain aging, total cerebral brain volume and temporal horn volume (which is inversely related to hippocampal volume) were assessed. The researchers found that elevated leptin levels were associated with higher total cerebral brain volume and lower temporal horn volume and higher leptin levels were prospectively associated with a lower incidence of AD and dementia.

"Over a 12-year follow-up, this corresponds to an absolute AD risk of 25 percent for persons with the lowest levels of leptin compared to a six percent risk for persons with the highest levels," said Seshadri.

"If our findings are confirmed by others, leptin levels in older adults may serve as one of several possible biomarkers for healthy brain aging and, more importantly, may open new pathways for possible preventive and therapeutic intervention," she added.

The study, which appeared in the December 16 issue of the *Journal of the American Medical Association,* received funding from the National Heart, Lung, and Blood Institute, the National Institute on Aging, and the National Institute of Neurological Disorders and Stroke.

Dieters Can Experience Neurobiological Similarities of Drug Addicts and Alcoholics

BUSM researchers have shown that intermittent access to foods rich in fat and sugar induces changes in the brain which are comparable to those observed in drug dependence. The findings, reported in the journal of the *Proceedings of the National Academy of Sciences,* may explain how abstinence from these foods contributes to relapse eating among dieters as well as related eating disorders.

Forms of obesity and eating disorders can be defined as chronic relapsing conditions with alternating periods of abstinence (dieting to avoid "forbidden" foods rich in sugar and fat also known as palatable foods) and relapse (compulsive, often uncontrollable, eating of highly palatable foods) that continue despite negative consequences. Although the positive reinforcing properties of palatable foods are well known, less attention has been given to the increased probability of a behavioral response produced by removal of an aversive stimulus (intake of palatable food to relieve negative emotional states).

The researchers used 155 rats to measure the neurobiological responses. The first group, the diet-cycled subjects, repeatedly ate standard rat chow for five days, followed by a highly palatable, high-sugar, chocolate-flavored chow for two days. The second group ate only standard food. The amount of food consumed was not restricted for either group. When the diet-cycled rats were fed standard chow, they showed less motivation to obtain it, refused it—although it was previously acceptable—and exhibited anxiety. However, when the rats resumed eating the palatable food, they overate and their anxiety-related behaviors returned to normal.

The researchers then looked at the role of the brain's stress system, which contributes to cycles of drug and alcohol binging and withdrawal, in driving these behaviors. They found that during abstinence from palatable foods, the rats showed increased corticotropin-releasing factor (CRF) gene expression and peptide in the amygdala, an area of the brain involved in fear, anxiety, and stress responses. Similar to the anxiety, only when the diet-cycled group was fed palatable food did CRF levels return to normal. Importantly, the blockade of the CRF receptor 1 with a selective antagonist was able to prevent all the behavioral outcomes of palatable food withdrawal.

According to the researchers, CRF is a key stress neurotransmitter. "In observing the activation of the amygdaloid CRF system during abstinence from palatable foods, we understood the causes of recurrent dieting failures," said study co-author **Pietro Cottone, PhD,** an assistant professor and co-director of the Laboratory of Addictive Disorders in the Department of Pharmacology & Experimental Therapeutics at BUSM.

"CRF activation during abstinence from palatable foods induces a negative emotional state which is responsible for signs of anxiety and contributes to relapse to 'forbidden foods,'" added study co-author **Valentina Sabino, PhD,** an assistant professor and co-director of the Laboratory of Addictive Disorders in the Department of Pharmacology & Experimental Therapeutics at BUSM. "The stress experienced by frequent dieters in abstinence from palatable food has neurobiological similarities to the negative emotional state of drug and alcohol addicts."

This study was supported by the National Institute on Drug Abuse; the National Institute on Alcohol Abuse and Alcoholism; the National Institute of Diabetes and Digestive and Kidney Diseases; the Pearson Center for Alcoholism and Addiction Research; the Intramural Research Programs of the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism.

Gene Therapy Discovered to Prevent Progression of Emphysema

Alpha-1 Anti-trypsin Deficiency is the most common inherited form of emphysema seen in young people due to a mutation in the Alpha-1 Anti-trypsin gene. This genetic disease predisposes affected individuals to early emphysema and cirrhosis of the liver.

Gene transfer into specific cell lineages in vivo remains an attractive yet elusive approach for correcting inherited mutations. Although a variety of techniques have been developed to deliver DNA molecules to cells in vitro, in vivo gene transfer has been limited in many cell types by inefficient gene delivery as well as the limited life span of differentiated cell types.

Using mice, BUSM researchers discovered a system to deliver genes selectively to as many as 70 percent of a mouse lung's alveolar macrophages (AM), a key cell type contributing to emphysema.

"We applied this novel approach to achieve sustained in vivo expression of normal human alpha-1 antitrypsin (hAAT) protein at levels able to ameliorate emphysema in mice," said senior author **Darrell Kotton, MD,** BUSM associate professor of medicine and pathology and co-director, Center for Regenerative Medicine. "The lung macrophages carrying the therapeutic gene survived in the lungs' air sacks for the two-year lifetime of the treated mice following a single intra-tracheal injection of the lentiviral vector we had engineered," he added.

Kotton and his colleagues utilized this method of gene transfer to achieve localized secretion of therapeutic levels of human alpha-1 antitrypsin (hAAT) protein in lung epithelial lining fluid. "The progression of emphysema in mice exposed

to elastase was significantly improved by the gene therapy as evidenced by improvements in lung compliance and alveolar size," said **Andrew Wilson, MD,** lead author of the study and BUSM assistant professor of medicine.

According to the researchers, after 24 weeks of sustained gene expression, no humoral or cellular immune responses to the human hAAT protein were detected.

The study appears online in the *Journal of Clinical Investigation.*

Awards Honors

Francis A. Farraye, MD, BUSM professor of medicine and clinical director in the Gastroenterology Section at Boston Medical Center, received the William D. Carey Award from the American College of Gastroenterology (ACG). The award recognizes exceptional individuals who serve the ACG and its board of governors with distinction.

Gail Sonenshein, PhD, BUSM professor of biochemistry and director of the Women's Health Interdisciplinary Research Center, was elected as a fellow of the American Association for the Advancement of Science (AAAS). Election as a fellow is an honor bestowed upon AAAS members by their peers because of their scientifically or socially distinguished efforts to advance science or its applications.

As part of the section on Biological Sciences, Sonenshein was elected as an AAAS Fellow for her seminal contributions to the understanding of the mechanisms by which activation of NF-kappaB signaling pathways contributes to the development of metastatic cancer.

James A. Hamilton, PhD, BUSM professor of physiology and biophysics, is the 2010 recipient of the Biophysical Society's Avanti Award in Lipids for his innovative contributions in the application of NMR methods to phospholipids and fatty acids. The Biophysical Society is a professional, scientific society established to encourage development and dissemination of knowledge in biophysics.

Daniel Levy, MD '80, director of the Framingham Heart Study, received the Population Research Prize from the American Heart Association (AHA) for his research demonstrating risk factors' roles in cardiovascular disease. Levy is credited with transforming the landmark Framingham Heart Study into a far-reaching, multidisciplinary research project.

"Over the past 25 years, epidemiological studies directed by Dr. Levy have provided solid scientific evidence of the value of incorporating modern diagnostic, imaging, and biological technologies into population-based research," said Clyde Yancy, MD, AHA president. "These studies have cut across critical aspects of cardiovascular disease epidemiology and prevention."

James O'Connell, MD, BUSM assistant professor of medicine, was named the first winner of the J.H. Kanter Prize for his work as the president of Boston's Health Care for the Homeless program, the nation's largest and most comprehensive health care program for people who are homeless.

The national award, sponsored by the Health Legacy Partnership with a prize of $100,000, recognizes physicians for their tireless efforts and creativity in developing ways to eliminate health disparities and improve health care for people in the United States.

O'Connell created a model of health care for people who are homeless, established integrated relationships with Boston-area hospitals to facilitate both inpatient and outpatient care for people who live in shelters and on the street, and designed a medical records system for the care of patients who are homeless.

