UNIVERSITY of MARYLAND
SCHOOL OF MEDICINE

somnews

June 2011 Vol.12 No.10

BY CHRIS ZANG

Maryland's New Look

University of Maryland, Baltimore and University of Maryland Medical Center Unveil New Unified Look

The University of Maryland (UM) and the University of Maryland Medical Center (UMMC) have unveiled a new visual identity, including logos and colors, that reflects the collaboration between the two institutions. The goal of the new look is to provide a simplified and consistent external public image to students, faculty, staff, alumni, patients, referring physicians, donors, and the community that is easy to recognize and visually unifying.

The new logo, the result of a yearlong effort, replaces independent logos across the University's six professional schools and its various academic and research units and the visual identity of UMMC, an academic medical center that is the flagship of the 12-hospital University of Maryland Medical System. The Medical Center is a tax-exempt entity legally separate from the University. Many UM students and faculty learn, carry out research and provide clinical care in UMMC facilities.

The logo represents the pillars of Davidge Hall, the signature building on the UM/UMMC campus at Lombard and Greene streets and one of Baltimore's most recognizable public landmarks. The Davidge icon anchors both the University and the Medical Center in the deep historical tradition of the campus. Next year will mark the 200th anniversary of when the state legislature re-chartered the College of Medicine of Maryland as the University of Maryland here in Baltimore and Davidge Hall was constructed.

The new visual identity will be seen in signage around campus, during graduation ceremonies and other events, and in publications, with the transition to be completed by January 1, 2012.

More information about the new visual identity can be found at http://www.oea.umaryland.edu/communications/branding/launch.

DEAN'S MESSAGE: What's On My Mind

What's on my mind this month are highlights and accomplishments from the just concluded academic year.

It is the time of year when we reflect on the achievements of our students and graduates, for they are the personification of our educational mission. By providing excellence in biomedical education through an innovative and integrated curriculum, the School of Medicine faculty has prepared our medical, allied health and graduate students to provide compassionate, patient-centered care and conduct research that will improve healthcare worldwide.

An important measure of our success as a medical school is student achievement, and the class of 2011 excelled in many ways. **Thanks to outstanding scores in all phases of the United States Medical Licensing Examination (USMLE), and the extraordinary clinical experience provided through our partnership with the University of Maryland Medical System, our graduates are highly sought after by nationally acclaimed residency programs throughout the country,** including Yale, Stanford, Duke, and the University of Maryland Medical Center (UMMC). This year's class produced the third female student ever to match to UMMC's residency program in neurosurgery, and in dermatology—a specialty where residency positions are scarce—all six of our dermatology students were immediately accepted into training programs. Forty-three (43) percent of our graduates entered primary care specialties such as pediatrics, family practice, internal medicine and obstetrics and gynecology. The remainder went into the surgical fields. Residency program surveys have consistently demonstrated that our graduates are among the top performers in their specialties.

School of Medicine graduates also earned prestigious research fellowships that will propel them into careers in basic science, clinical research and medical education. **These "year-off" research programs allow students to leave medical school for one year to work with mentors on research projects and get a taste of what it's like to be a physician-scientist.** School of Medicine students have earned fellowships through the National Institutes of Health, the Howard Hughes Medical Institute and the Doris Duke Charitable Foundation. In 2010, 86 students conducted research projects and received total funding in excess of $500,000.

Student research is integral to the Graduate Program in Life Sciences (GPILS), which had an outstanding recruitment year. Applications increased and the quality of the students remained impressive. One hundred twenty-two (122) students were admitted, including 59 PhD students, seven of whom are underrepresented minorities funded by the nationally renowned Meyerhoff Training Program. GPILS continued to improve the educational experience for our students, leveraging technology to improve access to course materials. **GPILS helped the University to obtain or retain 21 NIH-sponsored training programs by improving data collection and administrative support to faculty in the application process.**

It was also a banner year for graduate students pursuing careers in allied health and public health. ***U.S. News and World Report* ranked the School of Medicine's Department of Physical Therapy and Rehabilitation Science (PTRS) 15th out of 204 programs in the country.** It was a year in which PTRS reached an important milestone, having graduated more than 2,000 students since 1956. Graduates of the Department of Medical and Research Technology (DMRT) walked off the stage with a host of prestigious awards, as well as job offers in a clinical laboratory setting. Two DMRT students were inducted in the Phi Kappa Phi honor society, an honor conferred upon students who rank in the top 10% of all graduating students in the nation. The Master of Public Health Program has added a global health concentration that addresses maternal and child health, nutrition, disparities in healthcare and the economic impact of disease.

