DEAN’S MESSAGE: What’s On My Mind

What’s on my mind this month is all we have to look forward to—from our capital projects, to our research program goals, to our new education initiatives—in the calendar year ahead. As I contemplate our next steps, I also reflect on the priorities for the School of Medicine. I see us achieving key milestones in a number of areas:

**Capital projects:** Many of you may have attended the "sneak peek" ceremony last month for the Maryland Proton Treatment Center (MPTC). This ceremony commemorated a significant milestone in the development of the Center both physically—with the placement of the final beam at the top of the building—and symbolically, as we came one step closer to having a facility dedicated to fighting cancer more aggressively while causing less harm to the patient. Once completed, the MPTC will have the capacity to treat almost 2,000 persons each year and will employ over 150 healthcare professionals. As only the 12th of such centers in the United States, and the only one serving the immediate Baltimore-Washington area, the decision to locate the MPTC in the University of Maryland BioPark demonstrates our leadership in cancer treatment and research into innovative approaches to fight this devastating disease.

**Continued state support for the construction of the Health Sciences Facility III (HSF III) research building remains upmost in my mind:** Although the Maryland General Assembly generously approved $4 million and $4.7 million in matching funds for the proposed building plan in 2011 and 2012, respectively, our project goal remains $284 million. I am heartened by the tireless work of our government relations and development teams who have reached out to the state legislature prior to the start of the 2013 session, including organizing last November’s legislative staff day, “Transforming Clinical Care Through Research.” My gratitude also extends to our facilities team, who is working diligently to keep the construction project on track in anticipation that the demolition of Hayden-Harris Hall (the former University of Maryland Dental School building) and the groundbreaking of HSF III might begin in calendar year 2013.

**Research programs:** One of our major priorities for this year is to continue to increase our support for the burgeoning research enterprise in the School of Medicine. Recently, we added a new research institute to the School, the Clinical and Translational Science Institute, and expanded our Department of Radiation Oncology program to include a new Division of Translational Radiation Sciences, which adds to the high caliber of research already ongoing. In fiscal year 2012, our grants and contracts funding totaled over $429 million, and I expect this total to increase for 2013 as we anticipate successful funding of several key research project grants, including a Clinical and Translational Science Award from the NIH National Center for Advancing Translational Sciences. I also want to emphasize the importance of consortia grants and encourage more staff to consider applying for these funding opportunities. These include such grants as the NIH National Heart, Lung, and Blood Institute Progenitor Cell Biology Consortium and the Cognitive Neuroscience Test Reliability and Clinical Applications for Schizophrenia Consortium. In an era when resources are at a premium and budgets are limited, building multi-investigator groups that promote collaboration and synergism can significantly help us achieve our research goals.

Education initiatives: This year we will launch the Foundations of Research and Critical Thinking course to help students understand basic research principles, evaluate the literature, and recognize how research findings will affect their clinical practice.

Before the endeavors of the year intervene I want to check in with you! Do you have needs that we currently are not addressing? Is there enough support in place to help you achieve your goals for the year? What can we do to help? I invite you to share your thoughts and welcome your feedback.

In the relentless pursuit of excellence, I am looking forward to seeing our objectives in the various mission areas come to fruition, even in the midst of these challenging times, and hope you will join with me in nurturing them to completion.

Sincerely yours,

E. Albert Reece, MD, PhD, MBA
Vice President for Medical Affairs, University of Maryland
John 2. and Adele K. Bowers Distinguished Professor and Dean, University of Maryland School of Medicine

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**DR. MOHAN SUNTHA Named President & CEO of New University of Maryland St. Joseph Medical Center**

The bridge board for the newly formed University of Maryland St. Joseph Medical Center named Mohan Suntha, MD, MBA, president and chief executive officer of the hospital following the transfer of the St. Joseph Medical Center to the University of Maryland Medical System (UMMS) on Dec. 1, 2012. Dr. Suntha is the Marlene and Stewart Greenebaum Professor of Radiation Oncology and vice chairman of the Department of Radiation Oncology at the University of Maryland School of Medicine. Dr. Suntha also is director of clinical affairs at the University of Maryland Marlene and Stewart Greenebaum Cancer Center.
University of Maryland School of Medicine researchers have launched groundbreaking research into the spread of potentially deadly drug-resistant malaria in the developing Southeast Asian nation of Myanmar, also known as Burma. The scientists, working as part of a large international team coordinated by the World Health Organization (WHO), have identified several promising genetic markers that could be used to develop tests to identify and track the spread of the newest type of drug-resistant malaria in Southeast Asia, including Myanmar. The scientists described these new candidate markers in an article published online Dec. 17 in the journal the Proceedings of the National Academy of Sciences (PNAS).

