features

**Maryland’s MASTRI Center:**
The World of Science Non-Fiction 8

Opened in 2006, the Maryland Advanced Simulation Training, Research and Innovation (MASTRI) Center offers simulation to improve skills, not only for surgeons and surgical residents, but for others within a broad range of disciplines in the health care community. It is headed by Adrian Park, MD, professor and chief of general surgery—a world-class surgeon and leading innovator in minimally invasive procedures.

On the Cover: Adrian E. Park, MD, in the MASTRI Center
Photo by Richard Lipperholz

**Are These Mummies the Secret Victims of Burke and Hare?** 14

When Professor Granville S. Pattison joined Maryland’s faculty from Scotland in 1820, he brought with him the world’s most extensive anatomical collection—nearly 500 specimens. Two centuries later Ronn Wade, head of Maryland’s anatomy board, is trying to determine if some of these donors might have been murdered.

**A New Breed of Doctor** 21

Maryland’s MD/PhD program received a tremendous boost late last year when it was named recipient of a significant grant from the National Institutes of Health. The funding will likely increase the number of applications to a program that has been gaining notoriety and popularity under the direction of Terry Rogers, PhD. As the program has evolved over the years, it has taken on a more translational focus.

**Alumna Profile:**
Francesca I. Okoye, MD/PhD ’09 24

Adding Muscle to the MD

She’s been described by faculty as one of the brightest and best. So it made sense that, in addition to earning an MD, Francesca I. Okoye, ’09, would also join the PhD program at Maryland with focus on the immune system. During her medical education she also began bodybuilding and won several competitions. Now settled into her specialty medical training, Okoye knows the years of preparation will be well worth the wait.

**Alumnus Profile:**
Jorge Velarde, MD/PhD ’06 26

Opportunity Revisited

Jorge Velarde, ’06, isn’t worried about the extended time it is taking him to work through his medical education and training. He remained an extra year at Maryland before receiving his MD/PhD to complete a research collaboration on E.Coli. Now, with his pediatric residency behind him, he’ll head to Boston for a fellowship in pediatric infectious diseases at Harvard Children’s Hospital.

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n a recent Wall Street Journal Op-Ed column, Darrell G. Kirch, MD, president and CEO of the Association of American Medical Colleges (AAMC), questions whether people newly insured through any overhaul in the health care system will have doctors to care for them.

The AAMC estimates a shortage of 125,000 doctors in the next 15 years. Medical schools currently graduate about 17,000 new physicians each year. The U.S. Department of Health and Human Services says we need a minimum of 16,000 additional primary care physicians right now.

My own experience as chair of the council of deans of the AAMC and dean at Maryland convinces me that these shortages are not predicated on any absence among qualified young men and women aspiring to the medical profession. During the past year, we received more than 4,500 applications for our available 160 placements. Undeniably, the high cost of medical education has become a main reason that some talented medicine-inclined students turn to other careers.

I’m sure we all have treasured memories of our medical school days—the expectations that accompany graduation, the carefully laid plans for residency, fellowships, eventual practice or perhaps research. I look at our young students today, and I can’t help wondering how many of their plans are tainted by the anxiety of having incurred an average student loan debt of $135,000. “Newly minted” physicians may not choose careers in lower-paying primary care specialties such as general internal medicine, pediatrics and family medicine, even when those are the areas of maximum need, particularly in rural areas.

Here at Maryland we bid for the highest caliber students with outstanding scholastic records and personal qualities intrinsic to exceptional clinicians and researchers. Applicants with clearly directed career goals are drawn to our world-class faculty and the benefits inherent to being taught and mentored by those known for groundbreaking discoveries from transplantation to stem cell research.

I feel strongly that we have a responsibility to help these exceptional future physicians achieve their goals and reach the medical milestones for which they are being trained. I talk to them about their dreams and their expectations, and I wonder sometimes: Is this the one who will replace me? Is this one who will achieve a goal I missed, the one who will take a direction I didn’t take but might have? It is at these times that the sense of responsibility becomes a personal one. I have a feeling it may be the same for many of you as well. That is why I’d like this message to be the beginning of an initiative to help fund student scholarships.

...we never have had enough money “left over” to develop a competitive scholarship program and we need one now more than ever. That’s why the case statement for our capital initiative to help fund student scholarships.

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Compared to our peer medical schools across the country, Maryland gets much less state support. Frankly, we never have had enough money "left over" to develop a competitive scholarship program, and we need one now more than ever. That’s why the case statement for our capital campaign features a strong component for scholarships. We want to raise in excess of $10 million in new scholarship money in order to more than double our current scholarship endowments of $8.5 million. Believe me when I tell you that we have many, many students whose careers you would be honored to support. I will be delighted to hear from any of you who want to discuss the nature of your support or other innovative ways of participating. You should also feel free to contact Dennis Narango, associate dean for Development at dnarango@som.umaryland.edu or 410.706.5489.

The challenge is ours. I have every confidence we’re up to meeting it head-on.

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**Dean’s Message**

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**EVENTS**

**Relief Work Continuing in Haiti**

Since late January infectious disease specialists from The University of Maryland Institute of Human Virology (IHV) and surgical staff from Shock Trauma have been providing care to victims of Haiti’s earthquake.

The IHV reported that its offices were still standing and all personnel safe after the January quake and its relentless aftershocks. Haiti is one of the sites where IHV’s division of epidemiology and prevention, in conjunction with Catholic Relief Services, is conducting HIV studies and AIDs prevention vaccine trials. Despite the obstacles these efforts are continuing.

St. Francis de Sales Hospital in Port-au-Prince is the site of Maryland’s extended medical care. Teams of 20 rotating through every two weeks are treating infections from wounds that didn’t heal due to unsanitary conditions, and the surgical cases are focusing on untreated fractures that healed poorly. Efforts are expected to continue for several months.

**EVENTS**

**Student Award Honors Mackowiak, ’70**

Thomas Reznik, a fourth-year student at Maryland, was recently recognized by the local chapter of the American College of Physicians (ACP) with an award named in honor of Philip A. Mackowiak, ’70. Inaugurated this year, the Philip A. Mackowiak Award is presented to a medical student from either Maryland or Johns Hopkins who best exemplifies the ideals of the ACP. Remik organized the ACP mentorship program for Maryland students and served as student representative for the Maryland ACP during legislative day in Washington, DC. A representative of the MAA Student Advisory Committee, Remik is married and the father of two. Mackowiak, vice chair of the department of medicine, is a former ACP governor.

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**Advice to the Young Physician**

Written by Richard Colgan, MD, Advice to the Young Physician reveals how to make the transition from technician to healer as taught by some of medicine’s greatest teachers. Colgan is an associate professor at the University of Maryland School of Medicine and director of undergraduate education in the department of family and community medicine.

$34.95

Order your copy through www.amazon.com, or www.barnesandnoble.com
**EVENTS**

**Calling on Annapolis**

The Maryland contingent in Annapolis

Loan repayment assistance programs, funding for scholarships, and the problem of physician shortages were among the items of discussion between some 50 students and faculty members and their elected officials in Annapolis on January 21.

“Then they realize what a wonderful thing their support does, in terms of getting kids from all parts of the state, especially the underserved rural areas, to become physicians and other healthcare providers. They get to see the results of the hard work the students have done.”

“The lawmakers have been great to us,” said Skyler Lentz, ‘13. “They seem to be genuinely interested in hearing from us and get our opinions.” Lentz was part of a group of students from the rural areas of western and southern Maryland and the eastern shore. Students and faculty were also invited to watch as presiding officers from both the house of delegates and senate presented the school with proclamations recognizing the groundbreaking work of its faculty researchers in mapping the genome of the common cold virus, a step that might one day lead to a cure. Later, they had a brief visit from Mike Miller, senate president, and Michael Busch, house speaker, who both spoke on the status of health care reform.

The pilgrimage to Annapolis has become an annual event in recent years, headed by SCM dean E. Albert Reece, MD, PhD, MBA.

**Transitions**

**Perman Returns to Head University**

Jay A. Ferman, MD, professor and chairman of the department of pediatrics at Maryland from 1999 to 2004, is returning to campus as president of the University of Maryland Baltimore. Since 2004, he has served as dean and vice president for clinical affairs at the University of Kentucky (UK) College of Medicine. He returns on July 1.

While at UK, Ferman was responsible for the recruitment of nearly 200 faculty members, a 40 percent increase in the number of science faculty and a 30 percent increase in clinical department faculty. Total all-source revenues grew by $150 to $500 million. Based on the most recent data, the college rose from 35th to 28th among public medical schools in total funding from the National Institutes of Health. He managed the implementation of external educational partnerships at UK supporting the colleges of dentistry, nursing, pharmacy, public health, and health sciences.

Ferman received his MD from Northwestern University in Chicago. Following residency training in pediatrics at Northwestern University Children’s Memorial Hospital in 1975, he completed a fellowship in pediatric gastroenterology at Harvard Medical School and at the Children’s Hospital Medical Center in Boston in 1977.

From 1996 to 1999, Ferman was the Jesse Ball duPont Professor and Chairman in the department of pediatrics at Virginia Commonwealth University Medical College of Virginia in Richmond. He served on the faculty at The Johns Hopkins University School of Medicine for 12 years, and from 1977 to 1984 was an assistant professor and associate professor of pediatrics at the University of California, San Francisco.

