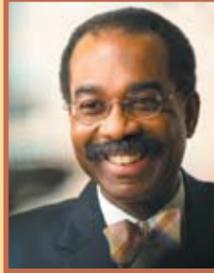




DEAN'S MESSAGE: What's On My Mind



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Dear Faculty, Staff, Students and Friends:

Welcome back! What's on my mind this month is the new school year and our new group of students. I hope you enjoyed your summer and are now ready to embrace the new school year with enthusiasm and determination. I am very pleased to be celebrating my first anniversary as dean of this medical school. When I accepted this job two long summers ago I knew that I would be taking the helm of an exceptionally fine medical school, and I am pleased and proud to say that this past year has confirmed that prediction. The University of Maryland School of Medicine is a very special place, and we should all be very proud to be a part of it.

I also want convey a special welcome the Class of 2011. We are glad you chose the University of Maryland School of Medicine! We are dedicated to ensuring an exciting and highly personalized medical education for each and every one of you. We welcome 161 new medical students from 67 colleges and universities around the country, ranging in age from 21 to 35, 56 percent of whom are women. This class has an average MCAT score of 31 and GPA of 3.6.

There are several exciting events on the horizon this month. I will host a back to school/work ice cream social on Thursday, September 17, from 3:00-5:00 PM in the MSTF Atrium.* This annual event is for faculty, staff, post-doctoral clinical and research fellows, and students. I hope you will join me for a scoop (or two!), some fellowship and conversation.

I will host our third and last bicentennial lecture on diseases of the central nervous system on Monday, September 24, at 7:00 PM at the Hippodrome Theatre.** Moderated by veteran network television health correspondent Dr. Bob Arnot, the featured speakers will

include our own William Weiner, MD, professor and chair of neurology, Columbia University researcher Nancy Wexler, PhD, whose studies led to the identification of the Huntington's disease gene, former U.S. attorney general Janet Reno, who revealed in 1995 that she has Parkinson's disease, and CBS anchor and weatherman Mark McEwan, who continues to recover from a 2005 stroke affecting his speech, balance and thought process.

On Tuesday, September 25, at 3:00 PM, I will give my first annual State of the School address, entitled *Soaring to Greater Heights, Together*. I will highlight the milestones we achieved together in the last twelve months and will touch on some of the challenges that lay ahead. A reception will follow the address and I hope that you will all display your academic citizenship by attending this important annual event.

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, School of Medicine

*To RSVP for the ice cream social call 6.8685.

**To obtain free tickets to the bicentennial lecture on the central nervous system call 6.2007.



Bicentennial Update

Bicentennial Year Attracts Attention from Boston to Lake Wobegon

During the second half of its 200th year, the School of Medicine will continue the anniversary celebrations with "Bicentennial Night at Camden Yards" featuring the Orioles vs. the Red Sox; an evening of lectures on the central nervous system by scientists and patients; and a live international radio broadcast of "A Prairie Home Companion" at the Hippodrome Theatre. Also on the agenda is the seventh annual Mini-Med School for residents of the region.

Mini-Med School
Wednesdays, September 5
to October 3, from 6-8 p.m.
Medical School Teaching Facility Auditorium
Free, but advance registration is required.
Includes a light supper.

This popular series explores health topics, advances in medical technology and preventive medicine. Faculty members are the instructors. To register or for more information call 6.8685.



Bicentennial Night at Camden Yards
O's vs. Boston Red Sox
Thursday, September 6, at 7:05 p.m.
All tickets are \$13; Section 332, upper reserved, behind home plate.

The game is only one of the highlights! The school has a large block of seats with a great view of the field (including Dean E. Albert Reece throwing out the first pitch), our representatives warming up with the Birds, an exhibit on the Eutaw Street Concourse and bicentennial recognition on the scoreboard. Purchase tickets with a credit card at www.sombicentennial.umaryland.edu. To pay by check, e-mail 2007@som.umaryland.edu with your name, address and number of tickets requested. Make out checks to UMB Foundation, Inc., and tickets will be mailed promptly when the check arrives.