In his obituary in The Baltimore Sun, “many national leaders in the fields of Parkinson’s disease, movement disorders and brain and spinal cord injuries” added Dr. Reece. “He built these divisions that are now world-class.”

Dr. Weiner was born and raised in Chicago and earned his medical degree from the University of Illinois College of Medicine. He did his intern year at Rush-Presbyterian-St. Luke’s Medical Center in Chicago, spent a year as a research fellow at the University of Minnesota, and then completed his second and third years of residency training at Rush-Presbyterian-St. Luke’s, and then spent the next year as Chief of Neurology at the University of Tennessee, where he trained under Dr. Thomas Hahn. 

“Bill was a true scholar, leader and visionary. He was acrimonious in his clinic and clinic-like style of conducting clinical research, but always open-minded about new ideas,” said Dr. Reece. “Dr. Weiner was a co-founder of the Parkinson’s Disease Foundation and the American Academy of Neurology. His work with Parkinson’s disease and other movement disorders was truly the most impactful work that was done in his lifetime.”

Dr. Weiner died on December 24, 2012 of gastric cancer at his parents’ home in Maryville, Tennessee. He was 46 years old.

Dr. Plowe told news outlets, “This puts him into the upper echelon in the field of movement disorders,” Dean Reece told the world. “His death is a huge loss not only for the University of Maryland but also for the national discipline as a whole.”

Just a week before his death, Dr. Weiner learned that the in-patient neurological service at the School of Medicine would be named in his honor. Services for Dr. Weiner were held Dec. 31 at Sol Levinson & Bros. He is survived by his wife, Lisa Shulman, MD, the Eugenia Brin Professor in Parkinson’s Disease and Movement Disorders in the Department of Neurology; two daughters, Monica and Miriam; stepson Joshua; stepdaughter Corey; siblings Barry and Merle; and five grandchildren. The School of Medicine is currently planning a memorial service on campus in his honor; details will be shared when they become available.

Andrew Dunsmore
Andrew “Andy” Dunsmore, PhD, assistant dean for Development at the University of Maryland School of Medicine, died on December 24, 2012 of gastric cancer at his parents’ home in Maryville, TN. He was 46.

Andy joined the Office of Development in October 2007 as associate dean, and was responsible for the School’s comprehensive fundraising campaign, “Transforming Medicine Beyond Imagination.”

He came to the School of Medicine from Johns Hopkins University, where he held the position of director of Development in the Department of Neurosurgery. In 2007, he obtained a Doctor of Philosophy from the University of Tennessee, where he had previously earned a bachelor’s and master’s degrees. In addition to his time at Johns Hopkins, Andy gained valuable higher education experience at the University of Tennessee School of Social Work, Hiwassee College, and the Washington University School of Medicine.

Dr. William J. Weiner
Dr. William J. Weiner, MD, professor and chairman of the Department of Neurology, who was nationally known for his work with Parkinson’s disease and other movement disorders, died December 29, 2012 of multiple myeloma. He was 67.

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Dr. Weiner’s major interests were in the experimental therapeutics and clinical phenomenology of Parkinson’s disease. He wrote or edited 25 books in neurology, most of which related to movement disorders. His most recent books included Parkinson’s Disease: A Complete Guide for Patients and Families, which was widely acclaimed by the patient community, and the scholarly text Parkinson’s Disease: Diagnosis and Management, which is now in its second edition. He helped lead the American Academy of Neurology author group that wrote the new Practice Parameters for Parkinson’s disease. Dr. Weiner also published over 300 peer-reviewed articles. His clinical expertise included Parkinson’s disease, Huntington’s disease, dystonia, tremor, Tourette’s syndrome, tardive dyskinesia, myoclonic and atypical parkinsonism.

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Learning and Decision Making: The Role of the Orbitofrontal Cortex

AN AREA OF THE BRAIN called the orbitofrontal cortex is responsible for decisions made on the spur of the moment, but not those made based on prior experience or habit, according to a new basic science study from substance abuse researchers at the University of Maryland School of Medicine and the National Institutes on Drug Abuse. Scientists had previously believed that the area of the brain was responsible for both types of behavior and decision-making. The distinction is critical to understanding the neurobiology of decision-making, particularly with regard to substance abuse. The study was published online in the journal Science.

Scientists have assumed that the orbitofrontal cortex plays a role in “value-based” decision-making, where a person compares options and weights consequences and rewards to choose a best alternative. The study shows that this area of the brain is involved in decision-making only when the value must be inferred or computed rapidly or hastily. If the value has been “cached” or pre-computed, like a habit, then the orbitofrontal cortex is not necessary.

The same is true for learning—if a person infers an outcome but it does not happen, the resulting error can drive learning. The study shows that the orbitofrontal cortex is necessary for the inferred value that is used for this type of learning.