Daniel Alford, MD '92, BUSM associate professor of medicine and medical director of the Massachusetts Screening, Brief Intervention, Referral & Treatment (MASBIRT) program at Boston Medical Center; and **Richard Saitz, MD '87,** BUSM professor of medicine and director of the Clinical Addiction Research & Education Unit of the Section of General Internal Medicine Division, are among the first physicians in the U.S. certified by the American Board of Addiction Medicine (ABAM), a new independent medical specialty board. The ABAM previously only certified psychiatrists but has begun to certify addiction medicine physicians from other specialties, including emergency medicine, family medicine, internal medicine, obstetrics and gynecology, pediatrics, preventive medicine, neurology, and surgery. The board sets standards for physician education, assesses physicians' knowledge, and requires and tracks lifelong continuing education.

Gordon L. Snider, MD, former BUSM faculty member, was honored with a Lifetime Achievement Award by the Alph-1 Society. Snider established the pulmonary section at BUSM and was chief of the medical service at the Boston VA Medical Center for 14 years. His pioneering research in lung disease showed how neutrophils, normal white blood cells, can destroy lung tissue and result in emphysema.

Barry Zuckerman, MD, BUSM professor and chair of pediatrics and chief of pediatrics at Boston Medical Center, received the Innovators in Health Award from the New England Health Care Institute. Zuckerman was honored for developing the pediatric programs Reach Out and Read, a child-development and early literacy program in the primary care setting; the Medical Legal Partnership for Children, which integrates legal advocacy and policy to improve the effectiveness of care; and Healthy Steps, a national program emphasizing child development and a two-generational model of care. The annual awards celebrate the achievement of leaders who exemplify the spirit of innovation and collaboration and have advanced the understanding, connectivity, or delivery of health care.

Awards Grants

Phyllis Carr, MD, BUSM associate dean for student affairs, and **Karen Freund, MD,** received one of 14 NIH award grants that focus on factors that influence the careers of women in biomedical and behavioral science and engineering. Their study is titled "Longitudinal Follow-up to the National Faculty Survey."

Elke Muehlberger, PhD, BUSM associate professor of microbiology and associate director of the Biomolecular Production Core Laboratory, is one of 14 researchers to receive an award from the Immune Mechanisms of Virus Control (IMVC) program of the National Institute of Allergy and Infectious Diseases of the National Institutes of Health. The program funds research that addresses key questions related to how the immune system responds to viruses.

When Senator Edward M. Kennedy came to the Medical Campus in 1998 to receive a special BUSM Sesquicentennial Gold Medallion from BUSM Dean Aram Chobanian and BU President Jon Westling, the senior senator from Massachusetts said, "One in ten dollars from the National Institutes of Health comes to Massachusetts—and much of this funding supports research at Boston University. That support is an especially wise investment in the future."

Edward M. Kennedy, 1932–2009

Stalwart of Medical Education, Biomedical Research, and Health Care

A staunch supporter of medical education and research and quality health care for all Americans, Senator Kennedy dedicated his life to serving the people of Massachusetts and the nation for more than 40 years.

In addition to championing civil rights, voting rights, workers' rights, immigration reform, raising the minimum wage, and environmental and energy issues, he led Congress to enact legislation to provide affordable and comprehensive health care, including mental health parity provisions.

Kennedy first called for universal health care for all Americans on the BU Medical Campus in 1969. He said, "We must begin to move now to establish a comprehensive national health insurance program, capable of bringing the same amount and high quality of health care to every man, woman, and child in the United States."

Kennedy was the original sponsor of the Comprehensive Health Manpower Training Act of 1971, which made possible important medical training programs and the Area Health Education Center at BUSM. He was the original author of the National Health Service Corps, through which financially disadvantaged students attend medical school in exchange for providing care for the underserved in rural and urban areas after they have completed their training. In 2000, he sponsored the Pediatric Graduate Medical Education Act which provided essential support for training programs at children's hospitals across the country.

He also supported health care and educational programs for minorities and women. In 1972, he was instrumental in establishing the Women, Infants, and Children Nutrition Program—popularly known as WIC—which offers food, nutrition counseling, and access to health services for low-income women, infants, and children. He secured funding for a system of community health centers across the country and also introduced The Minority Health and Health Disparities Research and Education Act of 2000, enacted in response to reports on the higher death rates in minority populations from diseases including cancer, heart disease, diabetes, and AIDS.

Kennedy worked to establish provisions in the Consolidated Omnibus Budget Reconciliation Act (COBRA), allowing workers to continue their employer-sponsored health insurance should they lose their jobs. In 1986, the landmark bill for the Protection and Advocacy for Mentally Ill Individuals Act was passed under his leadership. In the 1990s he led Congress in founding the Children's Health Insurance Program (CHIP) to support state efforts to provide health insurance to uninsured children in low-income families, and also legislated the Americans with Disabilities Act and the Health Insurance Portability and Accountability Act. He led the way in passing the Children's Health Act of 2000, the BioShield Act of 2003, and the Pandemic and All-Hazards Preparedness Act of 2005.

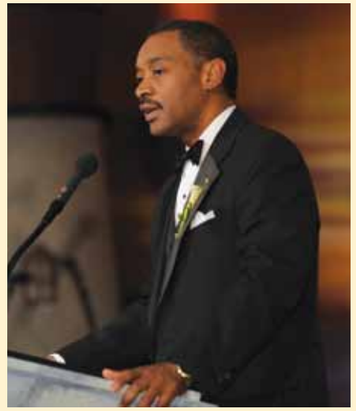
He was also involved in producing legislation that provided for food safety, drug and device safety, improved immunizations rates, HIV-AIDS treatment, and health services research.

"The people of Massachusetts and the entire country have lost a strong advocate who had a profound influence on their health and well-being," said Dean Karen Antman. "Boston University and the School of Medicine have lost an important friend who understood the value and importance of the work we do here."

Awards Honors

Gold Foundation Humanism Award Honors Jonathan Woodson, MD

Back row: Elliot J. Sussman, MD (2008–09 AAMC Chair), Jonathan Woodson, MD, Jordan C. Cohen, MD (Chairman of the Board, Arnold P. Gold Foundation), Darrell G. Kirch, MD (AAMC President and CEO); Front row: Arnold P. Gold, MD (Foundation Chairman), and Sandra O. Gold, EdD (Foundation President and CEO)



Woodson accepting the award

When the twin towers fell in New York, **Jonathan Woodson, MD,** was there to treat the victims. During Operation Desert Storm in Saudi Arabia, he was there to care for patients in an evacuation hospital. At BUSM, Woodson is there for medical students, underserved minorities, and the communities he calls home. He is a highly regarded vascular surgeon, decorated military leader, service-oriented academician, and esteemed mentor.

Woodson, who serves as BUSM associate professor of surgery and associate dean for diversity and multicultural affairs, received the 2009 Arnold P. Gold Foundation Humanism in Medicine Award at the Association of American Medical Colleges' Annual Meeting in November.

When not overseas treating critically wounded American soldiers, he has served as a faculty member at BUSM for more than 20 years. He is also a senior attending vascular surgeon at the Boston Medical Center and serves on the BU Medical Campus institutional research board. Additionally, he is an adjunct assistant professor of surgery at the Uniformed Services University of the Health Sciences.