Ferman succeeds David J. Ramsay, DM, DPhil, the university’s president since 1994. Until his arrival, E. Albert Reece, MD, PhD, MBA, dean of the medical school and vice president for medical affairs, will serve as acting president.

**Events**

**Chisolm Portrait Added to Collection**

Visitor to Davidge Hall can now enjoy viewing another portrait of one of the school’s 19th century deans. The image of Julian J. Chisolm, MD, Maryland’s 16th dean from 1869 to 1874, was put to canvas in 2009 and delivered to campus in late December. Chisolm is regarded as one of the most famous surgeons in the Confederate Army. He was professor of surgery at the Medical College of South Carolina from 1858 to 1868 and treated the first wounded soldiers at Fort Sumter at the beginning of the Civil War. He joined Maryland’s faculty in 1868 as professor of operative surgery and clinical professor of diseases of the eye and ear. An internationally renowned ophthalmologist, Chisolm served as president for nearly every national and international organization during his time.

He was founder and chief surgeon of the Presbyterian Eye, Ear and Throat Hospital in Baltimore, and he is recognized for performing the first outpatient surgery for cataracts in America.

The artist is Laura Era, owner of the Troika Gallery on Maryland’s eastern shore. She is credited with portraying several of Maryland’s early deans now on display in Davidge Hall.

Funding was provided by the Medical Alumni Association Bowers Collection of Medical Artifacts Endowment Fund.
Stent Keeps Vessels Open for Dialysis

Kidney dialysis patients often need repeated procedures—such as balloon angioplasty—to open blood vessels that become blocked or narrowed at the point where dialysis machines connect to the body. Now, a new FDA-approved stent graft can keep these access points open longer, reducing the number of procedures these patients may need, according to Maryland research published in the February 11, 2010, edition of the *New England Journal of Medicine*.

“This is the first large-scale randomized study to find a therapy to be superior to the gold standard of balloon angioplasty. We found that using this new stent for dialysis patients whose access grafts have become narrowed improves graft function. It also clearly reduces the need for repeated invasive procedures and interruption of dialysis,” explains lead author Ziv Haskal, MD, chief of vascular and interventional radiology at the medical center. Haskal is also professor of diagnostic radiology & nuclear medicine as well as surgery at the medical school.

The prospective multi-center study took place at 13 sites across the country and enrolled nearly 200 patients. Ninety-seven patients received angioplasty with the new stent inserted in the patient’s arm, compared to 93 who received angioplasty alone.

In the study, patients with the stent graft were more than twice as likely to have open vessels compared to the angioplasty only group after six months. The recurrence of restenosis was nearly three times lower with the stent group (27.6 percent vs. 77.6 percent). In later follow-up, some patients still had functioning grafts two years after the stent graft was first implanted.

“That can translate into cost savings and improved quality of life for these patients, who already spend about nine to 12 hours a week in dialysis. We can now start considering grafts as something that may last for years instead of months in dialysis patients.” According to the researchers, the cost to treat dialysis access failure amounts to about $1 billion per year, and the number of patients needing hemodialysis is expected to continue to grow substantially over the next decade.

The self-expanding metal stent graft creates a scaffold to keep the blood vessel open. It is encapsulated by polytetrafluoroethylene, the same material from which most dialysis patients whose access grafts have become narrowed improves graft function. It also clearly reduces the need for repeated invasive procedures and interruption of dialysis.

We found that using this new stent for dialysis patients whose access grafts have become narrowed improves graft function. It also clearly reduces the need for repeated invasive procedures and interruption of dialysis.

The vaccine, based on a single strain of the falciparum malaria parasite—the most common and deadliest form found in Africa—targets malaria in the blood stage.

Scientists tested the vaccine in 100 children ages 1–6 at the Bandiagara Malaria Project in rural Mali. The doses proved to be safe and well tolerated, and they showed very strong antibody responses that were sustained for at least a year. Based on the apparent success in this early trial, the same international team of investigators is now subjecting it to further study in a trial of 400 Malian children. That study also will examine whether the vaccine—though it is based on a single strain of malaria—can protect against the broad array of malaria parasites that exist. The scientists hope the vaccine could be combined with other vaccines to create a multi-component immunization that is highly protective.

A new vaccine to prevent the deadly malaria infection has shown promise in protecting the most vulnerable patients—young children—against the disease. An international team of researchers led by the Maryland’s center for vaccine development and the Malaria Research and Training Center at the University of Bamako in Mali, West Africa, is doing the groundwork.

There are about 300 million malaria cases worldwide each year, resulting in more than one million deaths, most of them African children according to the World Health Organization. There is no approved vaccine to protect against the condition. The parasite is treatable using medications, though drug resistance is a relatively common problem.

In a study of the vaccine in young children in Mali, researchers found it stimulated strong and long-lasting immune responses. “These findings imply that we may have achieved our goal of using a vaccine to reproduce the natural protective immunity that normally takes years of intense exposure to malaria to develop,” says Christopher V. Plowe, MD, MPH, professor of medicine and chief of the center’s malaria section. Plowe, a lead author of the study, published online in the Feb. 4 issue of *PLoS ONE*, the journal of the Public Library of Science. He is an investigator with the Howard Hughes Medical Institute and a Dori Duke Distinguished Clinical Scientist.

In addition to the Howard Hughes Medical Institute’s support, the study was sponsored by the U.S. Army and funded by the National Institute of Allergy and Infectious Disease, and the United States Agency for International Development.

The new vaccine, called FMP2.1/AS02A, was developed as part of a long-standing research collaboration between the Walter Reed Army Institute of Research (WRAIR) and GlaxoSmithKline Biologicals (GSK). The vaccine consists of a form of the AMA-1 protein, invented and manufactured by (WRAIR), and the AS02 Adjuvant System, developed and manufactured by GSK. The adjuvant system is a compound that boosts the immune response to the vaccine. Previous studies found the vaccine to be safe and to produce strong immune responses in adults.

The vaccine, based on a single strain of the falciparum malaria parasite—the most common and deadliest form found in Africa—targets malaria in the blood stage.

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The researchers who created the laboratory are members of the Maryland Advanced Simulation Training, Research and Innovation Center (MASTRI), headed by Adrian E. Park, MD, the Campbell and Jeanette Plugge Professor of Surgery and chief of general surgery. Some of the capabilities at the center hint of science fiction, but they are very real. MASTRI is a high-concept think-and-do tank that is pushing the limits of futuristic technology while pursuing human concerns within medical education and discovery. Members employ simulation to improve skills, not only for surgeons and surgical residents, but for others within a broad range of disciplines in the health care community.

Opened in 2006, MASTRI was the vision of Park, a world-class surgeon and leading innovator in minimally invasive procedures. Having developed a simulation...
M ASTRI is a high-concept think-and-do tank that is pushing the limits of futuristic technology while pursuing human concerns within medical education and discovery.

emphasis is research that determines the best methods for skill and cognitive training in a wide variety of medical and health-related disciplines. There is considerable evidence his vision has been on target from the beginning. Within a few years, the center has become an internationally regarded site, drawing the attention of medical educators throughout the country who come to study its program. It is one of relatively few centers nationally—and the first one on the east coast—to receive a full three-year certification from the American College of Surgeons.

By all accounts, medicine was a latecomer in education by simulation, and arguably with good reason. Pilots and astronauts learn on simulators and later graduate to mastering control panels from the air and outer space. Surgeons, on the other hand, work in the inner space of the human body, and simulators can’t replicate that. Or can they? Gerald R. Moses, PhD, director of the MASTRI Center, explains that in times past, surgeons were taught by a see one, do one, teach one maxim. It worked well, and still does, as surgical mentors pass their expertise and insight to students. That kind of education cannot be replaced. However, the advent of minimally invasive surgery, which has become standard for all abdominal procedures as well as many others, lends itself to simulation because the surgeon works through a video monitor, and his or her hands are separated from the surgical field.

“Today’s surgical residents still learn decision making and judgment in the traditional manner, through supervised practice in the operating room,” Moses says. “But there is additional available training through simulation of surgical procedures that provides alternatives to practicing on real patients.”

Therein lies a key component of simulation: safety. Moses alludes to a familiar question asked of surgeons by patients who want to know the number of a specific kind of procedure a doctor has performed.

“If the surgeon admits he has only done a few, the patient probably doesn’t feel very comfortable,” Moses says. “But if the answer is a few, but I’ve performed the operation 250 times in a simulated environment, the patient’s response is likely to be more positive.”

He reports that there are certain manual techniques attached to minimally invasive surgery that are mastered with low-fidelity simulators designed to develop fundamental skills. Through realistic instrumentation and mock-up tests, surgeons get the chance to practice until they get it right. In a sense, they have no “first patient.” When a young doctor steps into an initial operating encounter as lead surgeon, he or she enters with the con- didence gained from surgical mentors, plus the added experience of having already perfected the procedure through practice.

Although Park concludes it was his specialty of minimally invasive surgery that first directed his interest in simulation, he does not believe it is the main driver today. The broad applications within most specialties are propelling its popularity, he says. “There is also an increasing pressure from policy makers, educators, patients and their representatives that medical trainees don’t practice on patients,” he says. “So the learning curve, for example in critical care or emergency medicine, makes it important to avoid direct patient contact in the early stages of training. If mistakes are made, it’s better they are made in a simulated environment.”