Community service remains a cornerstone of the student experience at the University of Maryland School of Medicine, and this year was no exception. **Through numerous organizations, students reached out to help those in need in Baltimore City and throughout Maryland.** Through Project Feast, students cooked and served a turkey dinner for the less fortunate on Thanksgiving Day. The Student Sight Savers Project offered glaucoma screenings at Lexington Market. When the High School Mini-Med Program visited Baltimore high schools, our medical students were there to help with entertaining, educational and interactive presentations. The Student National Medical Association (SNMA) was especially active, with members providing health education and screening, collecting coats and blankets for the homeless and providing school supplies and Christmas gifts for children in need. In recognition of their outreach efforts, the SNMA was named national chapter of the year.

As they gear up for another year in the classroom, prepare to begin their rotations or move on to begin their careers, our students and graduates deserve praise and congratulations. I am delighted with their academic accomplishments and service to our community. Our sincere thanks must also go to the professors and mentors who made their achievements possible. Congratulations to all.

In the relentless pursuit of excellence, I am
Sincerely yours,

E. Albert Reece, MD, PhD, MBA
Vice President for Medical Affairs, University of Maryland
John Z. and Akiko K. Bowers Distinguished Professor and Dean, University of Maryland School of Medicine

Class of 2011 Graduates

BY CAELIE HAINES

The University of Maryland School of Medicine celebrated 151 newly-minted MD's from the Class of 2011, who received their doctoral hoods on May 20, and then graduated. They join over 17,000 alumni who have transformed medicine and science and brought honor to the medical profession and the University of Maryland.

Dr. Risa Lavizzo-Mourey, president and CEO of the Robert Wood Johnson Foundation, addressed the class as keynote speaker. "Tomorrow, when the parties are over, it's going to get very real, very fast," she said. "Buckle up, because you are entering a world that is rapidly changing. The challenges may seem unrelenting at times, the demands may seem unrelenting, and the pressures unforgiving. But if you're as lucky as I've been, you will love every moment of it.

"Just consider this," she added. "The care and services you will deliver will be safer, more efficient, and of higher quality than any patients have ever received before. Technology, of course, is a big reason why—new technologies are being developed, even right here at this university, that are reinventing how we diagnose and treat patients."

► BY LEIGH VINOCUR

New Vice Chair for Department of Emergency Medicine

Dr. Amal Mattu Appointed to New Position

Dean E. Albert Reece, MD, PhD, MBA, and Brian J. Browne MD, professor and chair, Department of Emergency Medicine, announced the appointment of Amal Mattu, MD, professor, Department of Emergency Medicine, as the new vice chair of the Department of Emergency Medicine.

In this newly created position, Dr. Mattu will focus on faculty development as well as the expansion of the department's educational programs on all levels. He will also help to extend its international program. The Department of Emergency Medicine has a distinguished history as one of the pioneering emergency departments in the country. "We are leading the nation in a wide range of emergency care, including cardiopulmonary and brain resuscitation, clinical toxicology, prehospital care, emergency medical services, and disaster preparedness," said Dean Reece.

Dr. Browne explained, "Our decision to create the position of vice chair of the Department of Emergency Medicine is based on the increasingly complex and comprehensive nature of our educational programs for students, residents, and fellows. I have appointed Dr. Mattu because he is one of the most qualified and successful emergency medical educators in the country." Since joining the emergency medicine faculty at the University of Maryland in 1996, Dr. Mattu has received more than a dozen teaching awards, including three national awards from the American College of Emergency Physicians and three others from the American Academy of Emergency Medicine. In 2000, he was named Founder's Day Teacher of the Year for the University of Maryland at Baltimore campus.

Although Dr. Mattu is officially stepping down from his previous role as director of the residency program, he has a new global and supervisory role, focusing on all aspects of education for the department. He said, "I will continue to oversee the education of the residents and perhaps spend a bit more time with students, too. However, a major interest of mine will be faculty development. I started a faculty development fellowship several years ago, and I want to spend more time on that." In addition, he hopes to create a risk management curriculum for the Department of Emergency Medicine. Dr. Browne added, "Dr. Mattu's leadership and vision will be integral to maintaining the momentum and quality of our educational programs."

