

SOMnews

UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE



FEBRUARY 2011 VOL. 12 NO. 6

DEAN'S MESSAGE: What's On My Mind

*W*hat's on my mind this month is the great feedback I am receiving from the School of Medicine community. Recently, I used a Communication Evaluation Survey to seek input, comments and suggestions from our faculty on how we can more effectively communicate our goals and accomplishments. Several hundred faculty members responded. This survey provided invaluable information.

Although we continue to review the responses, the survey is already helping us to understand what we are doing right, and what we can do better. For example:

- Two-thirds of respondents believe the school has sufficient communications vehicles for publicizing its news and information.

As a "self-reported" publication, *The Buzz* relies on news from the SOM community. I encourage you to contact the "Buzz liaison" in your department, program, research center or institute and report your publications, grants and contracts, honors and lectures.

in SOMnews readership. A 2007 survey showed that 70 percent of respondents received SOMnews but 56 percent read each issue. Since then, we have taken steps to make SOMnews, and all of our publications, more relevant and graphically appealing. In the latest survey, 98 percent said they receive SOMnews, including *The Buzz*, and 91 percent read these publications every month.

At the same time, faculty members had constructive suggestions on how to improve the content of our publications and distribute them in a more cost effective and environmentally friendly way. Among the suggestions:

- Send more publications by email or send a link to an online version of the publication.

• Be more concise.

Additionally, a number of faculty members mentioned time constraints prevent them from reading some publications or attending some events, while some suggested having meetings later in the day. Using your input, we have already begun to fine-tune our publications and improve our distribution methods, and we will consider adjusting the time of day for certain school-wide meetings. To address some of the input received, we will develop a plan to be more responsive to varied needs—by sending publications by email to those who prefer that format, and a hard copy to those who prefer to read a printed publication. You will hear more about these plans in the coming months.

We need your feedback in order to learn about your accomplishments and success stories. As a "self-reported" publication, *The Buzz* relies on news from the SOM community. Over the past four years, submissions about faculty, staff and student achievements have risen

• Seventy-one percent believe the visibility of the senior leadership is "just the right amount."

• Eighty-two percent believe the Dean's Message in SOMnews sets the right tone.

I was also heartened that the survey revealed a significant increase

dramatically. I encourage you to contact the "Buzz liaison" in your department, program, research center or institute and report your publications, grants and contracts, honors and lectures. If you have a story idea for SOMnews, please don't hesitate to contact the Office of Public Affairs (6-8518).

The Communication Evaluation Survey is but one example of how we are listening to our colleagues and students. Junior faculty members are encouraged to attend a monthly breakfast with the Dean's senior staff and me.

As you know, I have an open door policy. I will make time to meet with any faculty member, staff member or student who wants to see me, and I am available by phone. I am always open to your feedback, whether it is given in person or through an email to me at deanmed@som.umaryland.edu.

I want to thank those who responded to the Communication Evaluation Survey. By listening carefully to your thoughtful feedback we will continue to achieve success.

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

E. Albert Reece

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



What's the buzz?

Self-Reported News from the School of Medicine Community

APPOINTMENTS

IN THE NEWS

NEW FACULTY

NEW STAFF

SOMnews

DEAN'S MESSAGE: What's On My Mind

Technology Update

Technology Update

PSYCHOTIC DISORDERS AND DSM-V: INNOVATIONS AND CONTROVERSIES

Free Lecture & Reception
Wednesday, February 16
4-6 p.m. Auditorium

Featuring Dr. William Carpenter,
Professor, UM School of Medicine and
Director of the Maryland Psychiatric
Research Center

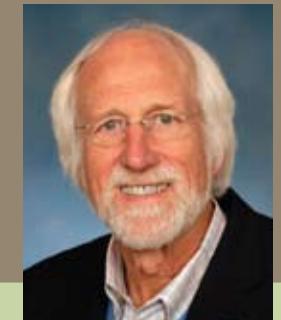
More information & CEU options:
www.ssw.umaryland.edu/lecture

MARK YOUR CALENDARS!