“MT coins” are developed by MASTRI staff, some of which are proprietary, some others that are shared with photography, a little plastic, some glue and considerable imagination,” he says. Park reports there are several other simulation models developed by MASTRI staff, some of which also have patents pending.

Some of the work undertaken by the MASTRI team seems futuristic, it should be noted that it is no more so than the environment itself. Every facet of the center has been designed, not only for optimal function and long-term adaptability, but with planning that remedies unanticipated interruptions or necessary changes in a planned schedule. One of a few academic simulation centers with on-site convenience, it found a home when the hospital’s surgery suites were being relocated. Park eagerly accepted part of the abandoned space for the center, using the remaining space to complete four “operating rooms” and two conference areas.

“We started swinging hammers, found some funding for needed renovation work, and there appears to be none. George says the test of any surgical model the center uses is that it can be transferrable in its application to the operating room, claiming there are many simulators they won’t use because of their unrealistic learning curve. “We want to be absolutely sure that any student who learns on a simulator will not have to re-learn in surgery,” he says.

The solution to the problem of finding appropriate technology often is found in the response from the center’s staff who elect to develop their own models. George points out that those involved in this research generally are staff members with relevant experience. His own background includes several years as an operating room manager. He and F. Jacob Seagull, PhD, director of education research, created a model for hernia repair by approximating human tissue with various materials so that the model looks and feels realistic. An added degree of realism is achieved by converting actual patient data into a three-dimensional representation that then can be placed inside the models. The model is unique to Maryland and now is being used nationally in lieu of using animals to demonstrate the procedure. The manufacturer’s model sells for $120,000, and has some physical restraints for teaching. MASTRI develops its technology at a cost of $300 and has a patent pending for it.

Ivan George, director of advanced technologies and special projects, reports, “We have different technology for every class of procedure we undertake. We use laparoscopic simulators, plus those for endoscopy, trauma, childbirth, vascular procedures—and while some of the simulators serve multiple functions, we need individual modules for each one.”

He adds the center’s full roster of both physical and virtual trainers includes human patient mannequins that breathe, have blood pressure and other vital signs reflected on a screen. A technician behind the screen can change the “patient’s” well-being by adjusting vital signs to simulate risk situations. The mannequin’s chest will rise and fall in response to behind-the-screen input, and will respond as a human patient would to trauma, amputation, or even multiple challenges.

“A student might be called on to manage an airway problem or uncontrolled bleeding,” he says. “We might be using our baby simulator to test an anesthesia resident’s administration of an anesthetic to an infant—a delicate procedure in which the blood oxygen mixture must be precise.”

Research is a cornerstone of MASTRI’s initiatives that finds cost efficiencies when necessary and solutions where there appear to be none. George says the test of any surgical model the center uses is that it can be transferrable in its application to the operating room, claiming there are many simulators they won’t use because of their unrealistic learning curve. “We want to be absolutely sure that any student who learns on a simulator will not have to re-learn in surgery,” he says.
Surgery education, though it constitutes approximately half of the center’s program, is by no means its only activity. Learners include medical students, anesthesiology residents, fellows, nurses, nurse practitioners, paramedics, Air Force military and civilian personnel, and hospital employees. In all, there are 40 different courses, encompassing 500 sessions and 3,000 course hours for a total 5,000 student encounters annually. Moses formerly served as a program manager for the U.S. Department of Defense. He says the current needs for medical personnel to be trained in trauma and other procedures have led to their enrollment in MASTRI courses for a variety of disciplines. “There has been an enormous breakthrough in medical simulation in the last 10 years,” he says. “Technology is changing the way medical education is being applied. Even practicing surgeons wanting to refine or expand their skills are looking to simulated techniques.”

Strong endorsement from the American College of Surgeons is adding impetus to simulation programs across the country. The group is currently working to establish guidelines for specific elements within a curriculum. Similarly, the American Board of Surgery now dictates that a surgeon cannot sit for board examination until he or she has passed the fundamentals of laparoscopic and endoscopic skills taught through simulation. As for the relatively young Society for Simulation in Health Care, the organization hosted 350 at its annual meeting six years ago, and 3,000 in 2009. Probably no ground-breaking advance in medical science has forged ahead without complication, and simulation is no different. Park confirms there is not yet a uniform standard among simulators across the country. He says medicine lags behind colleagues in aeronautics, aerospace and the military who have been using simulation training for years, and understandably have made greater strides in terms of uniformity. Part of the reason medicine has been slower may be that, contrary to other high stakes fields that are willing to adopt innovations they know work, medicine tends to hold back until there is proof. Currently, leaders in the field, including Park, are developing fundamental principles for training. The support evidenced by the American College of Surgeons is making important inroads toward this aim. Park believes that, while there is still need for manufacturers to start talking the same language, medical science has made significant progress.

The results of simulation training have been impressive. As of this writing, the MASTRI Center has more than 3,000 different simulator models. The center has trained more than 12,000 learners in trauma care since opening in 1999. The program has trained anesthesiology residents and fellows, nurses, nurse practitioners, paramedics, and military personnel. The center has also trained hospital employees from several departments. In total, there are 40 different courses, encompassing 500 sessions and 3,000 course hours for a total 5,000 student encounters annually. Moses formerly served as a program manager for the U.S. Department of Defense. He says the current needs for medical personnel to be trained in trauma and other procedures have led to their enrollment in MASTRI courses for a variety of disciplines. “There has been an enormous breakthrough in medical simulation in the last 10 years,” he says. “Technology is changing the way medical education is being applied. Even practicing surgeons wanting to refine or expand their skills are looking to simulated techniques.”

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The achievements recorded by MASTRI in so short a time, as well as by leading simulation programs elsewhere, suggest it is inevitable that the field will earn a growing presence in almost every phase of medical care. “There is no turning back,” Park says. “The train has left the station. Simulation has become necessary to the practice of medicine. However, we cannot afford to ignore the challenges we face. This is an enormously expensive national undertaking. The market is a small one, and the return on investment not a favorable one. We will need an investment from government and all stakeholders including hospitals, medical and surgical oversight bodies, insurance companies and others. The bottom line, however, is that it will be one of the most fruitful and productive areas in terms of patient safety. I can’t think of anything more important than that.”

Dr. Park can be contacted at the MASTRI Center through the department of surgery at 410.328.7994 or apark@smail.umaryland.edu.
In 1829, William Burke and William Hare were put on trial in Scotland, accused of murdering several people and selling their bodies to aid medical science. Burke was eventually hanged after Hare testified against him to save himself. The following article appeared in The Sun newspaper in the United Kingdom on February 12, 2010. It explores the possibility that some of their victims were brought to the University of Maryland in 1820 by Professor (and later dean) Granville S. Pattison.

By Siobhan McFadyen

A grisly crime wave struck fear into the heart of the nation almost 200 years ago. Furious Scots rioted in Glasgow and Edinburgh and burned down a medical school in Aberdeen because of the shocking rise in body-snatching. Serial killers Burke and Hare were convicted of murdering 16 people—and selling their corpses to medics for dissection.

Now a US expert is coming to Scotland to discover the truth about a collection of mummies bought by the University of Maryland around the time the evil duo were carrying out their slaughter. Ronn Wade, director of the uni’s anatomical services division, said: “We don’t know where the bodies came from exactly—but it was almost certainly done under cloak and dagger.”

The mummies have been preserved in arsenic, salt and honey and the unique specimens have been used by thousands of US medical students. Yet Ronn is unsure how exactly the mummies, which once had 500 separate parts, were collected. He has teamed up with Scots historian John McPhail to uncover their history.

Ronn said: “The Scotland of then is very different to what it is today. Body-snatching was a lucrative industry. It wasn’t until the capture of Burke and Hare that people realised the true horror of what had been happening and the laws were changed.”

In those sinister times, grave-robbing and murdering victims was one way universities could get their hands on bodies for research. Families even staged grave side vigils to prevent corpses from being taken.

Ronn added: “By law only those who had been executed could be legally used but the medical profession needed hundreds of bodies each year and only around 50 people were executed. It therefore gave me to the crime wave. People who had just lost loved ones would come up with elaborate methods to keep their remains safe. They would personally watch over graves or invest in iron coffins and mortsafes which can still be seen in Greyfriars churchyard.”

In 1832, the Anatomy Act gave physicians and surgeons access to corpses that were unclaimed after death. But Ronn reckons his mummies were collected before this act was passed. He claims they were assembled by a 16-year-old prodigy called Allan Burns who was in charge of the dissecting rooms at College Street Medical School in Glasgow.

His older brother John was the first Surgery Professor at the University of Glasgow and was later prosecuted for grave-robbing. Ronn added: “We know when the mummies were created but who they are remains a mystery. Out of all of the remaining mummies there is one that offers a clue because it has a colour tattoo. It’s the only identifying mark on any of the specimens. I have seen and it depicts the coat of arms of Pope Pius VII. In those days colour tattoos were rare and I’ve often wondered whether it could have been that of a bishop.”

