

DEAN'S MESSAGE: What's On My Mind

What's on my mind this month is the dramatic improvement in the efficiency of the Human Research Protections Office (HRPO), which has led to a much faster approval process for research projects involving human subjects. The HRPO provides support for the Institutional Review Board (IRB), which is charged with protecting the rights and welfare of those who volunteer to participate in clinical trials and other research studies here at the University of Maryland.

It is up to the HRPO to shepherd research proposals through the IRB approval process. Reporting to the Dean of the School of Medicine, the HRPO reviews and oversees all human subject research across the campus—more than 1,000 studies per year. Together, the IRB and HRPO determines the level of risk, ensures that any risk is minimized, and that all participants are informed—not only of the risk—but of their rights as research subjects. With a staff of 25, the HRPO conducts ethical and scientific reviews, and makes certain that all research complies with federal regulations.

Research proposals with a higher degree of risk require direct review by all members of the IRB, which has the authority to

approve, modify, or disapprove any research proposal involving human subjects. Certain minimal risk applications may be approved by the IRB without a full committee review. Until recently, these “non-committee” proposals caused a bottleneck in the approval process.

In 2010, the HRPO implemented new tools and processes to greatly simplify and streamline the review process. To that end, the HRPO developed the Human Research Protection Toolkit, which provides the IRB and HRPO staff with a streamlined set of standard operating procedures. The toolkit includes checklists and worksheets to make the submission process more efficient. **The toolkit is designed to facilitate the least burdensome path to regulatory compliance, while improving efficiency and fully protecting study volunteers.**

In addition, IRB analysts are now designated reviewers for research proposals that do not require a review by the full IRB. In effect, the

analysts function as IRB members for these minimal risk protocols. Rather than returning submissions to the investigator for minor corrections, analysts have been empowered to engage researchers directly and implement changes that will quickly put research applications back on track. In addition, the HRPO has strengthened its education and training programs for some 2,000 investigators and staff involved in human subject research.

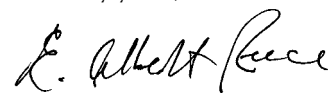
Under this new paradigm, the average number of days required for approval has fallen dramatically. The time it takes for full IRB approval has been cut from 35 days to 21 days or less. Non-committee submissions that once took an average of 25 days may now be approved in seven to ten days.

Faster turnaround times will help our faculty researchers to be more productive scientists and make the School of Medicine an even more attractive destination for federal funding, grants and contracts. But it is not enough to simply increase the amount of research we do. It is imperative that we **increase the impact** of that research on human health. That cannot be done without the help of human volunteers. Protecting their rights, health and well-being is of the utmost importance. This imperative can now be accomplished more effectively and efficiently, thanks to the new tools and procedures implemented by the IRB and HRPO.

I congratulate the IRB membership and the entire HRPO staff for this remarkable achievement. Special thanks go to IRB chair Dr. Robert Rosenthal, Executive Vice Dean Dr. Bruce Jarrell, and Susan Buskirk, assistant dean for Human Research Integrity and Compliance, who worked together to bring about these positive changes.

To learn more about the HRPO, visit <http://www.hrpo.umaryland.edu/>

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



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Legislative Day

Dean E. Albert Reece, MD, PhD, MBA, and more than 40 medical students and faculty members traveled to Annapolis on January 21, 2011, to speak with members of the Maryland General Assembly about issues important to the University of Maryland School of Medicine. In face-to-face meetings with lawmakers, students discussed loan repayment assistance programs, funding for scholarships and infrastructure projects, the problem of physician shortages, and the positive impact the School of Medicine's research has had on state revenue.

“It's important for these senators and delegates to meet our students,” said Bruce Jarrell, MD, executive vice dean, and professor, Department of Surgery. “Then they realize what a wonderful thing their support does, in terms of getting students from all parts of the state, especially the underserved rural areas, to become physicians.”

This support comes in the form of both funding for the School of Medicine and scholarships to individual students, given to them by their respective state senators and delegates. Students who benefitted from these scholarships had the opportunity to thank the lawmaker(s) responsible for granting the money. Legislators welcomed the students' stories about how much these funds helped their education, but they could make no promises regarding continued financial support during such bleak economic times.

