



Breakthrough Treatment Offers Hope for Patients with Advanced Abdominal Cancer

A breakthrough treatment that combines surgery with a procedure called hyperthermic intraperitoneal chemotherapy (HIPEC) is dramatically increasing hope for patients with advanced cancers of the abdominal cavity.

A multidisciplinary cancer team at Drexel University College of Medicine, led by Wilbur B. Bowne, M.D., associate professor of surgery and chief of gastrointestinal surgery, now offers this state-of-the-art treatment option to patients with advanced abdominal cancers, including colon, ovarian, appendiceal and gastric cancers, peritoneal mesothelioma, low-grade sarcomas, and pseudomyxoma peritonei.

Until recently, treatment for advanced abdominal cancers could provide only relief from symptoms, with no hope of stopping disease progression or prolonging life. In clinical trials conducted by the National Cancer Institute, the combination of cytoreductive surgery and HIPEC has been shown to slow or prevent recurrence of cancer and significantly improve the survival rate of patients.

The HIPEC procedure, which is only available at a handful of institutions in the metropolitan Philadelphia area, is performed in the operating room immediately following debulking or cytoreductive surgery. After removing all visible tumors, Bowne and colleagues deliver high doses of heated chemotherapy directly into the abdominal cavity to destroy any remaining microscopic cancer cells. The solution circulates throughout

the abdomen for at least 90 minutes at 41 to 43°C, a temperature established in clinical trials as cytotoxic, allowing optimally cytoreduced tumors to absorb the chemotherapy and target the chemotherapy to the cancer cells.

"Heat in and of itself has a cytotoxic effect against cancer cells, causing programmed cell death," explains Bowne, a surgical oncologist who specializes in pancreatic and complex abdominal surgery. "Heat also increases the absorption of the chemotherapy across the cancer cell plasma membrane and seems to target the chemotherapy to the cancer cells while sparing normal tissue."

With the HIPEC procedure, patients benefit from a concentration of chemotherapy much higher than could be administered systemically. Since the HIPEC solution only circulates within the peritoneal cavity and not in the bloodstream, HIPEC does not cause the side



Dr. Wilbur Bowne

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pulse

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Dean’s Message

Welcome spring! We have had a busy winter. The Liaison Committee on Medical Education came to campus from March 3 to 6, as one of the last steps in our accreditation process. The site visit was the culmination of nearly two years of work on the part of our faculty and professional staff, alumni, trustees, and students. We feel that we did very well. I want to express my thanks to everyone who participated, and especially to Drs. Barbara Schindler and Donna Russo who led our efforts. Dr. Russo received special recognition from the survey team for her thoughtful preparations of the survey materials.



Daniel V. Schidlow, M.D.

We were pleased to receive the exit conference statement that summarizes the survey team’s report. Their judgments are not binding upon the LCME; nevertheless, we can take pride in their many positive findings.

The team noted that we have made thoughtful investments in support of the educational mission of the College. Dr. Schindler and the educational program staff have implemented a robust, data-driven process to assure comparability of education and assessment across our many clinical education sites, and the College uses a comprehensive process to evaluate its education program outcomes. The Pathway Program

for fourth-year students was cited as an innovative approach to providing career counseling in a systematic way that is tailored to individual student needs.

The team observed that we have made a commitment to our clinical affiliates as integral partners in the medical education of our students. Initiatives such as the annual Dean’s teaching award at each site were viewed as concrete demonstrations of the value we place on our clinical campuses. The team also noted that affiliate leaders praise the open lines of communication and the active on-site collaboration of administrators and faculty members from Philadelphia.

**“We have made a
commitment to
our clinical affiliates
as integral partners
in medical education”**

Speaking of our clinical campuses, we have just celebrated Match Day, when our fourth-year medical students learned where they will spend their residency years. I am pleased that so many of our students matched with our clinical campuses, including Hahnemann, St. Christopher’s, Abington, Allegheny, Crozer-Chester, Einstein, Lancaster General, Lehigh Valley, Mercy, Monmouth, and York.

Daniel V. Schidlow, M.D.
Walter H. and Leonore Annenberg Dean
Senior Vice President of Medical Affairs
Dean’s Office: 215-762-3500

Destination Excellence: Creating a Positive Climate

This is the one-year anniversary of this column, which highlights the academic community's efforts to achieve inclusive excellence through recruiting, and by embracing the uniqueness of each of us. Much has happened during this year, including the administration of the "Demographic and Diversity Climate Survey" in which the College of Medicine community was invited to participate last fall. Data from the survey are still being analyzed; however, the preliminary big picture results are informative and instructive.

- 1,543 people completed the survey, for an overall response rate of 33 percent. Responses included 46 percent of faculty; 31 percent of professional staff; 43 percent of medical students; 26 percent of graduate and professional studies students; 20 percent of residents.

The following diversity climate questions were included and respondents were asked their degree of agreement on a 5-point scale:

- *The climate in my department or program is welcoming to individuals from underrepresented groups.*
88.4 percent of respondents answered "strongly agree/agree" to the question regarding a welcoming climate (faculty, 89.8; staff, 85.4; medical students, 91.7; graduate/professional studies students, 84; residents 91).
- *Leaders in my department or program demonstrate behaviors that foster diversity.*
71.3 percent answered "strongly agree/agree."
- *My department or program accepts perspectives from people like me.*
81.4 percent answered "strongly agree/agree."

While the response rate makes it difficult to draw definitive conclusions, it may be inferred that the climate at our school with regard to inclusion is positive but more work needs to be done. The

Dean's Diversity Task Force has recently been approved by the faculty and board of trustees to become a Standing Committee of the Faculty and is codified in the Faculty Bylaws; the Committee on Diversity and Inclusive Excellence is expected to work hard to develop programs that educate our community and help us truly achieve inclusive excellence.

Expect a comprehensive report on the results of the survey in the coming months.

— Mary M. Moran, M.D.
Vice Dean for Faculty Affairs
& Professional Development



The Diversity Task Force headed by Dr. Mary Moran has been approved to become a Standing Committee of the Faculty: the Committee on Diversity and Inclusive Excellence.

College Invited to Millennium Conference 2013

Drexel University College of Medicine has been selected to join five other medical schools at Millennium Conference 2013 on Teaching Value-Added Care, co-sponsored by the Carl J. Shapiro Institute for Education and Research at Harvard Medical School and Beth Israel Deaconess Medical Center, and the Association of American Medical Colleges, in partnership with the American College of

Physicians. It is an honor to be chosen, as the College has been several times. "In selecting your team, we were impressed by your institution's commitment to teaching value-added care, the representation of senior leadership and expertise that your team offers, and your willingness to integrate insights from the conference into your local initiatives," the Shapiro Institute's executive director wrote in the decision letter. Drs. Pamela Duke, Cheryl Hanau, Eugene Hong, Joseph Jaeger, and Kathleen Ryan will attend the conference, to be held May 8-10.

Guns Are Children's Worst Enemies

More deadly than disease

This is the 15th article Daniel R. Taylor, D.O., associate professor of pediatrics, has written for the Philadelphia Inquirer on issues that affect the children he treats.

On Dec. 17, three days after the Sandy Hook Elementary School shootings, my 11-year-old daughter asked me if I had heard about the teacher who hid her students in a closet while telling the gunman they were in gym class. "She was killed," my daughter said, her eyes waiting for a response from me.



Dr. Taylor

"I heard," I said delicately. "She gave her life to protect her students." I kissed her on her forehead as she opened the car's passenger-side door, and watched as she walked up the stairs to her school. She glanced back at me for a second before the heavy door closed behind her.

Earlier that month, I took care of a 2-year-old boy who had pulmonary tuberculosis. He was tested because of several factors that put him at high risk for TB, which in the last century killed tens of thousands of Americans, especially children. Today, only a few hundred Americans will die of this disease, due to intense public health efforts.

TB and guns? I'll get back to this.

In 2010 there were 6,570 gun-related deaths of children, 18 a day, a small classroom of innocents. This is 15 times the death rate from infections and twice the death rate from cancer. Children of color constitute 63 percent of these gun death victims. As a nation, we have invested billions in research and developed weapons to target specific cells based on a child's individual genes to prevent and treat infections and cancer. Not so for guns and kids.

In 2010 there were 6,570 gun-related deaths of children, 18 a day, a small classroom of innocents

Over the last half-century, through regulations and hard science, we have successfully reduced our children's exposure to toxic air pollutants and water and food contamination. With tighter regulation of the cigarette industry, we have reduced their inhalation of secondhand smoke. Yet, inexplicably, we continue to poison our children's cultural environment through various "entertainment" media that, in a child's first 18 years of life, expose a developing brain to 16,000 murders and 200,000 violent acts on television alone.

We allow 40 percent of Philadelphia's children to live in poverty, in areas where exposure to violence is common,

making them more likely to fight first as they get older.

In a 2001 study of 7-year-olds, done in the area around St. Christopher's Hospital for Children, 75 percent had heard gunshots, 61 percent worried they might get killed, 10 percent had seen a shooting or stabbing inside the home, and an unbelievable 18 percent had seen a dead body outside. Toxic.

There are 300 million guns in the United States, in a third of all households. In homes with a child, 32 percent of guns are stored unlocked and 22 percent of stored guns are loaded. The cost of firearms-related death, disability, and loss of wages is estimated at \$47 billion. The spending represents a fiscal cliff of human suffering.

In my practice, I prescribe more care and equipment for children injured by firearms than for those in car accidents or swimming pool mishaps.



In a 2009 study looking at 395 gun-related fatalities inside a home, 333 were by suicide, 41 were domestic violence homicides, and 12 were unintentional. This is a 98 percent death rate. Nine intruders were killed in this study, a 2 percent protection rate. Feel safe?

The American Academy of Pediatrics has stated simply that "the absence of guns from children's homes and communities is the most reliable and effective measure to prevent firearm-related injuries (and death) in children and adolescents."