Perspectives on the Central Nervous System:
The Scientists & The Patients
Monday, September 24, 7-9 p.m.

The Hippodrome Theatre, 12 N. Eutaw Street
There is no charge, but tickets are required.

The central nervous system (CNS) is an amazing network involving the brain and spinal cord and millions of nerve cells.

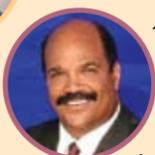
This final evening in the bicentennial lecture series focuses on the science and daily reality of Parkinson's disease, Huntington's disease and stroke. Speakers include former U.S. Attorney General Janet Reno, CBS anchor and weatherman Mark McEwan and Dr. Nancy Wexler of Columbia University. Moderated by television network health correspondent Dr. Bob Arnot. To request tickets, e-mail 2007@som.umaryland.edu or call 410.706.2007. Be sure to include the number of tickets you want, your name, full address and phone number.



Janet Reno



Nancy Wexler, PhD



Mark McEwan



Bob Arnot, MD

A Prairie Home Companion
Live Radio Broadcast
in Collaboration with WYPR-FM
Saturday, October 13, from 5:45-8 p.m.

The Hippodrome Theatre, 12 N. Eutaw Street
Garrison Keillor and the crew from Lake Wobegon take over the Hippodrome for an international broadcast of this perennial favorite. Tickets sold out within hours of going on sale.

Sold Out



Garrison Keillor

From Stem Cells to Green Tea

Biochem Chair Has a Variety of Research Interests

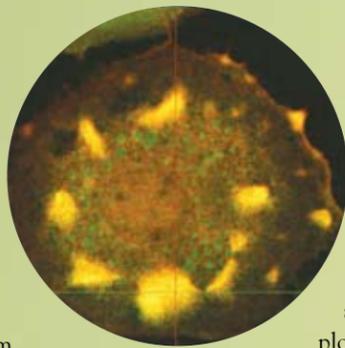
When Richard Eckert, PhD, joined the University of Maryland School of Medicine as professor and chair of the Department of Biochemistry & Molecular Biology in November 2006, he brought with him an exciting research enterprise. Dr. Eckert's research focuses on understanding how normal surface skin cells function to protect people from illnesses and how those cells are altered during disease states, including skin cancer and scleroderma. He also researches how stem cells deep within the multiple layers of the skin can be transformed into other types of cells to battle diseases that affect other systems and organs in the body.

"The skin is an ideally designed system and perfect for research," says Dr. Eckert, who currently has four grants from the National Institutes of Health and support from a private foundation. "Most of the time, our skin works properly and adequately protects our stem cells from damaging UV radiation from sun exposure and injury caused by scrapes and other wounds. We'd really like to know what controls the systematic and coordinated development of the skin."

According to Dr. Eckert, knowing how the skin develops is important because it serves as a major barrier for the body, protecting it from a variety of illnesses and diseases. "The skin has stem cells along its bottom layer. Those stem cells undergo cell division and give rise to all 12 layers of the skin. We are working to better understand this process of cell division and the development of these skin layers," he says.

Utilizing the plethora of stem cells in the skin, Dr. Eckert and colleagues have recently been able to transform them from skin cells into neural cells, through the use of transcriptional regulators. "These regulators are ones that control embryonic development in its earliest stages," says Dr. Eckert. "If we put them into cells that are pre-established to make skin, we can move those cells in another direction."

People can have a variety of problems when the skin does not function properly. "One disease we are investigating is scleroderma, an autoimmune disease of the skin



A microscopic image of a skin stem cell from Dr. Eckert's lab research.

that results in a highly thickened dermal layer. The skin develops plaques which can eventually spread to the lungs and compromise a person's ability to breathe," says Dr. Eckert. "We've developed an animal model for the disease that is bringing us closer to identifying its initial trigger so that a therapy could potentially be developed to either reverse the illness or at least halt the progression."