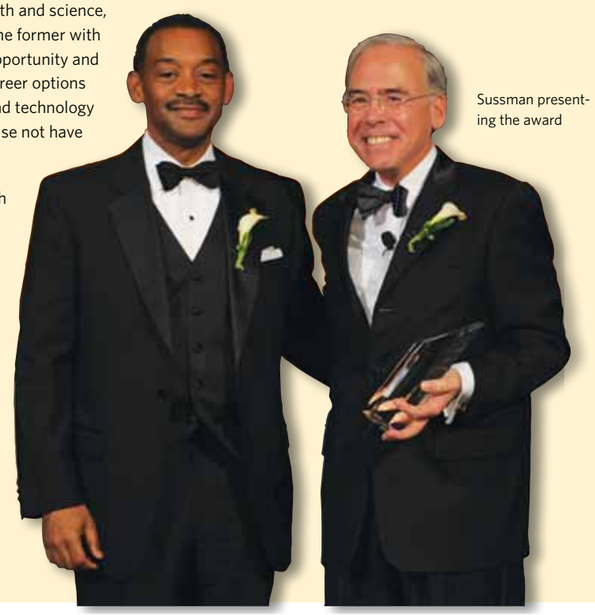
Photos courtesy of the AAMC

Woodson helped found the Gateway to Medicine pipeline program, first in New York City and now in Roxbury, MA. By pairing medical students with high school students in low socioeconomic areas for tutoring in math and science, the program provides the former with an important service opportunity and exposes the latter to career options in medicine, science, and technology that they might otherwise not have considered.

He also helped establish the Boston Scholar's Program, an early initiative of the Boston Partnership Fellows Alumni Association, where professionals of color mentor students from Boston Public Schools. He has been a leader in Boston University's Early Medical School Selection Program, a partnership among BU, BUSM, and 14 undergraduate institutions that has significantly increased enrollment of underrepresented minorities at BUSM. He emphasizes that physicians have a social contract to society and that being good stewards of limited health care resources is an essential part of being a physician.

A recipient of more than 20 military awards and decorations, Woodson holds the rank of Brigadier General, U.S. Army Reserve, and was appointed assistant surgeon general for mobilization, readiness, and reserve affairs, and deputy commanding general for the Army Reserve Medical Command with assignment to the Office of the U.S. Surgeon General.

He received his bachelor's and medical degrees from the City College of New York, New York University School of Medicine, and his master of strategic studies degree from the U.S. Army War College. He completed his residency training in internal medicine and general and vascular surgery at Massachusetts General Hospital.



Sussman presenting the award

Faculty Appointments

Rhoda M. Alani, MD, was appointed chair of the BUSM Department of Dermatology, Herbert Mescon Chair and Professor of Dermatology, and chief of the Department of Dermatology at Boston Medical Center.

Alani's most recent appointment was at Johns Hopkins University School of Medicine where she was a faculty member in oncology, dermatology, and molecular biology and genetics, director of The Laboratory of Cutaneous Oncology in the Sidney Kimmel Cancer Center, and director of the Pigmented Lesion and Melanoma Clinic in Dermatology at Johns Hopkins. Her research focuses on understanding the molecular basis of melanoma development and progression with the aim of translating her laboratory findings to better prevention, detection, diagnosis, and treatment of melanoma. Her clinical interests focus on pigmented lesions and melanoma.

Alani received her medical degree from the University of Michigan Medical School, where she received the Graduation with Distinction in Research Award. She completed an internship in internal medicine at Yale University School of Medicine and a residency in dermatology at Harvard Medical School.

Ronald B. Corley, PhD, BUSM professor and chair of the Department of Microbiology and associate director at the National Emerging Infectious Diseases Laboratories, has been appointed as BU Medical Campus associate provost for research. Corley will provide leadership and direction in planning, development, and evaluation of research on the Medical Campus, and will facilitate growth of the BU Medical Campus research portfolio.

Jerrold J. Ellner, MD, has been appointed BUSM professor of medicine and chief of the Section of Infectious Diseases at Boston Medical Center. He is internationally recognized for his research on tuberculosis and its interactions with HIV infection. He was the principal architect of the Uganda-Case Western Reserve University Research Collaboration and is a founding member of the Academic Alliance for AIDS Care and Prevention in Africa.

Ellner is principal investigator of the recently awarded Clinical Diagnostics Research Consortium from the National Institutes of Health (NIH), which will evaluate investigation TB diagnostics in endemic areas. He most recently served as chair of the Department of Medicine at the New Jersey Medical School of the University of Medicine and Dentistry of New Jersey (UMDNJ) from 2002 to 2006, and Professor of Medicine and Scientific Director of the Center for Emerging Pathogens at UMDNJ. He was named Best Doctor in New York 2001 by *New York Magazine* and Top Doctor in New Jersey by *New Jersey Monthly* numerous times.

Deborah M. Fournier, PhD, has been appointed BU Medical Campus assistant provost for institutional research and evaluation. Fournier, also appointed associate professor of community health sciences in BU School of Public Health (BUSPH), will focus on directing the evaluation activities of the Clinical & Translational Science Institute. She also will focus on curriculum management and accreditation for the BU School of Public Health.

She has served at the Henry M. Goldman School of Dental Medicine since 1995, initially as assistant professor and executive director of educational research and evaluation and later as associate dean, first for institutional planning and evaluation and then most recently for educational research and evaluation.

She received both her PhD and MS from Syracuse University in Syracuse, New York. Her primary contributions to the field of evaluation include exploring evaluative reasoning and the inferences drawn from evidence in applied field studies.

Claudia P. Hochberg, MD '02, has been appointed assistant professor of cardiology at BUSM and an interventional cardiologist at Boston Medical Center. She completed her residency in internal medicine at Brigham and Women's Hospital and fellowships in interventional cardiology and clinical cardiology at Beth Israel Deaconess Medical Center, Boston. She specializes in the treatment of coronary artery disease, the management of acute myocardial infarctions and valvular heart disease. Her research interests include improving reperfusion strategies in acute myocardial infarctions and the differences in the treatment, management, and outcomes of coronary artery disease in women.

Igor Kramnik, MD, PhD, has been appointed associate professor of medicine and director of the Aerobiology Core Laboratory of the National Emerging Infectious Diseases Laboratories (NEIDL). Kramnik also will be an investigator at the NEIDL Institute and serve on its Internal Scientific Advisory Committee.

He received his MD from Samara State Medical University in Samara, Russia, and obtained his PhD from the Central Institute for Tuberculosis Research in Moscow. He completed a residency in internal medicine there and a postdoctoral fellowship in immunology and genetics at the Centre for the Study of Host Resistance at McGill University in Montreal, Canada. His research interests are mechanisms of host resistance to infection with virulent mycobacterium tuberculosis with special emphasis on lung-specific aspects of the disease progression and granuloma biology.

Ashvin N. Pande, MD, has been appointed assistant professor of medicine at BUSM and director of Endovascular & Structural Heart Interventions at Boston Medical Center. He received his medical degree from Duke University School of Medicine and completed his residency in medicine at Brigham and Women's Hospital, where he also completed a fellowship in cardiovascular medicine, interventional cardiology, and advanced peripheral vascular and structural interventions.

Pande specializes in interventional cardiology, vascular medicine, and congenital heart disease. His research interests include advanced devices in coronary and vascular interventions as well as the use of novel techniques and procedures for the treatment of structural and congenital heart disease.

Avrum Spira, MD, BUSM associate professor of medicine and pathology, has been appointed as chief of the Section of Computational Biomedicine in the Department of Medicine at BUSM. He directs both the Bioinformatics & Systems Biology Program in the Pulmonary Center and the Translational Bioinformatics Program in the Clinical & Translational Science Institute at BUSM.

At the annual dinner to celebrate faculty who were awarded a Peter Paul Career Development Professorship at Boston University are Peter Paul; John Connor, PhD, BUSM assistant professor of microbiology; Assen Marintchev, PhD, assistant professor of physiology and biophysics; and BUSM Dean Karen Antman, MD.

Faculty in Print

Richard Saitz, MD '87
***Principles of Addiction Medicine,* 4th Edition**
Lippincott Williams and Wilkins (2009)
Editors: Richard Ries, David Fiellin, Shannon Miller & Richard Saitz

The book details the state of the science and practice of addiction medicine and is a comprehensive reference for understanding addictive disorders. The fourth edition has been substantially reorganized, revised, and augmented to cover an ever-expanding body of knowledge. Saitz is a professor of medicine and epidemiology; associate director of the Office of Clinical Research; director of the Clinical Addiction Research & Education Unit; and director, BU BRIDGE CTSI Division of Clinical Research Resources.