All are welcome and encouraged to come listen to William Carpenter, MD, professor, Department of Psychiatry, and director, Maryland Psychiatric Research Center, give a lecture on psychotic disorders and DSM-V on Wednesday, February 16, 2011, in the School of Social Work auditorium.

The lecture will begin at 4 p.m., with a reception to immediately follow.

This is a free event, but registration is required. For more information and to register, visit www.ssw.umaryland.edu/lecture.



Differences in Brain Development Between Sexes May Hold Clues to Mental Health Disorders

Research in animal models focuses on area of the brain that controls emotion, social behavior



Margaret M. McCarthy, PhD

Many mental health disorders, such as autism and schizophrenia, produce changes in social behavior or interactions. The frequency and/or severity of these disorders is substantially greater in boys than girls, but the biological basis for this difference between the two sexes is unknown.

Researchers at the School of Medicine have discovered differences in the development of the amygdala region of the brain—which is critical to the expression of emotional and social behaviors—in animal models that may help to explain why some mental health disorders are more prevalent among boys. They also found a surprising variable—a difference between males and females in the level of endocannabinoid, a natural substance in the brain that affected their behavior, specifically how they played.

The study results have been published online this month in the *Proceedings of the National Academy of Sciences*.

Margaret M. McCarthy, PhD, the senior author and a professor in the Departments of Physiology and Psychiatry, said, “Our findings help us to better understand the differences in brain development between males and females that may eventually provide the biologic basis for why some mental health conditions are more prevalent in males. We need to determine if these neural differences in the developing



“Our findings help us to better understand the differences in brain development between males and females that may eventually provide the biologic basis for why some mental health conditions are more prevalent in males.”

brain that we've seen in rats may cause similar behavioral effects in human babies.”

Dr. McCarthy and her colleagues found that female rats have about 30 to 50 percent more glial cells in the amygdala region of the temporal lobe of the brain than their male litter mates. They also found that the females had lower amounts of endocannabinoids, which have been dubbed the brain's own marijuana because they activate cannabinoid receptors that are also stimulated by THC, the main psychoactive ingredient of cannabis.

Researchers also found that the female rats also played 30 to 40 percent less than male rats. However, when these newborn female rats were given a cannabis-like compound to stimulate their natural endocannabinoid system, their glial cell production decreased and they displayed increased play behavior later as juveniles. In fact, the level of play exhibited by females treated with a cannabis-like compound was very similar to levels in male rats, the researchers found. Yet exposure to this cannabis-like compound did not appear to have any discernible effect on newborn male rats.

Dr. McCarthy, who is also associate dean for Graduate Studies and interim chair of the Department of Pharmacology & Experimental Therapeutics, noted, “We have never before seen a sex difference such as this in the developing brain involving cell proliferation in females that is regulated by endocannabinoids.”



Steven Kittner, MD, MPH

International Effort to Identify Genetic Risk Factors for Stroke

RESEARCHERS from the School of Medicine are coordinating an international team of scientists working to identify genes or gene variants that may make a person more likely to have a particular type of stroke called an ischemic stroke. Steven Kittner, MD, MPH, professor, Department of Neurology, is the lead investigator of the 17-site study, funded with a \$3.6

million grant from the National Institutes of Health.

Ischemic strokes are caused by a blood clot in the brain and are the most common type of stroke, representing more than 80 percent of all cases. Stroke is a leading cause of disability and the third leading cause of death in the United States.

“This multinational collaboration will be one of the largest stroke genetics research projects ever launched. Recent studies in conditions such as diabetes and lupus have shown that a large sample size, such as the one we will be using, can be vital in helping to uncover genetic influences in a complex disease, so we are eager to see what genetic variants we may find for stroke and what promise these discoveries may hold for prevention and treatment,” explained Dr. Kittner.

“Using DNA analysis of blood samples from at least 6,000 stroke patients, we will be able to interrogate more than one million genetic variants for their association with stroke. The design and size of the study increase the chance that we may find genetic variants that were previously not suspected to be linked to stroke,” said Braxton Mitchell, PhD, MPH, professor, Department of Medicine, leader of the multi-institutional team that will analyze the data.