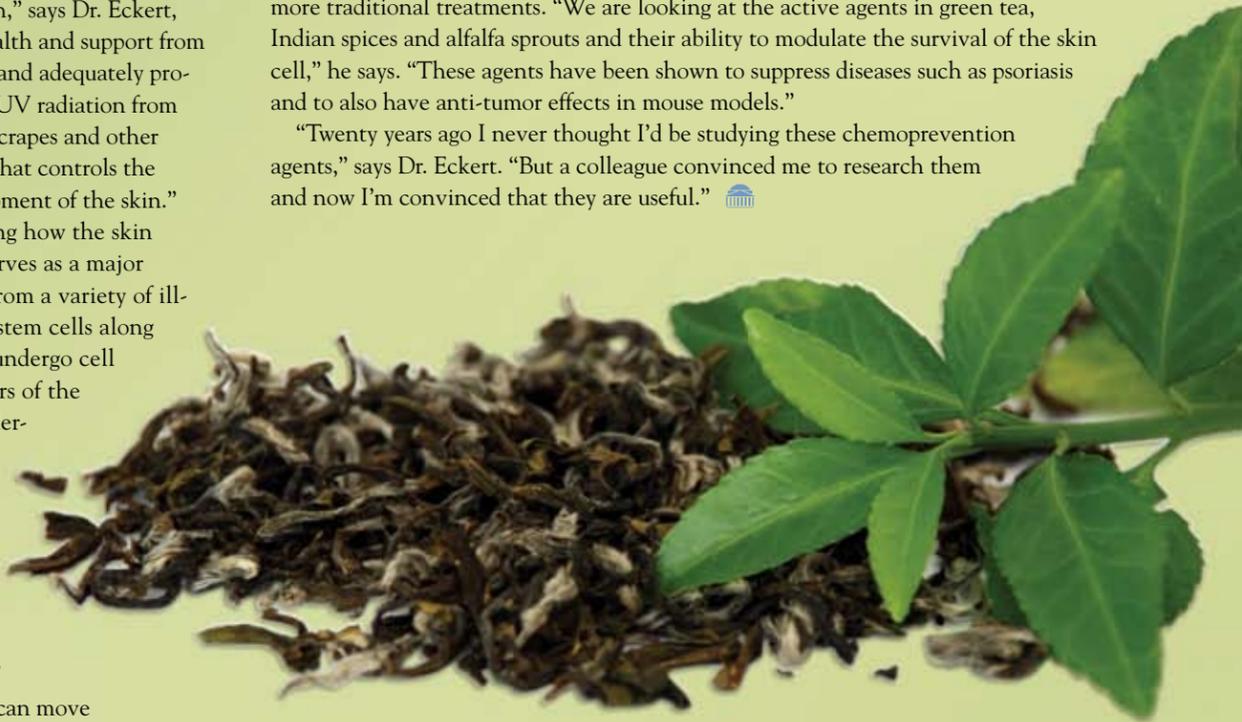
Dr. Eckert is also involved in the field of chemopreventives, which are dietary agents used to prevent cancer. "This field has really exploded in the United States in the past 20 years," says Dr. Eckert. "There has been enough research to convince people that these agents have some real benefit."

Dr. Eckert feels that some of these agents can have a positive impact on preventing and treating certain cancers, but that they can also interfere with more traditional treatments. "We are looking at the active agents in green tea, Indian spices and alfalfa sprouts and their ability to modulate the survival of the skin cell," he says. "These agents have been shown to suppress diseases such as psoriasis and to also have anti-tumor effects in mouse models."

"Twenty years ago I never thought I'd be studying these chemoprevention agents," says Dr. Eckert. "But a colleague convinced me to research them and now I'm convinced that they are useful." 



Richard Eckert, PhD



Green tea is thought to be a chemopreventive—a dietary agent used to prevent cancer.

"What Do We Do?"

MARYLAND PSYCHIATRIC RESEARCH CENTER (MPRC)

The Maryland Psychiatric Research Center (MPRC) was being run unsuccessfully as a state research center connected with the state hospital system when the University of Maryland School of Medicine was asked in 1977 to partner with the State Hygiene Administration to oversee the facility. The School of Medicine sharpened the focus of the center to schizophrenia research and brought in William Carpenter, MD, professor, Department of Psychiatry, as director.