Still, the students felt positive about their interactions. “It's neat. They literally put aside what they were working on and listened to us,” said third-year student Chris Lemon. “That says something about how much they value education.”

“I feel like we're making progress by making legislators aware of our needs and our accomplishments,” added fourth-year student Molly Mulflur, who participated in Legislative Day for the fourth year in a row. “Every year it seems like they know a bit more about the kind of issues we're facing. Hopefully we'll see that pay off in money from the legislature in the coming year.”

Students and faculty were also invited to the Senate and House chambers, where Dean Reece and the School of Medicine were officially recognized by Baltimore City Senator Verna Jones and Baltimore City Delegate Keiffer Mitchell, Jr. Later, the group had the opportunity to hear from Joshua Sharfstein, MD, Secretary of the Department of Health & Mental Hygiene, who discussed health care reform. Ben Steffen, director of the Center for Information Services & Analysis at the Maryland Health Care Commission, also spoke about health care reform and the emergence of patient-centered medical homes, doctors'

offices that patients could visit for all their medical needs, with special emphasis on preventive medicine.

“It was a lot of fun,” said second-year student Ian Oppenheim, who was attending Legislative Day for the first time. “I had the opportunity to meet most of the state senators and delegates from my county and get the word out about this terrific school. I think we enlightened them.”

Dean Reece poses with the School of Medicine faculty and medical students who participated in Legislative Day.



NARSAD Award Winners

Five School of Medicine faculty members have been awarded Young Investigator grants from NARSAD, the National Alliance for Research on Schizophrenia and Depression. Young Investigators pursue brain and behavior research related to schizophrenia, depression, bipolar disorder and other conditions. Their projects investigate topics such as how to mitigate the negative impact of antidepressants on pregnancy, new strategies for treating overeating in schizophrenics and the role of genetics in bipolar disorder and depression. The five scientists were among 214 researchers to be awarded \$12.6 million in new research grants as part of NARSAD's 2010 Young Investigator Awards. They were selected from more than 1,000 applicants. Young Investigator grants are intended to support a new generation of researchers to pioneer breakthroughs in mental health research. The grants are catalysts for additional funding, providing researchers with "proof of concept" for their work.



JEAN A. MILSTEIN, PHD, postdoctoral fellow, Department of Pharmacology & Experimental Therapeutics, will test the hypothesis that postnatal environmental enrichment can ameliorate some of the negative consequences of maternal treatment during pregnancy with specific serotonin reuptake inhibitors (SSRIs), the most widely prescribed class of antidepressant drugs. Both maternal depression and antidepressants can have adverse effects on the fetus, but since it is not always feasible to discontinue treatment when a woman becomes pregnant, it is vitally important to develop therapies for mitigating the adverse long-term effects of fetal exposure.



MATTHEW C. TRUDEAU, PHD, assistant professor, Department of Physiology, will examine the biophysical and pharmacological properties of a novel form of the HERG (Human ether á go go Related Gene) that has been linked to cognition and schizophrenia. Dr. Trudeau and associates previously showed that different forms of HERG that are related to cardiac function were differently inhibited by drugs. The objective of the current proposal is to compare the fundamental biophysical and pharmacological properties of the novel schizophrenia-related HERG with the cardiac-related forms to provide fundamental new information about the basic mechanisms and insight into the effects of therapeutic drugs on cognitive function and schizophrenia.



KIMBERLY R. WARREN, PHD, research associate, Department of Psychiatry, will test the use of oxytocin as a way to limit overeating in people with schizophrenia. Certain antipsychotics lead to overeating and overweight. Oxytocin plays a role in limiting overeating, but oxytocin function has been shown to be disrupted in schizophrenia. Dr. Warren therefore speculates that supplementing oxytocin may decrease overeating in this population. Self-reported hunger ratings will be measured before and after administration of oxytocin and placebo, and the appetite hormones leptin and insulin will be measured before and after administration.

TODD DENTON GOULD, MD, assistant professor, Department of Psychiatry, will study the role in mood disorders of CACNA1C, a gene that has displayed close association with bipolar disorder and depression, both highly heritable disorders. Dr. Gould and his group have genetically engineered a mouse model and discovered that mice with only one functional copy of the gene are resistant to both depression- and manic-like behaviors, and also that many of the behavioral effects are sex specific, which the lab has now confirmed in human studies. Dr. Gould would now like to understand how specific variations in CACNA1C are associated with gene expression and specific protein levels in psychiatric illness.