Ronn—who has also studied Egyptian mummies—says his Scottish collection is unique. He added: “The collection was groundbreaking at the time. It was superior to anything that had been available and we still use it today for educational purposes. I’m hoping to come back to Scotland to do some more research to see if I can find out more.”

Mr. Wade can be contacted at the anatomy board at 410.706.3313 or rwade@som.umaryland.edu

Are These Mummies the Secret Victims of Burke and Hare?

A colored tattoo: The coat of arms of Pope Pius VII?
Appointments to National Organizations

Miriam Bilker, PhD
professor and head of the division of human genet- ics in the department of pediatrics, was appointed the executive director of the American Board of Medical Genetics (ABMG) in September 2009. In this capacity she will represent the ABMG on the American Board of Medical Specialties, as well as other organizations representing the genetic community. In addition, she will represent the ABMG at appropriate public and governmental events and work closely with the board of directors to coordinate board activities, provide administrative oversight and manage internal committees.

Carol Carraccio, MD
professor, department of pediatrics, is chair-elect of the board of directors of the American Board of Pediat- rics for a one-year term beginning January 2010. In 2011, she will serve as actual chair of the board for one year, and in 2012 will serve as immediate past chair for another year.

Virginia Keane, MD
associate professor of pediatrics, was awarded the pediatrician of the year award by the American Academy of Pediatrics in September 2009. The award was given to a pediatrician who is also a fellow of the AAP and who is recognized as exemplifying the ideals of pediatrics in service, advocacy and contribution to organized pediatrics.

Stephen Jacobs, MD
professor, department of surgery, was awarded the 2009 Gold Care Award by The American Veterinary Asso- ciation (AVMA). The award is presented annually to a veterinarian who has made outstanding contributions to the profession and to the AVMA. Jacobs was cited for innovation and leadership in the field of laparoscopic donor nephrectomy and in residency education.

Laure Aurelian, PhD
professor, department of pediatrics, was awarded an invited speaker at the 2009 AES annual meeting held in Boston in December 2009. He was chosen in recognition of his genuine concern for patients as well as his devotion to the care of people afflicted with epilepsy—characteristics reflective of Penry’s own philosophy.

Leonid Medvedev, PhD
professor, department of microbiology & immuno- biology, co-organized a workshop, entitled “The Change We Need New Frontiers in Live-Cell Imaging” at the annual meeting of the Society for Neuroscience in Chicago in October 2009. The workshop examined advanced microscopy approaches that push the limits of what is currently possible in imaging of living cells and tissues, demonstrating techniques that have only recently become available to neuroscientists or that will only become available in the coming years.

Scott Thompson, PhD
professor, in the department of physiology, co-organized a workshop, entitled “The Change We Need New Frontiers in Live-Cell Imaging” at the annual meeting of the Society for Neuroscience in Chicago in October 2009. The workshop examined advanced microscopy approaches that push the limits of what is currently possible in imaging of living cells and tissues, demonstrating techniques that have only recently become available to neuroscientists or that will only become available in the coming years.
Maureen Black, PhD, the John A. Scholl Professor of Pediatrics, was awarded a $2,000,375 grant from the National Institute of Child Health and Human Development for “Toddler Feeding Styles.” The grant covers the period September 30, 2009 to August 31, 2011.

Grants & Contracts

Amy Fulton, PhD, professor, department of pathology and program in oncology, was a guest editor of the bookClickem Receptors in Cancer, published by Humana Press, 2009.

Manhattan Charurat, PhD, MHS, assistant professor, department of medicine and institute of human virology, received a four-year $2,858,656 grant from the National Institute of Allergy and Infectious Diseases for his work entitled “Acute HIV Infection and Pregnancy.”

The goal of this research is to investigate the impact of HIV acquisition during pregnancy on mother-to-child transmission of HIV in Nigeria.

Kevin Cullen, MD, professor, department of medicine, and director, University of Maryland Markey and Reavill Cardiac Cancer Center, received two administrative supplements to the Cancer Center Support Grant (P30). The first grant was for $31,500 to hire a new physician-scientist for the period of August 1, 2009, to July 31, 2010, and the second was a two-year $150,000 supplement for pilot and grant programs to support developing shared services.

Raja Erzurumlu, PhD, professor, department of anatomy & neurobiology, received a five-year $1,649,629 R01 grant, competing renewal grant from the National Institute of Neurological Disorders and Stroke for “Cellular Mechanisms Underlying Pattern Formation.” Additionally, he received a $242,415 equipment supplement award from the National Institute of Neurological Disorders and Stroke for his R01 grant entitled “Histomorphometry for Cortical Development and Plasticity.”

Gary Fliskum, MD, professor and vice chair for research, department of anesthesiology and center for shock Trauma and Anesthesiology Research (STAR), has been awarded a three-year, $1,015,952 grant from the Department of Defense/Genova Foundation for the project “Inhalation of Oxygen and Hypertension: Early After Injury May Be Detleons to Casualties with Closed-Head Traumatic Brain Injury.”

W. Florian Fricke, PhD, research associate, department of microbiology & immunology, and institute for genome sciences, received a two-year $1,364,611 grant from the National Human Genome Research Institute for the project entitled “Virtual Machines and Cloud Computing for Automated and Portable Sequence Analysis.”

“A co-investigator on the grant is Owen White, PhD, professor, department of epidemiology. This funding was issued under the National Institutes of Health nurse (K02) 09-09-09, as part of the Recovery Act Limited Competition for NIH Grants: Research and Research Infrastructure “Grand Opportunities” (R2C2).”

Ronald Gartenhaus, MD, associate professor, departments of medicine and microbiology & immunology and program in animal models, received a five-year $1,781,280 R01 grant from the National Institute on Alcohol Abuse and Alcoholism for his work entitled “Nicotinic Contribution and Risk of NHL: Role of mTOR Dysfunction.”

Alfredo Garzino-Demo, PhD, assistant professor, department of microbiology & immunology and institute of human virology, received a four-year $1,667,901 grant from the National Institute of Neurological Disorders and Stroke for his work entitled “Novel Anti-HIV Activity of CCR5 via APOREIC: Relevance to CNS Infection.”

The goal of this research is to investigate the mechanism of inhibition of HIV by a cellular receptor called CCR5. These studies are highly relevant to preventing and treatment of HIV infection. He will contribute knowledge that can be used to develop novel anti-HIV drugs that will target CCR5.

Stephen Lieggett, MD, professor, departments of medicine and psychology, and associate dean for interdisciplinary research, received a five-year $2.3 million grant from the National Heart, Lung and Blood Institute for his work on the molecular basis of rhinovirus-induced smooth muscle reaction contraction alternations. The title of this grant is “Lung HIV-G-Protein Coupled Signaling Interactions in Asthma.”

Dave Pauza, PhD, professor, department of medicine and institute of human virology, received a four-year $1,218,776 grant from the National Cancer Institute for his work entitled “Mechanisms for Defeating Tumor Immunity in AIDS.” The goal of this research is to investigate signaling pathways that control cell functions, to uncover defects associated with HIV infection. Knowledge of these defects and potential drugs that can correct the viral protein responsible for these defects, is needed to design new therapy approaches to get rid of T cells in patients with HIV disease.

Christopher Plane, MD, MPH, professor, department of medicine and chief of the Malara section, center for vaccine development, was awarded a three-year $1.5 million contract (and a two-year option of $1 million) from the USAID Regional Development Mission Asia to support molecular surveillance of drug-resistant malaria in Greater Mekong Subregion—Cambodia, China, Laos, Thailand, and Vietnam. This award is a collaboration with Mahidol University, Prince of Songkla University in Bangkok, Thailand, and Global Scientific Solutions for Health in Baltimore.

Pablo Rabinnovich, PhD, assistant professor, department of biochemistry & molecular biology and institute for genome sciences, was part of a multi-institutional team that sequenced the canine genome. He will be part of an international consortium that has created a $1.3 million grant from the Bill & Melinda Gates Foundation for research to improve canine genome assembly and analyze cutting-edge-assisted breeding of canines, a woody shrub that is cultivated in tropical and sub-tropical regions for its edible root, a rich source of carbohydrates.

Jacques Revel, PhD, associate professor, department of medicine, received a five-year $2.5 million grant from the National Institute of Child Health and Human Development for his work entitled “A Novel ORFeome Approach to Identify Disease Genes.” Tettelin’s focus will be on “A Novel ORFeome Approach to Identify Disease Genes.”

Awards & Recognition

The goal of this initiative is to develop a highly interactive and synergistic consortium of investigators who will share data and expertise to further the field of progenitor cell biology forward.

Hervé Tettelin, PhD, associate professor, department of microbiology & immunology and institute for genome sciences, is a co-investigator on a five-year $10,189,193 grant from the National Institute for Allergy and Infectious Diseases entitled “Macular immunity, vaccines and microbiota in humans and animal models.” Tettelin’s focus will be on “A Novel ORFeome Approach to Identify Disease Genes.”

Ron Zellie, PhD, professor, department of pediatrics and microbiology & immunology is the primary investigator of this project.

William Stanley, PhD, professor, department of medicine, received renewal funding totaling $311,500 for a five-year NIH Program Project Grant entitled “Cardiac Energy Metabolism and Mitochondrial Function in Heart Failure” (August 2009–July 2014). The project studies defects in energy metabolism in cardiac muscle in the chronically failing heart, with emphasis on the development of novel nutritional and pharmacologic therapies. It is headed by Stanley and is a collaborative effort with Case Western Reserve University, New York Medical College, and Henry Ford Health Services.