"Schizophrenia was an easy choice—first of all, because that is what I do," says Dr. Carpenter. "If they didn't want to focus on that, then they wouldn't have asked me. But in every way it was an obvious choice. Schizophrenia is a leading, worldwide public health problem. It may be THE major disease as far as a lack of understanding of etiology and treatment. The cost is outstanding; it costs this country more than all cancers combined."

That cost comes mainly from indirect support of patients. "About 80 percent of patients are unemployed, most of the rest are underemployed, so they have unstable living situations, and the burden on families is huge," Dr. Carpenter explains. "It's a big problem in the state hospitals, of course. The state is responsible for providing direct care to those with the disease who have no one else to support them."

While there are medications to treat schizophrenia, they only quell certain symptoms, such as hearing voices, having false beliefs, being paranoid, or having disorganized thinking. "All have certainly been a big part of schizophrenia," says Dr. Carpenter. "But years ago a study showed that these symptoms, while they are bad, have very little to do with the eventual outcome of a normal life as far as function."

Instead, it is the extent of a patient's impaired cognition that determines whether they will be able to function in normal society. Unfortunately, this symptom is one

It is the extent of a patient's impaired cognition that determines whether they will be able to function in normal society.

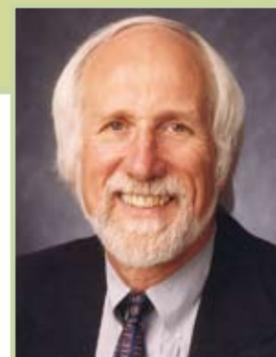
that medications cannot treat. But the MPRC hopes to change that. "We're working really hard," Dr. Carpenter reveals.

"We push all the time because we have so much work to do. We do basic discovery, the pathophysiology of mental illness, and we know a lot of what's going on in the brain. But we don't have any specific information about why this is going on."

A four-year, \$26 million contract with Novartis was a great boost to this research, but the company suddenly cut the project when a new CEO took over. Partnerships with other drug companies have been difficult to acquire because of the MPRC's strict rule that all their research be made public. "That doesn't mean we won't sign confidentiality agreements, but if we take money from them to do a project, that data will go into the public sector and they won't be able to control it," explains Dr. Carpenter. "We always do public science, so we'll never get in one of those embarrassing jams where it's discovered something didn't work so it never got published."

While research will always be their main focus, the MPRC also offers teaching expertise to the School of Medicine. "We do a lot of teaching, but we're not responsible for anybody's curriculum," says Dr. Carpenter. "Michael Vogel organizes a course for graduate students on biological psychiatry and asks faculty from the Department of Psychiatry to teach in it. Various psychiatry faculty will meet with trainees or occasionally give lectures to medical students. But most of our teaching is done by mentoring post-doctorate fellows. So we get mostly people who are already through their PhD and psychiatry residency before they come on board."

Michael Vogel, PhD, is an associate professor in the Department of Psychiatry. For more on the MPRC, visit their Web site at <http://www.mprc.umaryland.edu/>. 



William Carpenter, MD

Study Compares Two Surgical Procedures for Stress-Related Urinary Incontinence

Different surgical procedures have been available for decades to relieve urinary stress incontinence. But until now, the two main techniques—the “sling” and the Burch—had never been compared in a scientific study to see which was more effective.

In a randomized clinical trial at nine medical centers, including the University of Maryland, doctors found that the sling procedure worked better than another surgical treatment, the Burch procedure, to treat urinary stress incontinence in women. The results of the NIH-funded study were reported in a recent issue of the *New England Journal of Medicine*.

Stress incontinence is, by far, the most common type of incontinence. It often results from inadequate bladder support from the pelvic muscles, or a weak or damaged urethra. Anything that strains or stresses the abdomen, such as coughing, sneezing, laughing, or even walking, may cause urine to leak.