► BY KAREN ROBINSON

Consortium Awards $23.4 Million

for Promising HIV/AIDS Preventive Vaccine Candidate

Maryland Governor Martin O'Malley announced on May 5, 2011, that the Institute of Human Virology (IHV) will receive $23.4 million from a consortium of funding sources to support the next phase of research into a promising HIV/AIDS preventive vaccine candidate. The IHV vaccine program grants include $16.8 million from the Bill & Melinda Gates Foundation, $2.2 million from the U.S. Army's Military HIV Research Program (MHRP), and other research funding from a variety of sources, including the National Institutes of Health (NIH).

At a celebration in IHV's light-filled multi-level atrium on Lombard Street, O'Malley thanked those supporting the research. "Through your generosity and vision you are making this place not only a beacon of hope, but a real powerful force of healing. It makes us understand we are a part of something much bigger than ourselves by being here today. "There's a beautiful Talmudic saying that if you save just one life it's as if you've saved the world," he continued. "Imagine the lives that we have the ability, the potential, the blessing, to be able to touch through the great work that Dr. [Robert] Redfield, Dr. [William] Blattner, Dr. [Robert] Gallo and all of you here at this Institute are doing."

Governor Martin O'Malley addresses the press conference crowd as (L-R) Jose Esparza, MD, PhD, senior advisor on HIV Vaccines for the Gates Foundation, Deputy Commander of Walter Reed Army Institute Research Col. Peter Weina, PhD, MD, FACP, Robert Gallo, MD, University System of Maryland Chancellor William "Brit " Kirwan, PhD, UMB President Jay Perman, MD, and Dean Reece share in the good news.

The funding is to support further preclinical development and Phase I/II clinical trials of a novel HIV vaccine candidate developed by the research team at IHV. The candidate immunogen, denoted as FLSC (Full-Length Single Chain), is designed to elicit strongly protective antibody responses across the spectrum of HIV-1 strains. Research will be conducted by IHV, led by Dr. Gallo, director of IHV and a professor in the Department of Medicine, and joined by investigators from Sanofi Pasteur and the Military HIV Research Program.

University of Maryland President Jay A. Perman, MD, told the crowd, "I can't think of any other place in the world where they could assemble as much knowledge about HIV in a single room as a staff meeting here at this Institute. What Dr. Gallo and his team are doing really represents unbridled hope. Not just for the millions of people currently living with HIV/AIDS, but hope for future generations who might never have to know the scourge of this disease."

Grants provided by the consortium will allow for clinical testing of FLSC evaluating immune response and safety in humans, and optimization of the prime-boost vaccination strategy. The research is specifically designed to determine if the immune responses elicited by the vaccine candidate are sufficiently powerful and long-lasting in humans. The research will also assess prime-boost combinations of the HIV vaccine developed by Sanofi Pasteur (ALVAC), which recently demonstrated modest protection in an efficacy trial conducted by the MHRP in Thailand, coupled with the FLSC developed by the Institute. Both vaccine candidates involve use of a modified form of the outer protein envelope, allowing each to potentially complement the use of the other.

"The Gates Foundation worked closely with Dr. Gallo's team in the design and review of this innovative approach to an HIV vaccine," said Jose Esparza, MD, PhD, senior advisor on HIV Vaccines for the foundation's Collaboration for AIDS Vaccine Discovery project. "We are proud to support Dr. Gallo's continued, pioneering work in HIV and AIDS."

The Gates Foundation's assessment of the promising potential of IHV's preventive vaccine candidate was shared by the MHRP. "The U.S. Military HIV Research Program, part of the Walter Reed Army Institute of Research [WRAIR] and working with the Henry M. Jackson Foundation for the Advancement of Military Medicine, is very pleased to be part of this exciting research effort to develop a globally effective HIV vaccine," said Col. Peter Weina, PhD, MD, FACP, deputy commander of WRAIR.

The novel prime-boost strategy using FLSC is distinguished by its potential ability to induce broad antibody responses to HIV-1. The antibodies induced by the experimental vaccine bind to common HIV regions that are exposed when the virus attaches to target cells, rather than to specific characteristics of the HIV envelope protein that may not be present in all virus strains. That strategy could potentially overcome limitations of previous vaccine candidates that responded to single strains or narrow ranges of HIV viruses.

