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A celebration for the BUSM community

FRIDAY, SEPTEMBER 21, 2012

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**BOSTON UNIVERSITY
SCHOOL OF MEDICINE**

SUMMER 2012 • www.bumc.bu.edu

Campus Alumni News

BUSM'S 165TH COMMENCEMENT

CLASS OF 2012

Launched as
Clinicians
and Scientists

**BOSTON
UNIVERSITY**



DEAR FRIENDS,

Each year at Commencement, I look out at the sea of faces and think what promise these new physicians and researchers bring to medical science and health care. Each has a unique contribution to make. I believe that the School of Medicine has prepared each of the physicians particularly well to care for their patients and each of the scientists in discovery. Members of the Class of 2012 were already accomplished when they arrived on campus and did even more during their stay on campus. We look forward to hearing from them and about them as they take medical practice and discovery into the future.

At the core of our mission is the educational, intellectual, professional, and personal development of our students, trainees, and faculty. A key to successful development is a collegial, supportive environment enhanced by appropriate resources and a keen awareness of the challenges and opportunities posed by medical education and the scientific endeavor.

The BUSM Department of Biochemistry is an excellent example of forward thinking that is happening at our School. With the foundation of our experienced veteran faculty and the infusion of new faculty recruited from some of the best programs internationally, updated facilities and proactive leadership, Biochemistry is building on its history of achievements and laying the groundwork for ever-greater contributions to scientific discovery.

New programs in the Division of Graduate Medical Sciences are expanding opportunities for learning and research in a variety of biomedical fields. Utilizing the resources of our scientists and their connections to practical applications in their fields, programs such as forensic anthropology are attracting outstanding students and program recognition.

The new student residence is now open and filled to capacity with medical students. This important addition to our campus is being dedicated on September 21. Please join us for the celebration and a tour of this new facility, which will substantially improve the quality of our students' lives. The faculty and students have been touring the building as we watch with great joy the development of the adjacent garden, the delivery of furniture and exercise equipment, and, most recently, a Yamaha baby grand piano for the student lounge. So many of our students are accomplished musicians.

The diversity of our alumni's pursuits speak to their intellectual curiosity and creative talents. Andrew Malbin '78 has combined his medical training with his love of underwater photography, examples of which he shares with the BUSM community in this issue.

Please enjoy reading about the people and programs in this issue. As always, thank you for your interest and commitment to BUSM.

Best regards,

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

**Boston University School of Medicine:
Campus & Alumni News**
Published by the Boston University
Medical Campus Communications
Office on behalf of Boston University
School of Medicine.

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DESIGN & PRODUCTION
Boston University Creative
Services
PHOTOGRAPHY
Boston University Photography,
Boston University School of
Medicine Educational Media
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Boston University's policies provide for equal opportunity
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PHOTOS BY FRANK CURRAN

SUMMER 2012

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ON THE COVER
BUSM's 165th
Commencement
by Frank Curran

BUSM's 165th Commencement



As a sea of red robes enveloped the Boston University Charles River Campus during Commencement weekend, the MD and PhD graduates of the School of Medicine and its Division of Graduate Medical Sciences stood out with their dark-green and deep-blue lapels and hoods signifying their course of study. The academic road has led the 238 graduates of the Class of 2012 to this day of recognition as doctors of medicine and doctors of philosophy. One hundred sixty-six members of the class received the MD; 10 the MD/PhD; four the MD/MBA; three the MD/MPH; and 55 the PhD. Latin honors were conferred on 34 class members.

PHOTOS BY FRANK CURRAN

BUSM Dean Karen Antman, MD, welcomed the graduates and their families and friends after a rousing performance of the national anthem by graduating medical student Mary Alice Vijjeswarapu.

"Commencement is really only the end of the beginning of your education," Dean Antman told the Class of 2012. "We hope you have acquired the most important tool of all—the capacity for continued, disciplined inquiry and lifelong learning. You are about to embark as a resident or post-doc on what will be your steepest learning curve yet. Congratulations on reaching this major milestone in your professional life—the end of the beginning."

Speaking in Latin in what has become her Commencement tradition, Associate Provost for Graduate Medical Sciences Linda Hyman, PhD, told the graduates, *per aspera ad astra*: through hardships to the stars. "I chose this phrase because I think it is important to recognize the road you've traveled was likely long and difficult," said Hyman. "And, yes, as we all know, it is all about the journey—but now, stars, here you come! I know it wasn't easy and that you almost certainly experienced hardship along the way—perhaps experiments that didn't work or a test you knew you could have done better on. Yet, here you are and you most definitely have made it."

The faculty awards conferred at Commencement included Educator of the Year Awards to Adam B. Hall, MSc, instructor of anatomy and neurobiology, for Graduate Sciences; Megan T. Sandel, MD, MPH, associate professor of pediatrics and environmental health, for Preclinical Sciences; and Edward B. Feinberg, MD, professor of ophthalmology, for Clinical Sciences. The Leonard Tow Humanism in Medicine Award was presented to Heidi P. Auerbach, MD, assistant professor of medicine, and Brian Penti, MD '04, assistant professor of family medicine. The School's highest teaching award, the Stanley L. Robbins Award for Excellence in Teaching, was presented to Anna DePold Hohler, MD '98, associate professor of neurology.

OPPOSITE PAGE: Agganis Arena is the site of the 165th BUSM Commencement on May 19, 2012.

1. Class of 2012 graduates line up for the Commencement ceremony. **2.** Mary Alice Vijjeswarapu sings the national anthem. **3.** Johann Sebastian Bergholz Villafane speaking on behalf of PhD graduates. **4.** Identified by their blue hoods, PhD graduates pose together. **5.** Human rights activist and 2012 Commencement speaker Charles Clements, MD, MPH. **6.** Aniruddha Hazra speaking on behalf of the MD graduates.



Speaking on behalf of the PhD graduate students, Johann Sebastian Bergholz Villafane said, “Whether it is in industry or academia, policy or education, we came to this particular school—to BU—because we wanted to make a difference, and we have already begun. As we teach classes, publish our articles, discover new medicines, and treat our patients, we become part of the international scientific community, and it will be up to us to give this community direction and purpose.” Villafane received his doctorate in biochemistry and has accepted a position as a research assistant professor at Sichuan University in Chengdu, China.

Aniruddha (Anu) Hazra, chosen to speak by his medical school classmates, pondered several major events during his BUSM education. “Recently, I found myself thinking about our induction into medicine out on Talbot Green that August afternoon,” he recalled. “When I compare that Anu, in his crisp white coat, to the Anu standing today in overly priced, rented regalia, the differences are staggering. On the outside, I have much less hair, have gained a little weight, and perpetually look tired. But more importantly, on the inside up here—and I speak for all of us—we have consumed, digested, and applied more knowledge and skills than we could ever imagine. On Match Day I made the analogy of our match to finding ‘the one.’ If that Friday in March was our engagement, this is the wedding. It is a culmination of years of dedication and diligence.” Hazra will be starting an internal medicine residency in Chicago’s Rush University Medical Center.

Commencement speaker Charles Clements, MD, MPH, executive director of the Carr Center for Human Rights Policy at the Harvard Kennedy School, shared the human rights activist three-word code: dignity, witness, and hope. “Dignity is at the core of all human rights,” he said. “Dignity should be at the core of every interaction you have with patients as a physician. Witness can come in many forms. It can mean standing up for patients who have no voice of their own. Hope is the very foundation of the Universal Declaration of Human Rights. I cannot think of a single domain during my lifetime in which there hasn’t been some improvement. You began this journey with hope and I’m sure you can think back to someone who spilled a little hope on you along the way.”

The ceremony concluded with the MD graduates reciting the Hippocratic Oath and, for the first time at a BUSM Commencement, the PhD graduates recited the Oath of the Scientist. ■

Photos are up on Facebook at www.facebook.com/BUmedicine and a video is available on BUiverse at www.bu.edu/buiverse.



1. Ebonye Carter and her son are ready for the Commencement ceremony.
2. Keyona Gullett and Carly Grovhoug display their diplomas.
3. Assistant Dean for Alumni Affairs Jean Ramsey, MD '90 with Nathan Calloway and his son, Wilson.
4. Faculty honored at Commencement are (from left): Edward Feinberg, MD; Megan Sandel, MD; Adam Hall, MSc; Anna DePold Hohler, MD '98; Heidi Auerbach, MD; and Robert Lowe, MD.



PHOTOS BY FRANK CURRAN



Robert Lowe Receives Metcalf Award

Robert C. Lowe, MD, associate professor of medicine and course director for the BUSM second-year Integrated Disease and Therapy Course, received a Metcalf Award for Excellence in Teaching at Commencement exercises on May 19.

“This is one of the University’s highest teaching awards, and we are honored that Dr. Lowe has been recognized as one of the most outstanding faculty at Boston University,” said Dean Karen Antman.

Students, faculty, and alumni nominate candidates for the awards, which were established in 1973 by a gift from the late BU Board of Trustees Chairman Emeritus Arthur G. B. Metcalf. Metcalf Award winners each receive \$5,000.

“My approach to teaching is best described as using active learning principles and real-life cases to help students integrate the basic principles of medical science with the practical knowledge that underlies clinical medicine,” said Lowe. “In addition to teaching professional behavior, I try to instill a sense of the history and value of the medical profession as a whole. I take very seriously the trust and power that society gives us as physicians, and I explicitly remind students of their responsibility to individual patients and society as a whole.”

A BUSM faculty member since 2001, Lowe earned his bachelor’s degree in biology from Harvard College and his MD from Harvard Medical School, with post-doctoral training at Brigham and Women’s Hospital and Boston Medical Center. He was recently selected by *Boston* magazine as one of “Boston’s Top Doctors.” ■

APPOINTMENTS

ANGELA JACKSON, MD, APPOINTED NEW ASSISTANT DEAN OF ACADEMIC AFFAIRS

Angela Jackson, MD, an associate professor of medicine at BUSM, joined Academic Affairs as assistant dean on March 1. In her new role, she will focus primarily on clinical teaching site development for medical students.

Dr. Jackson is a graduate of the Medical College of Pennsylvania in Philadelphia and completed her residency and chief residency at Boston City Hospital.

While maintaining a broad interest in all aspects of medical education, she focuses on health policy, primary care resident education, and skill development for clinical teachers. She has been an advocate in Washington, D.C., for increased federal funding for primary care training

and health care workforce development and was appointed by Health and Human Services Secretary Kathleen Sebelius to the Advisory Committee on Training in Primary Care and Dentistry, which advises the secretary concerning policy and program development for the Health Resources and Services Administration of the Bureau of Health Professions.

She has created innovative curricula to train residents in the skills necessary to become leaders in health care who focus on the care of medically underserved patients. Some of her initiatives include developing nontraditional community teaching sites for residents; integrating public health and mental health into residency training; promoting leadership skills for physicians; developing advocacy skills; training chief residents in leadership and teaching skills; and formulating professional development plans for residents and junior faculty.



BUSM Rises in National Rankings

U.S. News & World Report has ranked Boston University School of Medicine (BUSM) the 31st-best research medical school in the United States (up from 34th last year). BUSM tied Dartmouth and the University of Alabama medical schools and ranked ahead of USC’s Keck School of Medicine and Brown, Tufts, and Georgetown medical schools.

BUSM’s ranking in primary care rose from 47th to 31st, and the School’s drug and alcohol abuse specialty is ranked 10th-best in the nation.

BUMC Expands Legacy of Diversity and Inclusion

Born of the union of Boston University and the New England Female Medical College, BUSM has admitted students without regard to race or religion from its founding. While this legacy of inclusion sets the School apart and is a major source of pride, maintaining and expanding upon the tradition is as important today as it ever was.

Associate Dean for Diversity & Multicultural Affairs Rafael Ortega, MD, has embraced his role as the dean's proponent of diversity and inclusion on the Medical Campus and strongly advocates for using campus resources to benefit the broad range of individuals in the campus community.

"Traditionally, Diversity & Multicultural Affairs was mostly concerned with issues pertaining to underrepresented minorities, in particular African Americans and Hispanics," Ortega says. "Times have changed and there is a need now to be much more diverse and inclusive. We have realized the importance of recognizing and including other groups that are not necessarily related to ethnicity or race. Also, while women make up half of the students now admitted to the School, we recognize that in general, women are still not on par with men in the higher ranks of health care.

"Diversity and inclusion have come to mean recognizing the heterogeneity of the campus and the community it serves, including lesbian, gay, bisexual, and transgender (LGBT) members, those of various religious traditions, veterans, single parents, the elderly, and members with physical disabilities. Perhaps most importantly, diversity also encompasses different ways of thinking and different approaches to solving the myriad challenges we face today.

"Our goal is to ensure that we recognize all of these groups under the umbrella of diversity with the understanding that by having such a rich and varied environment, we are better able to produce health care providers who mirror the community we serve," Ortega adds.