With funding from the National Institute of Neurological Disorders and Stroke (NINDS), this initiative brings together 12 research institutions in the United States and five in Europe. The project, which should take about four years to complete, furthers the NIH efforts in the field of ischemic stroke genetics and genome-wide association studies (GWAS).

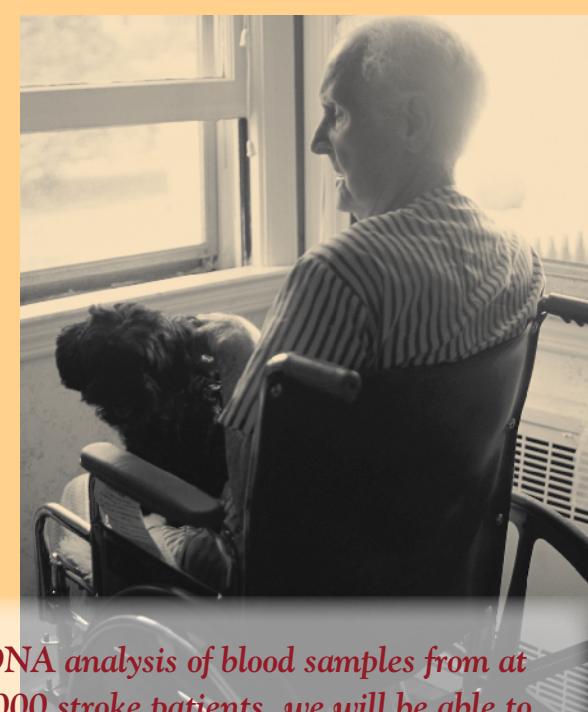
“Stroke is a challenging disease to study because it can be due to a wide variety of causes and pathological processes. One important goal for this international team will be to develop standardized, validated and easily replicated methods to identify stroke subtypes, which may account for variations in stroke occurrence, severity, complications, response to therapy and recovery,” explained Katrina Gwinn, MD, NINDS project director.

Established risk factors, such as hypertension and cigarette smoking, are not sufficient to explain who will suffer from a stroke and who will be spared. Classifying strokes into subtypes using a standardized method will allow the researchers to drill

down into the genetics that may be linked to a particular subgroup of stroke. In addition, the component elements leading to inclusion into or exclusion from each subgroup will be recorded, allowing for the future development of new approaches to classification.

Nearly 800,000 strokes occur each year in the United States. A stroke disrupts blood flow to the brain, causing cells to die, and increasing the risk of permanent brain damage, disability or death. Symptoms include numbness or weakness on one side of the body, sudden loss of vision, sudden confusion or trouble speaking, dizziness or loss of balance, and sudden, severe headache. A stroke can cause someone to have permanent difficulty with walking, hearing and vision, and speaking and understanding speech. Strokes can also cause emotional changes.

Certain medical factors can increase a person's likelihood of having a stroke. These include having had a previous stroke, diabetes, high blood pressure, atrial fibrillation, and heart disease. Lifestyle factors such as smoking, being overweight and drinking too much alcohol can also increase a person's risk for stroke.



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Multi-Center Study Aimed at Preventing Health Care-Associated Infections

A

School of Medicine infectious disease researcher is leading a nationwide study to determine if the use of gloves and gowns in all intensive care unit patient contacts can reduce antibiotic resistance and health care-associated infections (HAI). HAIs are infections that patients get while receiving medical or surgical treatment in hospitals or other health care facilities. HAIs are among the leading causes of death in the United States, accounting for an estimated 1.7 million infections and 99,000 associated deaths in 2002.

"Patients need better interventions to protect them against acquiring antibiotic-resistant bacteria and developing infections," said principal investigator Anthony Harris, MD, MPH, professor, Department of Epidemiology & Public Health, and head of the Division of Genomic Epidemiology & Clinical Outcomes.

The study will be conducted in 18 to 30 intensive care units around the country. The scope of the study is larger than previous interventions.