Michael Terrin, MD, CM, MPH, professor, department of epidemiology & preventive medicine, received a seven-year $30,720,138 grant from the National Heart, Lung, and Blood Institute for the establishment of a Pro-Genitor Cell Biology Consortium Administrative Coordinating Center. The goal of this initiative is to develop a highly interactive and synergistic consortium of investigators who will share data and expertise to further the field of progenitor cell biology forward.

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A look back at America’s fifth oldest medical school and its illustrious alumni

170 Years Ago
In 1840, the Maryland Medical and Surgical Journal, edited by Maryland’s faculty, became the first official publication to be adopted by the medical departments of the U.S. Army and Navy.

50 Years Ago
In 1960, Margaret L. Shanard, class of 1949, became the first female president of the Baltimore County Medical Society.

120 Years Ago
In 1890, William T. Councilman, class of 1878, made his initial report on the hepatic manifestations in patients with yellow fever and his description of an acidophilic body later known as Councilman Body. He became Dr. William Welch’s first resident at City Hospital and a faculty member in physiology, anatomy, and pathology at Johns Hopkins. In 1892, he became the Shattuck Professor of Anatomy at the Harvard Medical School.

A New Breed of Doctor

Although the trend toward physicians with dual professional degrees developed almost 60 years ago, the term physician-scientist remains a vague one among many. Who are these doctors and what is the impetus that drives them toward a career demanding approximately eight years of education beyond their undergraduate studies, plus residencies for most, and additional fellowships for many?

Understandably, the emergence of molecular biology and DNA discoveries opened new opportunities to look at the human genome, thereby attracting those with inclinations toward research as well as clinical care. The entire shift toward personalized medicine...
where treatments are based on a patient’s individual DNA is sold as cause for the merger between medicine and science.

However, Terry B. Rogers, PhD, professor of biochemistry and molecular biology, and director of Maryland’s MD/PhD program, reports there has been an evolution in the mission of modern physician-scientist training programs. One of 120 medical schools nationally, approximately 40 are funded by the NIH. A recent grant application from Maryland’s program has received an exceptional high score, with funding anticipated by July 2010. Rogers says a favorable NIH review is contingent in part on support from eminent physician-scientists on faculty who can contribute to the training of those in the program.

“It is no accident that a school such as ours, with the talents of Jim Nataro, Steve Liggert, Bob Gallo, Curt Civin and others, has received a top score,” Rogers says. “Our students see medicine and research as a continuum, and they are supported by a top level faculty. In addition, we bring in physician-scientists from the NIH and elsewhere, not only as speakers but as mentors.”

The American Association of Medical Colleges (AAMC) has launched an analysis of programs in 22 prestigious medical schools including the one at Maryland. Rogers, who serves on the executive committee of the AAMC’s MD/PhD section, reports the study shows close to 80 percent of graduates within these programs work in academic medical centers, institutions such as the NIH, or biotech companies. An impressive 99 percent pursue a residency after graduation, typically followed by a fellowship. Fewer than 10 percent drop one phase of training to become either physician or scientist, but not both. Rogers attributes the continued activity in both medicine and science to flexibility within training programs that balance and integrate medicine with research.

Shayna Rich, one of 32 students currently enrolled in the Maryland program, is a graduate of Dartmouth, with degrees in physics and mathematics. Rich began rethinking her choice of career path shortly after graduation. With what she calls a fair amount of “intellectual soul-searching,” she considered medical school. She started working in a hospice environment and soon was drawn to palliative care and end of life issues. Her application to Maryland was based on her instinct that the program would offer a pragmatic way of balancing her interests in research and clinical care. Rich completed a PhD in epidemiology in three years, a considerable achievement. As she works toward her MD, she has already published numerous papers, has received an NIH grant, and in 2008 was named the most outstanding graduate student at the medical school. In addition, she is a recipient of the Nataro Family Scholarship, an award to the program from three generations of SOM alumni whose most recent alumnus is the program’s first graduate, world-class infectious disease specialist, James P. Nataro, MD/PhD ’87.

“For me, the program is a marriage of translational research with the area of medicine I’ve chosen,” Rich says. “Even today, when I talk to MDs, they tell me many journal papers are not helpful. There is only limited benefit in a study on the efficacy of a drug if it is written from an ivory tower perspective, without hard facts that help physicians know what is best for an individual patient. I believe this kind of inequity can be addressed by the MD/PhD graduate.”

Maryland’s program is a highly competitive one. While applications are likely to increase following receipt of the NIH grant, applications currently approximately 120 a year. Of those, 30 applicants will be interviewed and 11 accepted. Ultimately, five will matriculate. Acceptance of each student represents a substantial expense to the SOM which provides full support, including tuition, health insurance and an annual stipend to each student. Full student support is necessary if we are to get the kind of results we need,” Rogers claims. “However, there is a return on that investment. Many of our students are so talented that they receive their own grants. This results in resources for their mentors, and places an outstanding student in a laboratory in which he or she may make an important discovery—one which the principal investigator can spin into a new grant.”

Faculty members involved in the MD/PhD program contend such returns don’t begin to include all the benefits gained by training those who in the near future will be part of the decisive bonding taking place between science and medicine.
Adding Muscle to the MD

Alumna Profile: Francesca I. Okoye, MD/PhD ’09

At 5 feet 11 inches, Francesca I. Okoye, MD/PhD ’09 cuts a striking figure. She is athletic, energetic, and intelligent. But what really sets her apart in the world of medicine is what she is working hard to become: a new breed of physician, accomplished not only in medicine, but science as well.

Over a seven-year stretch, Okoye, age 33, has not only received a doctorate in microbiology and immunology, but graduated from the school of medicine. It is a pursuit that requires intelligence, dedication, stamina and a desire to spend more than a decade studying and learning in hospitals, clinics and labs. Her goal is a simple one—to make a difference. And the best way she knows how is by fusing the scientist with the physician.

“I fell in love with the fact that I could try something in the lab and take it back to the patient,” says Okoye, who received her doctorate in 2007 and graduated from the medical school last spring. “That is the whole goal of being in medicine: to make a difference.”

Years ago, the scientist and physician would have rarely crossed paths. But Okoye and a growing number like her are bringing the two worlds together.

Okoye is currently a first-year resident in internal medicine at Stanford Hospital & Clinics in Palo Alto, Calif. She pulls 30-hour shifts in the cardiac care unit, counseling patients on taking medications, or discussing the benefits of a low-salt diet. “For me it is one patient at a time,” says Okoye. “Before conversing with each patient I remind myself to address every aspect as to why they are here; so they don’t have to return for the same problem.”

While she shows compassion at the bedside, Okoye is as serious in the lab. She has studied CD4 T cells, which help activate other cells in the immune system. She has contributed to breast cancer vaccine research, and has studied proteins and antigens in cells by staining them with immunofluorescent dye. “For me research is great if I can apply it to humans,” she says. “At the end of the day I want to know how my work in the lab applies to patients.”

If anyone has the potential to make a difference in medicine it is Okoye, according to Frank M. Calia, MD, MACP, vice dean for clinical affairs and former chairman of medicine. “She is a superstar,” he says. “Her rise is already meteoric.”

Since she was a youngster, Okoye knew she wanted to be in medicine. She was born in Nigeria, one of six children, and her parents moved to Baltimore in 1986. Her father, a scientist at Johns Hopkins School of Public Health, researched malaria until he retired, and her mother is currently working as an aide at a nursing home.

“We all played sports,” she says of her three brothers and two sisters. “But the girls were more bookish than the boys,” Okoye’s younger sister, Mercy, a third-year resident at Maryland.

After graduating from college, Okoye became a research assistant and then a senior laboratory technician in the oncology department at Johns Hopkins University School of Medicine. She wanted to become a doctor but needed to improve her MCAT scores. Working in the lab helped pay for her courses and prepare for the test. She was accepted at Maryland in 2002, and two years later she decided to apply to the MD/PhD program.

“The MD/PhD application process was intense: more forms, more essays and, yes, panel interviews,” Okoye recalls. “The interview was the most nerve-racking with several faculty members grilling me on why I wanted two degrees, where I saw myself in 10 years, and what area of research and medicine I hoped to pursue.”

Only a handful of students were accepted.

Calia, who was chairman of the department of medicine at the time, met with Okoye and the other senior medical students once a week. He says she was one of the best ever. “And I have been doing this for 40 years,” he says. “I knew about her because everybody raved about her. There was a buzz,” he says. “She excelled in the basic sciences; she has excellent clinical skills; she is very creative; she has great people skills; and she has leadership coming out of her ears.”

Okoye has sacrificed plenty by packing so much into her life in such a short time. About seven years ago she began bodybuilding to keep in shape and showed promise, taking first place in several competitions, including the DC Capitol City Musclesmania Tall Division in 2004. She still manages to squeeze in time for a workout, but on her one day off a week she is usually scrambling to meet life’s basic needs. “I tend to run errands that I should have run all week—I clean my apartment and buy groceries,” she says.