Ortega, a professor of anesthesiology and vice chair for academic affairs for the Department of Anesthesiology, has long been interested in issues of diversity and inclusion, as well as the underrepresentation of minorities in health care. A native of the Dominican Republic, Ortega came to the United States and learned that he was "Latino." It was "something I had not experienced before," he says. "It was that new self-awareness and the fact that Marcelle Willock, a woman of color, was my professor and chair when I came to do my residency here at BU. This was a rarity in the 1980s, and she influenced me not just as an anesthesiologist but also in developing sensitivity to racial issues. I also became aware of disparities in the treatment of pain for some ethnic groups who received fewer analgesics in the emergency room, post-operatively, and on the wards. This is a topic I have lectured on and written about."

Two of his major objectives are to raise the visibility of Diversity & Multicultural Affairs and of the various groups on campus. Toward this end, he has recruited new assistant deans who reflect the diversity of the community. "We wanted to have a team that would represent large segments of our population and bring additional points of view," he says.



Rafael Ortega, MD

Ortega's staff has conducted the first survey of students, faculty, and staff to assess the campus environment as a whole regarding diversity and inclusion. The survey aims to determine how comfortable people are in this environment, the degree to which they feel their opinions are heard, and what challenges they believe they face.

An ongoing series of forums has been implemented where topics relevant to specific groups—including LGBT, black, and Muslim issues—are openly discussed; future forums are planned to focus on Jewish and Hispanic concerns. "This is an important initiative because it lets people know that we

are an environment that is open to all individuals and groups," says Ortega. "These conversations address topics that have not previously had a public platform for discussion."

Ortega plans to continue strengthening the Early Medical School Selection Program (EMSSP), one of the most important programs for recruiting students from underrepresented populations. Diversity & Multicultural Affairs is also responsible for recruiting and retaining diverse faculty and staff. "A major advancement in this area has been bringing into our office the individual responsible for minority recruitment at Boston Medical Center," notes Ortega. "This has reduced duplication of efforts, addressed the overlap between the medical school and hospital communities, and strengthened and expanded the Medical Campus's ability to attract and keep talented people of diverse backgrounds." He points out that many student and faculty activities used as recruiting tools for new physicians for the hospital are now held collaboratively with the School of Medicine and Boston Medical Center: "When you bring a candidate to interview, if they are exposed to individuals who are also open to a diverse climate, they are more likely to accept a position here."

Disparities in health care is another area of concern for the office—not only those based on ethnicity but also on age, gender, and sexual orientation. "We plan to pursue opportunities to engage in meaningful research that can have an impact on the curriculum and the development of diversity-sensitive materials to be incorporated into what our students are provided," says Ortega. "The physicians we produce need to understand their patients in all manner of their backgrounds to ensure the best possible care for them."

"In an ideal world in which all of these issues are incorporated into the fabric of the Medical Campus environment and where everyone is included and valued for their differences, we may not need our office," he continues. "But for the foreseeable future, we have a lot of work to do and need people and programs paying attention to and addressing these issues."

An accomplished musician, Ortega also is encouraging the presence of the humanities at the School through a greater exchange of the arts with the Charles River Campus and a plan to have an artist-in-residence on the Medical Campus. ■

PHOTOS BY BU PHOTOGRAPHY

BUSM Staffers Receive BU's Highest Award for Service to the University

Two members of the School of Medicine staff, Registrar Ellen DiFiore and Laboratory Manager for the Department of Biochemistry Celeste Rich, have received this year's John S. Perkins Distinguished Service Award.

Peter Szende, a School of Hospitality Administration associate professor and chair of the Perkins selection committee, said DiFiore and Rich were honored "for their professionalism, attention to detail, and personal commitment to the University." They each received a plaque and \$500 at a ceremony on May 1.

BU's yearly recognition of often-unsung but essential workers at the University, the Perkins Award is supported by an endowment from the late John S. Perkins, a BU trustee, faculty member, and administrator. Winners are

selected by the Faculty Council from nominations by professors.

"It is gratifying to know that what you do is valued by faculty, staff, and students," said DiFiore, a 23-year BU employee and registrar since 2001 who manages the herculean task of registering BUSM students, arranging leaves of absence, and handling scheduling or enrollment changes. DiFiore's ever-present humor and

extreme dedication to her job led one professor to refer to her as a "magician."

Rich, also a 23-year employee, manages two labs and serves on the School's laboratory safety committee. She says the best part of her job "is all the wonderful people I work with in the biochemistry department and the medical school." A colleague reports that as a scientist, Rich "has the ability to identify, design, and execute key, scientifically relevant experiments."



From left, Dean Karen Antman, Perkins awardees Ellen DiFiore and Celeste Rich, and Chair of Biochemistry David Harris, PhD.

Celebrating 100 Years of Healing, Discovery, and Education

The Evans Memorial Department of Medicine at Boston University School of Medicine will celebrate its 100th anniversary on October 5 & 6, 2012.

All former and current residents, fellows, staff, faculty, alumni, and their guests are invited to attend a special symposium dedicated to reflecting on the department's past century and peering into the future of health care and discovery.

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The Evans Memorial Department of Medicine

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Dean's Advisory Board Dinner and Meeting Honor Aram Chobanian

In May, the School of Medicine's Dean's Advisory Board Dinner was held in honor of Aram V. Chobanian, MD, BU president emeritus and BUSM dean emeritus. Board members and special guests enjoyed a talk by student Commencement speaker Aniruddha Hazra '12 titled "A Day in the Life of a BUSM Student." Dean Karen Antman shared remarks about Dr. Chobanian and his impact on the School and the University, and Dr. Chobanian spoke movingly, humorously, and with gratitude about his career, his family, and how much fulfillment and enjoyment he has received from both.

The next day, the Dean's Advisory Board Meeting began with a members-only tour of the new student residence. Following the tour, the board heard presentations by three of the School's outstanding faculty members, and new board member Rachelle Silver was welcomed by Board Chair Sherry Leventhal. Dean's Advisory Board members serve as advocates and supporters of the School's educational and research mission and provide counsel to Dean Karen Antman.

NEW BOARD MEMBER

Rachelle Silver resides with her husband, Lee, a fellow Dean's Advisory Board member, in Claremont, California, and is a staff nurse at The Webb Schools of California, a private high school in Claremont. She has a special interest in adolescent head trauma and is responsible for bringing the ImPACT method of head injury evaluation to The Webb Schools. She's also an eligibility determination committee member for the Community Connections Volunteer Driver Program in the Pomona Valley. She and her husband have two sons, Brent and Drew, who are both enrolled in Boston University's seven-year BA/MD program.



1. Lee Silver, MD '82, member of the Dean's Advisory Board (DAB); Dean Karen Antman; and Rachelle Silver, a new member of the DAB. 2. Board members Lewis Heafitz (left) and Michael Kussman, MD '68. 3. Ashraf M. Dahod; Shamim A. Dahod, MD '87, member of the School of Medicine's Dean's Advisory Board and chair of the Boston University Board of Overseers; and Aniruddha Hazra '12. 4. (1st row) Ginger Sullivan, Aram V. Chobanian, MD, and Jasmine Chobanian. (2nd row) Dean Karen Antman and Louis W. Sullivan, MD '58, member of the Dean's Advisory Board. 5. (from left) Alan Leventhal, member of the Boston University Board of Trustees; Sherry Leventhal, chair of the School of Medicine Dean's Advisory Board; Robert Saper, MD, MPH, faculty member; and Aram V. Chobanian, MD, BU president emeritus and BUSM dean emeritus. 6. Rita Mehos and Louis W. Sullivan, MD '58, members of the Dean's Advisory Board.



PHOTOS BY BU PHOTOGRAPHY

PHOTOS BY BU PHOTOGRAPHY

177 Receive Master's Degrees at GMS Commencement

The Division of Graduate Medical Sciences (GMS) awarded master's degrees to 177 members of the Class of 2012. Representing 12 GMS programs, 51 master of science degrees were conferred while 126 graduates received the master of arts.

Linda Hyman, PhD, associate provost for the Division of Graduate Medical Sciences, told the Class of 2012, "You did it! You're great! You're amazing! You're awesome!"

Noting the pomp and circumstance of the event that dates back to medieval European university traditions, Dean Karen Antman, MD, said, "Although academic regalia trace to a specific era and place, the conferring of hard-earned credentials, celebrations of goals met, and



PHOTOS BY FRANK CURRAN



"These two years have been the most transformative that I have known."

—CORISSA RODGERS, MS
2012 STUDENT SPEAKER

expressions of gratitude transcend time and place. Congratulations on reaching this major milestone."

Student speaker Corissa Rodgers noted, "I worked hard these past two years. But, beyond sweat equity, I credit my being up here today to a combination of my classmates' confidence and encouragement, my professors' high expectations and endorsement, and Boston University's ability to provide the necessary tools for me to do it all."

The candidates were presented by Mark Moss, PhD, chair of the Department of Anatomy & Neurobiology, and Michael White, MS, assistant dean of financial affairs, and were hooded by the faculty member of their choice. Dr. Hyman presented each class member with a rose and Dean Antman conferred the diplomas. A gift from the BUSM Alumni Association was presented to each graduate by Assistant Dean for Alumni Affairs Jean Ramsey. ■

1. Associate Provost Linda Hyman addresses the graduates. **2.** Members of the Class of 2012 await the start of the Commencement ceremony. **3.** Graduates line up for Commencement. **4.** Corissa Rodgers, student speaker.

Forensic Anthropology Program

Training professionals to identify remains



1. Students in the Field Methods course practicing the methods and techniques of recovery of human remains, in this case plastic skeletons.

Tara Moore, PhD, director of the Division of Graduate Medical Sciences (GMS) program in forensic anthropology, laughs when forensic-based TV dramas are mentioned in a discussion of the BUSM Graduate Medical Sciences program in forensic anthropology. “We disabuse applicants and students of the idea that that is what we do and what they will learn,” she says. “We are engaged in the serious examination of skeletal remains that are more decomposed than what a pathologist typically examines during a routine autopsy.”

The full-time, 42-credit program applies the principles of physical and biological anthropology, anatomy, and osteology to criminal case work and other scenarios involving unidentified remains. It is one of the only graduate forensic anthropology programs in a department of anatomy at a major medical center.

The development of forensic-related programs in GMS grew out of Dr. Moore’s interest in forensic science. With the full support of Department of Anatomy & Neurobiology Chair Mark Moss, PhD, she has created two master’s programs—one in biomedical forensic science and the other in forensic anthropology—that she directs.

“I learned there were no programs in forensic science in Massachusetts and only one in New England, in Connecticut,” says Dr. Moore, an associate professor of anatomy and neurobiology who received her PhD from BUSM in 2000. “We reached out to the Boston

and Massachusetts State Police and the local FBI office to see if there was interest among their members. We learned very quickly that not only were there folks who wanted to get their master’s degree, but there were also folks who wanted to teach.”

In addition to local law enforcement agencies, faculty have been recruited from the Joint POW/MIA Program in Hawaii, a group that identifies human remains from World Wars I and II and the Korean and Vietnam Wars; the International Criminal Investigative Training Assistance Program (ICITAP) in Bogota, Colombia; the National Museum of Health and Medicine, a center for the collection of specimens for research in military medicine and surgery established during the Civil War as the Army Medical Museum; and from the University of Tennessee, which has a renowned advanced program in decomposition studies. Dr. Moore is very proud that with only 88 board-certified forensic anthropologists in the country, the BUSM program has three faculty members with the certification.

The field of forensic anthropology developed out of physical and biological anthropology, areas that specialize in studying skeletal remains with expertise

in examining bones for trauma. “Traditionally, these anthropologists would be looking at ancient remains and could determine sex, age, height, weight, and ancestry,” Dr. Moore says. “But they could also apply this expertise to examining remains discovered somewhere in the weeks and months between death and being fully skeletonized.”

When law enforcement officials began asking anthropologists to help with the identification of human remains, they consulted William Bass—considered one of the fathers of forensic anthropology—who founded the University of Tennessee Anthropology Research Facility in the early 1980s, a field site to study the stages of decomposition.

“Our students actually get to go down there [the University of Tennessee] and observe autopsies,” Dr. Moore notes. “Our program offers extensive training in anatomy and osteology. Students have to know the skeleton and they learn all of the techniques for determining identification. They also take forensic pathology and skeletal pathology to understand trauma and learn how to properly exhumate remains using plastic skeletons at our outdoor facility in Holliston, Massachusetts.”

Currently, 20 students are enrolled in the program; because of its popularity, admissions are selective. “We are attractive because we are the only program attached to a medical school,” Dr. Moore says. “Our students not only learn anatomy, which most programs don’t offer, they get to work with the cadavers.”

Students come from many different places and backgrounds. Nicole Jones, a first-year student from Seattle, Washington, learned about forensic anthropology while taking classes in funeral archaeology in Rome. “A guest lecturer discussed identifying victims of the civil war in Croatia, and her stories got me interested in forensic anthropology,” she says. “Boston University is one of the few schools that offer this degree, and I am very happy with my decision to move across the country. I feel the students are valued.” Upon graduation, Jones hopes to join an international, nonprofit organization to help identify victims of mass disasters and also possibly work for the FBI at some point in her career.

The program is closely affiliated with the Department of Radiology, which affords students the opportunity to use X-rays and CT scans for their thesis research. Currently, five students have completed a thesis with the use of radiology.