“We found the sling was successful at treating the stress incontinence in 66 percent of the women in our study, versus a 49 percent success rate for those who

had the Burch, and this difference was statistically significant,” says Toby C. Chai, MD, associate professor, Department of Surgery. He was the principal investigator on the study from the Maryland site.

The study, which began in 2002, randomly assigned 655 women with the average age of 52 to one of two

“The important take-home message for women is that successful treatments are available for incontinence.”

groups—326 had what is known as the autologous fascial sling procedure and 329 had the Burch colposuspension procedure. All of the women were followed for a minimum 24 months after their surgeries. The sling technique has traditionally been performed by uro-

gists, while gynecologists favored the Burch. The study was conducted by both urologists and gynecologists who were trained in the two procedures.

Regardless of the outcome, says Dr. Chai, “The vast majority of patients in both groups reported satisfaction with the treatment they had received.” Two years following their surgery, 86 percent of those who had the sling procedure reported that they were satisfied with the treatment, compared to 78 percent of those who had the Burch technique. However, the one advantage of the Burch over the sling was that there was a higher rate of side effects, such as urinary tract infections, following the sling. The reasons were not clear.

“The important take-home message for women is that successful treatments are available for incontinence, and the tools and techniques are improving all the time,” says Harry W. Johnson, Jr., MD, associate professor, Department of Obstetrics, Gynecology & Reproductive Sciences.

“There is also now an array of new minimally invasive techniques that we can offer so that our patients do not have to suffer from the embarrassment and inconvenience of incontinence. The new treatments are replacing the traditional sling and Burch surgeries,” says Dr. Johnson, who is a co-investigator in the study.

Dr. Johnson and Dr. Chai are participating in a new, multi-center study comparing two types of minimally invasive treatments that require only two small holes—either in the abdomen or in the upper thigh—to help position a mesh material to support the urethra. Because they do not require a larger incision, the recovery time for these procedures is about two weeks, compared to four to six weeks for the older sling or Burch operations. “Our study results support the validity of these new, less invasive treatment kits. We believe our latest study will provide additional guidance on the most effective way to help patients with urinary stress incontinence,” says Dr. Chai.

An estimated 11 million American women and five million men suffer from one or more forms of urinary incontinence. It affects older women more often than younger women, but Dr. Johnson estimates that more than 20 percent of women between the ages of 20 and 65 are also affected. Pregnancy and childbirth, menopause and the structure of the female urinary tract may contribute to urinary incontinence in women. The condition is believed to be under-reported. Some patients are too embarrassed to seek help, while others suffer in silence because they think it is a normal consequence of aging.

People with incontinence may suffer from social isolation, sexual dysfunction and depression, even though the condition can be effectively treated. Recent studies estimate incontinence costs more than \$20 billion annually in the U.S., the bulk spent on management measures, such as pads and diapers, not medical treatment.

There are several types of incontinence, ranging from the most common, stress incontinence, to urge incontinence and overflow incontinence. One of the main goals of the Urinary Incontinence Treatment Network, or UITN, the group of nine centers that participated in this latest study, is to assess which therapies work best for each type of incontinence.

In addition to the University of Maryland, other incontinence treatment centers in the UITN that participated in the study include the University of Alabama, University of California at San Diego, University of Pittsburgh, University of Texas at Dallas and San Antonio, University of Utah, Beaumont Hospital in Royal Oak, Michigan, and Loyola University in Chicago.



Toby C. Chai, MD



Harry W. Johnson, Jr., MD

Institute of Human Virology Receives \$43 Million Federal Grant

The University of Maryland School of Medicine’s Institute of Human Virology (IHV) has received a \$43 million grant from the President’s Emergency Plan for AIDS Relief (PEPFAR). The funding will be used to further IHV’s AIDS Care and Treatment in Nigeria (ACTION) project by providing immediate care and treatment to 48,000 patients and expanding HIV testing and counseling to an additional 100,000 Nigerians over the next year. Nigeria ranks third in the world for total number of persons infected with HIV, the virus that causes AIDS.