Back to TB.

To be infected, you must have a susceptible host, someone whose immune system is weakened, such as children and the elderly. You must also be in a place where TB is endemic, mostly crowded, impoverished areas. The public health system in the United States successfully screens high-risk individuals, treats TB early on, and is working on a vaccine. No controversy here.

The Sandy Hook tragedy once again takes our collective consciousness back to the debate about mental health and angry young men (susceptible hosts). Back to debates about how we glorify violence and defend outdated notions of First and Second Amendment rights over the health and safety of children.

After this tragedy, leaders in pediatrics across the country collectively wrote to Vice President Biden to improve firearm safety and mental health care and quell the culture of violence. And last week, President Obama proposed legislation to enhance background checks and reinstate the assault weapons ban.

It's a good start, but a long fight in Congress looms. We need action now. With inaction, 18 families a day are burying their children.

Harlem Children Zone's Geoffrey Canada had it right when he posed these questions about gun violence and children of color. "If we were fighting an outside enemy that was killing our children at a rate of more than five thousand a year, we would spare no expense in mounting the effort to subdue that enemy," he said. "What happens when the enemy is us? What happens when those American children are mostly black and brown? Do we still have the will to invest the time and resources in saving their lives?"

The cost of firearms-related death, disability, and loss of wages is estimated at \$47 billion ... a fiscal cliff of human suffering

On Dec. 17, after work, I rushed home to meet my daughter's school bus. As the door swung open, and her tan suede shoes hit the pavement, I felt a pang of relief.

I thought of the parents of the 20 children in Newtown and the parents of 18 elsewhere on any given day who would never see their youngsters coming home from school.

Then I kissed my daughter on the same spot on her forehead as that morning, holding my lips there a little longer than before.

This article appeared in the Philadelphia Inquirer on January 21, 2013. Reprinted with permission. http://articles.philly.com/2013-01-21/news/36464896_1_guns-death-rate-domesticviolence-homicides/3

Breakthrough Treatment

• *continued from the cover*

effects typically associated with intravenous chemotherapy, such as nausea, fatigue, hair loss, and neutropenia.

"The HIPEC procedure is now accepted as an evidence-based viable treatment option in an otherwise lethal disease for patients who had no hope in the past," says Bowne. "Its viability is supported by prospective randomized published data. In clinical trials, 60 percent of patients with advanced colon cancer who were given six months or less to live reached a median survival of two years, and 45 percent lived to five years."

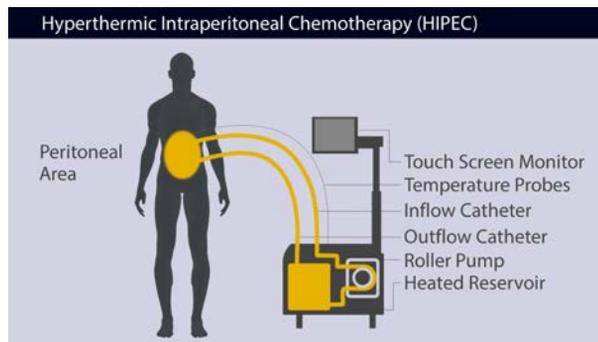
The survival rate for other types of advanced abdominal cancer, such as pseudomyxoma peritonei, has been as long as 10 years.

Patients are selected for HIPEC based on two key factors: the type and location of their tumor(s) and their general health.

"We have to consider the type and grade of tumor, how aggressive the tumor is, and the amount of tumor in the patient," Bowne explains. "The tumor must be contained within the peritoneal cavity with no metastasis outside the abdomen. We don't offer this treatment for metastatic pancreatic cancer because it has been shown to be too biologically aggressive."

In some instances, HIPEC can be used for palliative care to enhance quality of life. For example, patients presenting with ascites may find it difficult to eat and breathe. The ascitic fluid can be removed and followed by HIPEC, which prevents recurrence of ascites and enables the patient to eat and breathe more comfortably.

Suitable HIPEC candidates are patients who are gener-



ally in good health, able to withstand the rigors of a long operation, and able to eat, walk, and function independently.

"This procedure is not age dependent," emphasizes Bowne. "Some patients who are age 70 or 80 can tolerate HIPEC if they are in good health. We very carefully select all our patients."

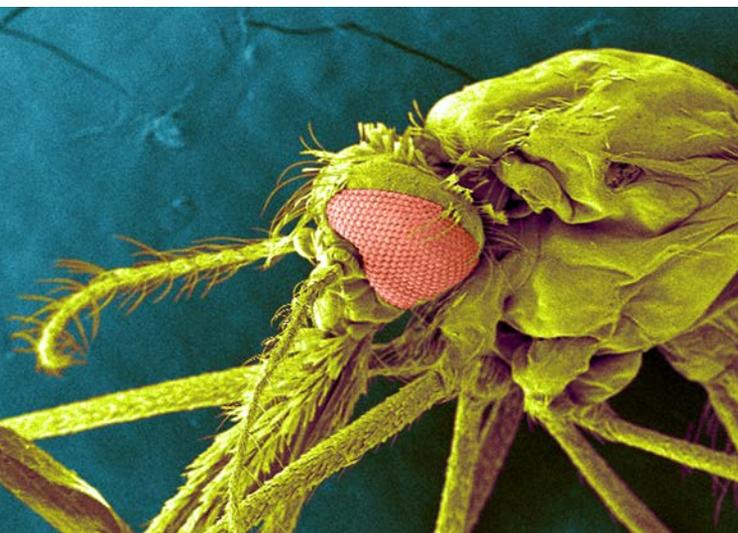
Bowne notes that cytoreductive surgery involves a lengthy operation of six to 14 hours, sometimes requiring multi-visceral organ resection. In some cases, HIPEC can be performed using minimally invasive approaches such as laparoscopy or robotic surgery.

Recovery time depends on the extent of the surgery, but patients generally stay in the hospital for seven to 14 days following the procedure. Patients can typically resume normal activities within four to six weeks. Bowne and a dedicated multidisciplinary team of cancer specialists, anesthesiologists, and nurses at the College of Medicine and Hahnemann University Hospital coordinate care with the patient's medical oncologist, who provides continuing care after the procedure.

New Malaria Treatment on the Horizon?

A discovery made at the Center for Molecular Parasitology at Drexel University College of Medicine has led to a potential new treatment for malaria. The subsequent development of a drug that can kill multiple stages of the parasite that causes human malaria was part of an international study involving 16 different institutions from seven countries. The findings were recently published in *Science Translational Medicine*.

The center's director, Akhil Vaidya, Ph.D., professor; Michael Mather, Ph.D., research assistant professor; and



A malaria mosquito: *Anopheles gambiae*

Joanne Morrissey, research instructor, all from the Department of Microbiology & Immunology, participated in the study showing that ELQ-300, an Endochin-derived drug, completely protected mice from malaria caused by the parasite *Plasmodium falciparum*. This parasite is transmitted to humans by infected female mosquitoes. It is the deadliest of five species of parasite that cause human malaria.

The Drexel team had discovered that ELQ-300 is effective because it disrupts the parasite's mitochondrial respiration, leading to inhibition of building blocks needed for DNA synthesis. The parasite is thereby prohibited from multiplying, so it dies. The drug works only on the parasite's mitochondria, without affecting human mitochondria. The drug is easy to make and cheap to produce, making it a potential game-changer in treating malaria. Human testing could begin in two years.

The research team was supported by Medicines for Malaria Venture, an international nonprofit foundation, and led by principal investigator Michael Riscoe, Ph.D., a professor in the Molecular Microbiology & Immunology Department at Oregon Health Sciences University. The effort is made up of an international group of researchers from the United States, Australia, Singapore and Switzerland. (The study, "Quinolone-3-Diarylethers: A New Class of Antimalarial Drug," was published in the March 20, 2013, issue of *Science Translational Medicine*.)



Dr. Vaidya



Dr. Mather

A Legacy of Art, Science & Industry: Highlights from the Collections, April 12 – May 31

Drexel University will present an exhibition drawn from the full range of its collections: paintings and sculptures, rare books, historic garments, medical and scientific artifacts, notable posters and sound recordings – from Jean-Baptiste Camille Corot's *Shepherd* to a Coco Chanel evening ensemble to landmark master recordings by Gamble and Huff to John James Audubon's buckskin jacket. Specially

selected objects from the College of Medicine's Legacy Center collections will be on view, including the medical tool shown on the back cover of this issue of *Pulse*. The exhibition is free and open to the public Monday through Saturday from 11 a.m. to 5 p.m. in the Leonard Pearlstein Gallery, URBN Center Annex, 3141 Filbert Street, on the University City Campus.



Latino Medical Student Conference Held at Drexel

Drexel University College of Medicine hosted the 40th annual Latino Medical Student Association–Northeast Regional Conference on February 23 at the Bossone Research Enterprise Center on the University City Campus. The conference co-chairs, Max Oran, a third-year Drexel medical student, and Karla Curet, a student at Philadelphia College of Osteopathic Medicine, planned the event together with members of the LMSA chapters at Drexel,



By row, top to bottom: (1) Dr. Mario Cruz, Paul Gomez, Dr. Anthony Rodriguez; (2) Dean Schidlow, J. Mica Guzman, Katelyn Belleisle; (3) Funsho Adekunle, Michel Medina, John Falcone, Max Oran; (4) Valerie Valero, Sherita Glenn, Dr. Victor Cueto, '12; (5) Anokhi Shah, Andrea Bakos, Andreea Micu, Stephanie Santana (back), Samia Moughanni

Jefferson Medical College, PCOM, and Temple University School of Medicine. "This joint effort reflected the camaraderie envisioned in the theme of this year's conference, 'Soy Latino! Uniting the Leaders Among Us,'" Oran said.