More training lies ahead. After residency Okoye plans to begin a fellowship, as she contemplates rheumatoid arthritis as her specialty. She aims to “find better treatment options or perhaps even discover the exact mechanism involved in the development and progression of the disease,” she says. “It is a long road,” Okoye admits. “But at the end of the day well worth the effort. I like helping people.”

She excelled in the basic sciences; she has excellent clinical skills; she is very creative; she has great people skills; and she has leadership coming out of her ears.

I fell in love with the fact that I could try something in the lab and take it back to the patient.”
Opportunity Revisited

**Alumnus Profile: Jorge Velarde, MD/PhD ’06**

The first student in Maryland’s MD/PhD program to receive a full scholarship with a stipend could have obtained his PhD a year earlier than he did. Jorge Velarde MD/PhD ’06, stayed to take full advantage of an offer he couldn’t refuse.

“Jorge was one of the best students I have ever worked with in any capacity,” he says. “He was a superb student: hard-working, creative, and independent. Velarde is equally appreciative of his former student’s abilities. “Jorge was one of the best students I have ever worked with in any capacity,” he says. “He was a superb student: hard-working, creative, and independent.

Velarde, whose father is an alumnus of UMCP, was recruited to the same campus through the prestigious Banneker-Key scholarship. After graduating with a GPA of 4.0 and numerous honors, he selected Maryland’s MD/PhD program over several others based on the prestige of the center for vaccine development. He authored two papers prior to getting his PhD, and then went on to complete a residency in pediatrics at the Cincinnati Children’s Hospital Medical Center, his first choice because of its strong clinical training programs. For the past year, he has served as a staff physician in the emergency department of that medical center. His wife, Aynslee Wells Velarde, ’07, will complete her pediatric residency department of that medical center. His wife, Aynslee Wells Velarde, ’07, will complete her pediatric residency at Boston where Velarde will begin a fellowship in pediatric infectious diseases at Harvard’s Children’s Hospital.

While his research has necessarily taken a back seat during the past year, he is eager to begin studies on the pathogenesis of group A Streptococcus, which is known to cause a number of infections. He had started to put together the kind of data that was leading him closer to discovery. On another front, he calls his year treating children in a busy emergency department a challenging experience that gave him a chance to treat some seriously ill youngsters. Those interactions with children and parents have been invaluable as well.

“Every experience throughout my medical and graduate education, as well as my clinical work as a staff physician, have been exciting because they pointed me in the direction of my ultimate career path,” Velarde says. “People sometimes ask if I see myself more as an MD or PhD. To be honest, it’s neither—not yet. I see myself as Jorge. I’m pretty low key on that. Right now, I’m thinking about the opportunities I have had, looking forward to those ahead, and focusing on how they will shape my future.”

In recounting some of those past, he includes the summer between college graduation and medical school. He was fortunate to assist in a research project in the laboratory of biochemical genetics, national heart, lung and blood institute at the NIH. He admits being a little star struck at the tender age of 21 to have as a mentor, the late Marshall Nirenberg, PhD, who won the Nobel prize for deciphering the genetic code of DNA.

“Jim Nataro became the strongest influence I had. He was a phenomenal human being and an unbelievable mentor. He would come over to where I was working, ask how my experiments were going, and assure me he was there to help if I needed him. A few years later, when I was in medical school, we had a retreat, and I invited him to speak. He accepted, and I remember how impressed I was again at his genuine interest in talking to us.”

People don’t generally think of medical students as having time for volunteer activities. Velarde, however, managed to find hours to help out several worthy causes throughout his school years. He returned English to Spanish-speaking adults through a charitable organization in downtown Baltimore. He visited AIDS patients in Madrid while studying abroad during college, and was one of many students throughout the university who provided continuing education about AIDS prevention to students in Baltimore schools.

As for the future, Velarde hopes for a career in academic medicine. “I want to be a good clinician,” he says. “I want to be a good infectious disease specialist, and I want to be successful in my research. I know this will take a number of years,” he adds. “I’m in no hurry. I hope that doesn’t sound as if I’m not ambitious. I am, but I know my future is still in the formative stages. Eventually, I’d like to do research 75 percent of the time. Ideally, Jim Nataro is the model I would most like to emulate, and that’s an ambitious goal.”

Jorge Velarde, MD/PhD ’06

By Rita M. Rooney
The Junior Bull Roast

More than 100 juniors were able to break free from rotations to attend the annual bull roast celebration at the MSTF Atrium on December 10. The event, sponsored by the Medical Alumni Association, is designed to reunite the third-year class after a busy semester of rotations. This year four of the MAA-sponsored student activities—including the bull roast—were underwritten by Carolyn McGuire-Frenkil, a member of the medical school board of visitors. Faculty in attendance included vice dean Bruce Jarrell, MD, assistant dean for student affairs Donna Parker, ’86, husband Nenels Todd, ’86, and Richard Colgan, MD.

Annual Thanksgiving Feast Serves 400

Project Feast, a university initiative headed by medical students to serve Thanksgiving meals to the homeless, served 400 people at the Booker T. Washington Middle School on the national holiday. In addition to a hot meal, participants received bags of clothing and non-perishable food donations. They also enjoyed music performed by an oboe player. This year’s organizers were Beth Lidinsky, ’12, and Katie Duncan, ’12.

Sophomore Social

More than 70 members of the class of 2012 gathered at the Waterfront Hotel in Fell’s Point for the MAA-sponsored Sophomore Social on January 7. This annual party is held during the first week of classes in January as students return from the winter break. Participants were treated to appetizers, beer, wine, and soft drinks. Organizers included Anna Binstock, Joy Chang, and Khola Tahir, members of the MAA Student Advisory Committee.

Diversity Dinner Cancelled by Inclement Weather

The blizzard that shut down Baltimore and much of the state this winter forced the cancellation of the third annual Celebrating Diversity Dinner on February 6. The event had drawn nearly 200 reservations from alumni, faculty, students, and prospective students. Myron Weisfeldt, MD, the William Oder Professor of Medicine and chairman of the department of medicine at Johns Hopkins Medical School, was to be the keynote speaker. He was re-cipient of the 2008 diversity award, presented by the Association of Professors of Medicine. Proceeds from the event benefit the Dr. Donald E. Wilson Endowed Scholarship Fund. The event could not be rescheduled but will be held again next year.

The number of charitable gifts from individual donors to the medical school seems to be climbing in FY10, and gift amounts could reach record levels this year, according to the medical school and alumni association.

Last year a faltering economy combined with a plummeting stock market seemed to spook a good number of would-be donors. Nationally, revenues from gifts of $1 million and above fell nearly 70 percent. Total giving to the medical school rose nonetheless on the strength of a few large gifts and foundation grants.

But the tide for individual donors is showing some signs of turning. Through January 31 of the fiscal year, medical school gifts total $45 million, up from $29 million during the same period last year. “We don’t want to be over-confident because we’re only seven months into the fiscal year,” cautioned Dennis Narango, associate dean for advancement. “A lot of things can happen, but the numbers certainly look encouraging.”

Lead gifts include:

• $4 million in research support for the school’s center for vaccine development, from the Bill & Melinda Gates Foundation; and

• $3 million to establish the Xcision Endowment for Radiation Oncology Program Support, from Yi, Yu and Lenma, LLP.

• $1 million to support related research and patient services for otorhinolaryngology, radiation oncology and the PATCH Fund, from the Orokawa Foundation.

The number of donors is also up about five percent. “It’s rewarding to increase the donor pool each year as well,” according to Larry Pittrof, executive director of the Medical Alumni Association. “Despite a heavy debt load our recent graduates carry, many still find a way to make a gift to their medical school.”

Fund raisers are optimistic that the school will eclipse last year’s $53.8 million raised in gifts and pledges.

Save the Date and Help Save Lives

Maryland Half Marathon

13.1 mile race • 2 Person Team Relay • Kids Fun Run

May 23, 2010 • 7:00 a.m.

Timonium Fairgrounds

Post Race Concert featuring:

www.marylandhalfmarathon.com

Benefitting:

www.mdpcms.org

Sign up today and help fight cancer!
Heed Your Estate Plan

enjamin Franklin once wrote a colleague, “...in this world nothing can be said to be certain, except death and taxes.” Presently, however, making the decision of how to tax at death is anything but.

Most expected Congress to enact a “patch” that would apply the $3.5 million per person estate tax & GST tax exemptions and the 45 percent top rate of 2009 to 2010. It was then hoped that if the interim Congress could accomplish a long-term resolution to the estate tax system.

However, as a result of Senate inaction on this issue, a full repeal of the estate tax and the generation-skipping transfer (GST) tax took effect on January 1, 2010. Also repealed are the rules allowing for a “stepped up” basis for a decedent’s assets for capital gains tax purposes.

In the meantime, the federal gift tax remains in effect, with a $1 million per person lifetime exemption and $13,000 per donee annual exclusion. For any gifts above the exemption, the top gift tax rate has decreased from 45 percent to 35 percent.

If there is no Congressional action this year, then in 2011 the federal estate tax and GST tax would once again take effect, as would the “stepped up” basis rules, with a lower $1 million per person exemption and higher 55 percent top rate for each of these taxes.

The only thing certain right now besides death and taxes is that you should contact your attorney to consider whether amendments to your estate planning documents are warranted. Temporary repeal may create potentially unintended negative consequences under the formula clauses of some individual’s wills and related trusts, which could not have been contemplated when those documents were drafted.