In Memoriam

Edith Kaplan, PhD, on September 3, 2009. She was a former professor in the departments of neurology and psychiatry and in the Behavioral Neuroscience doctoral program at BUSM. She served as director of Clinical Neuropsychological Services at the Boston Veterans Administration Medical Center, where she was responsible for the development of an internationally renowned pre- and post-doctoral clinical neuropsychological internship training program. Kaplan also was a professor of psychology at Suffolk University, Boston, and affiliate professor of psychology at Clark University, Worcester.

Throughout her 50-year career in psychology, Kaplan made invaluable contributions to the promotion of clinical neuropsychology as a specialty area in psychology. She was noted for her research on brain-behavioral relationships in the areas of aphasia, apraxia, developmental issues in clinical neuropsychology, and normal and abnormal aging.

She made singular contributions to clinical neuropsychological assessment through the development and introduction of the process-oriented approach which offered a revolutionary advance in test interpretation, stressing the qualitative aspects of patients' performance profiles. She developed and co-authored numerous tests including *The Boston Diagnostic Aphasia Examination, The California Verbal Learning Test* (adult and children's versions), the *Wechsler Adult Intelligence Scale-Revised, as a Neuropsychological Instrument* (WAIS-RNI), the *Wechsler Intelligence Scale for Children-III, as a Neuropsychological Instrument* (WISC-IIINI), and *The Delis-Kaplan Executive Function System.*

Joseph J. Vitale, ScD, on August 18, at the age of 84. A BUSM professor emeritus of pathology and laboratory medicine and professor of socio-medical sciences and community medicine, he also served as associate dean for international health programs from 1978 to 1990, director of nutrition education programs from 1977 to 1995, and professor of nutritional sciences at BU School of Dental Medicine from 1976 to 1995.

Vitale was passionate about fostering and facilitating international student exchange health experiences. During his career, he developed formal affiliations with medical centers in Mexico, Colombia, Ireland, Israel, Spain, and China, and established the Vitale International Foundation for Medical Education/Exchange (www.vifme.org) in January 1996, which provides financial assistance to qualified senior medical students who successfully complete an elective at a foreign medical center.

He earned a MS in physiology from New York University and a ScD from the Harvard School of Public Health. He received an Honorary Doctorate in Medicine from Health Science Institute in Medellin, Colombia.

His daughter, Laura Vitale Romo, is a 1989 graduate of BUSM.

Family Medicine Interest Group Wins National Award

The BUSM Family Medicine Interest Group (FMIG) received an American Academy of Family Practice (AAFP) Program of Excellence Categorical Award for Promoting the Value of Primary Care. One of four categorical awards offered each year, the award recognizes groups who promote family medicine as a specialty.

The FMIG was created to increase awareness and interest in family medicine at BUSM shortly after the Department of Family Medicine was established on the Medical Campus in 1997, as well as to help those interested in pursuing a career in the specialty. The BUSM group offers a variety of seminars and conferences, dinners, and workshops throughout the academic year. Involvement in FMIG provides educational and informational opportunities outside the traditional medical school curriculum, assists students seeking residencies in family medicine, helps support individuals to attend state and national conventions, and offers opportunities to build relationships with family medicine faculty and create unity among FMIG colleagues.

In the 2008–2009 year, the FMIG enhanced their outreach with a web campaign that included a blog discussing events and issues in primary care, created the "All in the Family" e-mail newsletter, and developed an online calendar of events. Among a number of initiatives, the group built new partnerships with students and programs at local area medical schools and hospitals, with the BU School of Public Health, and with the BUSM Alumni Association to engage alumni in family medicine with the FMIG.

"Coming from the traditionally more subspecialty-focused Northeast, we are honored and excited to be the only school recognized in this region," said Sebastian Tong '11, one of the leaders of the FMIG. "We aim to serve as a role model for other schools, showing that it is possible to develop an active and innovative FMIG by effectively using the departmental, state, and national resources available."

"We aim to serve as a role model for other schools, showing that it is possible to develop an active and innovative FMIG by effectively using the departmental, state, and national resources available."

Members of the FMIG spell out the organization's name.

"Remember Why You Chose the Profession of Medicine"

Class of 2013 joins the BUSM community

On a beautiful summer afternoon, the 176 members of the Class of 2013 donned their new white coats and raised their voices in unison to recite the Hippocratic Oath. Both the oath and the white coat symbolize their entrance into the profession of medicine.

"When you put on your white coat for the first time today, the message is not that you are expected to become a professional, but that, as of today, you are already a part of the profession," explained Dean Karen Antman. "When you see your first patients in a week or so, you represent the profession and the patients will not be able to differentiate between you and their doctor. You will both be in white coats."

The group is among the largest classes ever admitted to BUSM and is drawn from a pool of nearly 11,000 applicants. They entered from six different pathways and come from 75 undergraduate institutions in the U.S. and Canada. Their ages range from 19 to 40 years and, as a group, they speak more than 30 languages.

Guest speaker Linda Heffner, professor and chair of the BUSM Department of Obstetrics & Gynecology, urged them to really listen to their patients and not always rely on technology. "Watch facial expressions during the interview and listen to the sounds in the patient's chest," she said. "These very human skills will direct you to the diagnosis." She also noted that medical school is full of surprises and challenges. "You will not always be right or best, so share your experiences with your colleagues and learn from them. Remember why you chose the profession of medicine."

"When you put on your white coat for the first time today, the message is not that you are expected to become a professional, but that, as of today, you are already a part of the profession."

The Other Side of the Bed

Intensive training for medical students in bedside care

Class of 2013 Medical Equipment Supported by Alumni

Members of the newest BUSM class received their medical equipment kits which included stethoscopes that were purchased with donations from alumni of the School. Jean Ramsey '90, assistant dean of the Alumni Association, helps Erin Jones '13 display her new stethoscope.

A hospital stay involves multiple medical, scientific, technological, and communications processes. Patients also require basic care and comfort. In the face of the rapidly expanding, complex base of technical knowledge underpinning medical care, the increased patient documentation requirements, shorter hospital stays, and decreased physician time with patients, how to expose medical students to care issues and effectively produce skillful, patient-centered physicians are significant challenges in medical education.

Michael Charness, MD, BUSM assistant dean and chief of staff of the VA Boston Healthcare System, and his colleague Cecilia McVey, BSN, MHA, CNA, associate director of Nursing and Patient Services at the VA Boston Healthcare System, have developed a program designed to give medical students a paid opportunity to participate directly and intensively in patient care. Students accepted to the program are hired for the summer after their first year of medical school as health techs at the VA Boston Healthcare System.

The program designers hope that it will help to transform physician care at the bedside by producing a better, different kind of doctor—one who understands and appreciates nursing care and nurses in patient care; who can effectively interact with nurses in patient care teams; and who has learned how to competently and humanely interact with patients.

"This program will provide many medical students with their first intensive exposure to patient care," said Charness. "Our goal is that they will gain a deep appreciation for the role of multidisciplinary teams in twenty-first century health care, a high level of comfort in patient communication, and advanced skills in basic bedside care."

The students undergo four days of intensive orientation and training to learn the skills and responsibilities of a health tech on a nursing unit. They are then assigned to nurse mentors at the West Roxbury, Massachusetts, VA campus, on the unit of their choice including medical and surgical wards, a spinal cord injury unit, a coronary care unit, medical or surgical intensive care units, a progressive care unit, and the emergency department.

During their two months of service, they engage in direct patient care, learning basic techniques of patient assessment; determination of vital signs; patient hygiene, feeding, repositioning, and wound care; placement and monitoring of catheters, intravenous lines, and feeding tubes; suctioning and respiratory care; and care of tracheostomies. Weekly lectures address practical topics from how to talk to dying patients to communications with the medical team, physician-nurse collaboration, and patient safety.