With 225 in attendance, the conference attracted the highest turnout of any LMSA regional conference. Participants included approximately 100 medical students from 20 medical schools across the Northeast, 75 undergraduate students, and 50 high school students, including a large group from Thomas Edison High School in Philadelphia, who were invited to attend free of charge.

The keynote address, given by College of Medicine Dean Daniel V. Schidlow, M.D., was followed by a full day of workshops led by faculty from across the Northeast. Speakers from the College included Drs. Anthony R. Rodriguez, associate dean for student affairs and diversity; Mario Cruz, assistant professor of pediatrics; and Ana Núñez, associate dean for urban health equity, education and research, and director of the Women's Health Education Program. Workshops identified health issues prevalent in underserved communities, such as the growing demand for health care access and health disparities, and reflected on ways that students could better serve minority populations.

The conference also featured a poster session, allowing students to display their research achievements, and an exhibitor fair attended by 30 residency programs, medical schools, and universities across the Northeast.

"At the end of the day, the conference served as an excellent opportunity for students to make connections and learn about the value of being Latino in the medical field," Oran said. "We thank Drexel University for their support in helping to make this conference a huge success."



The painting *City Hall* was donated by the artist, third-year Drexel medical student J. Mica Guzman, Jr., as a gift for the keynote speaker.

Tuesday, June 18: It's Tee Time

The beautiful courses of the Philadelphia Cricket Club will be the site of the 13th annual Manuel Stamatakis Golf Classic on Tuesday, June 18. All proceeds of the event will support scholarships for Drexel medical students with proven academic talent and financial need, through the Manuel N. Stamatakis Scholarship Fund, established by the founding chair of the College, trustee Manny Stamatakis. The day includes a buffet lunch, cocktail reception, and awards dinner. Come out and golf for a very good cause. For more information, email golf@drexelmed.edu.



Manny Stamatakis

Partnership with Kaiser Permanente to Develop Physician Leaders

Drexel University College of Medicine has partnered with Kaiser Permanente in California to help ensure a strong physician workforce for the future and to further develop emerging healthcare leaders for the Sacramento region.

This summer, as many as 16 third-year medical students from the College of Medicine will begin a year of clinical rotations at Kaiser Permanente medical centers in Sacramento, South Sacramento, Roseville, and Vallejo. They will have rotations in pediatrics, obstetrics/gynecology, surgery, outpatient psychiatry, family medicine, and adult medicine. Lisa Liu, M.D., South Sacramento's assistant physician-in-chief of health promotion, is spearheading the training

program.

Officials at Kaiser Permanente said they embrace the opportunity to bring Drexel's medical students to the Sacramento region. "We know that many of these students will choose to live and practice right here in our own community," said Richard Isaacs, M.D., physician-in-chief, South Sacramento.

College of Medicine Vice Dean Barbara Schindler, M.D., noted that participating in the partnership program would give students "the opportunity to learn about the unique model of care at Kaiser Permanente."

These will not be the first College of Medicine students in Sacramento. Premed students attending the Interdepartmental Medical Science program at Drexel's Sacramento campus have already had opportunities to observe Kaiser Permanente's model of care through a unique 10-month physician shadowing program. That successful program began in March 2011.



Teams from Drexel University College of Medicine and Kaiser Permanente met in January in Sacramento. Barbara Schindler, M.D., vice dean for educational and academic affairs, is at center.



New AVP for Institutional Advancement

We are pleased to introduce the College of Medicine's new associate vice president for institutional advancement, Donna Frithsen. A veteran development professional with more than 20 years of experience in higher education and academic medicine, Donna comes to us most recently from Bryn Mawr College, where she served as the chief development officer.

Prior to that, she was the vice president for development and alumni relations at Drew University. Donna also spent 10 years at The Fund for Johns Hopkins Medicine, where she first served as director of development for psychiatry and the clinical neurosciences, and was then promoted to director of departmental programs, overseeing grateful patient and alumni fundraising for 18 clinical departments.

Donna earned a bachelor's degree in philosophy and theology at Boston College, and a master's degree in communications from Rowan University. She also received a certificate in higher education management from the Harvard School of Education in 2004. Donna can be reached at dgf37@drexel.edu or 215-255-7343.

20th Annual Pediatric AIDS Benefit Raises \$27,500

The annual Drexel University College of Medicine Pediatric AIDS Benefit Concert was a wonderful, fun-filled evening that raised \$27,500 for children with HIV and AIDS. More than 420 students, faculty, and guests entertained or applauded their way through the February 18 event, which showcased a total of 14 acts.



Student Darius Farzad

This was the 20th year for the concert, which has now raised almost \$483,000 since its inception. The event benefits the Dorothy Mann Center for Pediatric and Adolescent HIV at St. Christopher's Hospital for Children. The center is the largest of its kind in the tri-state area, providing comprehensive care, including social services, to children infected with HIV and their families. The money raised by the Pediatric AIDS Benefit Concert helps pay for the

services of a child-life specialist and a dietitian for the program, offers the children the opportunity to attend summer camp, and helps provide the affected families with emergency funds for housing and other expenses.



Committee members included (l-r), front: Andrea Bakos, Joanne Ahn, Kelsie Persaud, Anokhi Shah; middle: Sonia Abichandani, Matt Diamond, Dave Eng; back: Will Hochgertel, Andrew Trontis, Star Tiko. All are second-year medical students.

Compliance & Privacy

HIPAA Final "Omnibus" Rule

The final HIPAA rule, released January 17, 2013, known as the "omnibus rule," greatly enhances a patient's privacy protections, provides individuals new rights to their health information, and strengthens the government's ability to enforce the law.

Health & Human Services Secretary Kathleen Sebelius noted that "much has changed in health care since HIPAA was enacted over 15 years ago. The new rule will help protect patient privacy and safeguard patients' health information in an ever-expanding digital age."



**Edward Longazel
Chief Compliance & Privacy Officer**

The changes in the final rulemaking provide the public with increased protection and control of personal health information. The HIPAA Privacy and Security Rules have focused on health care providers, health plans and other entities that process health insurance claims. The

changes announced in January extend many of the requirements to business associates of these entities that receive protected health information, such as contractors and subcontractors. Some of the largest breaches reported to HHS have involved business associates. Penalties are increased for noncompliance based on the level of negligence, with a maximum penalty of \$1.5 million per violation. The changes also strengthen the Health Information Technology for Economic and Clinical Health (HITECH) Breach Notification requirements by clarifying when breaches of unsecured health information must be reported.

Individual rights are expanded in important ways. Patients can ask for a copy of their electronic medical record in an electronic form. When individuals pay their own charges, without submitting them to insurance, they can instruct the provider not to share information about their treatment with their health plan. The final omnibus rule sets new limits on how information is used and disclosed for marketing and fundraising purposes, and prohibits the sale of an individual's health information without his or her permission.

The College of Medicine will be surveying the clinical practices administration to gather locations of devices that retain patient information, and to identify all business associates, so updated Business Associate's Agreements can be issued as required.

We never guess ... we ask! Call anytime to ask a compliance or privacy question, or to request compliance or privacy training: 215-255-7819

Confidential compliance hotline: 866-936-1010 or visit www.drexelmed.edu/ComplianceHotline

Exploring the Gray: The Responsible Conduct of Research

You are a medical school professor. One of your graduate students has submitted a take-home exam essay with sections of material copied verbatim from another source without citing it. When you discuss this issue with the student, he freely admits that he cut and pasted the material. He explains that as a non-native speaker of English, he could never express these concepts as fluently as the author of the medical text. He did, however, demonstrate that he understood the assignment as well as where to find the information. Do you fail the student for plagiarism?

Conducting scientific research has become increasingly complicated, and even issues that seem black and white often inhabit shades of gray. In the College of Medicine course “Responsible Conduct of Research” (RCR), biomedical graduate students – along with some postdoctoral and M.D./Ph.D. trainees – learn to discern what it means to act with scientific integrity in various professional scenarios. The stakes for failing to do so, as one frequently sees in the news, can be high.

The National Institutes of Health requires that the content of RCR be conveyed to all NIH-funded scientists who conduct research on human or animal subjects. The material is, in fact, mandated by all NIH training grants. It is also the only course all Drexel biomedical graduate students are required to take.

At the College of Medicine, RCR is directed by Richard Rest, Ph.D., professor of microbiology and immunology, and director of professional development and postdoctoral affairs. The course itself, however, is taught by a cadre of senior faculty – including the Dean – all of whom present in their areas of expertise. “There are very few courses like this in the United States that use such senior faculty,” Rest explains. Since RCR’s beginnings over a decade ago, senior faculty from various disciplines have continually prioritized delivering this material to graduate students. “That has been just incredible,” Rest says.