“Our research showed that damage to the orbitofrontal cortex may decrease a person’s ability to use prior experience to make good decisions on the fly,” says lead author Joshua Jones, PhD, a postdoctoral researcher at the University of Maryland School of Medicine and a research scientist at NIDA, part of the National Institutes of Health. “The person isn’t able to consider the whole continuum of the decision, the mind’s map of how choices play out further down the road. Instead, the person is going to regress to habitual behavior, gravitating toward the choice that provides the most value in its immediate reward.”

The study enhances scientists’ understanding of how the brain works in healthy and unhealthy individuals, according to the researchers. “This discovery has general implications in understanding how the brain processes information to help us make good decisions and to learn from our mistakes,” says senior author Geoffrey Schoenbaum, MD, PhD, adjunct professor at the University of Maryland School of Medicine and senior investigator and chief of the Cellular Neuroscience Research Branch at NIDA. “Understanding more about the orbitofrontal cortex also is important for understanding disorders such as addiction that seem to involve maladaptive decision-making and learning. Cocaine in particular seems to have lasting effects on the orbitofrontal cortex. One aspect of this work, which we are pursuing, is that perhaps some of the problems that characterize addiction are the result of drug-induced changes in this area of the brain.”

The scientists are continuing their research, examining the specific coding of the neurons in the orbitofrontal cortex during this process, as well as the effects that drugs have upon this area of the brain. “Drug addiction is marked by severe deficits in judgment and bad decision-making on the part of the addict. We believe that drugs, particularly cocaine, affect the orbitofrontal cortex. They coerce the system and hijack decision-making.”

The scientists used a rat model for their research, disabling the orbitofrontal cortex and measuring the difference in behavior that resulted. Further study using the same rat model—work not reported in this paper—has shown that cocaine use mimics this damage to the orbitofrontal cortex.

Further study of this neurobiological mechanism is needed, and the results have not been replicated in humans, but certainly the research is promising, says E. Albert Reece, MD, PhD, MBA, Vice President for Medical Affairs, University of Maryland, and the John Z. and Akiko K. Bowers Distinguished Professor and Dean, University of Maryland School of Medicine. “Our goal here at the School of Medicine is to make groundbreaking discoveries in the laboratory that can be translated into new treatments and new hope for patients and their families,” says Dean Reece. “We are hopeful that research that tells us more about the basic mechanisms in the brain will translate to new techniques in neurobiology and in treating devastating conditions such as drug addiction.”

Dr. Terry Watnick Joins the Division of Nephrology

The Department of Medicine is pleased to welcome Terry Watnick, MD, to their Division of Nephrology. Dr. Watnick is an associate professor with an interest in genetic renal diseases and autosomal dominant polycystic kidney disease (ADPKD). ADPKD is one of the most common inherited diseases worldwide and is the fourth most common cause of kidney failure. Dr. Watnick is the Director of the Baltimore Polycystic Kidney Disease (BPKD) Program. Watnick has been an investigator in recent clinical trials that have been aimed at testing whether vasopressin-2 receptor inhibitors are effective in halting the progression of polycystic kidney disease.

The exciting Polycystic Kidney Disease Program that Dr. Watnick leads creates an environment that is aimed at fostering interactions between clinical and basic research. The Center includes biomedical research cores that provide reagents aimed at accelerating the pace of research in the field and also to advance translational PKD science nationally and internationally.

Dr. Mohan Suntha (continued from front page)

“I have had the privilege of working closely with Dr. Suntha for the past five years and have worked very closely with him over the last year while negotiating the purchase of St. Joseph Medical Center,” says Francis X. Kelly, Chairman of the University of Maryland St. Joseph Medical Center Board of Directors. In his capacity as vice president for system program development for UMMS, Dr. Suntha has been part of the UMMS transition team working on the acquisition of St. Joseph Medical Center from Catholic Health Initiatives.

“Dr. Suntha is an outstanding member of the University of Maryland School of Medicine faculty, and we are delighted that he will continue in his role as professor here,” says E. Albert Reece, MD, PhD, MBA, Vice President for Medical Affairs, University of Maryland, and the John Z. and Akiko K. Bowers Distinguished Professor and Dean, University of Maryland School of Medicine. “He has shown himself to be an exceptional leader and I am confident that he is the best candidate to lead the new University of Maryland St. Joseph Medical Center.”

Kelly adds, “In addition to being an outstanding radiation oncologist, as a graduate of the Wharton School of Business, Dr. Suntha is ideally qualified to be CEO of St. Joseph. He is a strong, personable and decisive leader.”