“The work being done now in Nigeria is extraordinary,” says Robert C. Gallo, MD, the founder and director of IHV who co-discovered HIV and developed the first HIV blood test. “This new award enables us to reach even more people who need the care and treatment provided by our institute’s experts. We are very proud of our Nigerian staff and of Dr. Blattner, who directs ACTION,” says Dr. Gallo, who is also professor in the Departments of Medicine and Microbiology & Immunology.

ACTION provides quality care and the latest treatments to people living with HIV/AIDS, focusing on antiretroviral therapy and the development of patient care support activities.

ACTION also emphasizes the need for patients to adhere to instructions for taking their medications and relies on partnerships with established medical clinics in Nigeria. These strategies have already helped Nigeria develop its own expertise in providing long term solutions to the country’s HIV/AIDS epidemic.

“In Nigeria, the lives of more than 500,000 people who need immediate treatment depend on the dedication of the IHV team that works tirelessly to expand services,” says William A. Blattner, MD, principal investigator for the project, who is co-founder and associate director of IHV and director of the institute’s Division of Epidemiology and Prevention. “Seeing the patients who have returned to healthy lives inspires our staff to continually adapt innovative strategies,” says Dr. Blattner, who is also a professor in the Department of Medicine.

Since its inception in 2003, ACTION has achieved a balance of rapid expansion and excellent medical care by focusing on quality. The team works alongside Nigerian colleagues at treatment sites throughout Nigeria and employs a model that links the community to care. ACTION has placed more than 30,000 Nigerians on therapy, has provided more than 38,000 pregnant women with HIV preventive services, has tested more than 84,000 Nigerians for HIV, and has given basic care and support to more than 40,000, including nearly 5,000 children.

“The School of Medicine is proud to embrace the work of the Institute of Human Virology in Nigeria and around the world. Such a program ties the citizens of Baltimore to a worldwide community that demands the best of medical care exemplified by the mission of the school,” says Dean E. Albert Reece, MD, PhD, MBA.



William Blattner, MD



Nigerian scientists are trained in HIV detection and diagnostics at Institute of Human Virology facility in Abuja, Nigeria.

First Mini-Med School for Kids Launched for the Bicentennial

Approximately 35 children between the ages of five and 13 got a taste of medical school when the University of Maryland School of Medicine kicked off its first Mini-Med School for Kids at the Salvation Army's Franklin Square Boys & Girls Club summer camp in West Baltimore on July 11. Like all of our medical students, their education started with anatomy lessons from Larry Anderson, PhD, professor, Department of Anatomy & Neurobiology, who proved just as popular with this younger crowd as he is with his usual students.

After a welcome from Dean Reece, who encouraged the children to have fun while learning about better health, the campers gathered excitedly around "Dr. Larry" as he pulled out his displays of plastinated body parts. They tried to guess what each might be (a heart, a tongue, a lung) and wondered aloud if they'd come from real people (hearing they did only made them more excited). Dr. Anderson was happy to let the children get hands-on with the bones and organs, but directed them to handle each part with respect, since it had once been a part of a living person. He also eased concerns that the parts had not been extracted from the bodies until after the patients were already dead, and explained how people choose to donate their bodies to medical science in order to help teach doctors how to better do their jobs.

Dr. Anderson's displays were a vivid way to show the children the differences between healthy lungs and the lungs of a smoker or a healthy heart and the diseased heart of an obese person as well as the internal location of some of their own organs, like the kidneys. He hoped this chance to see

Larry Anderson, PhD, holds aloft two sets of lungs, one healthy and one from a smoker, illustrating for the children the damage smoking can do to one's lungs.

their bodies from the inside would encourage the youngsters to "learn healthy lifestyles, so they can be healthy for life" while laying the foundation for the parts of the body they'd be studying in the weeks to come.