In addition to courses in forensic anthropological techniques and procedures, human anatomy, and osteology, students study fossilization processes, death investigation, experimental design and statistics, expert witness testimony, and crime scene investigation. They are encouraged to take elective courses in the Departments of Anthropology and Archaeology on

the Charles River Campus, as well as electives in the GMS Biomedical Forensic Sciences program.

“This program gives me access to other areas of the forensic sciences that other programs could not,” says Jade De La Paz, a student in the program who came to BUSM by way of the Smithsonian Institution’s National Museum of Natural History. De La Paz speaks four languages—including Twi, a language of the Ashantis in Ghana—and worked summers in an Alaskan salmon cannery to fund her undergraduate education. “Also, it is the only program in the country that is in an anatomy department, which gives us access to the gross anatomy lab and all the medical students who are more than willing to share their expertise in anatomy, which is something every forensic anthropologist should also have. I see this as a relatively objective science that incorporates hard scientific data with the cultural sensitivity of anthropology, and that is why it interests me.”

Students are required to complete a laboratory or field-based thesis and spend almost the entire two years working on their project. Some students have done decomposition research, while some have traveled to other universities that have large skeletal collections. “We have students going to Colombia and Puerto Rico to use skeletal collections down there,” says Dr. Moore. “Currently, we also have one student going to London to study skeletal remains of Black Plague victims from the Middle Ages.”

Program graduate Corinne Tandy teaches forensic anthropology and anatomy and physiology at a community college in Knoxville, Tennessee. “I had a wonderful experience in BU’s program,” she says. “The coursework was engaging and the Medical Campus faculty was great to work with because of their expertise



and backgrounds. The availability of resources and support for conducting independent research was pivotal in developing a research project for my thesis.” Tandy completed internships in the Office of the Chief Medical Examiner in Boston and at the Regional Forensic Center in Knoxville; she is presenting her research at the annual American Academy of Forensic Sciences (AAFS) conference. She has



MORE ONLINE
www.bumc.bu.edu/forensicanthro/masters-program

also applied to doctoral programs in preparation for a career in a medical examiner’s office and is pursuing her research in the biomechanics of fracture morphology and healing as well as time-since-death determination.

In addition to Moss, both Linda Hyman, PhD, associate provost of

the Division of Graduate Medical Sciences, and Dean Karen Antman have helped provide the resources to bring Dr. Moore’s proposal from one course to a full-fledged program.

“Medical sciences education offers many opportunities to train professionals in myriad fields,” says Dr. Hyman. “We are fortunate at Boston University to have the human and technical resources to institute high-quality training programs like forensic anthropology to meet the growing need for expertise.” ■

PHOTOS BY TARA MOORE

In Memoriam



William J. Bicknell, MD, on June 5, 2012, at the age of 75. Dr. Bicknell was the founder and chair emeritus of the Department of International Health at the School of Public Health and helped grow the department into a globally recognized leader. He held a dual appointment at the School of Medicine as a professor and director of international health programs in the Department of Family Medicine.

During a varied career that spanned five decades and merged disciplines of practice and policy, Dr. Bicknell held posts as the first medical director of the U.S. Job Corps, Massachusetts Commissioner of Public Health, acting director of the Neighborhood Health Center Program for the U.S. Office of Economic Opportunity, and medical director of health and retirement funds for the United Mine Workers of America.

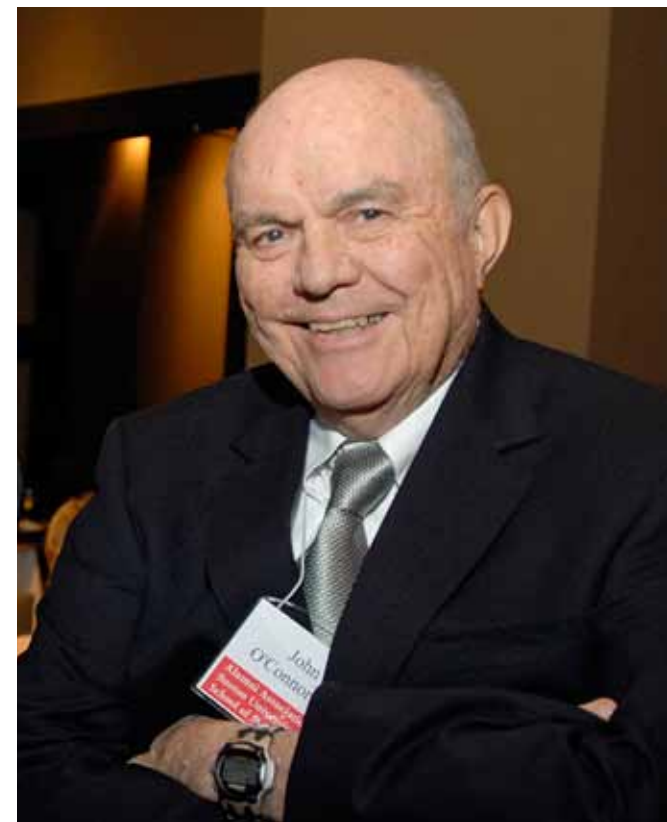
Dr. Bicknell earned a bachelor's degree in biology from Johns Hopkins University in 1958. After graduating from Duke University School of Medicine in 1963, Dr. Bicknell joined the U.S. Public Health Service Commissioned Corps and was named senior physician for Peace Corps volunteers in Ethiopia. While there, he also worked in local hospitals and was exposed to a level of illness and suffering that presaged his shift to public health. Several years after returning from Ethiopia, Dr. Bicknell earned an MPH from the University of California, Berkeley.

Diagnosed in 2010 with metastatic lung cancer that eventually spread to his brain, Dr. Bicknell detailed his fight with methodical precision in blog updates and in a poignant final lecture. On May 2, he returned to the Medical Campus to deliver "Lessons Learned from a Life in Public Health," a no-holds-barred personal recap of his experiences furthering public health in 62 countries.

After coming to BU in 1978, he focused on establishing the curriculum for the nascent Department of International Health and later established the Center for International Health that was eventually expanded into the current Center for Global Health & Development. Along with Brian Jack, associate professor of family medicine and vice chair for academic affairs, he founded the Lesotho-Boston Health Alliance to improve Lesotho's medical capacity by strengthening hospitals and establishing a family medicine residency program to help the impoverished country retain physicians.

He is survived by his wife, Jane Hale; two sons, two grandsons, and his brother.

PHOTO BY MICHAEL SAUNDERS



John F. O'Connor, MD '57, on March 1, 2012, at the age of 81. Dr. O'Connor served as BUSM associate dean of admissions for 21 years, having overseen the acceptance of more than half of the School's living alumni by the time of his retirement in 2002. He was a distinguished BUSM faculty member for 43 years as a professor of anatomy, pediatrics, and radiology, and was chief of pediatric radiology at Boston Medical Center, building the department and serving as its first director. He also served as chief of radiology at Franciscan Hospital for Children for 37 years.

Dr. O'Connor trained in pediatrics at Boston City Hospital and completed his radiology residency at the Peter Bent Brigham Hospital in Boston. Highly regarded by his BUSM colleagues and a national figure in pediatric radiology, he was the recipient of many honors during his career. His proudest professional moment came when his peers awarded him the Gold Medal of the Society

PHOTO BY FRANK CURRAN

for Pediatric Radiology (SPR) in 1997—the highest accolade the organization bestows—recognizing his leadership as a scientist, teacher, and mentor. In 2006, the SPR also honored him with the Jack O. Haller Award for Teaching Excellence. He served as president of the New England Roentgen Ray Society as well as the Society for Pediatric Radiology. Dr. O'Connor had many outside interests; he was an award-winning bird photographer and avid sailboat racer.

He is survived by his wife of 55 years, Anne Walsh O'Connor, his six children including sons Stephen (BUSM 1990) and Daniel (BUSM 2000), and 15 grandchildren.

Contributions may be made in his honor to the John F. O'Connor Family Scholarship fund at BUSM. To make a gift to the fund, please visit www.bu.edu/supportingbusm, click on Give Now, and provide the fund name in the Special Allocations Instructions section. ■

Surgical Oncologist Maureen Kavanah Receives Lifetime Achievement Award

Maureen T. Kavanah, MD, associate professor of surgery at BUSM and a surgical oncologist at Boston Medical Center (BMC), received the prestigious 2012 National Surgical Adjuvant Breast and Bowel Project (NSABP) Distinguished Investigator Lifetime Achievement Award for her extraordinary contributions and meritorious service to the NSABP in support of clinical research in breast and colorectal cancers.

During her nearly three decades of service on the Boston University Medical Campus, Dr. Kavanah has exemplified the spirit of the award through her dedication to the promotion, publication, and presentation of clinical research. "This award reflects not only Dr. Kavanah's commitment to excellence in research and patient care, but to advancing treatment for breast cancer nationally and internation-

ally," said Gerard Doherty, MD, the James Utley Professor and chair of surgery at BUSM and chief of surgery at BMC.



Dr. Kavanah became a research investigator with the NSABP in 1981, and has since held several leadership positions within the organization. As the principal investigator of NSABP Clinical Research at BMC, she has led numerous NSABP-sponsored clinical studies in breast and bowel cancers. She has served on NSABP's Board of Directors since 1988 and also serves as the proto-

col chair for the Breast Cancer Prevention Trial (P-1) and chair of the Ethics Committee.

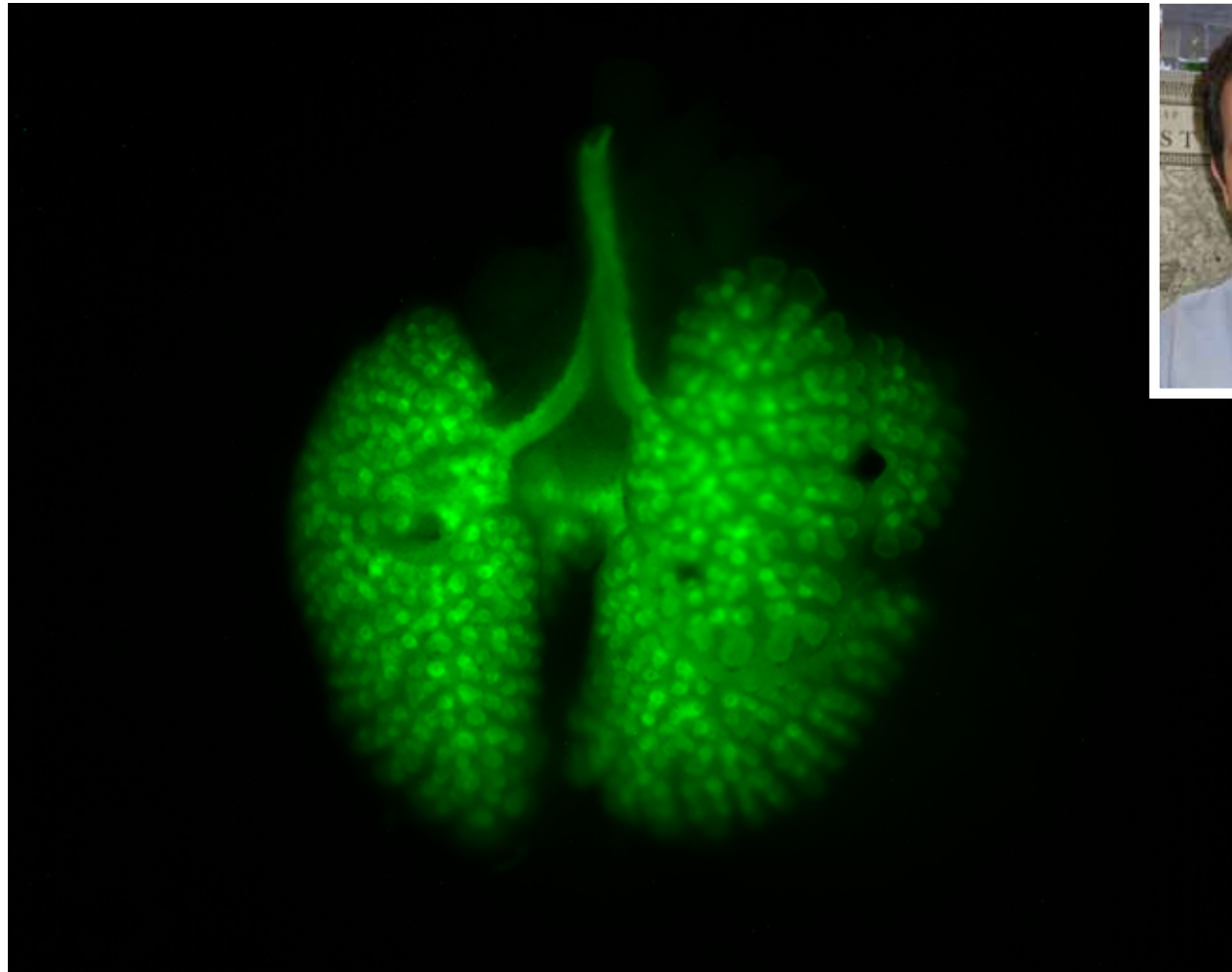
In addition to her renowned scientific achievements, Dr. Kavanah has dedicated her time to the scientific community by serving as a faculty supervisor for many young investigators. In 1990, she established BMC as a full-member institution of the Southwest Oncology Group (SWOG) and served as its principal investigator until 1994. Dr. Kavanah belongs to numerous professional organizations and has been a member of the Board of Governors of the American College of Surgeons, president of the Massachusetts chapter of the American College of Surgeons, president of the New England Cancer Society, and chair of the National Cancer Institute Central Institutional Review Board. She lectures extensively and has been chosen as a "Top Doctor" by *Boston* magazine annually since 2008.