"Our study targets multiple health-care-associated infections and all antibiotic-resistant bacteria at the same time," said Dr. Harris, an infectious disease physician and epidemiologist, whose research interests include emerging pathogens and infection control. He continued, "We will assess whether the intervention of wearing gloves and gowns for all patient contact, regardless of whether the patient is already colonized with antibiotic-resistant bacteria, could prevent patient-to-patient transmission of antibiotic-resistant bacteria and prevent the

Our study targets multiple healthcare-associated infections and all antibiotic-resistant bacteria at the same time.

transmission of other bacteria that cause healthcare-associated infections." The study will also document the costs and unintended consequences associated with implementing universal glove and gowning procedures.

The \$5.7 million study is funded by the Agency of Healthcare Research and Quality (AHRQ) in collaboration with the Centers for Disease Control and Prevention and the National Institutes of Health. In 2010, the AHRQ funded 22 HAI prevention projects totaling \$34 million.

"Dr. Harris is a national leader in research aimed at preventing the emergence of antibiotic resistant bacteria and healthcare-associated infections," said Jay Magaziner, PhD, MSHyg, professor and chair, Department of Epidemiology & Public Health. "The Division of Genomic Epidemiology & Clinical Outcomes has taken a very broad perspective on understanding the causes of these infections and determining whether prevention methods are worth the financial expense and time required to implement them."



Anthony Harris, MD, MPH

Study Finds Racial and Socioeconomic Disparities for Parkinson's Disease

African-American patients and those with lower socioeconomic status have more advanced disease and greater disability when they seek treatment from Parkinson's disease specialists, according to a study by Lisa Shulman, MD, Eugenia Brin Professor in Parkinson's Disease and Movement Disorders, Department of Neurology. The study, published in the *Archives of Neurology*, found that race, education and income were each significant and independent factors in determining a patient's level of disability. The disparities in health care are associated with greater disease severity and earlier loss of independence.

The cause of these racial and socioeconomic disparities is unclear, but possible explanations include problems with access to health care, reduced physician referral rates or patient reluctance to seek care from a movement disorders specialist. The study focused on a sample of more than 1,000 patients who were seen at the University of Maryland Parkinson's Disease and Movement Disorders Center for parkinsonism (slow movements, tremor and rigidity, difficulty initiating movement, and problems with gait and balance), mostly due to Parkinson's disease, but also caused by other conditions, including stroke, head trauma and medication side effects.

"Through our evaluation over a five-year period, we found that African Americans and people with lower socioeconomic status had greater disease severity and disability than whites when they first came to our clinic. Very large differences in Parkinson's disease symptom severity and functional status were seen between blacks and whites, between high and low income groups and between groups with greater and lesser educational attainment," said Dr. Shulman.

"In the future, we will need to see if greater understanding and correction of these disparities could improve outcomes for these patients," added Dr. Shulman, who is also co-director of the University of Maryland Parkinson's Disease and Movement Disorders Center.

The analysis revealed that African-American patients were less likely to receive medications for their parkinsonian symptoms overall and less likely to receive newer medications, which are generally more expensive. But the researchers acknowledged that the relatively small number of African Americans in the study (66) may limit their ability to detect differences and that more study is needed.

The researchers believe this is one of the first studies to show health disparities in disease severity and disability in parkinsonism.

"Future studies need to evaluate patient attitudes and their beliefs about Parkinson's symptoms and treatment. It is possible that some patients may believe slowness and tremor are just part of aging or that they have to reach a certain threshold of severity before seeking treatment. On the other hand,

it may be that physicians, either consciously or unconsciously, are less likely to refer African Americans and patients of lower socioeconomic status to a Parkinson's specialist," noted William Weiner, MD, professor and chair, Department of Neurology. Dr. Weiner also is co-investigator and director of the Maryland Parkinson's Disease and Movement Disorders Center.

With Parkinson's disease, early medical treatment can have a profound effect on how well a patient functions as the disease progresses. "If treatment for parkinsonism is very delayed, you can't turn back the clock," explained Dr. Shulman.

Dr. Weiner said, "The results of this study show we need to learn more about the causes of parkinsonism and find ways to overcome these disparities, which clearly are affecting the quality of life of patients who are from different backgrounds and means. The differences in function between patients with different education levels may suggest that patients with more education are perhaps more likely to request a referral to a specialist. Conversely, it is possible that physicians are more likely to refer more highly educated patients to a specialist."