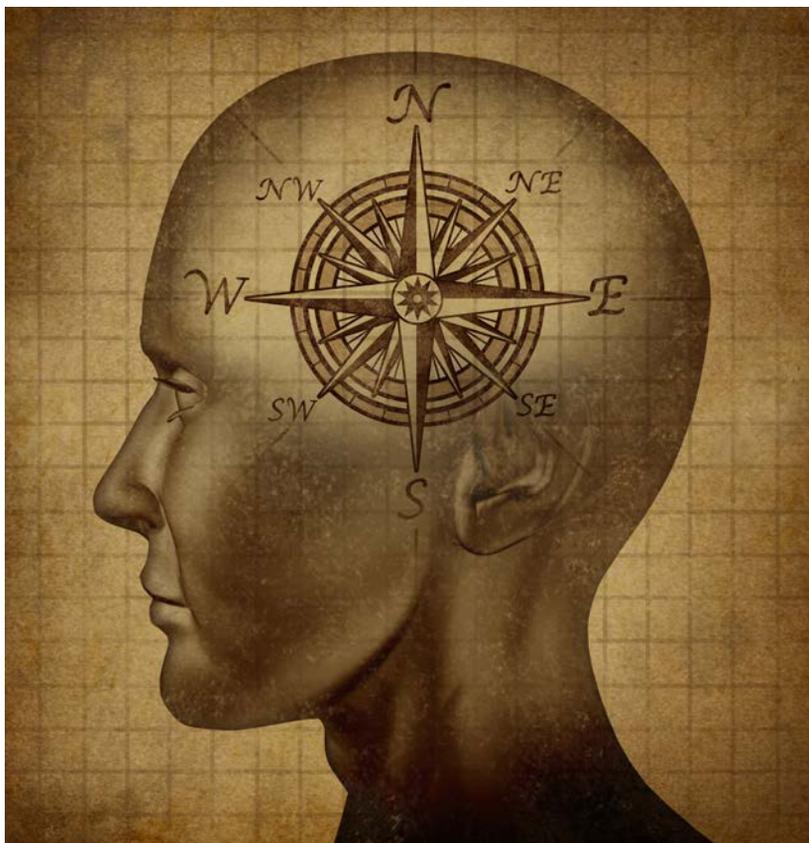
This faculty support has several outcomes according to Kenny Simansky, Ph.D., vice dean for research, and one of RCR’s instructors. First, it introduces biomedical trainees to scientists who “make or influence policy ... relevant to research and research education.” The involvement of senior faculty also affirms that the College “is very serious” about RCR. In addition, they serve as role models of professionalism to trainees.

RCR covers an array of topics, including the fabrication and misrepresentation of data, misconduct, interpersonal dynamics

in a lab, hiring and firing people, strategies for addressing a problem, and how an institution may respond in these scenarios. Rest explains that in the past, scientists may not necessarily have been *trained* how to write a grant or run a lab. In addition, “Working with human subjects has gotten much more complex,” he says. “The ethical handling of humans and data has gotten much, much more complex for research purposes.”

Simansky presents the RCR kickoff session. In his introduction to the concept of ethical research, he says he often cites Machiavelli’s *The Prince*, a text that “speaks to the issue of how one justifies human behavior and what behavior is not justifiable.” Discussions about scientific integrity evolve from these larger questions of behavior and conduct.

“It’s really interesting, number one, where they take [the dialogue],” Simansky says, “and number two, how they involve each other in the discussion.” For instance, a trainee recently initiated a discussion about access to unpublished data. Because of datasets being made public before formal publication, there is potential for abuse. What ethical issues might arise from the availability of those data? What strategies might protect those data? How does one maintain intellectual property so others don’t employ it for their own means? Conversely, do such databases reduce the possibility that scientists will attempt to “doctor” their data?



Rest cites the introductory example of plagiarism as another of those gray areas. Graduate students from outside the United States may have different sensibilities, particularly regarding how one shows respect for elders or authority, such as a published author or scientific expert. Their conventions for citing sources may differ. These writing traditions are not “bad” or “wrong,” according to Rest. “They’re different.” Part of the process in RCR is familiarizing everyone with the standards and norms of admissible research.

There are similar gray areas in research involving human subjects. Rest provides this example:

You are a scientist who has approval to draw blood. A colleague approaches you with a request to draw about 5 milliliters of blood for an experiment. Your approval, however, only extends to specific situations – certainly not to your colleague’s experiment.

Rest relates that one’s mental response might be, “‘I am not allowed legally to do that.’ On the other hand, ‘Give me a break. I know how to do this.’”

A lot is at stake. As Rest points out, “In order for us to believe it ourselves, for society to believe what we do, every aspect of what we do has to be as close to responsible conduct and have as much integrity as possible.” He cites the chilling example of Andrew Wakefield, the British doctor who publicized bogus results linking vaccines to autism. “He affected millions of people,” Rest says, “all because he was wrong ... purposely wrong ... he did so much damage.” Even though Wakefield’s research has been debunked, the theories he put forward continue to hold ground in popular thought.

“In order for us to believe it ourselves, for society to believe what we do, every aspect of what we do has to be as close to responsible conduct and have as much integrity as possible.”

RCR provides the opportunity to discuss these complicated issues and develop an ethical framework before stepping into a lab. Outside of any class discussion, however, the example of faculty leadership remains critical, Simansky attests. “The most important thing in training for these standards is how the faculty members carry themselves and carry out their work and act as role models,” he says. “The day-to-day training by the faculty mentors really must be in line with the standards we teach in our course.”

In RCR, trainees are learning how to navigate the future ethical gray areas that may be difficult to imagine today. Simansky concludes, “The most effective course doesn’t teach factoids for them to take away. The most effective course teaches the student how to evaluate future situations with respect to ethical conduct because things change. As in any other activity, it’s the mindset and principle of proper action that are important, because that gives you the flexibility in evaluating new situations as they arise.”

In Memoriam

Alumni

F. Knight Alexander, Jr., M.D., HU ‘64

February 14, 2013

Chiuling Chai, M.D., HU ‘57 January 26, 2013

Peter J. Corey, M.D., HU ‘55 January 12, 2013

Gene T. Fries, M.D., HU ‘55 January 22, 2013

Alan Gibstein, M.D., HU ‘60 February 24, 2012

James E. Gildea, M.D., HU ‘59 January 22, 2013

George P. Glenn, Jr., M.D., HU ‘53

January 3, 2013

Gerald D. Grant, M.D., HU ‘60 February 26, 2013

Robert B. Hutcheson, M.D., HU ‘47

January 21, 2013

Harry J. Kenworthy, Jr., M.D., HU ‘61

January 17, 2013

Walter E. Kepler, Jr., M.D., HU ‘48

December 27, 2012

Eleanor Marie Kohn, M.D., WMC ‘55

January 30, 2013

Richard E. Kuhn, M.D., HU ‘46 February 19, 2013

Danny S. Lesnick, M.D., HU ‘69 January 27, 2013

Michael A. Miles, M.D., HU ‘71 February 25, 2013

John J. O’Rangers, Jr., Ph.D., HU ‘72

January 20, 2013

Gregory Sarmousakis, M.D., HU ‘55

March 7, 2013

Ralph A. Skowron, M.D., HU ‘56 January 12, 2013

Julene (Jarrett) Ricks-Ngwayah, M.D., MCPHU

‘00 passed away on December 9, 2012, outside of Chicago. She is survived by her husband Elias, two sons (Elias and Jared), her parents and two brothers. Ricks-Ngwayah was a board-certified internist and endocrinologist, having completed a fellowship at Georgetown University. Prior to her death, she practiced endocrinology at Franciscan Medical Specialists in Munster, Ind.

Faculty

Evangelos T. “Van” Angelakos, M.D., Ph.D.,

emeritus professor of pharmacology and physiology, passed away on January 23 at the age of 83. He earned a doctorate

in physiology from Boston University School of Medicine, followed by a medical degree from Harvard Medical School. Angelakos served as professor and chair of Hahnemann University’s Department of Physiology from 1968 until his appointment as emeritus professor in 1995. In 1981, he founded the Interdisciplinary Medical Sciences program. He is survived by his wife, Elizabeth

WHAT WE'RE DOING

Maria Elena Aguilo-Seara, D.O., second-year psychiatry resident, has been appointed community outreach advocate by the Philadelphia Psychiatric Society.



Dr. Barrett

James E. Barrett, Ph.D., professor and chair, Department of Pharmacology & Physiology, and director of the Drug Discovery & Development program, has been elected to a two-year term as president of the Association of Medical School Pharmacology Chairs.



Ms. Benabou

Karen Benabou, a second-year M.D./Ph.D. student, presented her poster "Differences Between Frontotemporal Dementia Patients With and Without Head Injuries" on March 21 at the American Academy of Neurology annual meeting in San Diego. Her work was selected as one of the "Geriatric Neurology Scientific Highlights" of the meeting. **Carol Lippa, M.D.**, professor of neurology, is the co-author.



Ms. Bungy

Barbara L. Bungy, MPH, CHES, executive director of the Center for the Urban Child at St. Christopher's Hospital for Children, was invited to represent Region III on the Women's Health Leadership Institute (WHLI) Stakeholder Workgroup. Her role on this board will be to provide insight and direction around leadership development of experienced community health workers across the country to enhance their capacity to influence change in their communities to address women's health disparities. The WHLI is a national initiative of the Department of Health & Human Services Office on Women's Health.



Dr. Cabry

Robert J. Cabry, M.D., assistant professor, Department of Family, Community & Preventive Medicine, and associate director of the Sports Medicine Fellowship, has been appointed to the NCAA Committee on Safeguards and Medical Aspects of Sports. He is the first Drexel physician to serve on the committee, which educates and advises member institutions on best practices for providing student-athletes with a safe and healthy experience.



Dr. Eisen

Howard Eisen, M.D., Thomas J. Vischer Professor of Medicine and chief of the Division of Cardiology, is the author of "A Novel Definition of Cardiac Allograft Vasculopathy," published in the October 2012 issue of *American Journal of Transplantation* (epub ahead of print 25 September 2012).

Drs. Matthew Fanelli and **Brittain Tulbert**, both third-year dermatology residents, competed in Resident Jeopardy on March 1 at the American Academy of Dermatology annual meeting. They made it to the final round and finished in third place.



Dr. Greenberg



Dr. Vearrier

Michael Greenberg, M.D., professor of emergency medicine, and **David Vearrier, M.D.**, assistant professor of emergency medicine, published a paper, "The Perception of Odor Is Not a Surrogate Marker for Chemical Exposure: A Review of Factors Influencing Human Odor Perception," in the February issue of *Clinical Toxicology*.



Dr. Huneke

Richard Huneke, DVM, MPH, executive director of ULAR and associate professor of microbiology and immunology, was elected assistant section leader by his peers on the Council on Accreditation of the Association for the Assessment and Accreditation of Laboratory Animal Care, International. He has served on the 56-member Council on Accreditation since 2005, performing site visits and program evaluations of over 50 biomedical research institutions worldwide. As assistant section leader, he will lead discussions of program reviews during triennial council meetings.