BRITTA HAHN, PHD, assistant professor, Department of Psychiatry, is working to pinpoint brain mechanisms underlying attentional abnormalities in schizophrenia, a hallmark of the disorder. Attentional abnormalities may be linked to an abnormal regulation of the so-called default network of resting brain functions. Dr. Hahn will administer tests of visuospatial tasks with patients and use functional MRI to measure brain responses so as to link specific attention deficits to specific neural systems, which may then be linked to specific gene variants.



"Young Investigators are selected for their innovation and potential to improve the lives of people living with mental illness through enhanced treatments and therapies and a better understanding of the causes of mental illness," said Benita Shobe, NARSAD president and CEO. "This body of research represents the cutting-edge of brain and behavior research."

NARSAD was founded in 1981 by the National Alliance for the Mentally Ill, the National Mental Health Association and the National Depressive and Manic Depressive Association. Since 1987, NARSAD has been leading the development of the mental health research field and has awarded more than \$274 million in 4,046 grants to 3,319 scientists around the world. 🏛️

Reception Honoring Dr. Edson Albuquerque

HE HAS BEEN CALLED THE IRON man of Pharmacology. After 36 years at the helm, Edson Albuquerque, MD, PhD has stepped down as chairman of the Department of Pharmacology and Experimental Therapeutics, but he will continue his work as a professor of Epidemiology and Public Health and Director of the Division of Translational Toxicology. On January 27, a reception was held in Dr. Albuquerque's honor. It was an opportunity for his colleagues and contemporaries to celebrate his enormous achievements.

"Dr. Albuquerque has distinguished himself as a scientist, a scholar, a mentor, and faculty leader, said Dean E. Albert Reece, MD, PhD, MBA. "His research has proven to be truly groundbreaking."

Soon after his arrival, Dr. Albuquerque established his laboratory for electrophysiological studies of synaptic transmission. His work led to the first determination of density and distribution of nicotinic receptors in skeletal muscle, and he was the first to demonstrate that Myasthenia Gravis is related to a marked decrease in the number of functional synaptic nicotinic receptors at the neuromuscular junction.

Dr. Albuquerque's work elucidated the actions of neurotoxins on a variety of neurotransmitters and receptors in the central nervous system. This research had important implications for ALS and other diseases. His studies of nicotinic receptor antagonists led to the discovery of a distinct subtype of nicotinic receptor in the brain. "Dr. Albuquerque's research shed new light on the neural circuitry of the hippocampus and the mechanisms of both



(L-R): UMB President Jay Perman, MD, Edson Albuquerque, MD, PhD, Johns Hopkins Professor of Neuroscience Solomon Snyder, MD, and Curt Civin, MD

endogenous and exogenous regulatory molecules," said Margaret McCarthy, PhD, associate dean for Graduate Studies, and acting chair, Department of Pharmacology & Experimental Therapeutics.