The research team, which included physicians and staff from the Department of Neurology, Department of Psychiatry and Department of Epidemiology & Public Health, evaluated patients who came to the Maryland Parkinson's Disease and Movement Disorders Center over a five-year period. Study participants completed questionnaires about their age, race, household income and education as well as how long they had been diagnosed with parkinsonism.

They also did self-evaluations on a modified version of the Older Americans Resource and Services Disability Scale, a measurement of the difficulty in performance on 14 daily activities ranging from getting out of bed and getting dressed to cooking meals, using the telephone, handling money and taking medications. Because symptoms of parkinsonism fluctuate, the study participants rated their symptoms twice, describing their best and worst levels of functioning.

The patient assessment included a medical history and neurological examination by a Parkinson's disease specialist. The researchers also used a standard Parkinson's disease scale, the United Parkinson's Disease Rating Scale, to assess the severity of symptoms in all patients.



Lisa Shulman, MD

"If treatment for parkinsonism is very delayed, you can't turn back the clock."

Coat & Blanket Drive for the Homeless

At the beginning of December, the Student National Medical Association (SNMA) launched its first Coat & Blanket Drive. With the help of School of Medicine faculty and students, the SNMA was able to collect over 300 items, including coats, blankets, sweaters and pants, that would provide warmth to those in need. SNMA contacted several homeless shelters and transitional homes in Baltimore, hoping their residents would be able to attend. On December 21, the SNMA student volunteers distributed items at a local church to over 100 Baltimore residents. Several second-year medical students volunteered that day to help visitors find the items they needed as well as serve light refreshments.



SNMA members at their first annual winter coat and blanket drive.

The hard work paid off. The individuals who attended were excited and grateful for the free items they received. Due to the success of this year's event, and the fact the students were able to help over 100 Baltimore community members, SNMA will host a Coat & Blanket Drive again in late 2011. The students hope to start in early November in order to collect even more items to reach a greater number of people. 

{STUDENT PROFILE}

Stacy Orozco



Stacy Orozco and her two sons

Stacy Orozco has many titles—wife, mother, Marine. Soon she will be adding college graduate to that list. This spring, she will graduate with a Bachelor's in medical technology research. She hopes to then work in a clinical laboratory, and—if her schedule allows—eventually go on to train as a specialist in Blood Banking. She is the first in her family to go into the medical field.

Stacy is a student in the University of Maryland School of Medicine's Department of Medical & Research Technology, or DMRT—currently the only place within the School of Medicine where students can earn an undergraduate degree. The Bachelor's degree

program allows students to specialize in one of two career tracks: medical technology research or biotechnology research. Both tracks are two or three years, depending on whether students choose to go full time or part time. In addition to lecture and laboratory instruction, students in both tracks complete externship training, which enables many of them to have a job waiting for them upon graduation.

Life is a constant juggling act for Stacy, but she's used to keeping all those balls in the air. During her five years in the U.S. Marines Corps, she met and married her husband and had two children, while still staying committed to her decision to serve her country. The life skills she learned during that time have proved very helpful to her education. "Being a mom definitely helped me learn how to balance a lot of responsibility," Stacy said. "And being a Marine has taught me perseverance."

Although Stacy admits it's been difficult having less time to spend with her children because of her school obligations, she says it's been truly memorable to have met so many wonderful people, especially her classmates. Their support has been invaluable to her, but it's the support of one person in particular that has seen her through all her educational challenges. "I would not have made it this far without the support of my husband," declared Stacy. "I'd like to thank him for being so wonderful."

To learn more about DMRT, visit their website at <http://medschool.umaryland.edu/dmrt/>. 

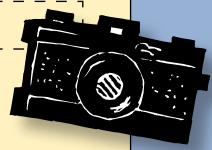
{PHOTO OF THE MONTH}



Look Out Below. Photo by: Tom Jemski

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 March 1, 2011, for the April issue of SOMnews.



SOMnews

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