"At first, I was unclear about the responsibilities that the MDs have that prevent them from being as helpful at the bedside as nurses would wish them to be. After seeing both sides of the spectrum, I recognize that it is a delicate balance of professionalism and manpower."

—Medical Student Program Participant

BUSM students enjoy The Other Side of the Bed program's annual picnic.

Paper by First-year Student Published in *BMJ*

Lead author Steven Lin '13, along with the chair of medical humanities of Tzu Chi College of Medicine in Taiwan and a doctoral student at the Harvard School of Public Health, published a paper in the December 19, 2009 online edition of *BMJ* titled "Silent virtuous teachers: anatomical dissection in Taiwan."

Dissection is a core component of gross anatomy in medical education worldwide. Human dissection provides an opportunity to learn about the human body in three dimensions and, more recently, a chance to introduce medical students to humanistic approaches to confronting death.

The paper notes that at least two challenges exist in creating and offering a successful dissection course; the first is having sufficient numbers of people donate their bodies. In Taiwanese society, there is a belief that cadavers should not be disturbed after death; therefore, people have been unwilling to donate their bodies for medical purposes, leading to cadaver shortages. Consequently, medical schools in Taiwan have historically depended on unclaimed bodies from mental institutions or the streets. The second challenge is ensuring that students treat cadavers with due respect.

Lin and his colleagues describe how the dissection course at Tzu Chi College of Medicine in Taiwan has motivated and inspired people to donate their bodies for scientific endeavors, an otherwise culturally avoided gesture in the East. They demonstrate how the course has navigated around the cultural concerns surrounding death, to the benefit of medical students, body donors, and their families. They analyze the humanistic effects of this course on students, as well as on donors and their families, by drawing on examples of participant observation and students' reflections in Chinese-language literature. They suggest that the design of the curriculum fosters accountability and offers inspiration that may have otherwise have been omitted through cadaver anonymity.

"I am interested in how compassion can be fostered and cultivated through integration of the humanities in medical education," said Lin. "There is a great deal to learn from other cultures in terms of medical care and education, and how that knowledge can be transformative for better patient care in light of the immense population diversity in this country."

BMJ is the former *British Medical Journal* and a subsidiary of the British Medical Association.

Race for the Cure

Pictured left are 11 of the 17 Boston University Medical Campus team members who participated in the Susan G. Komen Race for the Cure to raise money to support breast cancer research and treatment. The race is a 5K run/fitness walk celebrating Massachusetts breast cancer survivors, supporting those currently fighting breast cancer, and remembering those who have died.

High School Student Donates Award to BU Alzheimer's Disease Center

Boston University Academy sophomore **Max Wallack,** 13, of Natick, Massachusetts, a recently-named 2009 Build-A-Bear Huggable Hero, donated his $2,500 award to the Boston University Alzheimer's Disease Center. Wallack founded Puzzles To Remember (**www.PuzzlesToRemember.org**), which collects puzzles and donates them to facilities that care for those with Alzheimer's disease and dementia. He established the organization in memory of his great-grandmother, who passed away from Alzheimer's. Dean Antman and members of the BU Alzheimer's Disease Center hosted Max on the Medical Campus to thank him for his contribution and for his commitment to helping those with the disease. Established in 1996, the BU Alzheimer's Disease Center conducts cutting-edge research and strives to enhance clinical care for Alzheimer's disease patients and their families.

From left to right: Robert Stern, PhD, co-director of BUSM's Alzheimer's Disease Clinical & Research Program; Karen Antman, MD, dean of BUSM and provost of Boston University Medical Campus; Neil Kowall, MD, director of the BU Alzheimer's Disease Center; Max Wallack, Boston University Academy sophomore; James Berkman, head of Boston University Academy; and Ben Wolozin, MD, PhD, BUSM professor of pharmacology and neurology.

Professorship Honors Renowned Scientist

Nancy Bucher's slight frame and gentle demeanor belie her powerful mind. At 95 years of age, she continues her lifelong pursuit of answers to the important questions of cell regeneration. Bucher is recognized internationally for her pioneering research on liver regeneration and the uncontrolled growth of cancer cells.

A distinguished member of the BUSM Department of Pathology & Laboratory Medicine for 26 years, she has been recognized for her long-standing contributions to the research mission of the department with the establishment of an assistant professorship in her honor. "This is the first named professorship in the Department of Pathology & Laboratory Medicine," said Daniel Remick, MD, professor and chair of the department. "It is wholly fitting that it carry Dr. Bucher's name because of her outstanding contributions to the field and to this department. We are currently recruiting a young investigator who shares her passion for science and investigative work."

Established with anonymous contributions, the Nancy L. R. Bucher Assistant Professorship Fund in Pathology is a permanently endowed fund, the income of which provides salary and research resources to a junior faculty member for three to five years.

"Professorships are important to the mission of the School of Medicine because they support the research work of biomedical scientists," said Dean Karen Antman. "They offer BUSM the opportunity to attract highly distinguished researchers."

The fund also benefits from the generous challenge grant given by former BU Board of Trustees Chair Alan Leventhal and his wife, Sherry, who is vice chair of the BUSM Dean's Advisory Board, to establish endowed positions throughout the University. The Leventhals are also the parents of two BUSM graduates.

The Department of Pathology & Laboratory Medicine has a long history of contributions to the field of pathology. The new professorship is part of a resurgence of the department and is a resource for fulfilling its mission to bridge basic and clinical sciences in the study, teaching, and diagnosis of disease. In the past three years, 23 new faculty have been recruited, the amount of National Institutes of Health funding has quadrupled, and the department has moved to new, state-of-the-art research facilities.

"I love BU," said Bucher. "And I am pleased to have this professorship named in my honor."

Christine Iacobuzio-Donahue, MD, PhD,'98, (center right) presented the Nancy L. R. Bucher Seminar titled "Molecular Features of Pancreatic Cancer Progression." Iacobuzio-Donahue is an associate professor of pathology and oncology at the Sol Goldman Pancreatic Cancer Research Center at Johns Hopkins University School of Medicine.

She is pictured with Chris Andry, PhD, BUSM associate professor of pathology and vice chair for operations and management for the Department of Pathology & Laboratory Medicine; Mary Jo Murnane, PhD, BUSM associate professor of pathology; and Daniel Remick, MD, professor and chair of the Department of Pathology & Laboratory Medicine.

Nancy L.R. Bucher >

Fall Alumni Weekend 2009

Boston University Alumni Weekend 2009 was held Friday, October 23–Sunday, October 25 and featured alumni events from every school. This year, for the first time, BUSM, BUSPH, and BUGSDM enjoyed events for their alumni—here are photos from some of them.

On Saturday morning, the Medical Campus hosted an Alumni College event titled "Health Care Reform and the Promise to Address Health Outcomes Disparities" which included a keynote address by Louis Sullivan '58, former U.S. Secretary of Health and Human Services and president emeritus of Morehouse School of Medicine.

Jonathan Woodson, MD, associate dean for diversity and multicultural affairs, moderated a panel discussion by faculty from BUMC, including Karen Freund, MD, professor and chief of the Women's Health Unit Section of General Internal Medicine, and Rafael Ortega, MD, professor and vice chairman of the Department of Anesthesiology.

In the afternoon, a celebration was held in recognition of the **25th anniversary of the Early Medical School Selection Program (EMSSP),** a program created to increase the number of medical students from underrepresented minority groups. A partnership among BUSM and undergraduate colleges, it emphasizes early admissions and curriculum coordination and includes BUSM, Boston University undergraduate schools, and historically black institutions.

The EMSSP has been hailed by the Association of American Medical Colleges as an example of what medical schools can do to increase minority enrollment. Currently, half of the students from underrepresented minority groups entering the first-year class at BUSM come from this program.

The celebration featured **Kenneth Edelin, MD,** former BUSM associate dean for minority affairs, Louis Sullivan '58, and Loretta Jackson '94 who offered reflections on the history of the program and its progress in the past 25 years.

In honor of the 25th anniversary of the EMSSP, both Sullivan and Edelin were presented with awards.