Dr. Kavanah received the 2012 award during a ceremony held in Scottsdale, Arizona, on April 29 at the NSABP clinical trials annual meeting. The NSABP Foundation, Inc. has a 50-year history of designing and conducting clinical trials that have changed the standard of treatment for breast and colorectal cancers. ■

PHOTO BY EIU PHOTOGRAPHY

BUSM Research

Pathway from Stem Cell to Lung Cell




Darrell Kotton, MD


Human lungs and trachea

Researchers led by Darrell Kotton, MD, associate professor of medicine and co-director of BU's Center for Regenerative Medicine (CReM), have derived a population of pure lung and thyroid progenitor cells in vitro that successfully mimic the developmental milestones of lung and thyroid tissue formation. The research, published in the April 6 edition of the journal *Cell Stem Cell*, identifies factors necessary for embryonic stem cells to differentiate into lung progenitor cells and provides key information about how the tissue engineering technology can be used to develop new gene- and cell-based therapies to treat lung diseases.

"We succeeded in capturing a cell fate decision in cultured stem cells that is normally very transient during the earliest stages of lung and thyroid development," said Dr. Kotton, who is also an attending physician

in pulmonary, allergy, and sleep medicine at Boston Medical Center. "Most importantly, our results emphasize that the precise inhibition of certain pathways at defined stages is as important as the addition of pathway stimulators at different developmental stages during lung and thyroid specification."

The findings represent years of research dedicated to identifying how to generate an unlimited source of lung progenitor cells in vitro from embryonic stem (ES) cells.

Since ES cells resemble the early developing embryo, CReM investigators studied normal lung and thyroid development in the developing embryo and used this knowledge as a road map to induce

the same sequence of developmental milestones in ES cells in culture. Previous research shows that progenitor cells from the embryo's gut tube (called endoderm) give rise to the lungs, thyroid, pancreas, gastrointestinal tract, and other organs. This led the researchers to focus on that time of development in order to identify what factors are responsible for how the cells differentiate.

The ES cells were engineered to include a fluorescent tag that glowed at the moment lung or thyroid cells were generated from ES cells in culture. Using this approach, the researchers differentiated the ES cells into gut tube endoderm and then identified growth factors that induced lung and thyroid lineages. Ultimately, 160 lung or thyroid progenitors could be generated per starting stem cell, and these progenitors could be purified using the fluorescent tag that glowed only once the cells had become lung or thyroid cells.

To demonstrate that the cells purified by the investigators were lung progenitors, Dr. Kotton's team studied the global gene expression profiles of the cells they derived and placed the cells into a three-dimensional lung scaffold. The cells grew and multiplied, forming two types of lung cells that normally coat the air sacs of the lungs.

The findings indicate that this technology can be used to grow new primordial lung progenitors to study human disease in vitro, which could lead to novel therapies to treat patients with end-stage lung disease, such as emphysema and cystic fibrosis.

"The ability to generate a supply of progenitor cells with the potential to differentiate into lung cells will be a huge boon to several research fields," said James Kiley, PhD, director of the Division of Lung Diseases at the National Heart, Lung, and Blood Institute (NHLBI), which funded the study. "It lays the groundwork for studying the mechanisms and programming of cells during lung development, which, in turn, will help develop new treatments."

The research, which was done in collaboration with Massachusetts General Hospital, Mount Sinai School of Medicine, and the Vermont Lung Center, was funded by the NHLBI through an American Recovery & Reinvestment Act (ARRA) grant. Co-authors of the manuscript are Tyler A. Longmire, PhD (a graduate student in Dr. Kotton's lab whose thesis work was this project), and Laertis Ikononou, PhD, assistant professor of medicine. ■

MORE INFO

The information, reagents, and tools derived from this study are available for members of the scientific community free of charge through CReM's Open Source Biology policy. Contact: **Amulya Iyer, CReM administrative director**, at amiyer@bu.edu or 617-638-4466. www.bumc.bu.edu/stemcells

Research in Brief

■ Pathway for Infection of a Common Sexually Transmitted Disease Pathogen Identified

BUSM researchers have identified a novel pathway that is necessary for infection to occur with the pathogen *Neisseria gonorrhoeae*, which is responsible for the second-most-common infectious disease worldwide, gonorrhea. The study was published online in the *Journal of Bacteriology*.

N. gonorrhoeae is a pathogenic bacterium that readily develops resistance to antibiotics and has recently been reported becoming resistant to cephalosporins, which are the only treatment option recommended by the Centers for Disease Control and Prevention (CDC).

"The first step in the disease gonorrhea is the colonization of bacteria on human mucosal surfaces, such as the vaginal and penile mucosae," explained senior author Caroline Genco, PhD, professor of medicine and microbiology and director of research in infectious diseases. Dr. Genco and her colleagues have identified a novel pathway that is critical for this bacterium to colonize on host mucosal surfaces. The key is a single protein, designated as Fur, the ferric uptake regulatory protein, which controls the expression of hundreds of *N. gonorrhoeae* genes by either increasing or decreasing the expression of these genes. The study found that genes whose expression is increased by Fur may play a critical role in the prevention of disease development by triggering the host immune system to recognize and clear the bacterium.

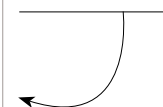
■ Role of Genes in Executive Dysfunction Confirmed

A study led by BUSM researchers and the McKnight Brain Institute shows specific genetic traits may predispose people to executive dysfunction. The findings, published online in the journal *Molecular Neurobiology*, also suggest that genetic mapping may help identify problems in demonstrating executive function skills and could serve as a therapeutic adjunct for increasing executive functioning capabilities.

This study was carried out by Marlene Oscar Berman, PhD, professor of neurology, psychiatry, and anatomy and neurobiology at BUSM; Abdalla Bowirrat, MD, PhD, professor of clinical neuroscience and population genetics at the Nazareth English Hospital in Israel; and Kenneth Blum, PhD, professor of psychiatry at the McKnight Brain Institute in Florida.

The ability to demonstrate executive function skills is unique to humans. Genetic predispositions are also influenced by environmental factors,

The ability to demonstrate executive function skills is unique to humans.



including family, educational and socioeconomic status, environmental stressors, and the availability of psychoactive drugs and unhealthy foods. Predisposition to behavior is based on a set of genes interacting with the environment that promote a feeling of well-being by way of neurotransmitters interacting in the “reward center” of the brain.

“The defects in specific genes may be causing the flawed metabolism of dopamine, as well as other neurotransmitters,” said Dr. Berman. These genetic defects may predispose individuals to executive dysfunction, leading to the demonstration of abnormal behaviors. “To determine executive function ability, a thorough assessment of both genetic and environmental risk factors needs to be conducted,” she added.

The National Institute on Alcohol Abuse and Alcoholism and the Medical Research Service of the U.S. Department of Veterans Affairs provided funding for this study.

■ Tomosynthesis Effective in Diagnosing Knee Osteoarthritis

A BUSM study shows that tomosynthesis may be more beneficial in diagnosing knee osteoarthritis than X-ray imaging. In the study, published online in the journal *Radiology*, tomosynthesis detected more osteophytes (abnormal bony spurs) and subchondral cysts (small collection of fluid within the bone) in the knee joint than conventional X-ray imaging.

Daichi Hayashi, MD, PhD, research instructor at the Quantitative Imaging Center in the Department of Radiology, is the lead author of the study. The



research was led by Ali Guermazi, MD, PhD, professor of radiology and chief of musculoskeletal radiology at Boston Medical Center. “Despite the known limitation of X-ray imaging, it is widely used to diagnose knee osteoarthritis, both in terms of daily clinical practice and also for clinical research studies,” said Dr. Hayashi. Given the limitations, Hayashi and Guermazi’s team explored tomosynthesis to image the knee joint and determine its accuracy in detecting signs of osteoarthritis in the knee. Tomosynthesis uses an X-ray beam to take tomographic images (that is, images in slices similar to those from CT scans), allowing for better visualization

The acute-phase response is an innate immune response where dozens of blood proteins change in concentration due to physiological stresses such as infection, inflammation, and injury.

than a single X-ray image. The radiation exposure from tomosynthesis is similar to the traditional X-ray and much lower than CT. Also, it takes seconds to obtain images using tomosynthesis, which can be done while a person is standing up.

“This study shows that the images obtained through tomosynthesis are significantly better than those from X-rays, and tomosynthesis could potentially be a better diagnostic tool for knee osteoarthritis in patients with knee pain,” said Dr. Hayashi. “While it has not been widely used in imaging of bones and joints to date, the results of our study show that using tomosynthesis to detect knee osteoarthritis can be effective.”

This study was funded through a research grant to Dr. Guermazi from GE Healthcare.

■ Liver’s Role in Preventing Dissemination of Lung Infection Uncovered

BUSM researchers have discovered the regulation and functional significance of the acute-phase response during a lung infection. The findings, published in the May edition of the *Journal of Clinical Investigation*, demonstrate that the liver responds to increased defenses in the blood that prevent localized infections from spreading throughout the body.

The study was led by Joseph P. Mizgerd, ScD, professor of medicine, microbiology, and biochemistry, and Lee J. Quinton, PhD, assistant professor of medicine and pathology.

The acute-phase response is an innate immune response where dozens of blood proteins change in concentration due to physiological stresses such as infection, inflammation, and injury. The change in concentrations of these proteins, such as C-reactive protein, can be measured in the blood and can indicate risk or progression of disease.

In this study, the researchers mutated two transcription factor genes, STAT3 and RelA, in liver cells. These cells, called hepatocytes, generate the blood proteins that change during an acute-phase response. Prior to infection, these mutations had no measurable effects. In response to pneumonia, which normally triggers the acute-phase response, these mutations completely prevented such changes in the blood proteins. The inability of the blood protein concentration levels to change led to those bacteria escaping from the lungs into the blood, and then being attacked ineffectively by the immune cells trying to destroy them. This exacerbated the infection, allowing it to spread to the blood and other organs.

“For the first time, we have shown the acute-phase response that occurs as a result of a lung infection triggers the liver to mount bloodstream defenses, preventing the infection from spreading throughout the body,” said Dr. Mizgerd who also is the director of the Pulmonary Center at BUSM.

The research was done in collaboration with other BU faculty members, including Stephen I. Pelton, MD, professor of pediatrics at BUSM and professor of epidemiology at BUSPH; Avrum Spira, MD, MSc, Alexander Graham Bell Professor of Medicine and chief of computational biomedicine at BUSM; and Matthew R. Jones, PhD, assistant professor of medicine from the Pulmonary Center.

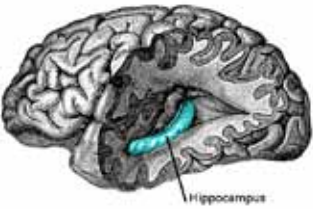
■ Genes that Influence Hippocampal Volume Identified

An international team of researchers led by BUSM has identified four loci that appear to be associated with decreasing the volume of the hippocampus, the region of the brain that plays an important role in the formation of specific, new memories—a function that patients with Alzheimer’s disease lose. The findings, published online in *Nature Genetics*, may have broad implications in determining how age, Alzheimer’s, and other diseases impact the function and integrity of the hippocampus.

Previous research has shown that the hippocampus is one of the brain regions involved with short- and long-term memory processes and that it shrinks with age. It also is one of the first regions to exhibit damage from Alzheimer’s disease, which can cause memory problems and disorientation.

“One of the problems with studying the genetics of a disease like Alzheimer’s, which becomes symptomatic later in life, is that many people die of other causes before they reach the age at which they might have manifested the clinical dementia associated with the disease,” said Sudha Seshadri, MD, professor of neurology at BUSM, a senior author of the study. “To get around this issue, we have been studying the genetics of traits that we know are associated with a high future risk of Alzheimer’s disease but that can be measured in everyone, often 10 to 20 years before the age when most persons develop clinical symptoms.”

The results show that if one of the genes is altered, the hippocampus is, on average, the same size as that of a person four to five years older. These results were replicated in two large European



samples, one of which included mixed-age and some cognitively impaired participants.

“The findings indicate that these loci may have broad implications for determining the integrity of the hippocampus across a range of ages and cognitive capacities,” said Dr. Seshadri. One of the genes identified by the researchers was also shown to play a role in memory performance in a different data sample.

This study was funded primarily through the National Institute on Aging.

■ Mechanism of HIV Spread Has Potential for Future Drug Therapy

A new understanding of the initial interactions of human immunodeficiency virus type 1 (HIV-1) and dendritic cells is described by BUSM researchers in a study in the *Proceedings of the National Academy of Sciences (PNAS)*. With over 2.5 million new HIV infections diagnosed annually and earlier detection becoming more common, better understanding of early virus-host interactions could have a great impact on future research and drug therapy.