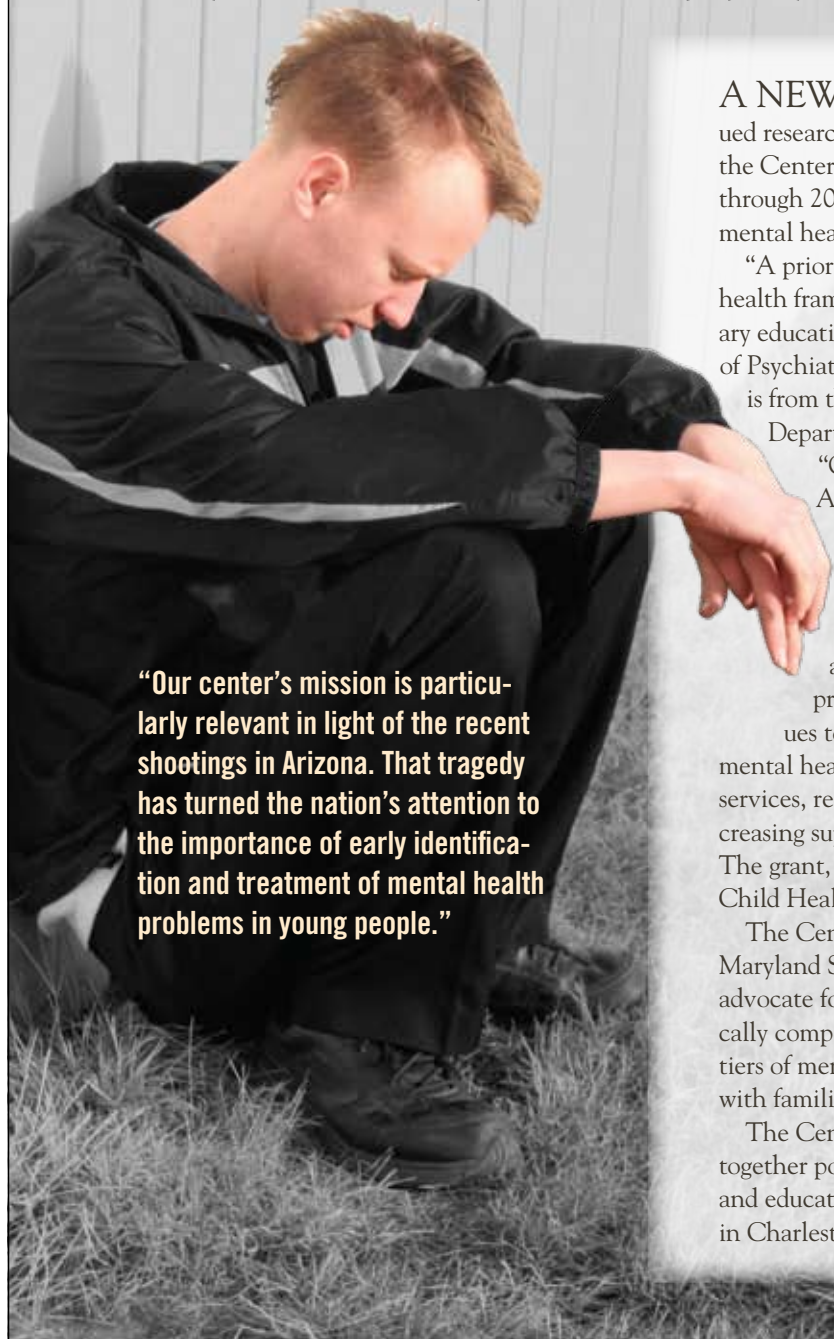
Also speaking at the reception was Solomon Snyder, MD, of the Department of Neuroscience at the Johns Hopkins University School of Medicine. "Edson's approach to science, underlying his success, is his love for free inquiry and his passion for getting to the bottom of complex problems," said Dr. Snyder.

During Dr. Albuquerque's long tenure, the department grew to 32 full-time and second-

ary faculty members who oversee 20 graduate students and 19 post-doctoral fellows. Dr. Albuquerque also developed a major graduate training program at the Federal University of Rio de Janeiro, Institute of Biophysics. These students have careers in academia, the pharmaceutical industry and in government agencies. Today, the department is recognized internationally for its research excellence and for its high level of funding.

J. Marc Simard, MD, PhD, professor, Department of Neurosurgery, collaborated often with Dr. Albuquerque. As Dr. Simard points out, the word Albuquerque derives from Latin and is taken to mean "white oak," a robust tree that can live hundreds of years. "In my view," said Dr. Simard, "Edson has fully lived up to his family name—exhibiting the strength, durability and longevity of a white oak, as he ascended within the international community of pharmacology." 🌳

New Federal Grant Funds Center for School Mental Health



“Our center’s mission is particularly relevant in light of the recent shootings in Arizona. That tragedy has turned the nation’s attention to the importance of early identification and treatment of mental health problems in young people.”

A NEW \$1.2 MILLION FEDERAL GRANT will support the continued research, training, policy and practice education, advocacy and outreach efforts of the Center for School Mental Health at the University of Maryland School of Medicine through 2014. The center’s mission is to strengthen policies and programs in the school mental health field in order to improve learning and promote success for America’s youth.