On Saturday evening, the first Medical Campus Gala was held at the Westin Waterfront, where more than 260 alumni, faculty, staff, students, and guests gathered for dinner, live music, and dancing. Distinguished alumni from the three Medical Campus schools were honored.

Top row from left to right:

Jeffrey Hutter, DMD, BUSDM dean, and Karen Antman, MD, BUSM dean, hosted the Dean's Recognition Dinner on Friday, October 23. The event recognized Dean's Club members who made gifts of $1,500 or more.

Pictured at the Dean's Recognition Dinner are, from left to right, Robert Witzburg '77, Lorraine Witzburg, Emily Ann Holick, Michael F. Holick, MD, Howard Bauchner '79, Peter Pochi '55, and Chris McElroy.

Undergraduate members of the BU Ballroom Dance Club performed choreographed dance numbers followed by group and individual instruction. The student dancers performed the swing, cha-cha, jive, waltz, samba, and rumba.

Bottom row from left to right:

Pictured from left to right are Dean's Advisory Board Member Elaine Kirshenbaum, Lindsay Miller '11, Tamanna Singh '11, Dan Kirshenbaum '11, and Dean Karen Antman.

Loretta Jackson-Williams '94 speaking at the Early Medical School Selection Program (EMSSP) anniversary celebration.

In honor of the 25th anniversary of the EMSSP, members of BUSM Office of Diversity & Multicultural Affairs Malissia Evans and Jonathan Woodson, MD, present a recognition award to Louis Sullivan '58, president emeritus of Morehouse School of Medicine and former U.S. Secretary of Health and Human Services.

Spring 2010 Alumni Weekend

Friday, April 30

- Scientific Program and luncheon at the School of Medicine
- Reunion social hour followed by individual Reunion Dinner Parties

Saturday, May 1

- Culinary market tour of Boston's historic North End
- Luncheon, panel discussions, and student-led campus tours
- Dining and dancing at the 135th Annual Meeting and Banquet

Visit our website: **www.bumc.bu.edu/medalumni/aw**

Reunion Dinner, Annual Meeting, and Banquet to be held at:

The Renaissance Boston Waterfront Hotel
606 Congress Street
Boston, MA 02210
617-338-4111

www.renaissanceboston.com

Contact the hotel directly to make your reservation, letting the agent know you would like to be placed in the Boston University School of Medicine Alumni Weekend room block and receive the discounted rate.

Please continue to visit our Alumni Weekend 2010 webpage at: www.bumc.bu.edu/medalumni/aw for updates of available Alumni Weekend room blocks. As April and May are extremely busy months in Boston, we strongly encourage you to book your hotel reservation as soon as possible.

Contact us:

BUSM Alumni Association
72 East Concord Street, L-120
Boston, MA 02118
Tel: 617-638-5150
Fax: 617-638-4492
E-mail: **alumbusm@bu.edu**

Campus and Citywide Events

Anniversary Celebrations

1990—20th	1970—40th
1985—25th	1965—45th
1980—30th	1960—50th

and
GOLDEN REUNION
(Graduates prior to 1959)

MIA Drs. Deborah Chong and Lise Rehwaldt with a patient and nurse Mary Kitundu in Mwanza, Tanzania.

Dr. Deborah Chong and her father.

Alumna Leads Volunteer Health Care Organization

Missions to Jamaica and Tanzania bring medical care and health education

Deborah Chong '99 believes that health care is a human right, a view that guides her life and work. An obstetrician-gynecologist, Chong co-founded Medicine In Action (MIA) with Karolynn Echols, MD, in 2005.

A nonprofit global medical organization, MIA is committed to providing quality medical and surgical care to populations in underdeveloped countries that lack access to adequate health services. MIA focuses on women's health care issues, and offers residents and medical students exposure to international health opportunities through its medical missions. Missions typically occur four times a year; eight missions to Jamaica have been completed—including ones in Kingston and rural St. Mary—and four to Mwanza, Tanzania.

Echols and Chong were residents together and shared a desire to bring health care to women in impoverished countries. Chong also credits her father, Alton "Sugar" Chong, as her inspiration for establishing MIA. "My dad was born and grew up in Jamaica. His family was poor but hard-working, and he put himself through university in the United States to become an engineer," she explained. "Remembering his roots, he returned to Jamaica and served the community even as he struggled with terminal cancer. For me, being a doctor is a gift and this is my way to give back and honor the memory of my father."

Tanzania and Jamaica were chosen as the first countries to serve because of their serious public health care issues. Tanzania is plagued by extreme poverty and a dearth of medical resources; access to medical care can require travel by foot for hours. Jamaica, while a country of more moderate poverty, has significant wealth disparity issues and lacks resources for basic preventative health care for those in need. Medications for serious illnesses are often not available, and the number of patients and lack of resources overburden the physicians working for the public health system.

"Through education and an emphasis on good health, we hope to empower women worldwide," said Chong of her organization. "By providing international exposure for residents and medical students, we can break down existing cultural barriers and contribute to the development of globally sensitive physicians. We emphasize helping women with their health and health education. Women are the cornerstone of society and if they are ill, the backbone of society becomes weak and frail."

BUSM was instrumental in helping Chong become a thoughtful physician with a conscience. She enjoyed working at Boston City Hospital, now Boston Medical Center, where she worked with many indigent patients and realized that this was a population with whom she felt a connection. Following graduation, she recognized that she was privileged and felt an obligation to use her talents to help others. BUSM allowed her to split her last year of medical school, giving her the opportunity to travel the world; the travel experience helped her choose her career path.

Although Medicine In Action is a small grassroots organization with 10 physicians, it's had significant impact in both Jamaica and Tanzania. The combination of volunteers in both the U.S. and the mission countries, along with local community doctors, enables MIA to spend 85 percent of the donations received on patient care. So far, 3,000 patients have been treated, 1,000 women have been screened for cervical cancer, and more than 200 surgeries have been performed.

The organization has implemented a large-scale pap smear screening program in Jamaica and would like to do something similar in Tanzania, either with pap smear screening and/or HPV vaccination.

"Dr. Chong's work illustrates how important it is to bring decent health care to underserved populations and how one person committed to others can make a difference," said Suzanne Sarfaty, MD '88, assistant dean of academic affairs and international health programs. "As an alumna, she is a wonderful role model and inspiration for our students."

For more information on Medicine In Action, visit **www.medicineinaction.org.**

Dwight Shen '78, Military Physician and Medical Missionary

On December 25, 2008, **Colonel Dwight Shen,** a Class of 1978 graduate, was directing the replacement operations for the Combat Support Hospital (CSH) in Mosul, Iraq, when insurgents launched a coordinated rocket attack on the base.

Shen had joined the U.S. Army Reserves in 1986 and spent much of his military career leading medical humanitarian assistance missions. "I am a naturalized American citizen," said Shen. "I was always grateful for the opportunities and privileges of citizenship but wanted to find some way to show that I deserved these gifts. When an opportunity came for me to join the Army, I immediately took it to give back to the nation that has given me so much."

A graduate of the Six-Year Program, he is an internist with a specialty in endocrinology. His years in the Army Reserves brought him to many places in Asia, including Indonesia, Mongolia, and Thailand. In 2007, he was part of the first military mission to go to Vietnam since the end of the American war with that country.

The Army does six to seven medical humanitarian missions a year, and Shen has averaged two to three, although now with a young daughter, he volunteers for only one a year. Working with the military in each of these countries, U.S. Army medical personnel combine with local medical providers to bring care to remote places whose population has little or no access to medical care. According to Shen, the missions develop good will for the U.S.; provide the military care providers with opportunities for working with their counterparts in other countries, which has proven valuable in crisis situations like natural disasters; and allow providers to learn to perform under austere conditions.

In 2006, he made his military commitment full time by becoming active duty. He was teaching classes on how to rebuild medical infrastructure destroyed by war and decided that instead of teaching it he should be doing it. "When the 345th CSH deployed to Iraq in 2008, I volunteered to deploy with them as their Deputy Chief of Professional Services (DCCS)," said Shen.