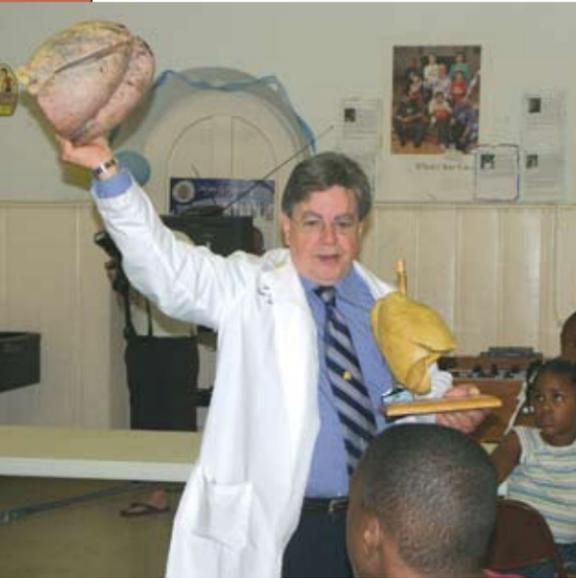
Mini-Med School for Kids continued at the Franklin Square Boys & Girls Club camp every Wednesday morning through August 8. Shawn Robinson, MD,

assistant professor, Department of Medicine, explored heart health and exercise through activities like having the kids run in place and then taking their pulse to illustrate resting heart rate versus an active heart rate. Kari Bichell, MD, assistant professor, Department of Family & Community Medicine, discussed diabetes, obesity and the importance of nutrition and then divided the kids into two groups for a relay race illustrating the food groups. Kevin Ferentz, MD, associate professor, Department of Family & Community Medicine, talked about asthma, smoking and drug and alcohol addiction and actively engaged the kids through a lively question and answer session. Ligia Peralta, MD, associate professor, Department of Pediatrics, explained the delicate subject of STI's and HIV through a candid lecture and then a few rounds of a Jeopardy-like game involving the information she had just disseminated.

Mini-Med School for Kids ended on August 15 when the campers came to the School of Medicine for a field trip. The children experienced firsthand what it's like to work in a laboratory through a discussion and demonstration led by Debby Kryszak, research lab supervisor for the Center for Celiac Research. Their lab activities included peering through microscopes to analyze cells, learning about how laboratories function, what research is and why it is important and the path to becoming a researcher in a medical school. Afterwards, Carnell Cooper, MD, associate professor, Department of Surgery and Program in Trauma, gave an informative presentation on violence and violence intervention, and then took the children on a tour of Shock Trauma.

Deborah Tyson, unit director for the Franklin Square Boys & Girls Club, summed up the Mini-Med School for Kids experience: "These children are blessed to have been a part of Mini-Med School. I know they have learned important lessons about their bodies, how to stay healthy for life and how to help their parents and grandparents live a healthier lifestyle. School of Medicine doctors shared invaluable knowledge about going to medical school and that's been inspirational for these kids as well."

Campers experiment with basic science in the Center for Celiac Research lab.



With a Mini-Med volunteer, Shawn Robinson, MD, demonstrates a resting heart rate with his pulse machine.



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{MINI-MED SCHOOL}

Seventh Annual Mini-Med School Calendar

The University of Maryland School of Medicine will conduct its seventh annual Mini-Med School this fall. Classes will run for five consecutive Wednesday evenings from 6:00 p.m.–8:00 p.m. and will be held in the MSTF Auditorium. For more information about Mini-Med School, check our Web site at <http://medschool.umaryland.edu/minimed>, or contact Heather Graham in the Office of Public Affairs at hgraham@som.umaryland.edu.

Date	Topic & Speaker
Wednesday, 9/5	200 Years of History at Maryland—A Historical Perspective—Mickey Foxwell, MD Anatomy—Larry Anderson, PhD
Wednesday, 9/12	Medication Management in Older Individuals—Nicole Brandt, PharmD Multiple Sclerosis—Walter Royal, MD
Wednesday, 9/19	Heart Disease in Women—Myung Park, MD Cancer of the Female Reproductive System—Neil Rosenshein, MD
Wednesday, 9/26	Palliative Care & End of Life Issues—Doug Ross, MD, PhD Fibromyalgia—Ray Flores, MD
Wednesday, 10/3	Organ Donation & Transplantation—Steve Bartlett, MD Graduation