"IHV's unique and promising HIV/AIDS vaccine candidate is designed to bind to the virus at the moment of infection, when many of the different strains of HIV found around the world can be neutralized," said Dr. Gallo. "We believe this mechanism is a major prerequisite for an effective HIV preventive vaccine."

Dr. Gallo acknowledged and expressed appreciation to the Institute's entire team, noting especially the original contributions of IHV's Tony DeVico, PhD, who is also a professor in the Department of Medicine, and co-principal investigator George Lewis, PhD, who is also a professor in the Department of Microbiology & Immunology, for their work on the development of FLSC. He also indicated that he was looking forward to advancing the next phases of research in conjunction with IHV Associate Director, Dr. Redfield, and his Clinical Care and Research Division at the Institute. Baltimore-based Profectus Biosciences, a spinoff company from IHV, will be leading the preclinical development of the vaccine construct.

"This is an exceptional combination of research partners-IHV, Sanofi Pasteur, Profectus Biosciences, and the Military HIV Research Program-and we are grateful for the extraordinary support from all of our funding partners, including the Gates Foundation, the U.S. Army, and NIH," said Dr. Gallo. "This team is truly dedicated to eradicating HIV and AIDS, and we are excited by the potential for accomplishing that goal with the use of our novel prime-boost immunization strategy."

► BY KAREN WARMKESSEL

Treatment for Triple-Negative Breast Cancer

Experimental drug may help reprogram tumor cells to respond to hormone therapy


Saranya Chumsri, MD

A multicenter clinical trial led by a researcher at the University of Maryland will evaluate a new approach to treat triple-negative breast cancer, an often-aggressive type of cancer that is more common among African-Americans and young women. The study will help researchers determine if an experimental drug, entinostat, can reprogram tumor cells to express a protein molecule called an estrogen receptor to make them sensitive to hormone therapy.

Saranya Chumsri, MD, assistant professor, Department of Medicine, and an oncologist at the University of Maryland Greenebaum Cancer Center, is the principal investigator of the newly opened National Cancer Institute-funded study. The trial is based on laboratory studies by Angela H. Brodie, PhD, an internationally recognized University of Maryland breast cancer researcher, and her colleagues. Their research, recently published in the journal *Cancer Research*, found that entinostat can cause triple-negative breast cancer cells to become sensitive to the effects of hormone therapy with an aromatase inhibitor. Dr. Brodie pioneered the development of aromatase inhibitors, a class of breast cancer drugs that reduces the level of estrogen produced by the body, thereby cutting off the fuel to cancer cells.

About 15 to 20 percent of breast cancers are triple-negative.

In this Phase II trial, doctors will treat newly diagnosed postmenopausal patients with entinostat and an aromatase inhibitor called anastrozole (Arimidex) before they have surgery to remove their cancer. Researchers will analyze tissue from the tumor and blood samples to evaluate whether the treatment is effective. After surgery, patients will receive standard treatment, such as chemotherapy and radiation.

"We hope that entinostat will make the tumor cells more sensitive to the drug anastrozole, causing the tumor to shrink or, at the very least, stop growing," Dr. Chumsri said. "For patients with triple-negative breast cancer, chemotherapy is currently the only drug treatment option, and it has a lot of side effects compared to hormone therapies like anastrozole."

Triple-negative breast cancer is unique in that it lacks three common receptors in the cell—estrogen, progesterone or human epidermal growth factor 2 (HER2), which are the targets of drugs widely used today to treat breast cancer. As a result, this cancer can be very difficult to treat; it doesn't respond to therapies that target estrogen and progesterone receptors, such as tamoxifen (Nolvadex), fulvestrant (Faslodex) and aromatase inhibitors (Femara, Arimidex and Aromasin), or to HER2-targeted therapies such as trastuzumab (Herceptin) and lapatinib (Tykerb).

About 15 to 20 percent of breast cancers are triple-negative. For unknown reasons, there is a higher prevalence of this type of breast cancer among African-Americans, young women and women with the BRCA1 mutation. African-American women are twice as likely as white women to have this type of cancer, which can be very aggressive and spread to other parts of the body, such as the lungs, liver and brain.

The clinical trial is based on laboratory studies by Dr. Brodie, professor, and Gauri J. Sabnis, PhD, assistant professor, both from the Department of Pharmacology & Experimental Therapeutics, in collaboration with Saraswati Sukumar, MS, PhD, a professor of oncology and pathology at the Johns Hopkins University School of Medicine. Their research showed that entinostat can sensitize triple-negative breast cancer cells to treatment with an aromatase inhibitor, and when combined with an aromatase inhibitor, also reduce the growth and spread of tumors in animal models.