In the study, researchers describe a novel mechanism of HIV-1 spread by dendritic cells. These cells, which are present at the body’s mucosal surfaces, are the focus of research because they are among

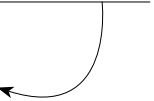
the first cells to encounter HIV-1 and trigger the immune system. This research details the role of a molecule called GM3, which arises from the host itself and is used by the virus for attachment and spread. Since this virus invasion method depends on the molecules originating from the host, “it is a stealth entry mechanism, likely not detected by the cell, so HIV can spread

quickly,” says Rahm Gummuluru, PhD, associate professor in the Department of Microbiology at BUSM and senior author of the study.

Despite the cleverness of the virus, this unique contact between HIV-1 and dendritic cells may offer a new direction for antiviral therapies. “Resistance to therapy, which often challenges physicians, is unlikely to occur in drugs that target this interaction, as these drugs would have the benefit of acting on the host, instead of the virus,” said Dr. Gummuluru. Further research in this field may identify specific targets and offer hope for preventing HIV infections.

The research was led by Wendy Blay Puryear, PhD, post-doctoral fellow in the Department of Microbiology, in collaboration with Dr. Björn Reinhard, assistant professor of chemistry and the director of the Nano-Bio Interface Laboratory at Boston University. ■

These cells, which are present at the body’s mucosal surfaces, are the focus of research because they are among the first cells to encounter HIV-1 and trigger the immune system.



Students



Bottom row, L-R: Carolee Estelle, Erkedra DeRouen, Marissa Montgomery; Top row, L-R: Chris Han, Aniruddha (Anu) Hazra, Shireen Heidari, and Keyona Gullett excitedly display their Match results.

Class of 2012's 97 Percent Match Rate Surpasses National Number

The BUSM Class of 2012 had a 97 percent match rate, surpassing this year's National Resident Matching Program rate of 95 percent, which was their highest percentage in 30 years. "These are the best results in a decade at BUSM. The Class of 2012 was accepted at many of the top programs in the country," said Phyllis Carr, MD, associate dean for student affairs.

For the second year, Match Day was held in Hiebert Lounge amid red and white balloons. On Friday, March 16, class members gathered with their families and friends to receive their letters from Dr. Carr as well as from Student Affairs Assistant Deans Daniel Chen, MD, MSc; Kenneth Grundfast, MD; Paul O'Bryan, PhD; John Polk, MD '74; and Karen Symes, PhD. Robert Beazley, MD, professor of surgery (retired) and Samantha Kaplan, MD, MPH, assistant dean for diversity and multicultural affairs, also presented letters to the students.

Forty-four members of the class are staying in Massachusetts for their residency, 13 of whom will be on campus at Boston Medical

Center. New York is claiming the next largest BUSM contingent with 23 class members and California is next with 21. Texas, Washington, Maryland, Connecticut, and Pennsylvania will also be hosting members of the Class of 2012.

Twenty percent of the class chose internal medicine, followed by family medicine (11 percent), pediatrics (10 percent), and emergency medicine and anesthesiology (9 percent each).

Zi Huang '12 of New York City was very pleased as he matched at North Shore-Long Island, his number-one choice. "Here at BUSM, they really train you well and are dedicated to your learning," said Huang.

PHOTOS BY FRANK CURRAN



Assistant Dean for Alumni Affairs Jean Ramsey '90 and Associate Dean for Academic Affairs Douglas Hughes, MD, gather with graduating students at the Alumni Association's Match Day breakfast at the School of Medicine.



Members of the Class of 2012, along with friends and family, toast Match Day during a celebration in Hiebert Lounge.

"They're so attentive to what you think—the faculty here really want you to succeed."

"We have thoroughly enjoyed your class," Dean Karen Antman told the assembled group. "You were already accomplished on your arrival and you have done some pretty remarkable things here, as well. In your first week on campus at the White Coat ceremony, the faculty welcomed you to the study of medicine. In another two months, we will welcome you to the practice of medicine. On behalf of the deans and faculty, congratulations on your accomplishments."

According to the Association of American Medical Colleges, the number of applicants in this year's Main Residency Match rose by 642 for a total of 38,377, an increase of more than 2,400 participants over the last five years. These individuals applied for 26,772 positions, 614 more than in 2011 (this total includes 146 positions in child neurology, which joined the Match this year). Internal medicine, anesthesiology, and emergency medicine saw the largest increases in 2012, and emergency medicine filled every available position. The number of family medicine positions increased only slightly (1.1 percent), after notable increases over the last two years. ■

BUSM Student Receives AMA Foundation Research Seed Grant

School of Medicine student Alexander Lankowski '13, was awarded a \$2,499 grant from the American Medical Association (AMA) Foundation's Seed Grant Research Program. Established in 2000, the program provides small grants to medical students, physician residents, and fellows to conduct basic science or clinical research projects.

Patients in sub-Saharan Africa frequently cite difficulty obtaining transportation from home to clinic as a significant barrier to receiving HIV care;



Alexander Lankowski training research staff on GPS collection techniques in Uganda.

Lankowski's research project aims to evaluate transportation barriers to HIV care in rural Uganda. It will more precisely characterize the association between transportation barriers and treatment outcomes and, ideally, lead to more informed programmatic decisions

regarding decentralization of HIV care and expansion of rural clinics.

Created to encourage more physicians to consider research as a career option, the Seed Grant Research Program supports the scientific discoveries of researchers and also gives young investigators a positive grant experience early in their careers.

"I am very grateful for the support of the AMA in helping us to continue our work in rural Uganda, and am encouraged by their commitment to funding research such as this that aims to better characterize the social and structural determinants of poor health outcomes," said Lankowski. "We hope that more precisely defining transportation barriers to HIV care will inform strategic decisions regarding decentralization of HIV care delivery systems and expansion of rural clinics."

Lankowski is one of 43 individuals nationwide who received a seed grant this year. Currently finishing a yearlong fellowship through the Doris Duke Charitable Foundation and Harvard Medical School, Lankowski will apply for residency programs in internal medicine or pediatrics, pursuant to a career in academic medicine, infectious diseases, and global health. ■

Biochemistry



David Harris, MD, PhD

PHOTO BY BU PHOTOGRAPHY

► A Department on the Move

Looking to cure cancer? Want to help stem the tide of obesity and diabetes? Want to find out why some people suffer cardiovascular disease and others grow old with a healthy heart? Some of the answers to these questions are very likely to be found in the research labs of biochemists and molecular and cell biologists.

“Biochemistry as a discipline has evolved significantly over the past 70 years from its origins in attempts to catalogue the molecular parts of living organisms,” says David Harris, MD, PhD, professor and chair of BUSM’s biochemistry department. “Today, biochemistry can encompass virtually any study of biological processes at the cellular or molecular level. Pick up a copy of any of the major scientific journals, and you will find that the papers it contains utilize biochemical techniques.”

The encompassing nature of the field is reflected in the department’s faculty—who are committed to educating the medical, dental, and master’s students throughout the Medical Campus—and the areas of research they pursue. Established in 1935, the department’s research in molecular and cell biology and genetics has had major implications for cardiovascular and pulmonary diseases, cancer, metabolic diseases, and neurodegenerative diseases.

“Perhaps our most important resource is the people in our department, including 30 faculty members, more than 60 graduate students and post-doctoral fellows, and 15 staff members,” says Dr. Harris. “Our work is characterized by extensive interactions within the department and with other basic science and clinical departments at the medical school.”

“We are ranked nationally among the top tier of departments of biochemistry in terms of NIH funding, and we have a long history of making pathbreaking contributions to key areas of biochemistry and molecular biology,” he adds.

Since assuming the role of chair in 2009, Dr. Harris has been on a mission to move the department to even greater achievements by building on its significant strengths and developing new resources, both human and operational. Greater opportunities for collaboration with other departments, programs, and centers on the Medical Campus are leading to increased multidisciplinary research projects.

To expand the research portfolio of the department, he has recruited four new assistant professors in the past two years, a major accomplishment for a basic science department. “This has been an incredibly fun part of my job,” he says. “Learning about whole new areas of biology and identifying young scientists at the cutting edge was incredibly exciting for me and all the members of our superb search committee.”

One new faculty member, cellular and molecular biologist Xaralabos Varelakis, PhD, works on signaling pathways that regulate cell size, which has important implications for understanding the growth and development of tissues and organs, and how the underlying pathways go awry in cancer and lead to tumor metastasis. Valentina Perissi, PhD, a biochemist and cell biologist, studies transcriptional control and the assembly of regulatory complexes on DNA. Her most recent findings have important implications for inflammation and diabetes. Mikel Garcia-Marcos, PhD, a biochemist, examines G proteins, which are gatekeepers of cell signaling and regulate virtually any physiological process, and dysregulation of their function (the cause of many diseases). Brigitte Ritter, PhD, a cell biologist, is studying the mechanisms of intracellular trafficking that have direct connections to diseases such as Alzheimer’s disease.

“From the outset, David’s [Harris] purpose has been to bring people in to fit into growing areas so we as a department can grow through those individuals,” says Stephen Farmer, PhD, professor of biochemistry and a member of the department for more than 30 years. “He has looked at not just the future of the department but of science.”

A highly accomplished molecular biologist, Farmer is also a leading researcher on obesity. His lab has focused on identifying the mechanisms that regulate adipose tissue—or fat cell—formation and function. “Bringing in Valentina [Perissi] provides new blood and new perspective on this growing area of research as the rise in obesity is associated with the dramatic increase in diabetes and cardiovascular disease, among others,” he says.

“An extremely important part of understanding how cells work is understanding how certain genes are turned

“The key to finding cures for the most serious human illnesses lies in understanding how the business of biochemistry. It is an incredibly exciting time in our field, with the advent of major

molecular pathways inside cells normally function and how they go awry to cause disease. This is the insights into the workings of living organisms, fueled by the application of powerful, new technologies.”

—DAVID HARRIS, MD, PHD, *professor and chair, Department of Biochemistry*

on in one place and not in another,” Dr. Perissi explains. “This is done at the level of DNA where you have a large number of proteins called ‘transcription factors’ that bind to the DNA and determine whether the gene is turned on or not, which is called gene expression.” Dr. Perissi is studying a particular gene involved in keeping the cell’s inflammatory response turned off, which is important because overactivation of the inflammatory response is involved in obesity, diabetes, cancer, and cardiovascular disease. “I am interested in why the body cannot keep the inflammatory response under control with these diseases so that in the future we can design ways to modulate the response and keep it under control.”

Dr. Perissi is delighted to be a part of BUSM: “I feel lucky to have a position here. There is a great deal of communication within and between departments. It is striking how open people are to talk and collaborate, helping me with my lab or with a grant. This was one of the things that weighed heavily in my decision to come to BU.”

Dr. Varelas, who came from the Samuel Lunenfeld Research Institute of the University of Toronto, examines the molecular mechanisms by which cells coordinate growth with cell fate during development and the onset of disease. “We are particularly interested in the role of the Hippo pathway, which is the major pathway regulating cell fate, growth, proliferation, and death,” he says. “If we understand the normal mechanisms or the signaling that determine these processes, we can better understand what happens when they are dysregulated, causing a variety of diseases.”

Dr. Garcia-Marcos, who is from the Basque region of Spain and did his post-doctoral training at the University of California, San Diego, came to BUSM to establish his lab and develop his own ideas. “It is exciting to have this balance here of senior people with a lot of experience and newer scientists with presumably new ideas,” he says. “Doors are open and you are always welcome to talk about anything.”

Dr. Garcia-Marcos has discovered a novel mechanism by which G proteins are regulated and has found that dysregulation of molecular components of the mechanism is involved in the development of cancer metastasis. He hopes to develop new therapeutic strategies for targeting cancer metastasis through research of the G protein regulatory mechanism and is also looking at what other proteins

interact with G proteins to make them more or less active. “The G proteins are involved in so many processes in the body that if something goes wrong with them, there is a very good chance that diseases arise,” he explains.

Organic chemist and one of the senior department members, Catherine Costello, PhD, is a professor of biochemistry, biophysics, and chemistry and director of the Center for Biomedical Mass Spectrometry at BUSM. Internationally recognized for her contributions to proteomics sciences and mass spectrometry, Dr. Costello focuses on determinations of the structures and functions of biopolymers, with emphasis on mass spectrometry-based methods for studies of glycobiology, post-translational modifications of proteins, cardiovascular disease, and protein folding disorders.

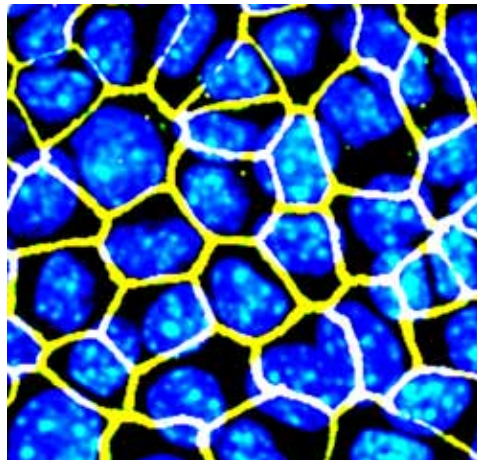
Matthew Nugent, PhD, professor of biochemistry, biomedical engineering, and ophthalmology and a 20-year member of the department, says, “To a large degree, doctoral student training drives research within the department, and as such, this has helped us maintain a rich academic environment that promotes creativity.” Dr. Nugent, also director of the Massachusetts Lions Eye Research Laboratory at BUSM, researches how signaling

molecules called growth factors are controlled in the extracellular space. In particular, his lab is investigating how interactions with compounds naturally found in the weblike gel that holds cells together, called the extracellular matrix, are able to direct growth factor activity.