Dr. Joshi



Dr. Emery

Suresh G. Joshi, M.D., Ph.D., assistant professor, Departments of Surgery and Microbiology & Immunology, and director of surgical infections research, and **Nachiket Vaze** (lead author), research assistant in the Joshi lab and a graduate student in biomedical engineering; **Drs. Christopher Emery**, associate professor, Department of Pathology & Laboratory Medicine; **Richard Hamilton**, professor and chair, Department of Emergency Medicine; and **Ari Brooks**, associate professor and director of research,



Dr. Hamilton



Dr. Brooks

Department of Surgery, published a research article entitled "Patient Demographics and Characteristics of Infection with Carbapenem-Resistant *Acinetobacter baumannii* in a Teaching Hospital From the United States" in *Advances in Infectious Diseases*, March 2013.

Joshi and **Utku K. Ercan** (lead author), research assistant in the Department of Surgery and a graduate student in biomedical engineering; Drs. Hong Wang, former postdoctoral fellow, and Hai-Feng (Frank) Ji, associate professor, Department of Chemistry; Gregory Fridman, research assistant professor of biomedical engineering, and Brooks published "Nonequilibrium Plasma-Activated Antimicrobial Solutions Are Broad-Spectrum and Retain Their Efficacies for Extended Period of Time" in *Plasma Processes and Polymers*, April 2013.

Joshi, Ercan (lead), and Brooks also were invited to present "Non-thermal Dielectric Barrier Discharge Plasma Treated N-acetylcysteine Solution: A Novel Antimicrobial Agent" at the 33rd annual meeting of the Surgical Infection Society of North America in Las Vegas, April 12-15.



Dr. Kralick

Francis Kralick, D.O., associate professor of neurosurgery, has been named co-inventor for a U.S. patent for an intracranial pressure sensor in conjunction with the Department of Biomedical Engineering at Drexel University.

(continued)

Drexel Psychiatry Stands Out at Colloquium of Scholars

Drexel psychiatry residents dominated the poster presentations – in both quantity and quality – at the Philadelphia Psychiatric Society’s Colloquium of Scholars, held March 2. Drexel residents submitted a total of seven posters, ranging from case reports to literature review to original research. Dr. Nivedita Mathur’s poster won the first prize in the category of “Original Research”; Dr. Maria Aguilo-Seara’s poster won the first prize in the category of “Case Report”; and Dr. Beeta Verma’s poster won the third prize in the same category. The Drexel Jeopardy Team also had a strong performance in the Mind Games that took place at the end of the meeting. Wei Du, M.D., clinical professor of psychiatry, is the director of the General Psychiatry Training Program.

Poster Presentations

- Maria Aguilo-Seara, Danielle Fine, Amirali Sayadipour, Ben Boswell, and Donald Kushon: *Divalporex Sodium Induced Non-Hepatic Hyperammonemia in a Patient with Schizoaffective Disorder and Complex Partial Seizure Disorder*
- Jonathan Barton, Hassan Majeed, and Paul Ambrosini: *Rampage Killing: A Psychosocial Analysis*
- Hassan Majeed, Branden Youngman, Yiqing Miao, and Donna Sudak: *Clinical Applications of Behavioral Activation*
- Nivedita Mathur, Pedro Bauza, Olufemi Ogundeji, Elif Yilmaz, Gaurav Mathur, Samson Gurmu, Wei Du, and Donald Kushon: *Characteristics of Substance Use Patients in an Inner City Psychiatric Inpatient Unit – A Chart Review*
- Amirali Sayadipour, Elizabeth Johnson, Maria Aguilo-Seara, Roza Javeri, Beeta Verma, and Sunil Verma: *Management of Benzodiazepine Dependency in Pregnancy*
- Amirali Sayadipour, Humberto A. Caro, Maria Aguilo-Seara, Beeta Verma, Roza Javeri, and Sunil Verma: *Managing Ziprasidone-induced Neutropenia – A Case Report*
- Beeta Verma, Nivedita Mathur, Vishal Verma, Amirali Sayadipour, and Sunil Verma: *Tacrolimus and Psychosis in Post-Transplant Recipients*



There are 30 residents in the Drexel/Hahnemann adult psychiatry program. Pictured here at Friends Hospital are (sitting l-r): Maria Aguilo-Seara, Lawangeen Khan, Beeta Verma, Salman Majeed, Ajeetha Ravindradosh, Jack Gilean, Rajninderpal Kaur, Branden Youngman, Joanna Beyer, Elif Yilmaz; (standing l-r): Mitali Patnaik, Nivedita Mathur, Marina Shainsky, Amir Ahuja, Humberto Caro, Olufemi Ogundeji, Charles Stanfa, Dimas Tirado, Krystine Biesaga, Sikandar Shah, Amirali Sayadipour, Liudmila Lobach, Alexander Berger, Jonathan Barton, Hassan Majeed, Khalid Zafar. Not pictured: Pedro Bauzá (chief resident), Ben Boswell, Kirsten Tollefson, and Celia Varghese



Dr. Kresh

J. Yasha Kresh, Ph.D., professor of cardiothoracic surgery and medicine, and research director for the Department of Cardiothoracic Surgery, was an invited keynote speaker at the 2nd ASME Global Congress on NanoEngineering for Medicine and Biology (Natural,

Biomimetic and Bioinspired Materials and Structures) held February 4-6 in Boston. The title of his presentation was "Cardiac Mechanotransduction: From Sensing to Reprogramming to Remodeling."



Dr. Kulkarni

Abhijit Kulkarni, M.D., assistant professor of medicine, will be recognized by the National Pancreas Foundation for his work in diseases of the pancreas. He is a gastroenterologist at Allegheny General Hospital.



Dr. Popnikolov Dr. Abaza

Jeffrey Lin, DDS, M.D., then chief resident, Oral and Maxillofacial Surgery Residency, authored the leading pathology article in the February 2013 issue of the *Journal of Oral and*

Maxillofacial Surgery, "Calcifying Epithelial Odontogenic Tumor: Case Report with Immunohistochemical and Ultrastructural Study and Review of Literature." Co-authors are **Michael A. Bianchi, DDS**, associate professor of surgery; **Nikolay Popnikolov, M.D., Ph.D.**, clinical associate professor, Department of Pathology & Laboratory Medicine; and Lin's mentor, **Nabil A. Abaza, DMD, M.S., Ph.D.**, professor of surgery, and program director, Oral and Maxillofacial Surgery Residency.



Ms. Lorber

Deborah R. Lorber, assistant vice president—risk management, was invited to participate as a panelist at the American Conference Institute's Brain Injury summit, held March 14-15 in Philadelphia.

Michael Mather, Ph.D., Joanne M. Morrisey, and Akhil B. Vaidya, Ph.D. See page 6.

Nisha R. Patel, M.D., a third-year resident in radiation oncology, has been working through the nonprofit Radiating Hope to provide the means for high-dose-rate brachytherapy to treat cervical cancer at a hospital in Dakar, Senegal. During March, she joined a team of two other U.S. physicians, a nurse, and two physicists to perform the first treatments there. The plan is to treat patients while training the current physicians and physicists at the facility so they can operate independently in the near future.



Dr. Petrucci

Ralph J. Petrucci, Ed.D., clinical professor in the Departments of Psychiatry and Medicine, recently participated in an FDA Neurologic Device Panel meeting in Bethesda, Md., during which the NeuroPace RNS System for Epilepsy was approved. He is also the core neuropsychologist participating in the 18-center NIH Randomized Evaluation of VAD InterVENTion before Inotropic Therapy (REVIVE-IT) investigation starting in April 2013.



Mr. Sachdeva

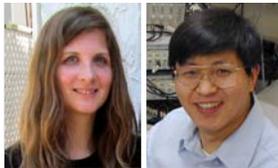
Rahul Sachdeva, a third-year Ph.D. candidate in neuroscience, presented "Intra-axonal mRNA Transport During Regeneration Following Spinal Cord Injury" at the Keystone symposium Growing to Extremes: Cell Biology and Pathology of Axons, held March 10-15 in Tahoe City, Calif. Sachdeva is currently doing his thesis work in the laboratory of **John Houle, Ph.D.**, professor in the Department of Neurobiology & Anatomy.

Amirali Sayadipour, M.D., second-year psychiatry resident, has been appointed research advocate by the Philadelphia Psychiatric Society.



Dr. Simmons

B. Brent Simmons, M.D., assistant professor in the Department of Family, Community & Preventive Medicine, has earned certification in hospice and palliative medicine, making him triple board certified: in family medicine, geriatric medicine, and hospice and palliative medicine.



Dr. Snyder Dr. Gao

Melissa Snyder, Ph.D., post-doctoral researcher, and **Wen-Jun Gao, Ph.D.**, associate professor, Department of Neurobiology & Anatomy, with Alicia Alderman, a former master's student, published "Gestational Methylazoxymethanol Exposure Leads to NMDAR Dysfunction in Hippocampus During Early Development and Lasting Deficits in Learning" in the journal *Neuropsychopharmacology* (Volume 38, Issue 2), January 2013.



Dr. Sudak

Donna M. Sudak, M.D., professor of psychiatry and director of psychotherapy training, presented the plenary session "Teaching Evidence-Based Psychotherapy for Depression" on March 6 at the Brain Conference, the pre-meeting of the American Association of Directors of Psychiatric Residency Training annual meeting, held March 7-9 in Fort Lauderdale. Dr. Sudak also presented four workshops – three at the pre-meeting and one at the annual meeting.