"The 345th CSH provided Level III casualty care to all of northern and western Iraq." As the DCCS, he was responsible for all clinical services including medical, surgical, pharmacy, laboratory, radiology, nutrition, and physical therapy.

"I was working outside the hospital when the initial rockets hit the base," recalled Shen. "I was wounded by shrapnel from a 107mm rocket that detonated 15 meters from me. The same rocket killed Major John Pryor, the trauma surgery residency director at University of Pennsylvania Hospital who I was working with."

While under rocket attack, two emergency room staffers under his command—who he instructed to take cover and not help him—instead carried him to safety. The shrapnel fractured his tibia and caused severe muscle damage to his legs. He had significant bleeding that required multiple surgeries for wound stabilization. After stabilization, he was medically evacuated to Germany and then the U.S. He underwent a number of months of treatment and physical therapy and is now back to full capacity serving our country.

"Through this event, I had remarkable experiences that changed my perspective," he said. "I saw the quickness, randomness, and violence of combat, the bravery of our soldiers, the quality of care for the wounded, the kindness and hospitality of the Iraqi people, and the humanity of our nation."

Shen now lives in Hawaii with his wife, Vicky, and eight-year-old daughter, Chloe. He has a 22-year-old son, Bryan. Stationed at Tripler Army Medical Center there, Colonel Shen received the Purple Heart and the Combat Action Badge. He continues caring for his military colleagues and their families, and leading humanitarian missions.

He recently visited the School of Medicine and had the opportunity to meet with and be thanked for his service by Dean Karen Antman and Associate Dean Jonathan Woodson who is also a brigadier general in the U.S. Army Reserves and has served in Iraq.

Top: Colonel Shen on a medical mission with some of his young patients.

Bottom: Colonel Shen being treated for his wounds.

"I was always grateful for the opportunities and privileges of citizenship but wanted to find some way to show that I deserved these gifts. When an opportunity came for me to join the Army, I immediately took it to give back to the nation that has given me so much."

Photographs of Long-ago Alumnae Discovered

By James S. Brust '68

Established in Boston in 1848, the New England Female Medical College (NEFMC) was the first medical school for women in the United States. Founder Samuel Gregory's reasons were less than enlightened (he felt it improper for male physicians to attend women for OB-GYN matters), and the school struggled throughout its 25-year existence, short of funds and opposed by mainstream medicine. Incorporated into Boston University in 1873, it became the Boston University School of Medicine. When BUSM celebrated its sesquicentennial in 1998, it was NEFMC's 1848 founding that was rightly considered the start of our School.

Ninety-eight women received medical degrees from the NEFMC, a small number for its quarter-century existence, but a remarkable feat for those women. As individuals, though, these pioneers have received little attention. Recently, photographs of two of them surfaced, putting faces on these long-ago alumnae.

The first is **Dr. Anna Inman (1813–1887)** of Smithfield, Rhode Island, an 1857 graduate. While still a student at NEFMC, she visited the New York Medical College for Women and later served as chair of their obstetrics department. She eventually returned to her native Rhode Island to continue her medical career.

The other is **Dr. Alida C. Avery (1833–1908)** from Lebanon, New York, an 1862 graduate. In 1865, she was selected as one of the original faculty members of Vassar College, where she was the campus physician and served as professor of physiology and hygiene. The photograph of Dr. Avery shown here is from an 1874 album of Vassar students and faculty. Later in her career, she practiced medicine, first in Colorado and later in California, working for women's suffrage organizations in both states.

Photographs of NEFMC graduates are rare—it is nice to see these two!

v **Dr. Alida Avery**
Courtesy of James Brust

^ **Dr. Anna Inman**
Courtesy of Michael McAfee

Michael L. J. Apuzzo '65

Professorship named in his honor at Keck School of Medicine
Awarded Neurosurgical Medal in Norway

Michael L. J. Apuzzo, the Edwin M. Todd/Trent H. Wells Professor of Neurological Surgery, Radiation Oncology, Biology and Physics at the Keck School of Medicine, has been honored by the establishment of a professorship in his name in advanced neurosurgery at the Keck School of Medicine of the University of Southern California.

He also was awarded the *Vilhelm Magnus Medal* at ceremonies sponsored by the Norwegian Neurosurgical Society and the University of Oslo. The medal, created on commission by one of Norway's premier sculptors, honors a living neurosurgeon who represents the "innovative and pioneering spirit" of Magnus, the neurosurgery pioneer at the University of Oslo in the early 20th century. In conjunction with the award ceremonies, Apuzzo presented a lecture entitled "The Quest for Modernity" to members of the Norwegian Neurological Society, University of Oslo neuroscience faculty, Norwegian National Center for Surgical Research, and the National Hospital.

BUSM Grads Rated Top Naval Interns

Three members of the Class of 2008 were selected as "best intern" by their respective program directors. Holding their awards (from left) are **Meghan Hughes, Daniel Ruane,** and **Annely Richardson.** Ruane was also selected as overall intern of the year. The award recognizes academics, research, and leadership.

Class Notes

1956

Irvin Yalom, of Palo Alto, CA, reports, "100,000 free books in Vienna! This is the official report by the city of Vienna honoring my book at their Book Fair in November 2009."

The famous American author and psychotherapist Irvin Yalom is this year's guest at the Austrian event "Eine STADT. Ein BUCH." (One City, One Book.) Once a year, 100,000 copies of a chosen title are printed and given free of charge to the citizens of Vienna as part of the reading project.

This year, Vienna is discussing Yalom's novel *When Nietzsche Wept.* The book deals with a fictional encounter of the philosopher Friedrich Nietzsche and one of the co-founders of psychoanalysis, Josef Breuer. Yalom was a guest of the city of Vienna, which organized a gala dinner in the Vienna City Hall.

Since 2002, some of the authors highlighted by the event include Frederic Morton, Nobel Prize winners Imre Kertész and Toni Morrison, Johannes Mario Simmel, John Irving, Nick Hornby, and Ruth Kluger.

Alan Goldberg '57 displays the cover of his new book.

1957

Alan H. Goldberg, of Shorewood, WI, writes, "I have recently written a book titled *The Doors of St. Michael's, Hildesheim.* In the book I discuss the history and the technological, sculptural, and theological significance of these eleventh-century, 15 ½-foot, 1 ½-ton church doors, located in Hildesheim, Germany. These doors with their biblical images were the first to be cast in one piece in bronze since antiquity. This casting was a remarkable achievement of forging for any age and a near-miracle for the eleventh century. My book is on the shelves of the University of Wisconsin Milwaukee Library and will be on the reserve reading list for a course in Medieval Art History. Comments: agold@wi.rr.com."

1972

Bruce K. Shapiro, of Owings Mills, MD, writes, "I direct the Johns Hopkins/Kennedy Krieger training program in neurodevelopmental disabilities and continue to enjoy the joys and challenges of interacting with residents and medical students."

1974

Steven J. Holtz of Oakland, CA recently received the prestigious J. Elliot Royer Award from the University of California School of Medicine, San Francisco (UCSF), an honor that is presented every two years to a neurologist in the San Francisco Bay Area who has made significant contributions to the field of neurology. Dr. Holtz is currently associate clinical professor of neurology at UCSF, where he has taught for over 28 years. He is also co-founder and co-medical director of one of the earliest Joint Commission-certified Primary Stroke Centers in the Bay Area at the John Muir Health System in Walnut Creek and Concord, CA. This stroke center received the Gold Achievement Award from the American Heart Association/American Stroke Association in 2008 and Dr. Holtz also received the Heart of Gold Medical Honoree Award, recognizing his contributions towards improving stroke care and patient outcomes in the community.

1979

Charles M. Blitzer, of Durham, NH, writes, "I am busy with orthopaedic practice in New Hampshire and serving as president of the New Hampshire Medical Society."