In summary, temporary repeal may create other tax-related opportunities. For example, distributions from trusts otherwise subject to GST tax might avoid this tax. Moreover, gifts could be made at the lower 35 percent top gift tax rate, and gifts to beneficiaries or trusts that would otherwise be additionally subject to GST tax would only incur gift tax liability.

Keep in mind there are risks to acting on the temporary repeal. Senate leaders have promised swift action in 2010 to restore the estate tax and GST tax, and there is talk of making them retroactive to January 1, 2010. This could result in a much higher tax liability. It also brings in question the possibility of a successful Constitutional challenge to the retroactive imposition of tax.)

Regrettably, we encourage you to contact us and/or consult your other advisors with respect to the estate tax issue.

1930s

1939: Oscar Hartman and wife Lee of Sarasota, Fla., recently celebrated 70 years of marriage.

1940s

1943M: David B. Gray of Charleston, W.Va., turned 93 on February 12. He reports that West Virginia has its advantages, but regrets that he is unable to visit Baltimore anymore.

1944: Warren D. Bril of Cherry Chase, Md., retired as full clinical professor emeritus of medicine at the George Washington University School of Medicine. 1945: Stanley R. Steinbach of Baltimore reports that he is tolerating retirement, thanks to Yuleoli, bridge, classical music, family, and the fact he can sleep until 9:00 am. One of his grandchildren practices family medicine, and another is a school principal. 1947: Jose G. Valderas enjoys living in Keller, Texas. 1949: Nathan Schnaper of Baltimore reports that son Bill, 75, of Chicago has received the Irene and Henry Portico Endowed Chair at Northwestern University where he is professor of pediatrics research.

1950s

1952: Bella Schimmel-Desser of Los Angeles maintains an office clinical practice, teaches at UCLA and the New Center for Psychoanalysis, works at a community counseling clinic, and does horticulture therapy in special education classes for children. 1954: Daniel H. Framm of Potomac, Md., continues practicing and volunteers at two facilities in Pasadena, Md. 1955: Paul G. Mueller is in an assisted living facility in Posadada, Md. 1956: Charles Sanislow of Middletown, Conn., continues to enjoy partial retirement with wife Sally, four children, and eight grandchildren. Work focuses on management of his hospital’s vascular laboratory. 1957: Marvin S. Arons of Woodbridge, Conn., received a lifetime achievement award from the Yale Medical School Section of Plastic Surgery. 1959: Warren S. Poland of Washington, D.C., was recipient of the 2009 Sigourney Award, recognizing distinguished contributions to the field of psychoanalysis. Poland’s focus has been on the psychoanalytic process and the application of psychoanalytic thought to broad cultural issues. He is author of Melling W Travels: The Dyad and Principles of Clinical Practice. 1959: Landon Clarke Stout of Galveston, Tex., is working half time in the pathology department at the University of Texas Medical Branch in Galveston where he has been since 1972. His spare time is spent remodeling houses 1958: Gaylord L. Clark of Silverton, Md., reports that 2009 was a good year for him! 1959: Daniel S. Sax of Randolph Center, Vt., reports that the abundance of rain and seasonal temperatures throughout autumn created a banner year for his trees of apples, crab apples, pears, plums, and apricots, and he was able to make crab apple jelly, applesauce and cider—sweet and hard. Sax continues to enjoy neurology as a consultant at the Veterans Health and Wellsons Clinic and in the department of neurology at Dartmouth Medical School.

1960s

1960: Wilson A. Heefer of Stockton, Calif., published Daguray Sellar: His Life of General Lucian K. Truscott Jr. now available at Amazon.com. A military historian, Heefer also authored Patton’s Building: The Life and Service of General Walton H. Walker and Twentieth Century Warrior: The Life and Service of Major General Edwin D. Patton. 1960: Emanuel H. Silverstein of Baltimore limits his work to the mornings but continues to enjoy his dermatology office practice. He is relieved, however, that there is no longer the pressure of a full waiting room.

1965: Morton E. Smith of St. Louis received the Samuel Goldstein Leadership Award in Medical Student Education at Washington University. During the annual meeting of the American Academy of Ophthalmology in October 2009, he delivered the Zimmerman Lecture. 1966: Michael B. A. Oldstone of Bethesda, Md., continued practicing ophthalmology full time in Vienna, Va., with daughter Lisa Sklar. He recently celebrated his 80th birthday, and he wishes his classmates well!

1970s

1970: Charles V. Dyer of Chevy Chase, Md., continues serving as a mentor, and to prepare for professional life by bringing people together in a relaxed, candid, personal atmosphere. 1971: Interested doctors contact LinkMD with a date, time, and venue at which they would like to host an event, and an electronic sign-up is posted on MedScope, a website available to Maryland medical students.

Hosting an event means providing dinner at their house, at a restaurant, meeting students for happy hour or sharing a hobby (running, biking, bowling, etc.) with similarly interested students.

While providing exposure to a specific field of medicine, students are also likely to be drawn to different specialties that are drawn to different specialties.

If you are interested in hosting an event please contact LinkMD, please email linkmd@umaryland.edu or visit http://web.me.com/link-maryland.
practice in 2005, traveled for one year before volunteering to run a surgical clinic at the local health department. He now works one-half day a week while enjoying retirement and family time.

- **Ann Robb-Isbn Wilke of Advance, N.C.,** continues doing graduate psychology not-for-profit enterprise, but reports that her best achievements are not the same.

- **Jeffrey Kleinman** practices family medicine outside of Boston.

- **Anne D. Lang** of Baltimore practices pediatrics in Catonsville with classmate David Otto. She has two children in college and her third in eighth grade, so she will not be retiring anytime soon. Lang looks forward to seeing everyone at the 50th reunion.

- **Roy T. Smoot Jr.** of Saint Michaels, Md., is chief medical officer at Kerner Hospital.

- **Louis W. Solomon** of Gainesville, Fla., is director of the brain simulation unit at the University of Florida.

- **Darryl Kurland** of Princeton, N.J., reports that son Jason is a first-year nephrology fellow at Brown University. John and Brian is working up Marc’s management ladder. Kurland continues in HM/HIV and TB research with Johnson/Johnson focusing on drug safety, while wife Caryn remains in neurological research.

1980s

- **1980:** Robert G. Ammlung of Randallstown, Md., has joined MDVIP and reports that several other alumni colleagues have done the same.

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1990s

- **1990:** Nicholas M. Cardiges and wife Stacie of Fogelviste, Pa., announce the birth of Evan Paul on November 20, 2009. He joins brothers Michael, age 11, John, age nine, and Luke, age six. Michael E. Rauser of Redlands, Calif., is residency program director and vice chairman of clinical affairs in the department of ophthalmology at Loma Linda University, where he was recently recognized for 10 years of dedicated service.

- **1992:** Claudia Montgomery-Hays and husband Steve live in Apopka with their two children. Her OB/GYN practice continues to do well.

- **1994:** Thomas A. Hensing of Glenville, Ill., has specialized the faculty at the University of Chicago Pritzker School of Medicine and is currently co-director of the thoracic oncology program at NorthShore University HealthSystem.

- **1995:** Louis B. Mallnow of Ovings Mills, Md., is in year two of an OB/GYN practice. He is the only physician in Maryland certified as a diplomat of the American Board of Clinical Lipidology and ASH-certified as a hyperten-
sion specialist. 1997: Brian Newcomb of State College, Pa., invites interested parties to join him for a future spring break medical mission to Nicaragua. He was there in March, working under the ministry of health. He and wife Celeste included chil-
dren, Nayan, age 10, William, age eight, and Alexandra, age three. 1998: Jonathan Davis of Bethesda, Md., reports the birth of son Matthew in February 2009. He joins sister Marisa, 

2000s

- **2000:** Shelley-Ann M. Baily of Brooklyn, N.Y., works with pediatric residents at SUNY Downstate and is building her own practice at Kings County Hospital. She looks forward to the 10th reunion in spring 2010. Morales-Hall will serve as chief resident for the internal medicine program at St. Vincent Hospital beginning in July.

- **2009:** Jason Custer of Giltner, Neb., has been named chief resident at the Ziegler School of Rabbinic Studies in Jerusalem during her fourth year of training. This time wife Barbara will be studying in Korea and will be joining Maryland’s faculty in 2010. Lang looks forward to parties to join him for a future spring break medical mission to Nicaragua. He was there in March, working under the ministry of health. He and wife Celeste included children, Nayan, age 10, William, age eight, and Alexandra, age three. 1998: Jonathan Davis of Bethesda, Md., reports the birth of son Matthew in February 2009. He joins sister Marisa, who is chief medical officer at Kernan Hospital.

- **2010:** Matthew W. Diehn, of Naples, Fla., retired from the practice of OB/GYN on January 1.

- **2010:** Michael H. Hotchkiss of Middle River, Md., are about to become grandparents for the first time.

- **2010:** The brothers Michael, age 11, John, age nine, and Luke, age six. Michael E. Rauser of Redlands, Calif., is residency program director and vice chairman of clinical affairs in the department of ophthalmology at Loma Linda University, where he was recently recognized for 10 years of dedicated service.