Dr. Martín-García Dr. Navas-Martín

Ph.D. candidates **Gokul Swaminathan, Fiorella Rossi, Luz-Jeannette Sierra, and Archana Gupta**, and their mentors, **Drs. Sonia Navas-Martín**, assistant professor, and **Julio Martín-García**, associate

professor, all in the Department of Microbiology & Immunology, published "A Role for microRNA-155 Modulation in the Anti-HIV-1 Effects of Toll-Like Receptor 3 Stimulation in

Macrophages" in *PLOS Pathogens*, September 2012. Swaminathan, a fourth-year doctoral student in the laboratory of Martín-García, has been pursuing this research as his thesis project. He presented the initial findings at the Conference on Retrovirology and Opportunistic Infections in March 2012 in Seattle and received a young investigator award. He attended this year's conference March 3-6 in Atlanta to present updated results on the miR155-HIV-macrophage studies and once again received a young investigator award.

(continued)

Many Winners at Medical Student Research Day

The second annual Medical Student Research Day, held on March 20, drew 57 poster submissions, including 15 from M.D./Ph.D. students. Organizer Jane Clifford, Ph.D., associate dean for medical student research and director of the M.D./Ph.D. Program, congratulated all the participants for their hard work and excellent presentations. "Whether an in-depth basic science project, a prospective clinical study, a retrospective chart review, or a report of an interesting case, the process is the same, and the value is clear," Clifford said. "It is my hope that participation in research and Medical Student Research Day will someday include every medical student at Drexel University College of Medicine."

Posters submitted by medical students were judged by faculty volunteers. There were four-way ties for both first and second place (the medical student's year is in parentheses).

FIRST PLACE

John Falcone (MS 1)

The Role of O-GlcNAc Transferase in Enhancing Breast Cancer Metabolism via Upregulation of the mTOR/HIF-1 Pathway

Mentor: Dr. Mauricio Reginato, Biochemistry & Molecular Biology

Nina Suda (MS 2)

Regulation of Perinatal \hat{I}^2 -cell Proliferation by Osteocalcin Signaling

Mentor: Dr. Patricia Ducey, Columbia University

Kelly Donovan (MS 1)

Novel Therapeutic Targets for the Treatment of Diabetic Retinopathy

Mentor: Dr. Jane Clifford, Biochemistry & Molecular Biology

Bridgette McCabe (MS 2)

Differences Among Signs and Symptoms of Dry Eye Among Patients with Sjogren's Syndrome, Blepharitis, or No Ocular Surface Disease

Mentor: Dr. Vatinée Bunya, Scheie Eye Institute

SECOND PLACE

Emily Greenwald (MS 4)

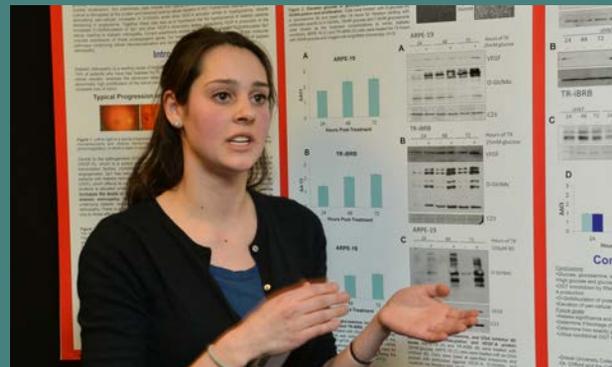
Sapan Ghandi (MS 3)

Eric Sarkissian (MS 4)

Gregory Piech (Medical Student Research Scholar)



Medical students (l-r) Christopher Chu, Vishish Srinivasan, and Eric Sarkissian each presented a research poster. Sarkissian tied for second place.



First-year medical student Kelly Donovan was one of four students whose poster presentation tied for first place.



Dr. Mahendra Rao (with Dr. Jane Clifford), director of the NIH Center for Regenerative Medicine and internationally renowned for his research involving human embryonic stem cells and other somatic stem cells, gave an inspiring keynote talk on the history of stem cell research and potential future applications of stem cells in the treatment of disease.



Dr. Li

Kimberly R. Urban, graduate student, **Yan-Chun Li, Ph.D.**, post-doctoral researcher, and **Wen-Jun Gao, Ph.D.**, associate professor, Department of Neurobiology & Anatomy, published "Treatment with a Clinically-Relevant Dose of Methylphenidate Alters NMDA Receptor

Composition and Synaptic Plasticity in the Juvenile Rat Prefrontal Cortex," in the March 2013 issue of *Neurobiology of Learning and Memory*.



Ms. Yeakel

Lynn Hardy Yeakel, MSM, director of the Institute for Women's Health and Leadership, and Betty A. Cohen Chair of Women's Health, is a recipient of the 2013 Alice Paul Equality Awards, named in memory of Alice Stokes Paul (1885-1977), who dedicated her life to securing equal rights for all women.

Spring Travel Awards

Attending meetings and conferences provides invaluable opportunities for students to disseminate their scientific discoveries, receive critical feedback, and network with other members of their scientific communities. The Biomedical Graduate Student Association and the College of Medicine Alumni Association biannually award selected students financial assistance to travel to conferences and meetings around the world that they otherwise might not be able to attend. Here are the recipients of the Spring 2013 Travel Awards, with abstract titles and destinations.

Mariana Gadaleta

Swi1 Is Required for Proper Replication at Difficult-to-Replicate Sites
Keystone Symposia on DNA Replication and Recombination, Banff, Alberta, Canada, March 3-8

Selena Lin

Detection of Clonally Expanded HBV DNA Integration Sites as a Marker for Early Detection of HBV Related HCC
American Association of Cancer Research Annual Meeting, Washington, D.C., April 6-10

Lauren Bailey

Irreversible HIV-1 Env Inactivation by Peptide Triazoles
Conferences on Retroviruses and Opportunistic Infections, Atlanta, Ga., March 3-6

Katie Matthias

Transcription Factors Rsp and CrgA Control Expression of the Serum-Resistance Factor -2,3-Sialyltransferase in Neisseria gonorrhoeae
American Society for Microbiology 113th General Meeting, Denver, Colo., May 18-21



Valerie L. Sodi

mTOR and c-Myc Regulate O-GlcNAc Transferase in Breast Cancer Cells
Keystone Symposia on Molecular and Cellular Biology, Keystone, Colo., February 24-March 1

Jessica Shaw

Traumatic Brain Injury Increases Ethanol Consumption in Female Rats
Research Society on Alcoholism Annual Meeting, Orlando, Fla., June 22-26

Lanfranco Leo

Mutations of Spastin Associated with Hereditary Spastic Paraplegia Cause Deficits in Axonal Transport via Hyper-activation of CK2
Emerging Concepts on Neuronal Cytoskeleton, Marbella Resort, Chile, May 26-30

Timothy Austin

Fidgetin Restrains Axonal Growth During Neuronal Maturation by a Microtubule-Based Mechanism and Provides a Means for Therapeutically Enhancing Regeneration of Injured Adult Axons
Emerging Concepts on Neuronal Cytoskeleton, Marbella Resort, Chile, May 26-30

Rahul Sachdeva

Intra-axonal mRNA Transport During Regeneration Following Spinal Cord Injury
Keystone Symposia on Molecular and Cellular Biology, Tahoe City, Calif., March 10-15

Continuity of Caring: Kevin Bernstein, M.S. '07, M.D. '11

As if receiving his medical degree wasn't enough excitement for one day, Kevin Bernstein was commissioned as a lieutenant in the U.S. Navy right after graduation.

Now in his second year in the family medicine residency at Naval Hospital Pensacola, Bernstein, who was part of the Armed Forces Health Professions Scholarship Program, will owe the Navy three years after he finishes his training. That's fine with him; in fact, he is considering staying in the Navy.

For starters, he loves what he's doing – both the overall environment and the variety of his patients: "Active duty military, their spouses, their children, retirees – it's a really good population to take care of," Bernstein says.

"As family doctors in the military, we practice full-scope family medicine," he explains. Family doctors deliver babies, take care of newborns as well as older children, and are able to perform in-office procedures. "[The Navy] can pretty much put us anywhere in the world because we can do all of those things.

"In my patient panel at any one time I have 10 to 15 pregnant women who I'm providing prenatal care for. After the delivery, I'll see the baby as well. In Pensacola there is a large retiree population, so I see a lot of middle-aged and elderly people. I have a very diverse panel, and it kind of speaks to being a family doctor – seeing all ages and stages."

Bernstein says he always wanted to be a doctor. "I never had a huge ah-ha moment. I guess back in preschool when someone asked 'what do you want to be,' I said I'd like to be a doctor," he laughs. But he did have an ah-ha moment the summer before he started medical school, when he went on a humanitarian trip to Honduras with some family medicine doctors and his father-in-law, who is a dentist.

"I got to really appreciate the scope of medicine, especially for a primary care physician. Just to watch them in action, to help them ... that was a moment when I realized this was definitely what I wanted to be doing," he says.

This feeling was reinforced by the primary care practicum that was part of his first-year curriculum. "You got to experience early on what primary care was, before you could potentially be swayed by the specialties," he says. "I feel that early exposure really made a difference."

Bernstein also had an interest in sports medicine, so meeting faculty physicians Eugene Hong and David Berkson was a revelation: "I realized, 'Wow, these are

family doctors who have also pursued their passion in sports medicine.' That was another one of those moments when I figured out what I wanted to do for a living." Bernstein would like to pursue a sports medicine fellowship, in or out of the service, after his tour in family medicine.

Primary care services are the foundation of health care in the Navy, and great importance is placed on continuity of care through the patient-centered medical home. Going to Pensacola for his residency was a top priority for Bernstein because he knew it was the first family medicine residency to adopt the model the Navy calls the Medical Home Port.

"The Navy does it really well in the sense that every clinic, every hospital, where I potentially could work has the same model of care," Bernstein says, "so no matter where I end up going, I already know what is expected of me and of the people I'll be working with."

One reason Bernstein went into the military was to practice in a different kind of health care system, one in which he knew all of his patients could be taken care of. "In the military, we have a single-payer system. I know that everyone I see has insurance. It's just nice to take that out of the picture."