Entinostat is an oral, selective histone deacetylase (HDAC) inhibitor. This anti-cancer agent is being developed by Syndax Pharmaceuticals, Inc., and is being investigated in other clinical studies for the treatment of advanced estrogen receptor-positive breast cancer, advanced non-small-cell lung cancer, advanced colorectal cancer and Hodgkin's lymphoma. Triple-negative breast cancer patients in this clinical trial will take entinostat weekly and anastrozole once daily for two to four weeks while they are waiting to have surgery. Researchers will use blood tests and tissue analysis of tumors to evaluate the effectiveness of the combination therapy.

Researchers hope to enroll a total of 41 patients at 20 sites, including the University of Maryland Greenebaum Cancer Center. The centers involved in the study are affiliated with the University of Chicago Phase II study research consortium and the California Cancer Consortium.

Dr. Chumsri says that if the results of this trial are positive, researchers plan to launch a larger study to test the combination therapy on women whose cancer has metastasized to other parts of the body. "These women have limited treatment options. Hopefully, this treatment would give them a longer period in which their cancer is not progressing, with only minimal side effects compared to chemotherapy," she said.

► BY KAREN ROBINSON

Benefit of Low Intensity Exercise

to Improve Walking for People with Parkinson's Disease

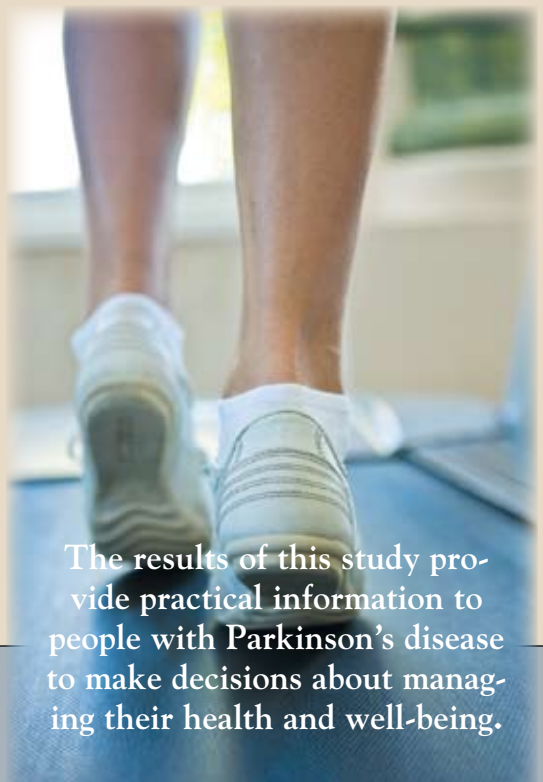

Lisa Shulman, MD

Researchers from the University of Maryland School of Medicine and the Baltimore VA Medical Center found that Parkinson's patients who walked on a treadmill at a comfortable speed for a longer duration (low-intensity exercise) improved their walking more than patients who walked for less time but at an increased speed and incline (high-intensity exercise). The investigators also found benefits for stretching and resistance exercises. The study results were presented April 12 at the 63rd Annual Meeting of the American Academy of Neurology meeting in Honolulu.

"Our study showed that low-intensity exercise performed for 50 minutes three times a week was the most beneficial in terms of helping participants improve their mobility. Walking difficulty is the major cause of disability in Parkinson's disease. These results show that exercise in people with Parkinson's disease can make a difference in their function. Exercise may, in fact, delay disability and help to preserve independence," said Lisa Shulman, MD, professor, Department of Neurology, and principal investigator.

"Many patients ask us what kind of exercise they should be doing. Now we can tell them that this research shows that low-intensity walking, which most people with Parkinson's can do, combined with stretching and resistance training may be the best option," added Dr. Shulman, who is also co-director of the Maryland Parkinson's Disease and Movement Disorders Center at the University of Maryland Medical Center.

The study compared 67 people with Parkinson's disease who were randomly assigned to one of three exercise groups: walking on a treadmill at low intensity for 50 minutes, higher-intensity treadmill training to improve cardiovascular fitness for 30 minutes, and using weights (leg presses, extensions and curls) and stretching exercises to improve muscle strength and range of motion. Participants exercised three times a week for three months under the supervision of exercise physiologists at the Baltimore VA Medical Center. "We saw positive effects with all three types of exercise, but the low-intensity training showed the most consistent improvement in gait and mobility," stated Dr. Shulman.