- **2010:** Claudia Montgomery-Hays and husband Steve live in Apopka with their two children. Her OB/GYN practice continues to do well. The Key to the Success of The Medical Alumni Association of the University of Maryland, Inc., in continuous operation since 1875, is an independent charitable organization dedicated to supporting the University of Maryland School of Medicine and Danville. Structure: The board consists of five officers and nine board members. Each year more than 100 alumni participate on its seven standing committees and 13 reunion committees.

- **2010:** Membership: Annual dues are $85. Dues are waived for emeritus members upgraded more than 10 years or have reached 70 years of age and newly graduated alumni, and reduced to $25 for alumni in training. Revenues support salaries for two full-time and five part-time employees, as well as general office expenses to maintain the alumni data base; produce the quarterly newsletter; provide unrestricted support to the dean.

- **2010:** Annual Fund: The association administers the annual fund on behalf of the medical school. Gift revenues support student loans and scholarships, lectureships, professorships, capital projects—including Danville Hall conservation—plus direct support to the various departments and unrestricted support to the dean.
Dr. Wooddy joined the U.S. Navy after graduation and interned aboard the USS Maury in the Pacific. At the end of World War II, he completed his internship at Bethesda Naval Hospital. After fulfillment of his military commitment, Wooddy established a family practice in La Plata, Md., where he remained until retirement in 2001. He was a founder of Physicians Memorial Hospital and served as chairman of its department of medicine from 1947 to 1970. He was also a trustee of the hospital from 1960 to 1989. Wooddy was the founding father of the Charles County Medical Society and served as its president. He enjoyed pottery making and served as a member of the La Plata Town Council. Wooddy was preceded in death by one son and is survived by wife Joan Sutton, two sons, one daughter, and two grandchildren.

William K. Brendle, ’45
Hatfield, Ga.
February 4, 2010

Merry Hospital in Baltimore was the site of Dr. Brendle’s internship. During World War II, he served as a flight surgeon in the Army Air Forces and later returned to Baltimore to begin private practice. In 1945 to 1947, he was a captain in the U.S. Army Medical Corps, and then returned to Baltimore to begin private practice. Dr. Brendle was also a founder of Physicians Memorial Hospital and served as chairman of its department of medicine and then practiced at a small primary care practice in Towson, Md.

Donald E. Fisher, ’47
Wallkill, N.Y.
January 30, 2009

Upon graduation Dr. Fisher decided on a general practice which he operated in Catoctin. At an attack of polio in 1950, he limited his ability to work long hours, so he became public health director in Carroll County and later Prince Georges County and Montgomery County. He left held the top medical post for the Maryland’s correctional system. Thereafter he moved to St. Michaels, Md., and established an emergency medicine and then practiced at a small hospital in Maine. Fisher is survived by wife Barbara, two daughters, one grandson and two great-grandsons.

Frank A. Shallenberger Jr., ’46
Tucson
January 17, 2010

Dr. Shallenberger was a member of the U.S. Army from 1941 to 1949, serving in the European Theater for two years during World War II. He interned at Maryland and received residency training in internal medicine at St. Mary’s Hospital and Pima County General Hospital in Tucson. From 1950 until 1956, he practiced family medicine in Tucson and afterwards became a family medical practice. Among his accomplishments were the practice of ophthalmology and gynecology. Solomon later served as a GN at Springfield and Crownsville State Hospitals, as well as Sheppard Pratt. He also held an assistant position at Johns Hopkins. In retirement he moved to Walnut Creek, Calif., where he enjoyed collecting stamps, coins, and wine. Solomon is survived by wife Karyn, four children, and 11 grandchildren.

Benjamin A. Addison, ’52
Baltimore
December 19, 2009

Upon graduation Dr. Addison received a private practice in Annapolis and returned to his hometown of Cumberland to establish a private practice in 1960 and continued for 40 years. He retired in 2000. Addison was a member of the Potomac Lodge 100, A.F. & A.M., and 32nd degree, Cumberland Scottish Rite Bodies. At Khan Shriners, and a past director of the Cumberland Shriners Lodge, of which he was a past master of 117, R.O. He is survived by wife Velma and one son.

Loretta A. K. Gilmore, ’57
Laurel, Md.
March 8, 2010

Upon graduation Dr. Himmler received training in internal medicine and returned to his hometown of Cumberland to establish a private practice in 1960 and continued for 40 years. He retired in 2000. Himmler was a member of the Potomac Lodge 100, A.F. & A.M., and 32nd degree, Cumberland Scottish Rite Bodies. At Khan Shriners, and a past director of the Cumberland Shriners Lodge, of which he was a past master of 117, R.O. He is survived by wife Velma and one son.

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She took a two-week cruise on the 50th anniversary of D-Day which included two days in Normandy. Gilmore was preceded in death by husband James and is survived by daughter Robin and several nieces and nephews.

Charles R. Mock, ’63
Bowie, Md.
October 19, 2009

Upon graduation, Dr. Mock spent 26 years in the U.S. Navy. After internship, he attended flight school in Pensacola, Fla., and in 1967 was the lead diving medical officer during construction of the Newport-Jamestown bridge in Rhode Island. The following year he was transferred to Quonset Point Naval Station, R.I., where he was senior medical officer aboard the USS Essex. One of his missions was to retrieve the Apollo 7 space capsule landing in the Atlantic Ocean and attend to its three astronauts. Mock returned to Maryland in 1969 as senior medical officer of the Naval Air Facility in Washington D.C. After two additional assignments, he retired in 1984 as commanding officer of the Naval Health Sciences Education and Training Command. One year later he joined the Johns Hopkins Health System as a practicing physician and later as an administrator. He was appointed assistant professor of pediatrics at Johns Hopkins University in 1990 where he consulted on hearing disorders of children. He became vice president for medical affairs of the Johns Hopkins Health System before retiring in 2000. In his second retirement, Mock established a medical consulting business and served as medical director for Nighttime Pediatrics of Annapolis, a company he helped build. An advocate for children with hearing, speech, and language disabilities, he helped found Children Handicapped in Language Development, serving as its president for several years. He was an accomplished pianist and organist, enjoyed cycling, running, boating, fishing, and sharpshooting. Mock is survived by wife Bette, three children, and one granddaughter.

William G. Bruce, ’65
Panama City, Fla.
December 2, 2009

From 1967 to 1970, Dr. Bruce was a flight surgeon in the U.S. Navy. He received residency training in general surgery at Maryland and then served a fellowship in surgical oncology at MD Anderson Cancer Center in Houston. He relocated to Panama City in 1978 and began a private practice of general and oncological surgery. Bruce served on the staffs and as chairman of the departments of surgery at Bay Medical Center and Gulf Coast Medical Center. From 2000 to 2006, he was a member of Bay Medical Center’s board of trustees, and after retirement in 2006 served as medical director for its wound healing center. Bruce is past president of the Bays Medical Society, and for 28 years he was an active member of the local chapter of the American Cancer Society. Bruce enjoyed flying and for nine years served as president of Bay Aircraft Owners, Inc. He also served on the board of directors and was past president of the Panama City POPS Orchestra. Bruce is survived by wife Ann.

John M. McIntyre, ’67
Baltimore
December 29, 2009

Dr. McIntyre received training at the University of Colorado until 1969 when he joined the U.S. Navy and spent two years at the Millington Naval Air Station in Memphis, Tenn., as a lieutenant commander. Additional residency training in orthopaedic surgery was followed by a fellowship in hand surgery, both at the University of Louisville. McIntyre then traveled to Oswestry, England, for additional training at the Robert Jones and Agnes Hunt Orthopaedic Hospital. He returned to Baltimore in 1976 where he established a private practice and had privileges at GBMC, Union Memorial, Good Samaritan. He also served as chief of surgery at Children’s Hospital. He had a teaching appointment at Johns Hopkins School of Medicine and was a board member of the Gilman School. He retired in 1999. McIntyre enjoyed handball, making furniture, and travel. He is survived by wife Nancy, four sons including Thomas, ’99, and five grandchildren.

Louis W. Miller, ’67
Stevenson, Md.
August 30, 2009

After training, Dr. Miller served with the U.S. Public Health Service before opening a private general practice in Pikesville which he operated for three decades. Appointments also included assistant professor of medicine at Johns Hopkins Hospital. He is survived by wife Joyce, two children, and five grandchildren.

Maureen C. Prendergast, ’82
Millersville, Md.
March 14, 2010

Faculty
William D. Lynn, MD
March 2, 2010
Baltimore

Dr. Lynn received surgical training at Maryland during the 1940s and remained on the faculty as an attending surgeon until retirement in 1985. A Baltimore native, Lynn graduated from Princeton University and received his medical degree from the Johns Hopkins School of Medicine in 1943. His training at Maryland was interrupted during World War II when he enlisted in the U.S. Navy. He served as ship physician aboard the USS Antietam assigned to the Pacific. He was discharged with the rank of lieutenant commander. Lynn returned to Maryland, completed training, and was hired as an attending surgeon at University Hospital. He was elevated to professor, ran the hospital’s emergency room, and also operated a private practice. Lynn served on several medical school committees including one for medical school admissions. He collected flags and enjoyed attending lacrosse games. Lynn is survived by two sons and three granddaughters. He was preceded in death by wife Eleanor and son William.