“A priority for the new funding is to advance a preschool to college school mental health framework, including how to successfully transition young adults to postsecondary education and/or careers,” said Sharon Stephan, PhD, assistant professor, Department of Psychiatry, and co-director of the Center for School Mental Health. The new grant is from the Health Resources and Services Administration (HRSA), part of the U.S. Department of Health and Human Services.

“Our center’s mission is particularly relevant in light of the recent shootings in Arizona,” said Nancy Lever, PhD, associate professor, Department of Psychiatry, and co-director of the Center for School Mental Health. “That tragedy has turned the nation’s attention to the importance of early identification and treatment of mental health problems in young people.”

The limited accessibility and low quality of mental health services for children and adolescents in the U.S. have reached the point of crisis. Over the past 20 years, policies and programs that integrate mental health services into schools have grown, and research continues to demonstrate their positive impacts on educational and mental health outcomes. School mental health programs are increasingly recognized as major forces in improving access to mental health services, reducing barriers to learning and promoting student success. Such programs have received increasing support from federal, state and local sources to address the mental health crisis in young people. The grant, specifically from the Child, Adolescent and Family Health Division of HRSA’s Maternal and Child Health Bureau, is for \$400,000 annually for three years.

The Center for School Mental Health, part of the Department of Psychiatry at the University of Maryland School of Medicine, has worked since 1995 on national, state and local levels to identify and advocate for school mental health programs that are innovative, effective, and culturally and linguistically competent. It targets programs that span across the development spectrum and across the three tiers of mental health programming (promotion, problem prevention, intervention). The center works with families, schools, and communities to help all students to be successful.

The Center for School Mental Health’s anchor event each year is its annual conference, bringing together policymakers, educators, youth, families and school mental health providers to foster dialogue and education about school mental health. Its next conference will take place September 22 through 24 in Charleston, South Carolina. 



Sharon Stephan, PhD



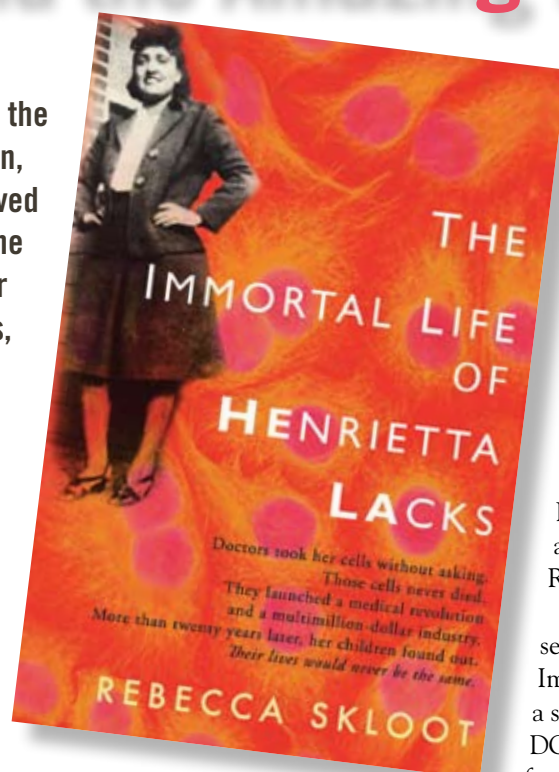
Nancy Lever, PhD

University of Maryland Event Recognizes The Woman behind the Amazing HeLa Cell Line

For years, scientists tried to regenerate cells in the laboratory setting, but none ever survived. Then, in 1951, doctors at Johns Hopkins finally achieved success with a group of cervical cells that came to be known as HeLa cells. These immortal cells never died—instead they continually replicated themselves, and at an astounding speed. Using these hardy cells in their laboratories, scientists uncovered mysteries about cancer and how to fight it; they developed the polio vaccine; they worked on scientific advances such as in-vitro fertilization, cloning and gene mapping; and they studied the effects of outer space and nuclear energy on human cells. Millions were made from these scientific advancements, but the woman who made them all possible remained mostly unknown—and uncompensated.

HeLa wasn’t just a random name given to these cells. HeLa was Henrietta Lacks, an African-American woman and mother of five who died at the age of 31 from an aggressive cervical cancer. Samples of her cells taken during a biopsy were used without her knowledge or permission by Hopkins scientists (a common practice back then), who never suspected how valuable they would prove to be.