The results of this study provide practical information to people with Parkinson's disease to make decisions about managing their health and well-being.

"To maintain the best possible quality of life, people with Parkinson's disease need practical, evidence-based advice about what kind of exercise will most benefit them over the long term. The Michael J. Fox Foundation has aimed to answer this question in its exercise funding to investigators such as Dr. Lisa Shulman and her team," said Todd Sherer, PhD, chief program officer of The Michael J. Fox Foundation for Parkinson's Research.

The Maryland research team measured participants' cardiovascular fitness before and after training, and found cardiovascular improvement in both the low- and high-intensity groups. Other measurements included the distance covered in a six-minute walk and timed tests of walking short distances, such as 50 feet.

"The results of this study provide practical information to people with Parkinson's disease to make decisions about managing their health and well-being. Our University of Maryland faculty members are committed to testing new approaches, such as exercise, to help patients," said Dean E. Albert Reece, MD, PhD, MBA.

Parkinson's disease affects about 1 million people in the United States and Canada. Most people begin to develop symptoms in their late 50s or early 60s, although it can occur in younger people. Parkinson's disease affects the brain's ability to produce dopamine, the neurotransmitter involved in the communication between the brain cells for motor control. Physical symptoms include tremor, muscle rigidity, slowness of movement and gait impairment. There are also non-motor symptoms such as changes in cognitive function, sleep disturbance and depressed mood.

{STUDENT PROFILE} ► BY CAELIE HAINES AND DAWN ROBERTS

New Tradition for Match Day at Maryland

Chris Lemon

A tradition at the School of Medicine's annual Match Day ceremony has each matching student throw a monetary donation into a bag, which is then given to the student who is the last to receive his/her Match envelope. This reward is often used for an after-Match celebration. At this year's ceremony, however, the traditional gift bag was replaced by a very special piggy bank.

Decorated with a Maryland flag theme, the pig was created by Class of 2011 president Christopher Lemon. During his four years at the School of Medicine, Christopher co-founded LinkMD, which is a very successful student/doctor networking program. He also co-founded the Community Outreach and Opportunities Program (CO-OP). Later Christopher was awarded an Arnold P. Gold Foundation Student Summer Service Fellowship to fund service with CO-OP. He served as president of the Internal Medicine Interest Group and was inducted into the Gold Humanism Honor Society as well. This year, Christopher was chosen to receive the Leonard Tow Humanism Award for demonstrating outstanding compassion in the delivery of care, respect for patients, their families and healthcare colleagues and demonstrating clinical excellence. Christopher matched successfully to the University of Maryland Medical Center, where he will do a residency in Pediatric Emergency Medicine.

Christopher spent hours stenciling and painting the pig in the weeks before Match Day as a special surprise for his classmates. The pig will now be used by each graduating class for their Match ceremony (the winner still gets all the money but has to give back the pig). During the year, Pig will be housed in the office of that year's Match Day Staff Award winner. The Match Day Staff Award, a newly-created award by the Class of 2011, is presented to the staff member deemed most supportive by that year's graduating class. Dawn Roberts, associate director of Student Affairs, was this year's winner.

PHOTO OF THE MONTH

Leaping into Summer, British Columbia, Canada
Photo by: **Ari Lapin**, first-year medical student

somnews
University of Maryland School of Medicine June 2011 Vol.12 No.10

SOMnews is produced by the University of Maryland School of Medicine, Office of Public Affairs
► E. Albert Reece, MD, PhD, MBA , Vice President for Medical Affairs, University of Maryland, and Dean, University of Maryland School of Medicine ► Larry Roberts, Executive Editor
► Heather Graham Phelps, Managing Editor ► Tom Jemski and Mark Teske, Head Shot Photos
► Brushwood Graphics Design Group, Design ► Submitting information to SOMnews: Please email your submission six weeks prior to the month you wish to see your submission included to Heather Graham Phelps, Public Affairs Manager, at hgraham@som.umaryland.edu. ► Printed using environmentally-responsible low VOC inks.

University of Maryland School of Medicine
655 West Baltimore Street
Baltimore, Maryland 21201-1559

Find the University of Maryland School of Medicine on Facebook, http://www.facebook.com/Maryland.Medicine or follow us on Twitter @UMmedschool.