“Cells within multicellular organisms, like humans, need constant instruction to tell them what to do,” says Nugent. “As such, cells need to be in constant communication with one another in order to coordinate tissue, organ, and organism-wide responses to changing conditions. A large class of proteins called ‘growth factors’ act from outside cells to relay information regarding the status of the tissue,

organ, etc. Under normal conditions, when there has been an injury or infection in a tissue, the cells will respond to repair the damage. However, when these communication systems break down, disease ensues.”

In addition to chairing the department, Dr. Harris is an active scientist who works on neurodegenerative diseases, including Alzheimer’s, and prion diseases which are infectious disorders related to mad cow disease. All are caused by abnormal proteins in the brain.



Normal mammary epithelial cells with their nuclei depicted in blue and cell contact-regulated polarity proteins highlighted in yellow. A common feature associated with tumor-initiation is the deregulation of polarity proteins. Varelas’s work is focused on understanding the mechanisms controlling these proteins and how they contribute to tumor suppression.

PHOTO BY XARALABOS VARELAS

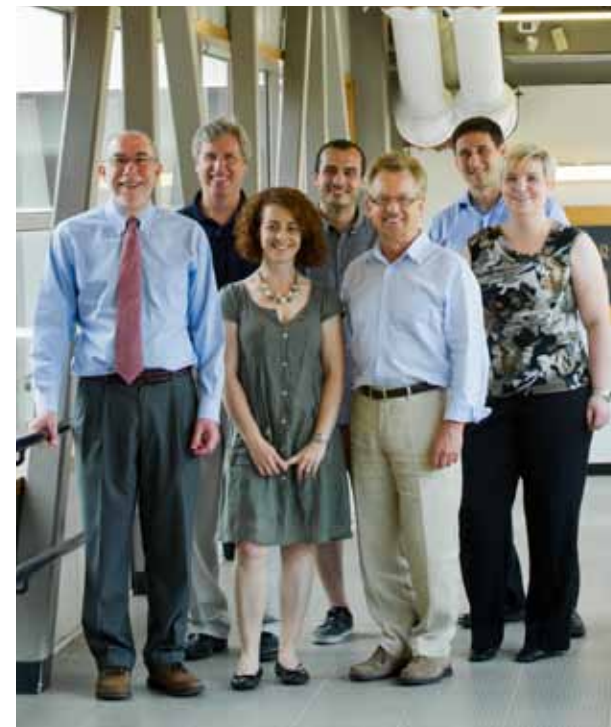
PHOTO BY BU PHOTOGRAPHY

From an administrative and operational standpoint, the department has made great strides in the past several years. Major changes to the department’s laboratory space include the complete renovation of approximately 30,000 square feet on three floors of the Silvio Conte Building to provide an open lab plan, allowing for more efficient space utilization and enhanced interactions among researchers. Dedicated rooms for large equipment, tissue culture, microscopes, and film handling, as well as common break areas for informal gatherings, have been created. A seminar room, eating area, and autoclaving facilities are now available, as well as renovated office space for faculty and administration. Two additional floors are slated for renovation in the near future.

Barbara Schreiber, PhD, associate professor of biochemistry and director of graduate studies for the department, has been part of the Medical Campus for more than 35 years, originally as a graduate student in the Department of Microbiology, then as a post-doc, first in clinical microbiology at University Hospital (forerunner to Boston Medical Center) and then with Carl Franzblau, PhD, then-chair of biochemistry. Franzblau offered Schreiber a faculty position and she never left. “Our new young faculty have added an energy and exuberance that has our students flocking to them and vying for positions in their labs,” Dr. Schreiber reports. “Our new monthly seminar series where students and post-docs give presentations to help hone their skills in public speaking has been a wonderful addition. We have launched a completely new website that highlights and markets the strengths of our department.”

Biochemistry department faculty have played a leading role in creating a new program, Foundations in Biomedical Sciences (FiBS), an intense science curriculum that covers biochemistry, cell and molecular biology, genetics, and physiology. The program is a success, with approximately 45 doctoral students enrolled throughout the campus. According to Dr. Schreiber, the Division of Graduate Medical Sciences (with strong support from the Department of Biochemistry) is examining the possibility of a unified admissions process where students are accepted into an umbrella program rather than through a specific department. “The FiBS curriculum is a good first step toward a core curriculum for all doctoral students,” she says. Students will benefit from having a greater pool of faculty mentors from which to choose, as they can rotate through various labs before choosing a thesis advisor. They will also have opportunities to interact with more students. The faculty will benefit from the elimination of duplicated efforts in admissions and student affairs.

Other department-wide initiatives include a monthly “chalk talk” series to give faculty the opportunity to share scientific ideas and get input from colleagues; a weekly social hour with rotating faculty hosts; and an annual



Biochemistry Department Chair David Harris (first row L-R) with Valentina Perissi, Stephen Farmer, Brigitte Ritter; (back row L-R) Matthew Nugent, Mikel Garcia-Marcos, and Xaralabos Varelas.

department picnic in the summer. Dr. Harris has also instituted an annual retreat focused on faculty research that has led to the initiation of a series of special interest groups, which are collections of faculty laboratories working on common themes that meet regularly to discuss data and ideas. There is also a Joint Thematic Seminar Series each semester in collaboration with the Evans Center in the Department of Medicine. Each series is based on a single, cutting-edge, scientific theme that bridges basic science and disease, the most recent being “Mitochondria: Engines of Life, Drivers of Disease” in the spring of 2012.

The addition of major equipment has given department members access to state-of-the-art scientific resources to further their research.

The family of a BUSM alumnus has recently made a generous endowment gift to the department that will be used to support new initiatives with a direct impact on students and faculty. This year, the gift was used to establish a fellowship program that provides stipends to two biochemistry graduate students.

“We work in an intellectually vibrant and intensely collegial environment in this department, and we are committed to our students and to supporting and growing the research potential and discoveries of our scientists,” says Dr. Harris. “This department is on the move, making contributions to basic science knowledge that can be translated into clinical applications for disease treatment, and hopefully, disease cures.” ■

Giving

www.bu.edu/supportingbusm

New Members Inducted Into Keefer Society at Annual Dinner



Established to recognize the commitment and generosity of individuals whose leadership at Boston University School of Medicine advances the School's mission and vision, the Chester S. Keefer, MD Society honors the memory of Dr. Chester S. Keefer, whose foresight and determination in his roles as chairman of the Department of Medicine, dean of BUSM, and director of the Medical Center were responsible for laying the foundation for the Boston University Medical Center.

On March 30, members of the society joined Dean Karen Antman at the Four Seasons Hotel in Boston for their 19th-annual dinner and a celebration of philanthropy. Seven of the sixteen new members were on hand to receive their induction plaques and recognition for their support of the School of Medicine. Highlights from the evening included individual musical performances by BUSM students and the School's own a cappella group, The Doctors' Notes, who performed selections by Billy Joel, the Beatles, and Etta James.

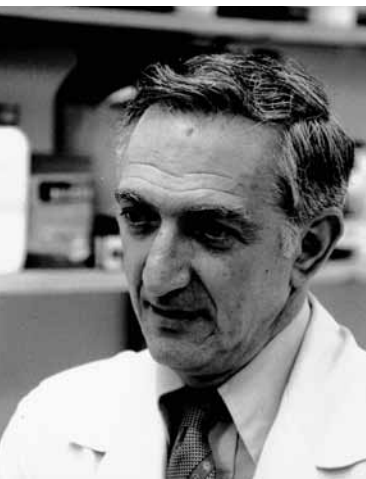
PHOTOS BY BU PHOTOGRAPHY



1. Philip Camilon '13 (l) and Marc Camilon (r) join their parents and new Keefer Society members, Althea B. Molatre, MD, and Felizardo S. Camilon, Jr., MD (c) at the annual dinner. **2.** New members Edward and Pamela Avedisian. **3.** New members Ann M. Huang and Bernard Huang, MD '62, receive their plaque from Dean Karen Antman. (FACING PAGE) **4.** New Keefer Society member and Dean's Advisory Board member William Muir Manger, MD, PhD. **5.** Keefer Society members Richard D. Scott, MD, and Mary D. Scott, MD. **6.** Lisa Rohman Singer with her mother and new Keefer Society member Joelyn Rohman (r). **7.** New member David J. Chronley, MD '77. **8.** John F. McCahan, MD, former acting dean of BUSM and former associate dean of academic affairs, receives his Keefer Society plaque from Dean Karen Antman.

Honoring a Passion for International Health and Medical Education

Joseph Vitale Scholarship Fund Established at School of Medicine



The late Joseph Vitale, MD, had a deep and abiding passion for bringing health and well-being to developing countries. The former BUSM associate dean for international health programs and professor emeritus of pathology and laboratory medicine felt that fostering and facilitating international student exchange health experiences was one important way to make this happen. Creating opportunities for medical students and trainees to understand on a basic level the needs of these communities and to catalyze their interest in being part of an international health movement was his lifelong commitment.

A fitting tribute to his memory is the recent establishment of the Joseph Vitale Scholarship Fund at the School of Medicine through a gift from the Vitale International Foundation for Medical Education. The endowed fund will provide scholarship awards for students enrolled at BUSM who are seeking clinical and research experience in developing countries to augment their medical education.

Thomas Barber, MD, director of the Vitale Foundation, believes the late Joseph Vitale would tell medical students interested in international health to challenge themselves to make a sustained difference to a community in need. Dr. Barber hopes that word of the gift will get out to Dr. Vitale's friends and colleagues as an example of what one individual can do to make a difference. "Dr. Vitale wanted to see the special strength of American medical education used to improve the health status of the world community, and we hope people will feel generous and target donations to the scholarship in his honor," Dr. Barber said.

Dr. Vitale was also a professor of sociomedical sciences and community medicine, director of the nutrition education program at BUSM, and professor of nutrition sciences at Henry M. Goldman School of Dental Medicine. He came to the Medical Campus in 1951 as a research assistant at the Mallory Institute of Pathology. In addition to his medical degree from the Universidad de Antioquia, Colombia, he had a master's degree in physiology from New York University School of Medicine and a doctoral degree in nutrition from Harvard School of Public Health.

He spent more than 30 years of his professional life in more than 65 underdeveloped areas of the world, and established affiliations with

medical centers in Mexico, Colombia, Ireland, Israel, Spain, and China. He raised funds from his family, friends, and colleagues to establish the Boston International Foundation for Medical Education, which was later renamed in his honor. The foundation will remain committed to helping future health professionals obtain overseas experiences.

"My father was able to keep the foundation alive during his lifetime," said Laura Vitale Romo, MD '89, "and I am so glad that the School of Medicine will now do it for him. That's the most important thing; to keep the opportunity going."

Susanne Sarfaty, MD '88, assistant dean for academic affairs and director of the international health programs for medical students, remembers Dr. Vitale as a role model when she was a medical student. "I am thrilled that I can now use that mentorship to help enrich the international health experiences of today's

medical students," she said. "An endowed scholarship to support international health opportunities will be a significant resource for our students."

"Dr. Vitale was dedicated to creating opportunities for international health exchanges to bring about sustained improvements in health care in developing countries and to integrate these opportunities into medical education," said Dean Karen Antman. "We are very pleased that his commitment can continue at BUSM through the Vitale

Scholarship Fund, for which we are exceedingly grateful to the Vitale Foundation and its donors." ■

For information on making a gift to the Joseph Vitale Scholarship Fund at BUSM, please contact Associate Dean Karen Engelbourg at engelbou@bu.edu or 617-638-4560, or visit www.bu.edu/supportingbusm.

PHOTO BY DICK ANTHONY

Boston University's Campaign Leadership Dinner

On April 18, several members of the Boston University School of Medicine Dean's Advisory Board were among those who attended Boston University's Campaign Leadership Dinner at the Metropolitan Museum of Art in New York. Guests enjoyed a gala celebration enhanced by the museum's unique Temple of Dendur setting and inspirational remarks by faculty and students. Noted speakers included Boston University President Robert A. Brown; Robert A. Knox (CAS'74, GSM'75), chairman, Board of Trustees; and Kenneth J. Feld (SMG'70), trustee, campaign chair.



1. Boston University President Robert Brown and Trustee Alan Leventhal. 2. Ashraf Dahod; Shamim Dahod, MD '87, BUSM Dean's Advisory Board member; and Dean Karen Antman. 3. Elaine Parisier; Simon Parisier, MD '61, BUSM Dean's Advisory Board member; and Dean Karen Antman. 4. Board of Trustees member Alan Leventhal; Sherry Leventhal, chair of the School of Medicine's Dean's Advisory Board; and Rita Mehos, member of the BUSM Dean's Advisory Board.