As part of Black History Month, the University of Maryland Medical Center and the University of Maryland presented a symposium on February 11, 2011, to acknowledge the enduring legacy of Henrietta Lacks. It featured Rebecca Skloot, author of the bestselling book “The Immortal Life of Henrietta Lacks,” which told the then mostly unknown story of the woman behind HeLa and the impact on Henrietta’s children when they found out—20 years



later—the huge part their mother had played in the advancement of medical research. Members of the Lacks family were also in attendance.

Following Ms. Skloot’s presentation, Phoebe Haddon, JD, LLM, dean of the University of Maryland School of Law, moderated a panel on the impact of HeLa cells and what is being done today to protect patients from unknowingly and/or unwillingly being used in medical research. Panelists included Curt Civin, MD, associate dean for Research, professor, Department of Pediatrics, and director, Center for Stem Cell Biology and Regenerative Medicine.

This panel discussion was followed by a presentation entitled “Mrs. Henrietta Lacks’ Legacy: Impact on Recent Research” by Hayley Warren, a sophomore at The Field School in Washington, DC. Claudia Baquet, MD, MPH, associate dean for Policy & Planning, professor, Department of Medicine, and director, Center for Health Dispari-

ties, wrapped things up with a discussion on bioethics in clinical trials. Dr. Baquet also discussed the difficulty in getting blacks to participate in clinical trials because of the mistrust created by stories like that of Henrietta Lacks and of the black men who were allowed to suffer and die from syphilis so scientists at the Tuskegee Institute could study the disease’s development.

Dr. Baquet is planning a special session of Mini-Med School this spring focused specifically on biomedical ethics and clinical trials. For more information and to register, visit <http://medschool.umaryland.edu/minimed/>.

For more on how the cells taken from Henrietta Lacks continue to live on, see this feature in Wired Magazine: http://www.wired.com/magazine/2010/01/st_henrietta/. 

Chloe Farkas Making the Foreign Familiar



Chloe Farkas moved to Japan in 2007 to teach English, even though she only knew five words of Japanese. “I had my share of tough days, but ultimately I found happiness by shifting my perspective whenever I encountered a frustrating situation. The experience has proven to be invaluable as Chloe pursues a Masters in Genetic Counseling at the University of Maryland School of Medicine.

“Life in Japan helped me complete the transition to adulthood,” she adds. “I moved to Awaji knowing no one and I had to learn how to ask for help from strangers who often did not speak my language. Initially, I was terrified, but as I opened myself up to the people around me I began to see the beauty and com-

plexity inherent to Japanese culture. As Westerners we focus on becoming individuals, but the Japanese strive to function together as a group. My friends in Awaji taught me that we all have a lot to offer each other and that life becomes much easier when we practice a little humility.”

Chloe hopes her experiences in a foreign land will help her as a genetic counselor in a clinical setting after her graduation in 2012. “Much of our time as counselors is spent helping people understand genetics, which seems like a foreign language to most people,” she said. “I’ll be helping to translate difficult terms and concepts, and I hope to do so in a way that lets people know they don’t have to deal with their situations alone.”

The Masters in Genetic Counseling program is selective, graduating only six students per year. Its small size allows students to bond closely. “I feel like I’ve gained five unique and wonderful sisters,” Chloe said of her classmates. She’s also been thrilled by the opportunities the program has presented to her. “Maryland was my top choice from the beginning because it is designed to give students a wide variety of clinical experiences, which I really wanted,” she explained. “I also like that our classes are taught by genetics professionals throughout the campus and within the greater [genetics] community, so that we gain a lot of different perspectives.”

Much like Japan, graduate school has been a challenging learning experience. “The hardest thing for me has been making the adjustment from a 9 to 5 routine to the round-the-clock studying routine of a grad student,” she said. “I hope that as the program continues I will get better at balancing the hard work with a bit of downtime. But as a genetic counselor, I will be learning for a long time.” 



Pink Dogwood Photo by: **Mark Teske**

Call for Photos!

Send in photos of your favorite spring activity for the next Call for Photos. To participate, submit your photograph(s) to photos@som.umaryland.edu by April 1, 2011, for the May issue of SOMnews.



SOMnews

UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE MARCH 2011 VOL.12 NO.7

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
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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.



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