That leads to his "other mission in life" – to help with the civilian health care system. Bernstein has been an active member of the American Academy of Family Physicians and its Pennsylvania

affiliate since his first year of medical school. He has held several offices in both organizations, and served on the AAFP Commission on Education. He is currently on the board of the AAFP Foundation. "In the military, [I'm] experiencing what it might be like in a health care system where everyone has coverage, and trying to figure out how we can have coverage as a universal thing. I feel that I'll have the experience and I'll be able to provide a different perspective that may be beneficial for health care in the civilian world at some point."

The opinions and assertions contained herein are the private views of the interview subject and the author and are not to be construed as official or as reflecting the views of the U.S. Navy Medical Department or the U.S. Navy at large.

Alumni veterans are invited to contribute to "Healers in the Military," an article planned for the fall online alumni magazine. If you are interested, please email pulse@drexelmed.edu.



Dr. Bernstein is chief resident in the Family Medicine Residency Program at Naval Hospital Pensacola.



Match Day

On March 15, students at medical schools across the country simultaneously opened sealed envelopes containing the name and location of their residency training. Drexel's Match Day began with a champagne toast delivered by Dean Daniel V. Schidlow, M.D. Of the 260 graduating students, 54 chose internal medicine, 28 pediatrics, 21 ob-gyn, and 20 emergency medicine.

The largest number, 90, will remain in Pennsylvania, followed by New York, California, New Jersey, and Massachusetts.





Calendar

April

National Alcohol Awareness Month

10 **Golden Apple Ceremony**
Queen Lane Campus, 5 p.m.
Contact: shay.myers@drexelmed.edu

15 **Legacy Luncheon**
Mitchell's Fish Market at the Waterfront,
11:30 a.m.-1:30 p.m. Homestead, Pa.

29 **Woman One Award Ceremony**
Rittenhouse Hotel
Contact: iwhl@drexelmed.edu or 215-991-8190

May

Better Sleep Month

3-4 **Alumni Weekend**

6 **American College of Obstetrics and
Gynecology Reception**
Hilton Riverfront Hotel, New Orleans,
6-7:30 p.m.

15-17 **50-Year Reunion**

17 **Commencement**

19 **Digestive Disease Week Reception**
Hilton Orlando, 6-7:30 p.m.

21 **American Psychiatric
Association Reception**
Hilton San Francisco Union Square, 6-7:30 p.m.

June

Cataract Awareness Month

18 **Manuel Stamatakis Golf Classic**
Information: drexelmed.edu/golf

July

UV Safety Month

August

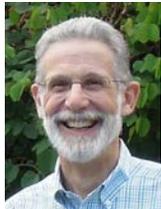
National Immunization Awareness Month

9 **White Coat Ceremony**
Hilton Philadelphia City Avenue
4200 City Avenue

**For more information about alumni events,
please call 215-255-7345 or 866-373-9633
(toll-free), or email medical.alumni@drexel.edu.**

'70s

Kristine Soly, M.D., WMC '70; Cardiology Resident and Fellow, MCP has opened a holistic cardiology practice in Crossville, Tenn. She also directs the Holistic Cardiology Learning Center, a resource for learning how to holistically treat chronic and preventable medical conditions. Soly is board certified in cardiology, internal medicine, and holistic medicine, and is a fellow of the American College of Cardiology.



Melvin P. Melnick, M.D., HU '72 is the recipient of the 2013 Presidential Award of the Pennsylvania Psychiatric Society (PaPS), to be presented on June 22. The award is given annually to a psychiatrist in Pennsylvania who has made an outstanding contribution to the profession of psychiatry. Melnick is a past president

of the PaPS and currently serves as a representative of the PaPS to the Assembly of the American Psychiatric Association (APA). He is board certified in both psychiatry and child and adolescent psychiatry, and is a Distinguished Life Fellow of the APA and the American Academy of Child and Adolescent Psychiatry. He practices in Pittsburgh.

Matthew E. Naythons, M.D., HU '72 award-winning *TIME* magazine photojournalist, and founder and president of Epicenter Communications, has donated his archive of photographs that document iconic historical events such as the Vietnam War and the Nicaraguan Revolution, to the Dolph Briscoe Center for American History at the University of Texas in Austin.

LeRoy Carhart, M.D., HU '73 was part of the documentary *After Tiller*, which was screened at the Sundance Film Festival. Carhart and three other physicians are featured in the film, which documents their experiences as targets of the anti-abortion movement.

Joel Parliament, M.D., HU '73 an internal medicine physician, retired from his practice in Loveland, Colo., after 40 years. He also worked at Banner Health Clinic in Loveland. During his career, he focused on diseases associated with aging and on prevention and patient education.

Robert Goren, M.D., HU '77; Resident, HU was named a Top Doctor in radiology in *Main Line Today* magazine. Goren is a radiologist at Lankenau Medical Center in Wynnewood, Pa.

'80s

Robert S. Porter, M.D., HU '80 has published a book, *The Answer Is Never Magic* (Amazon Digital Services, 2012), a Socratic dialogue on faith and religion between a skeptic and a believer. He is currently the editor-in-chief of The Merck Manuals.

William Sher, M.D., HU '80 has joined ENT and Allergy Associates, LLP (ENTA) as a full partner. His current practice, Otolaryngology Associates of Long Island, will merge with ENTA effective July 2013. He is the section chief of the Department of Otolaryngology at St. Charles Hospital in Port Jefferson, N.Y., and is an assistant clinical professor at Stony Brook University School of Medicine and the Albert Einstein College of Medicine.

Robin D. Rothstein, M.D., MCP '81 was appointed associate professor of medicine at Temple University School of Medicine and medical director of the Inflammatory Bowel Disease Program at Temple University Hospital. Rothstein came to Temple from Pennsylvania Hospital, where she was an attending gastroenterologist and the director of house staff education in gastroenterology.

David A. Cohen, M.D., HU '83, was named a Top Doctor in internal medicine in *Main Line Today* magazine. Cohen practices at Lankenau Medical Center in Wynnewood, Pa.

Bradley Grayum, M.D., HU '83 was named a Top Doctor in neurology in *Main Line Today* magazine. Grayum is a neurologist at Crozer Chester Medical Center in Upland, Pa. He also received the Crozer Chester Medical Center Educator of the Year award.

Joseph J. Caldwell, M.D., HU '84 joined the medical staff of Seabastcook Valley Health in Pittsfield, Maine, as an orthopedic surgeon. He is board certified and a fellow of the American Academy of Orthopaedic Surgeons.

Mary Driesch, M.D., MCP '84 was appointed medical director of Finger Lakes Community Health in Penn Yan, N.Y. She is also the school physician in the Penn Yan Central School District, the medical director at Keuka Comfort Care Home, and the founding director for the Daisy Marquis Jones Family Health Center in Yates County, N.Y.

Daniel J. Glunk, M.D., HU '84 was appointed to the Pennsylvania Patient Safety Authority board of directors. He practices internal medicine in Williamsport, Pa., and is a former president of the Pennsylvania Medical Society.

Gregory Postma, M.D., HU '84 is a professor in the Department of Otolaryngology and director of the Center for Voice, Airway and Swallowing Disorders at Georgia Regents University in Augusta, Ga. Georgia Regents University was formed in January by the consolidation of Augusta State University and Georgia Health Sciences University. He is the past president of the American Bronchoesophagological Association and the Dysphagia Research Society.

Jeffrey M. Finkelstein, M.D., MCP '85; DMD joined ENT Associates, which is located on the campus of Bryn Mawr Hospital and is affiliated with Main Line Health. Board certified by the American Board of Otolaryngology, he was previously with Aria Health in Philadelphia.

Dorothy A. Wludyka, M.D., WMC '85 has retired from her family medical practice in Tottenville, N.Y., where she and her late husband had practiced together.

Ralph D. McKibbin, M.D., HU '86; Gastroenterology Fellow, HU '92 was the speaker at Penn State Altoona's fall commencement ceremony. McKibbin is a gastroenterologist with Blair Gastroenterology Associates in Altoona, Pa.



Dr. Steinberg (on right)

Mark Steinberg, M.D., HU '86; DDS received the 2012 Presidential Achievement Award from the American Association of Oral and Maxillofacial Surgeons at the 94th AAOMS annual meeting in San Diego in September. In addition to his private practice in

Northbrook, Ill., Steinberg is a clinical professor of surgery at the Loyola University Stritch School of Medicine.



David A. Brake, Ph.D., HU '87 was recently appointed to the board of directors at Vaxin, Inc., an emerging biotechnology company developing vaccines and other biological products. He also recently received a Department of Homeland Security Under Secretary's Award for Science & Technology for his consultant work on an R&D team that developed the world's first licensed recombinant vaccine for foot-and-mouth disease.

Beth Baughman DuPree, M.D., HU '87 a breast cancer surgeon, was one of nine recipients of the REAL Award at the inaugural Patient Safety, Science & Technology summit hosted by the Masimo Foundation. The REAL Awards were created by Save the Children and the Frontline Health Workers coalition to honor the lifesaving work of dedicated health workers.

Richard O'Flynn, M.S., HU '82; M.D., HU '87 was listed in *Main Line Today* magazine as a Top Doctor. O'Flynn is an anesthesiologist with Society Hill Anesthesia Consultants in Media, Pa.

Angela Jackson, M.D., MCP '89 was named associate dean for student affairs at Boston University School of Medicine effective December 1, 2012. A member of the BUSM community since 1993, Jackson is an associate professor of medicine. She has an active primary care practice at Boston Medical Center and was named a "Top Doc" by *Boston Magazine* in 2011 and 2012.