PHOTOS BY BU PHOTOGRAPHY

Alumni

NEWS



DEAR ALUMNI AND FRIENDS,

Our recent Alumni Weekend provided great opportunities to listen to and learn from the many graduates who attended our events. What I heard was a consistent gratitude for the excellent preparation BUSM gave them in patient care and for the wonderful relationships they developed during medical school.

The photos in these pages reflect the fun and laughter that reunioners and our faculty, staff, and students enjoyed at Alumni Weekend, but you have to experience it to really appreciate how wonderful this coming together is.

As we all know, medical school is a challenging time that tests not only our mental acuity but our physical stamina, both of which we need in our work. Each generation has its own issues; while today's students have technological aids that many of us didn't have, they face a vastly larger body of knowledge that is adjusted and expanded with

ever-greater frequency. It's a great benefit for these students to have the resources of a community of graduates who faced some of the same hurdles and joys during their training, and have since made strides in the medical profession and scientific research.

Your continued support of and interest in BUSM makes a difference. Keep it coming.

Jean E. Ramsey

Jean E. Ramsey, MD '90, MPH '08
Assistant Dean for Alumni Affairs
Associate Professor of Ophthalmology and Pediatrics
Vice Chair of Education and Program Director

THANK-A-THON • APRIL 24, 2012

Alumni and student volunteers gathered in the Hiebert Lounge on Tuesday, April 24, for the **Second Annual Thank-A-Thon** at the School of Medicine. Volunteers called alumni who had given to the School of Medicine during the past fiscal year to thank them for their generosity. Assistant Dean for Alumni Affairs Jean Ramsey '90 and Dean of the School of Medicine Karen Antman were on hand to speak with the volunteers and share the many ways alumni donations impact BUSM. After enjoying dinner, volunteers began calling (and received their own thank-you gift of a BUSM fleece blanket or athletic pullover from the Alumni Association after their work was finished!)



1. Stephanie Wong '15, Roberta Apfel '62, and Jennifer Rosenbaum '15 pose during the Thank-A-Thon. 2. John Lim '15 speaks with an alumnus on the phone during the Second Annual Thank-A-Thon. 3. Jean Ramsey '90, assistant dean for alumni affairs, looks on as Alan Hoang '14 chats with an alumnus during the Thank-A-Thon. 4. Student volunteers Morgan Leighton '15, Erin Krizman '14, Matthew Nolan '15, and Stella Lam '13 gather for a photo after finishing dinner and before calling alumni to say thanks.



PHOTOS BY FRANK CURRAN

Alumni Weekend May 4-5, 2012



Alumni from across the country gathered in Boston on May 4 & 5 to celebrate Boston University School of Medicine reunions. Evening events including the reunion reception, dinner, and Annual Banquet were held at the Taj Boston. On Friday, a Campus Experience Panel and lunch event featured faculty and students discussing educational innovation at the School of Medicine. Guests returned to campus Saturday afternoon for a lunch and student-led tours of campus. Tour stops included the Alumni Medical Library, the anatomy lab, and the brand-new student residence. The weekend culminated on Saturday evening at the Annual Banquet, where Distinguished Alumnus Awards were presented and guests enjoyed dinner and dancing to a live band.

1. Guests of the Alumni Association, including alumni, deans, faculty, staff, graduating students, and student volunteers enjoyed dinner and dancing at the Taj Boston on Saturday evening during Alumni Weekend. The Annual Banquet event also included the presentation of the Distinguished Alumnus Awards. 2. George Walcott '62 and Daniel Silva '15 pose for a photo after the Campus Experience Panel event on Friday. 3. Mitchell Wice '15 guides Vicki Kvedar '87 and her family on a tour of the new student residence during Alumni Weekend. Wice is moving into the brand-new residence this summer. 4. Doug Hughes, MD, associate dean for academic affairs, speaks with alumni during the Campus Experience Panel on Friday at the School of Medicine. Experiences with innovation in curriculum, learning tools, and student activities were shared by a panel of faculty and students.



Alumni Weekend May 4-5, 2012, continued



1.



2.



3.



4.

1. A Class of 2012 guest shares her print from the photo booth during the Annual Banquet at the Taj Boston on Saturday evening. 2. Wilfred Tashima '62, and his wife Lily visit with Tom Zaccheo '62 during the 50th reunion celebration on Friday evening at the Taj Boston rooftop reception. 3. Members of the Class of 1987, Bruce Moeckel, David Lee, Michael Choo, and Tod Cooperman gather for a photo at their 25th reunion celebration on Friday evening at the Taj Boston. 4. Matthew McAdams '15 and alumni practice examining a "patient" at the Clinical Skills & Simulation Center during campus tours offered over Alumni Weekend.

BUSM Distinguished Alumnus Awards



Distinguished Alumnus Award recipients Steven L. Berk '75 and Michael J. Kussman '68 pose with Michael Choo '87, alumni association president; Karen Antman, MD, dean of the School of Medicine; and Jean Ramsey '90, assistant dean for alumni affairs. Drs. Berk and Kussman received their awards during Saturday evening's banquet at the Taj Boston.

Michael J. Kussman, MD '68, is a retired United States Army brigadier general and former Under Secretary for Health for the Veterans Health Administration.

A graduate of BU's combined bachelor's and medical degree program, he trained in internal medicine and endocrinology at New England Deaconess Hospital and Joslin Clinic in Boston. He earned a master's in management from Salve Regina University in 1994.

He has served in many positions during his military career, including as commander of the Walter Reed Health Care System in Washington, D.C., commander of the Europe Regional Medical Command, command surgeon for U.S. Army Europe, and TRICARE lead agent for Europe. He is board certified in internal medicine and serves on the faculty of the Uniformed Services University of the Health Sciences.

A graduate of the U.S. Army War College and an honor graduate of the Command and General Staff College, Dr. Kussman's military decorations include the Distinguished Service Medal (the highest award given in peacetime), the Legion of Merit with three oak leaf clusters, the Defense Meritorious Service Medal, and the Order of Military Medical Merit.

In May 2007, the U.S. Senate confirmed him as Under Secretary for Health for the Veterans Health

Administration (VHA) after he served as Acting Under Secretary for Health, leading the nation's largest integrated health care system.

Under his leadership, the VHA made dramatic improvements in the delivery of primary and mental health care. New models of health care delivery were developed, making care much more accessible for veterans, and polytrauma rehabilitation centers were created to meet the needs of recently injured servicemembers.

Dr. Kussman is currently a member of the Dean's Advisory Board at Boston University School of Medicine.

Steven L. Berk, MD '75, is the dean of the School of Medicine and vice president for medical affairs for the Texas Tech University Health Sciences Center School of Medicine (TTUHSC).

He completed his internal medicine residency and infectious disease fellowship at Boston City Hospital. He is board certified in internal medicine and infectious disease with a certificate of added qualification in geriatrics.

Berk was appointed chief of infectious disease at the new medical school at East Tennessee State University in 1982, professor of medicine in 1986, and chairman of the Department of Medicine in 1988, a position he held for 11 years. From 1999 to 2006, he served as regional dean, professor of medicine, and Mirick-Myers endowed chair in geriatric medicine of TTUHSC School of Medicine in Amarillo.

He has authored or co-authored more than 120 peer-reviewed publications and four textbooks and has served on the NIH Special Advisory Panel on the evaluation of vaccines against infections in the elderly.

In 1998, the American College of Physicians bestowed the title of Laureate in Medicine on Berk and, in 1999, he was elected to the national board of Alpha Omega Alpha.

In 2003, he received the Texas Tech University Health Sciences Center Distinguished Service Award.

Since becoming dean in 2006, he has overseen the most extensive curriculum reform in the school's 40-year history. His vision for addressing the ever-increasing need for primary care physicians led to a unique family medicine accelerated track that was approved in 2010. ■

1952 Frank L. Pettinga of Holland, Michigan, writes, "Graduated 1952—the best class ever. Earned an MA in pharmacology and an MPH in tropical medicine. Practiced family medicine for 19 years in Muskegon, Michigan, and became too busy. Joined the U.S. Department of State and served as an embassy physician for 13 years in Afghanistan, Austria, Washington, D.C., Egypt, and the Dominican Republic—my work took me to 77 countries in all. Returned to become the medical director at Hackley Hospital in Muskegon, Michigan, for seven years and then worked part time in occupational medicine at Hackley for eight. Nonmedical positions included president of the Muskegon County Medical Society, president of Calvin College Alumni, member of Calvin College Board of Trustees, and president of the Board of Trustees of Western Michigan Christian High School. Now retired with my wife, Sue, who helped me survive at BUSM. We live vicariously in the exploits of our four children and 10 grandchildren."

1957 Joel S. Rankin of Weston, Massachusetts, was honored by the Middlesex West District Medical Society of Massachusetts as the district's 2012 Community Clinician of the Year. Established in 1998 by the Massachusetts Medical Society to recognize a physician from each of the society's 20 district medical societies, the award recognizes physicians who have made significant contributions to their patients and the community, and who stand out as leading advocates and caregivers.

Rankin, who specializes in reproductive medicine, served as chair of the Department of Obstetrics and Gynecology at MetroWest Medical Center from 1975 to 1996. Since then, he has been supervisor of educational programs for the department, overseeing continuing medical education programs for physicians; he is also associate professor of obstetrics and gynecology at BUSM. Rankin was an associate professor of obstetrics and gynecology at the University of Massachusetts Medical School from 1979 to 1999 and a lecturer in obstetrics, gynecology, and reproductive biology at Harvard Medical School from 1994 to 1996.

1962 Generoso G. Gascon of North Falmouth, Massachusetts, writes, "I 'retired' 10 years ago from Brown University Alpert Medical School, as a professor emeritus, but promptly returned to the Middle East to start a new pediatric neurology division at the King Faisal Specialist Hospital & Research Centre in Jeddah, Saudi Arabia, for another five years. We've finally settled permanently in our



Gascon in Hawaii with Wilfred Tashima '62, standing in front of one of his airplanes about three years ago.

CONTACT US

If you have news, announcements, or creative works you'd like to share with your fellow alumni, please write to the BUSM Alumni Association at 72 E. Concord Street, L120, Boston, MA 02118 or email alumbusm@bu.edu.

BUSM Alumni Association on Facebook



www.facebook.com/alumBUSM

home on Cape Cod, though I'm still doing part-time practice as a member of the neurology department at Massachusetts General Hospital. More time for seeing the grandkids (two girls, three boys), gardening, some golf, and a lot of tennis."

1967 Paul A. Blake of Salem, Oregon, writes, "After graduating from BUSM, I attended the Harvard School of Public Health (MPH) and completed a residency in internal medicine in Boston, Seattle, and Atlanta. I worked as a medical epidemiologist (loved the epidemiology and tolerated the bureaucracy) for the Centers for Disease Control in Atlanta (26 years; worked in 16 countries but mostly in Atlanta) and then for the Georgia Division of Public Health (10 years) and retired in 2006 in Salem, Oregon. I have been married for 45 years to a Norwegian-American artist and weaver, and we have four children and six grandchildren in Oregon, Oklahoma, and Norway. In retirement, I have devoted myself to family, gardening, photography, enjoying Oregon, travel, worrying about climate change, and living as long and as well as possible."



Neal K. Anderson

1976 Neal K. Anderson of Seminole, Florida, writes, "Greetings! After 20 years of federal service (Air Force and Togus, Maine VA), I retired and went to law school at the University of Maine School of Law. I am now admitted to the Florida Bar and have a small general practice in Seminole, Florida. I

am married to the former June Lucas (SON '76) and we have six girls. My oldest is a lawyer in Boston—and not a physician among them!"

1980 Mark C. Weissler of Chapel Hill, North Carolina, writes, "I am a professor of otolaryngology—head and neck surgery at University of North Carolina, Chapel Hill. I serve as a regent for the American College of Surgeons and also serve on the American Board of Otolaryngology."

1981 Thomas A. Morris III of Kingstonton, Massachusetts, writes, "I remain self-employed in solo private practice of pulmonary disease in Brockton, Massachusetts. In 2006, at age 55, I was commissioned a lieutenant commander, Medical Corps, USN (RC), and in 2010 promoted to commander and mobilized to Landstuhl Regional Medical Center in Germany for six months in support of Operations Iraqi Freedom and Enduring Freedom. I have also served active training tours at National Naval Medical Center, Bethesda, Maryland, and Naval Medical Center, San Diego, California, as a visiting attending pulmonologist. For the last 14 years I have been an active Freemason in Massachusetts and I have also been active in the Massachusetts Medical Society and the New England States chapter of the American College of Chest Physicians. My wife Andrea, son Robert, and I reside in Kingston, Massachusetts."

1986 Karen Miller Boudreau of Greenfield, Massachusetts, has been named chief medical officer of the Boston Medical Center HealthNet Plan, a nonprofit that provides coverage for people on Medicaid and in state-subsidized health plans.

Boudreau previously worked at the Institute for Healthcare Improvement in Cambridge, where she was

senior vice president and medical director for a program that included many major quality-of-care initiatives, including those focused on reducing hospital readmissions and strengthening primary care.

She also has served as medical director for quality improvement at Blue Cross Blue Shield of Massachusetts and as medical and laboratory director at Valley Medical Group in western Massachusetts. At HealthNet, she will oversee strategy for managing enrollees' care and developing policies for medical care and quality improvement.