1990

Edward M. Gosselin, of Bridgewater, NJ, writes, "My wife, Gerianne, and I have just celebrated our 26th wedding anniversary. Our two little boys that I held in my arms on graduation day in June of 1990 are now in college—pre-med and engineering. Their two younger sisters are close behind. I am board-certified in emergency medicine working in central New Jersey and also an administrator in the department. Geri is still working part time as an RN. Many memories returned this October 2009 while attending the American College of Emergency Physicians Seminar at the Boston Convention Center. A visit to the Medical Campus was great, and the BU Bookstore has all of my family wearing Terrier red again! I can't believe it's been 20 years!"

In Memoriam

1941

Elsa K. Chaffee Bodon, of Key Largo, FL, on October 14, 2009, at the age of 94. An occupational medicine specialist, she retired to Key Largo. She is survived by her half-sister and her niece.

1942

J. Howard Lightfoot, of Contoocook, NH, on November 12, 2009, at the age of 91. A family physician, he practiced for 40 years until his retirement in 1986. During World War II, he served as a captain in the U.S. Army in England, Belgium, and France. He was predeceased by his wife of 63 years, Dorothy. He is survived by four children, four grandchildren, and five great-grandchildren.

1943-A

David K. Lovely, of South Portland, ME, on October 22, 2009. An otolaryngologist, he practiced in Portland until his retirement in 1989. During his career, he was on-staff at the former Children's Hospital and the former Maine Eye and Ear Infirmary. He also served on the active staff of the Mercy Hospital and Maine Medical Center, where he was chief of the Department of Otolaryngology from 1966 to 1985. Lovely was a member of the Maine Medical Association, the American Medical Association, and the American College of Otolaryngology-Head and Neck Surgery. He is survived by his wife of 67 years, Eleanor; two daughters, three grandchildren, and a great-grandson.

1944

Sumner Kaufman, of Sarasota, FL, on October 26, 2009, at the age of 88. An anesthesiologist, he was director of anesthesiology at Southside Hospital in Bay Shore, NY, for 37 years. He served in the U.S. Navy Medical Corps in World War II and the Korean War. Kaufman, also a graduate of BU College of Liberal Arts (now CAS), was one of seven members of his family to graduate from BUSM—including his brother **David Kaufman '47**—and five of the seven earned their undergraduate degrees at BU, including his two sisters. Another family member will graduate from BUSM in 2011. He is survived by his wife of 61 years, Harriet, three sons, one daughter, six grandchildren, one great-granddaughter, and two sisters.

1951

Julius Kritzman, of Newton, MA, on October 24, 2009, at the age of 85. An internist, he was board-certified in hematology, oncology, and internal medicine and for some time was involved in the research and publication of numerous papers. Among the very first group of interns at Tufts New England Medical Center, he was on the staff of Tufts for most of his career. He was selected as Massachusetts' American College of Physicians Internist of the Year in 1990. During World War II, he served as a combat engineer and was part of the landing on Omaha Beach in Normandy; he was also among the troops who liberated the concentration camp at Dachau. He was awarded the Croix de Guerre avec Palmes and the Good Conduct/Victory Medal. He is survived by his wife of 60 years, Elinor, two daughters, and four grandchildren.

1955

Frederick G. Doran, of Vero Beach, FL, on October 10, 2009, at the age of 83. A general surgeon before retiring to Vero Beach, Doran served in the U.S. Army Air Forces during World War II. He is survived by his wife, Jeanne, two sons, two daughters, and six grandchildren.

1956

Modhaffer K. Al-Chokhachy, of Plymouth, MA, on June 1, 2009, at the age of 79. A general surgeon, he was chief of surgery at the Jordan Hospital in Plymouth, where he practiced from 1965 through 2008. He was a fellow of the American College of Surgeons and a member of the New England Cancer Society. He is survived by his wife of 44 years, Carolyn, two daughters, and three sons.

1960

John J. Whalen Jr., of Orlando, FL, on December 11, 2008. An anesthesiologist, Whalen also served in the U.S. Air Force. He is survived by his wife, Cecilia, three daughters, one son, nine grandchildren, and five great-grandchildren.

1974

Anthony A. Gianelly, of Waban, MA, on May 28, 2009, at the age of 72. A specialist in medical education and communications, he held a doctor of dental medicine from Harvard School of Dental Medicine as well as a PhD in biology and biochemistry from Boston University. An internationally recognized professor of orthodontics, Gianelly served for many years as chairman of the Department of Orthodontics & Dentofacial Orthopedics at BU Henry M. Goldman School of Dental Medicine. He is survived by his wife, Ernestine, one son, one daughter, and two grandsons.

Alumni Association Phonathons

The Alumni Association staff extends sincere gratitude to all the loyal Phonathon volunteers.

1. On November 2 and 12, 2009, the Alumni Association held its annual Fall Phonathons to raise money for the BUSM Annual Fund. Forty-eight students and 14 alumni callers obtained a remarkable $90,000 in pledges over two nights. Alumni volunteers celebrating class reunions in 2010 took the opportunity to encourage classmates to attend their reunions during the medical school Alumni Weekend in April and May.

2. James Kimbaris, Joanna Ng, Christopher Simons, and Michael Friedberg, all regular volunteers and members of the Class of 2010, finish dinner before reaching out to alumni across the country. Dean Karen Antman expressed her appreciation for the time and effort the volunteers expend to support BUSM.

3. Emily Adams '10, who has been attending the Phonathons since her first year of medical school, enjoys a conversation with an alumnus at the other end of the line.

4. Assistant Dean Jean Ramsey '90 (left) and Alumni Association President Elizabeth Day Barnett '85 (right) present thank-you gifts to Eric Carniol '11 and Chris Han '12 for their volunteer efforts and commitment to BUSM.

5. Gene Healey '65, celebrating his 45th reunion in the spring, chats with Jordan Neviackas '12 during a break from calling.

Continuing Medical Education Conferences

March 19–20, 2010
The Steven Parker Memorial Developmental Behavioral Pediatric Conference:
Clinical Problems in Primary Care
Royal Sonesta Hotel, Cambridge, MA

March 25–26, 2010
Medical-Legal Partnership: Patients to Policy
Sheraton Crystal City, Arlington, VA

April 19–23, 2010
Current Clinical Pediatrics
Hilton Resort, Hilton Head Island, SC

April 28–30, 2010
The 6th Annual Ellison Pierce Symposium
Positioning Your ORs for the Future:
A Business, Risk and Clinical Update
Fairmont Copley Plaza Hotel, Boston, MA

May 3–7, 2010
The 26th Annual Controversies in Internal Medicine
Hilton Resort, Hilton Head Island, SC

For more information, please contact:

Continuing Medical Education
Boston University School of Medicine
72 East Concord Street, A305
Boston, MA 02118
Tel: 617-638-4605
E-mail: **cme@bu.edu**

www.bumc.bu.edu/cme

Calendar of Events

AOA Induction Ceremony
Boston University Castle
Monday, March 15, 2010, 7 p.m.

Alumni Association Spring Phonathon
Hiebert Lounge, BUSM
Tuesday, March 16, 2010, 5:30 p.m.

Match Day
BUSM
Thursday, March 18, 2010, Noon

Chester S. Keefer, MD Society Dinner
Four Seasons Hotel, Boston
Friday, March 26, 2010, 6 p.m.

BU Global Day of Service
Saturday, April 17, 2010

Alumni Weekend
The Renaissance Waterfront, Boston
Friday and Saturday, April 30 and May 1, 2010

Dean's Advisory Board Dinner
Sloane House
Charles River Campus
Thursday, May 6, 2010, 6 p.m.

Dean's Advisory Board Meeting
Hiebert Lounge, BUSM
Friday, May 7, 2010, 8 a.m.

Fifth Annual John McCahan Medical Campus Education Day
Friday, June 11, 2010, 8:30 a.m., BUSM

Graduate Medical Sciences Commencement, Boston
May 21, 2010

BUSM Commencement, Boston
May 23, 2010

BUSM Alumni Association Executive Committee Meeting
Hiebert Lounge, BUSM
June 23, 2010, 6 p.m.