University of Maryland Medical System, Catholic Health Initiatives (CHI) of Denver, and St. Joseph Medical Center (SJMC) in Towson, Maryland announced November 14 that they were moving forward with a variety of activities needed to transfer the assets of SJMC to UMMS on December 1, 2012. As part of the transaction, UMMS formed a new operating company that will house the operations of the acquired assets. The transaction was transferred and the transaction was closed.
Students to Service Loan Repayment Program

Christin Donnelly, Class of 2012, has always had an interest in primary care. So when she learned of the National Health Service Corps (NHSC) and their Students to Service Loan Repayment Program, she quickly applied. NHSC offers loan repayment to students in their last year of medical school in return for a commitment to serve in an underserved area upon completion of his/her residency program.

“I have always wanted to go into primary care, because I so strongly believe in the importance of keeping people healthy and promoting overall wellness,” Christin says. “Working with the West Baltimore population during medical school gave me a passion for working with the underserved. As soon as I heard about the opportunity to join the NHSC as a fourth-year medical student, I did not have to think twice about it. I was thrilled when I was accepted and am honored to be a part of the program.”

Christin plans to serve out her NHSC obligation in one of the West Baltimore’s underserved areas. “After living in Baltimore for seven years, I feel very connected to the community and feel a pull to return,” Christin admits. “It feels like home to me, and I want to continue working with the families I worked with during medical school.”

Although only required by NHSC to serve for three years, “I do plan on continuing to work in my underserved community afterwards,” Christin says. “I am so grateful for the wonderful education I was given, and I have a strong desire to make the most of this opportunity. To me, this is what it means to be a Family Medicine physician. It allows me to address a wide variety of conditions in men, women, and children, in communities that need it the most.”

“I had wonderful mentors in the Department of Family Medicine at the University of Maryland, whom I respected and admired for their dedication to patients and to teaching,” she adds. “It’s an easy decision at the end of the day. I know I’m meant to be a Family (Medicine) doctor.”

To find out more about the National Health Service Corps, visit http://nhsc.hrsa.gov.

GCRC Adds Van Service

The University of Maryland General Clinical Research Center (GCRC) now has a five-passenger minivan that is available to support the community-based research needs of our investigators. The van will be equipped with a refrigerator/freezer, a phlebotomy chair and the necessary supplies required to enable clinical and translational research needs. It can be used to transport a research team to an off-site location or to send GCRC nursing staff to a location on your behalf. It is available to travel throughout the state of Maryland.

If you currently have an approved GCRC protocol, you may request use of the van by contacting the GCRC via the scheduling email (gcrc@medicine.umaryland.edu). If you do not have an approved protocol, the van has been added to the list of GCRC resources you may request when you complete the GCRC protocol request via Cicero.

Should you have any questions about the van, or ways in which the GCRC can assist you or further support your research needs, please feel free to contact us at 410-398-7648. Additional information about the GCRC can be found on our website: http://rcrcschool.umaryland.edu/GCRC/

Study of Drug-Resistant Malaria in Myanmar

(continued from page 2)

track the spread of drug resistance and to help guide the malaria control program in affected countries. We want to focus limited resources on artemisinin resistance to try to stop it in its tracks before it spreads.”

“The University of Maryland School of Medicine and its Center for Vaccine Development have a strong global research presence, with scientists in dozens of countries,” says E. Albert Reece, MD, PhD, MBA, Vice President for Medical Affairs, University of Maryland, and the John Z. and Akiko K. Bowers Distinguished Professor and Dean, University of Maryland School of Medicine. “Dr. Plowe’s exceptional studies in tracking resistant malaria and developing vaccine candidates to prevent it are representative of the mission of the Center for Vaccine Development and the entire School of Medicine—to bring groundbreaking scientific discoveries from the laboratory to the clinic, impacting human health in Baltimore and worldwide.”

Myanmar is particularly significant in the study of drug-resistant malaria because malaria cases are found throughout the country, unlike in Thailand, where the center of the nation is malaria-free, forming a potential barrier against the disease’s spread. Myanmar’s high rate of infection paves a path for resistance to spread to and from neighboring nations, Dr. Plowe explains.

“Our main goals are both to track resistance and also to understand the parasite population structure,” says Dr. Plowe. The researchers will examine whether there are populations of the malaria parasite that interbreed and reproduce only with themselves in a given region, but do not spread to other regions. Studying the genetic make-up of these parasites can help scientists understand how resistance spreads to new regions and maybe even how to stop it. The race against the spread of resistance is crucial, he says.

“The artemisinin resistance that we’re seeing now is slowing how long it takes to clear the parasite—the infection eventually clears in most cases, it just takes longer,” explains Dr. Plowe. “But if artemisinin resistance reaches the stage that resistance to other drugs has—which is to say, total resistance, rendering the older drugs useless—we would expect the same to happen to artemisinins. In addition to a loss of human life, if we lost this most important tool against malaria, the recent momentum for global malaria eradication could quickly evaporate. It takes a long time to develop a drug, and we have nothing on the shelf to replace this class of drugs.”