Joshua D. Feder of Solana Beach, California, writes, "My classmate, Steve Ober '86, works at BU helping marry academia and industry for technology development. He has been such a great friend and help recently with his advice and resources in my efforts to develop technology systems for intervention and distance learning for clinicians and families working in the autism field. Thanks, Steve!"

1991 David Fox of New York, New York, writes, "I recently completed construction on my new facility for the treatment of patients with varicose veins and hemodialysis access problems. Stop by and say hello if you are in NYC."



David Fox's new facility

1993 Jeffrey R. Johnson of Bedford, New Hampshire, writes, "I joined Dartmouth-Hitchcock in New Hampshire five years ago and have a thriving practice. I am the director for obstetrical specialties at Dartmouth and am also on the board of the Department of Health and Human Services for the state. My son is 10 and an avid fencer, and my daughter is eight and the diva—she has been in several plays in the Palace Theatre Group in Manchester. My wife is going back to work in the fall as an RN and served as president of the neighborhood association for two years. We have an overachieving Entlebucher, which is a Swiss mountain breed, who just got her second agility title with the American Kennel Club last month."

1999 Anthony Sullivan of Colorado Springs, Colorado, writes, "I have been stationed at Fort Carson in Colorado Springs at Evans Army Community Hospital since 2003, after completing my training at Walter Reed Army Medical Center and Bethesda Naval Hospital. I recently returned from a six-month tour in support of Operation Enduring Freedom, where I was stationed at Camp Dwyer in Helmand Province, Afghanistan. I am currently the chief of the department of OB/GYN at Evans Hospital, where we are delivering 180 to 200 babies per month. Life is good out west but my wife, Colleen, and I are looking forward to returning to Boston when the kids, Alexandra (12), Scott (10), and Megan (6), are grown."

Worcester Art Museum Alumni Reception

Jean Ramsey '90, assistant dean for alumni affairs, and Dean Karen Antman, MD, hosted alumni and their guests at an inaugural event at the Worcester Art Museum on Tuesday, April 17. Alumni gathered for an evening of socializing, networking, catching up on recent school news, and enjoying the art.

The Worcester Art Museum is home to more than 35,000 pieces of artwork, including sculptures, paintings, photographs, prints, and drawings.



Assistant Dean for Alumni Affairs Jean Ramsey '90 and Fran Bohdiewicz '86 pose for a photo during the reception.



Roberta Apfel '62 and her husband, Bennet Simon, MD, pose in the contemporary gallery.

PHOTOS BY MARIE TURLEY

→ In Memoriam

1953 • Joseph S. Forte of Gardner, Massachusetts, on January 24, 2012, at the age of 85. A general surgeon, he served as chief of surgery from 1964 to 1980 at Henry Heywood Memorial Hospital in Gardner, Massachusetts, where he practiced from 1960 until his retirement in 1991.

Forte received his postgraduate training at St. Elizabeth's Medical Center in Boston, the former Pondville Cancer Hospital in Boston for one year, and Malden Hospital, where he met his wife, the former Doris McDaniel. He was a member of the Massachusetts Medical Society, the Worcester North Medical Society, the American College of Surgeons, the New England Cancer Society, the Boston University Alumni Association, and Alpha Omega Alpha (National Honor Medical Society). He served as president of the Worcester North Medical Society, chief of staff of Henry Heywood Memorial Hospital, and counselor of the Massachusetts Medical Society, and was former director of the Massachusetts Cancer Society.

1954 • Francis C. Mason of Norwood, Massachusetts, on December 25, 2011, at the age of 85. An obstetrician-gynecologist, he is survived by his wife, Jacqueline R. (York) Mason, three daughters, three sons, and eight grandchildren.

1955 • George C. Hewitt of Nelson, New Hampshire, on February 24, 2012, at the age of 83. An internist with a specialty in cardiovascular dis-

ease, he served at hospitals in Hartford, Connecticut, and Buffalo, New York, before returning to Massachusetts to join the Massachusetts Memorial Hospital staff. He had a private practice in Arlington and Lexington and was on the staff of Symmes Hospital in Arlington and Mount Auburn Hospital in Cambridge, Massachusetts. He completed his internship, residency, and a fellowship in hematology in Albany, New York. He also served in the U.S. Army as head of the blood bank at Fort Sam Houston in San Antonio, Texas.

1957 • John F. O'Connor (see page 15).

1959 • James J. Pollard of Marblehead, Massachusetts, on January 13, 2012, at the age of 77. After his surgical internship at Barnes Hospital in St. Louis, Pollard completed his residency in radiology at Massachusetts General Hospital, where, as a radiologist, he was a pioneer in the field of angiography. Later, he entered private practice at Choate Hospital, becoming chief of the radiology department. He finished his career at Beverly Hospital.

1962 • Rose K. L. Wong of Honolulu, Hawaii, at the age of 78. An internist in Hawaii for many years before retiring in 2004, Wong was also a medical consultant for the Division of Vocational Rehabilitation and the Ho`opono Division of the Blind for the state of Hawaii. She earned a master's degree in chemistry from the University of Hawaii and a PhD in biochemistry at

the University of Oregon. She completed an internal medicine residency at the Queens Medical Center and a clinical and research fellowship in medical oncology at Harvard Medical School in Boston.

1992 • Maria E. Pease of Burlingame, California, on October 8, 2011, at the age of 50. A psychiatrist, she treated children and adolescents as well as adults, with sub-specialties in parent-infant psychology and sport psychiatry. Since 1998, she served as assistant clinical professor at the University of California, San Francisco (UCSF). While at UCSF, she was the psychiatric evaluator on the transplant team of organ donors and recipients. Most recently she was an attending physician with the Deep Brain Stimulation Program, which provides treatment for patients suffering from obsessive-compulsive disorder. During her psychiatry residency, she received the Laughlin Award from the National Psychiatric Endowment Fund for "excellence in therapeutic skills and dedication to the welfare of patients." An avid swimmer, in 1980 she qualified for the U.S. Olympic Trials. Pease was a member of the Surfer's Medical Association, an international group of health care professionals committed to implementing models of health care delivery for underdeveloped coastal regions around the world.

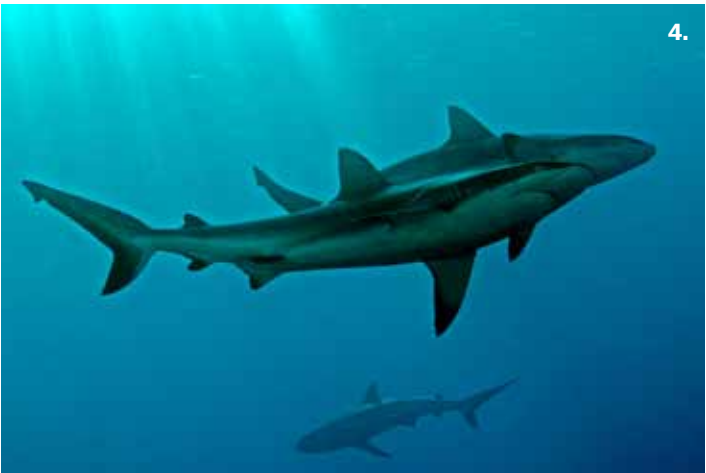
Andrew Malbin '78, Underwater Photographer



Andrew Malbin '78 left Boston following the famous Blizzard of 1978 for the warmer climes of Florida. He was slated for his residency in Jacksonville, Florida, and took the scuba diving certification he had earned while an undergraduate at BU with him. Malbin, a dual degree graduate of CAS and BUSM in the six-year bachelor's and medical degree program, has combined his loves of diving and photography to become an award-winning underwater photographer. He has traveled extensively, diving in some of the most exotic and beautiful areas in the world to capture tiny sea creatures and plants—as well as large sea animals—with his camera.

Shooting underwater photos since the early 1980s, he has dived and photographed across the Caribbean Islands, Mexico, Indonesia, French Polynesia, Micronesia, Hawaii, and Australia. His photographs have appeared on the cover of *Alert Diver SE Asia/Pacific* and in *EMPulse*, the Florida College of Emergency Physicians magazine, among other publications. His photography was chosen for an award by the Florida Museum of Photographic Arts, and a gallery of his work is on display in the international concourse of Charlotte Douglas International Airport. Aquatica, a Canadian company that makes housings for underwater cameras, has listed him as one of their preferred photographers and displays his work regularly on their website.

"I love taking pictures and I love diving," says Malbin. "Ever since I watched *Sea Hunt* on television as a kid, I have loved sea life. I am especially interested in large sea animals like sperm whales and whale sharks, which I have been fortunate enough to swim with and photograph. I get to spend time in places that most people never have the opportunity to visit and see creatures that they will never see, except on film. Swimming with the whales and being so close



1. Golden jellyfish, Jellyfish Lake, Palau, Micronesia. 2. 4 Reef sharks, Yap, Micronesia. 3. Hawksbill turtle, Little Cayman, Cayman Islands, BWI. 4. Reef sharks, Yap, Micronesia. 5. Andrew Malbin, self-portrait, taken off Little Cayman, Cayman Islands, BWI.

to such large and beautiful creatures is amazing." His favorite places to dive include Dominica because of the whales; Cancun, Mexico for the sharks; Little Cayman for having the best hard corals in the Caribbean; and Indonesia for macrophotography of the tiny sea life.

He notes that underwater photography is very different from taking pictures on land: "While light and focus are key to both, in the water you have to deal with currents that are continually moving you and the object of your interest, and you have to carry your light with you, since anywhere below 10 feet, the water filters out much of the color and light."

Malbin has been sidelined from his passion since last summer, when on a dive in Cozumel, he suffered decompression sickness and temporarily lost the use of his legs and one arm. "Because of my familiarity with hyperbaric medicine, I knew what was wrong with me and what I needed," he says. "After I convinced the guides on the boat that I needed oxygen and to get back to Cozumel—where I was treated immediately—a friend sent a plane to fly me to Duke Medical Center, which has one of the best facilities for dive medicine." He continued to receive treatment in his hometown of Tampa and reports that he is 85 percent recovered and expects to be 100 percent soon.

After starting his training in orthopedic surgery, Malbin switched specialties and eventually became board certified in emergency medicine; he has been retired from the full-time practice of medicine since 1999 due to cervical spine issues. Since then, he has done medical-legal review work and served as the medical director for two fixed-wing air ambulance companies that provide transport for patients who need medical monitoring during trips to receive care, at times doubling as a flight physician. "Over the years, I have taken patients from the U.S. to cities all over Europe and to just about every island in the Caribbean, as well as to Central and South America and Canada,"

says Malbin. "These are people who are too sick to travel on commercial flights and/or have the means to be flown by private jet from their homes to places like the Mayo or Cleveland Clinics for specialized care, for example." He also provides care to two well-known professional boxers.

Malbin is a diplomate of the American Board of Emergency Medicine and a fellow of the American College of Emergency Physicians. He served on the Board of Directors of the Undersea and Hyperbaric Medical Society and is a member of the Air-Medical Transport Section and Undersea and Hyperbaric Section of the American College of Emergency Medicine.

"I got a very good medical education and enjoyed my BU days," says Malbin. "Those of us in the six-year med program gravitated toward each other as friends, and a lot of us still keep in contact. As a flight physician, I once flew from Guatemala to the Ukraine and was forced to stop in Springfield, Massachusetts, because the patient was not doing well. The local intensivist who took care of my patient was Tom Higgins, my six-year med classmate. We now keep in touch regularly."

Malbin also has a 22-year-old daughter who was a certified scuba diver at the age of 12. Visit his website at www.oceandoctورشots.com for more photos and information. ■

2012-2013 Calendar

SEPT. 4	GMS Welcoming Barbecue Tuesday, September 4, 5:30 p.m., Talbot Green, BUSM
SEPT. 12	Young Alumni/Future Leaders Wednesday, September 12, 6:30 p.m., Taj Boston
SEPT. 21	BUSM Dean's Advisory Board Meeting Friday, September 21, 8 a.m.-noon, Crosstown Center
SEPT. 21	Joint BUSM, SDM & SPH Deans' Advisory Board Luncheon Friday, September 21, noon, Crosstown Center
SEPT. 21	School of Medicine Student Residence Dedication Ceremony Friday, September 21, 2:30 p.m., 815 Albany Street
SEPT. 24	Fall Phonathon Monday, September 24, 5:30 p.m., Hiebert Lounge, BUSM
OCT. 1	Fall Phonathon Monday, October 1, 5:30 p.m., Hiebert Lounge, BUSM
OCT. 1	Dept. of Surgery Reception Monday, October 1, 6-8 p.m., American College of Surgeons Annual Clinical Congress, Hyatt Regency, Chicago
OCT. 5-6	Evans Memorial Department of Medicine Centennial Celebration Friday and Saturday, October 5-6, BUSM
OCT. 20	Dean's Club Dinner Saturday, October 20, 6 p.m., Taj Boston
NOV. 5	BUSM Dean's Reception at the AAMC 123rd Annual Meeting Monday, November 5, 6:30-8:30 p.m., Marriott Marquis, San Francisco
MAY 3-4	School of Medicine Alumni Weekend Friday and Saturday, May 3-4, 2013