'90s

Theodore Ganley, M.D., HU '90 was named a Top Doctor in orthopedics in *Main Line Today* magazine. Ganley is the attending orthopedic surgeon and director of sports medicine at The Children's Hospital of Philadelphia in its King of Prussia location. Ganley is also an associate professor of orthopedic surgery at the Perelman School of Medicine at the University of Pennsylvania.

Amelia Paré, M.D., HU '92, was elected president of the 2013 Allegheny County Medical Society Board. She is a board-certified plastic surgeon in private practice at Plastic Surgery of Pittsburgh in McMurray, Pa., and is affiliated with several area hospitals, including the University of Pittsburgh Medical Center.



Deborah Kuhls, M.D., MCP '93 a

trauma surgeon and associate dean for academic affairs at the University of Nevada School of Medicine's Las Vegas campus, has been named to Vegas, Inc.'s 2013 Women to Watch. She is a member of the current class of fellows in the College of Medicine's Executive Leadership in Academic Medicine® program for women.



Elmer G. Pinzon, M.D., HU '94; MPH

was elected by peer vote to *Cityview* magazine's Top Docs of Knoxville, Tenn., for the fourth straight year. He is president, owner, and medical director of University Spine & Sports Specialists, and a clinical assistant professor in the Department of Surgery, Division of Surgical Rehabilitation, at the University of Tennessee Graduate School of Medicine.

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Everest Lam, M.S., HU '95 a general dentist, has opened a second office. His practice, Lancaster Dental Arts, has locations in Lititz and downtown Lancaster, Pa.

David M. Junkin Jr., M.S., MCP '98; M.D. a board-certified orthopedic surgeon, joined Southern Alleghenies Elite Orthopedics based in Hollidaysburg, Pa.

Christopher Kauffman, M.D., HU '98, was named a Top Doctor in psychiatry in *Main Line Today* magazine. Kauffman is a board-certified psychiatrist at Crozer Chester Medical Center in Upland, Pa.

Robert Perez, M.S., MCP '98; M.D. was appointed as the outpatient director for Radiology Associates of Hartford, a community-based provider of diagnostic imaging services. Perez joined RAH in 2010.

Tiffany Sanders, M.D., MCPHU '99, has joined the medical staff of St. Francis Hospital and Medical Center as medical director for the Malta House of Care, a nonprofit organization that provides free, basic primary healthcare to the uninsured through a mobile clinic service in Hartford, Conn., neighborhoods. She was previously the clinical director at the Federal Bureau of Prisons.

'00s

Jennifer Denne, M.D., MCPHU '01 was named a Top Doctor in general surgery in *Main Line Today* magazine. Denne practices at Bryn Mawr Hospital in Bryn Mawr, Pa.



Anthony E. Dragun, M.D., MCPHU '02 associate professor, vice chair, and residency program director in the Department of Radiation Oncology, University of Louisville School of Medicine and James Graham Brown Cancer Center, is overseeing a study for people with early stage breast cancer. The subjects receive radiation once a week,

instead of daily. They receive more radiation in the weekly treatment than they would in daily treatment, but less radiation overall during the five-week course. The goal of the experimental regimen is to make it easier, and more likely, for women to get the recommended radiation. This protocol is the only one of its kind in the United States.



J. Matthew Valosen, M.D. '03 joined the Bone and Joint Institute of South Georgia. He was previously the chief of Orthopaedic Surgical Services at Winn Army Community Hospital at Fort Stewart, Ga. Valosen is a diplomate of the American Board of Orthopaedic Surgery and a fellow of the

American Academy of Orthopaedic Surgeons.

Michael Lane, M.D. '04 an infectious diseases physician, has been named the patient safety officer for the Department of Medicine at Washington University in St. Louis (Mo.). Lane is an assistant professor of medicine.

Katy Lilly, M.D. '04 a family physician at Woodbury Family Practice in Newington, N.H., was chosen as one of the New Hampshire *Union Leader's* "40 Under Forty," a list of the state's "brightest young achievers." She serves as a team physician at the University of New Hampshire, where she won the 2012 Young Alumna/us Award, and as a member of the board of Growing Places, a local child care program. In addition, she was a founder of healthcareGIVES, a group that helps raise awareness for social issues.

'10s



Kevin Bernstein, M.D. '11 has been elected chief resident of the Family Medicine Residency Program at Naval Hospital Pensacola, in Florida. A lieutenant in the U.S. Navy, Bernstein was recently elected to Alpha Omega Alpha Honor Medical Society by the Maryland Gamma Chapter at the

Uniformed Services University of the Health Sciences. In addition, the Department of Defense Patient Safety Program selected his project, "Patient Centered Medical Home Continuity SOS (Smart on Safety)," for the 2012 Department of Defense Patient Safety Award. See profile, page 17.

Former Interns, Residents, and Fellows

(in alphabetical order)

Jeffrey L. Apfelbaum, M.D.; Internal Medicine Intern, HU '79 professor of anesthesia and critical care, and chairman of the Department of Anesthesia and Critical Care at the University of Chicago Medical Center and the Pritzker School of Medicine in Chicago, received the American Society of Anesthesiologists Distinguished Service Award.

Brian Carlson, M.D.; Internal Medicine Resident, HU '91 a board-certified gastroenterologist, joined Sonora Regional Medical Center in Sonora, Calif., and Sierra Physicians Network. Carlson has been in private practice for 13 years.

Mary Reich Cooper, M.D., J.D.; Internal Medicine Fellow, HU '86 joined the Connecticut Hospital Association in Wallingford, Conn., as vice president and chief quality officer. Cooper has held an academic appointment as assistant professor of medicine since 2008 with the Warren Alpert Medical School at Brown University.



Greetings From South Florida

Friends from the Hahnemann Medical College Class of 1950 have a reunion every winter in Florida. This year, classmates Hal Batt, Al Kramer, Elaine and Merv Needell, and Lou Soletsky gathered in Deerfield Beach on March 12 with their spouses and significant others. Having a wonderful time at JB's on the Beach are (front, l-r) Elaine and Merv Needell, Hal and Irma Batt, and (back, l-r) Ginny Salus, Lou Soletsky, Al and Helga Kramer, and Rina Grandi.

Theresa DiSandro, D.O.; Gastroenterology and Hepatology Resident, HU '09 has joined Lourdes Gastroenterology Associates in Cherry Hill, N.J.

Amir Jundi, M.D.; Nephrology Resident, HU '10 a board-certified nephrologist, has joined Garden City Hospital in Garden City, Mich., and sees patients in Dearborn.

Bindukumar C. Kansupada, M.D.; Cardiology Resident, MCP '84 a cardiologist and internal medicine specialist, was elected to the board of the Pennsylvania Medical Society. He practices at Heartcare Associates in Langhorne, Pa. He also serves as vice president of the Bucks County Medical Society.

Jeffrey Lin, DDS, M.D.; Oral and Maxillofacial Surgery Resident '12 is now in private practice. Also see page 14.

Dick Menzies, M.D.; Internal Medicine Resident, MCP '81 was awarded the Union 2012 Scientific Prize by the International Union Against Tuberculosis and Lung Disease (known as "The Union Award"). The award was presented during the Union's World Conference in November in Kuala Lumpur, Malaysia. Menzies is the director of the Respiratory Division at the McGill University Health Centre in Montréal.

Michael P. Moulton, M.D., Emergency Medicine Resident, MCP '94 a board-certified specialist in emergency medicine, was installed as the 159th president of the North Carolina Medical Society. Moulton has been with Eastern Carolina Emergency Physicians in Wilmington, N.C., since 1994. From 2001 to 2010, he was a North Carolina alternate delegate to the American Medical Association.

Pallavi M. Rastogi, M.D.; Hematology/Oncology Resident and Fellow, HU '07 board certified in medical oncology and internal medicine, joined Main Line HealthCare Hematology Oncology Associates in Wynnewood, Pa.

Priya P. Roy, M.D.; Internal Medicine Resident, MCPHU '02, joined the Hospital of Central Connecticut in New Britain, Conn. She practices at Grove Hill Medical Center, also in New Britain.

Kristen Sandel, M.D.; Emergency Medicine Resident '05 was named to the board of directors of the Pennsylvania Medical Society. Sandel is an associate director of emergency medicine at Reading Hospital in Reading, Pa. She is a fellow of the American College of Emergency Physicians.

Shyam Subramaniam, M.D.; Internal Medicine Resident, HU '98 board certified in pulmonary, critical care and sleep medicine, joined Mercy Health Physicians in Cincinnati, Ohio. He provides pulmonary and critical care coverage for Mercy Health-Western Hills Hospital.

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Do You Know What This Is?

Blood-letting was a common medical treatment from antiquity through the 19th century. Illness was thought to be caused by an imbalance in the body's "humors" — blood, phlegm, black bile, and yellow bile — and could be cured by creating a balance among them. This 19th-century scarificator was a state-of-the-art blood-letting device used to restore balance and health.

Many of the different models of scarificator looked similar to the one pictured here. It was a brass, spring-loaded device that was placed on a patient's skin, often on the arm. When the spring was engaged, roughly a dozen fine steel blades emerged from slits in the device, cutting through the patient's skin, at a depth set by using the dial on the top of the device. Blood would pour slowly out of the wounds to be caught in a bowl calibrated with markings to measure volume. When the appropriate amount of blood was drawn off, the wound was bandaged to stanch the flow. As medical science progressed in the 19th century and the popularity of "heroic medicine" faded away, these tools disappeared from medical practice.

The Legacy Center has two scarificators, including the one pictured here, which was donated in 1998 by Margaret Leymaster, widow of Glen Leymaster, president of one of the College of Medicine's predecessor schools, the Woman's Medical College of Pennsylvania, from 1964 to 1970. The device had been given to Dr. Leymaster by an alum.

For more information about the Legacy Center, visit <http://archives.drexelmed.edu/>.



This 19th-century tool and its case will be on display at Drexel University's Legacy exhibition. See page 6 for dates and location.