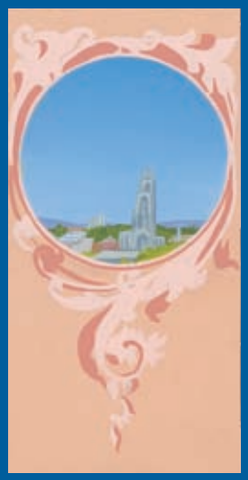


Devoted to noteworthy happenings at the medical school

Super SEALs

During training, American soldiers and sailors might run 10 miles at a clip. They almost never do that during combat. Then they're more likely to sprint in short bursts, climb over obstacles—the kinds of things a football player might do. The University of Pittsburgh's Scott Lephart wondered why the U.S. Navy hadn't considered using the techniques of sports science to train its troops. He recently convinced the military that its special forces should have customized workouts and nutrition plans to maximize performance, prevent injury, and save lives.

Lephart—a PhD who serves as chair of sports medicine and nutrition in Pitt's School of Health and Rehabilitation Sciences, director of the Neuromuscular Research Laboratory at the UPMC Center for Sports Medicine, and associate professor of orthopaedic surgery—runs the new Human Performance Research Laboratory in the SEAL compound in Little Creek, Va. He's using biomechanical analysis to study the physical demands placed on SEALs so they can train like SEALs rather than, say, long-distance runners.

—Katy Rank Lev

U.S. Navy SEALs will train with help from Pitt.

ROBERT BENSON/ GETTY IMAGES

FOOTNOTE

Sex, drugs, and rock 'n roll? Try, "Sex and drugs and rock 'n roll, and country, and R&B, and rap, and so on."

Pitt's Brian Primack, an MD assistant professor of medicine and pediatrics, has found that teenage Americans hear about 30,000 references to drugs, alcohol, and tobacco in music annually. Those references are often associated with sex, partying, and general good times. All popular genres were included in the study.

AN ELUSIVE BUG

JoAnne Flynn, a University of Pittsburgh PhD professor of microbiology and molecular genetics, says the greatest challenges facing tuberculosis researchers are the elusiveness of the tuberculosis bacterium and the related puzzle of knowing when treatment has worked.

"In some cases, the drugs take six months to work; in other cases, two months," she says. "By knowing what's happening in a person with tuberculosis, we may be able to shorten therapy, find better combinations of drugs, and reduce the effort it takes to cure the disease."

Equipped with $11.4 million from the Bill & Melinda Gates Foundation, Flynn and others at Pitt's Center for Vaccine Research hope to arrive at a better understanding of what makes TB treatments work. They also plan to develop imaging techniques to better monitor the progression of the disease and its treatment. *—Joe Miksch*

CAMI MESA

A&Q

Rethinking "The Change"

Hot flashes. Insomnia. Night sweats. The litany that marks the end of a woman's childbearing years can spark dread. Yet that need not be so, says Judith Balk (shown above), University of Pittsburgh assistant research professor of obstetrics, gynecology, and reproductive sciences. The yoga instructor, acupuncturist, and staff physician at the Women's Midlife Health Center at Magee-Womens Hospital of UPMC describes her vision for the transformation of attitudes toward menopause.

On youth culture

In some cultures, people look forward to menopause because it's the end of menstruation and the beginning of wisdom. Here, we're youth obsessed, and we look at it as the end of youthfulness.

There are so many books and Internet sites that sell hormones as a fountain of youth, women almost feel like if they're not doing [hormone replacement], there's something wrong with them.

On how doctors approach menopause

There are two competing theories: One is that our ideal state is having the hormones of a 20-year-old. When we hit menopause and our ovaries don't work like they did when we were 20, we take estrogen. That's medicalizing—an emphasis on treating.

Is that the ideal state? What we should be mimicking? Or is it the ideal state when we don't have to be slaves to our menstrual cycles, when we can focus on becoming the wise woman?

The second theory is that women do not need estrogen to feel well and be healthy and that the reason we have so much estrogen earlier in our lives is that we need it to reproduce.

Ideally, the focus [as women age] will be on wellness and prevention of disease. And I don't mean prevention of menopause, which is a natural part of life, but some of the conditions like hot flashes, insomnia, osteoporosis, heart disease—conditions we know increase as we get older.

Her question for us

Menopause is a time of life when people say, "I've got to get my act together." This is a group of motivated women who want to improve their health. How do we capitalize on this transitional time to help them do that? *—Interview by Sharon Tregaskis*

Faculty Snapshots

The American Cancer Society has named Jennifer Rubin Grandis (MD '87, Res '93) one of its three new clinical research professors. The honor carries with it a five-year, $400,000 grant. Grandis is a University of Pittsburgh professor of otolaryngology and pharmacology. She studies genetic abnormalities associated with head and neck squamous cell carcinoma. According to *Nature*, she tied for 11th for the most National Institutes of Health grants received by an investigator last year. Her eight grants total $3.7 million.

Grandis

Hans-Christoph Pape develops management techniques for doctors to treat orthopaedic injuries of trauma patients. The American Academy of Orthopaedic Surgeons recognized his contributions with the Kappa Delta Award, its highest honor. Pape, an MD associate professor of orthopaedic surgery, is the fourth Pitt surgeon to win the award in the past five years.

Pape

David Geller serves as president-elect of the Society of University Surgeons. The MD is the Richard L. Simmons Professor of Surgery at Pitt and codirector of the UPMC Liver Cancer Center. Several other Pitt surgeons have presided over the organization in recent history.

Niedernhofer

Geller also is one of three Pitt faculty members newly elected to the American Society for Clinical Investigation, which recognizes physician-scientists who have done innovative work before reaching age 45. Robert Ferris, an MD/PhD associate professor of otolaryngology and immunology, and Laura Niedernhofer, MD/PhD assistant professor of microbiology and molecular genetics, also are now card-carrying ASCI members.

Lakkis

The Association of American Physicians (AAP) recently announced its new members for 2008, including three Pitt profs: Ronald Herberman, an MD who is the Hillman Professor of Oncology, professor of medicine and pathology, and director of the University of Pittsburgh Cancer Institute; Jay Kolls, an MD, the Niels K. Jerne Professor of Pediatrics and Immunology, and chief of the school's Division of Pediatric Pulmonology; and Fadi Lakkis, an MD, the Frank and Athena Sarris Professor of Transplantation Biology, a professor of surgery and immunology, and scientific director of the Thomas E. Starzl Transplantation Institute. *—JM*

Orthopaedics is Women's Work

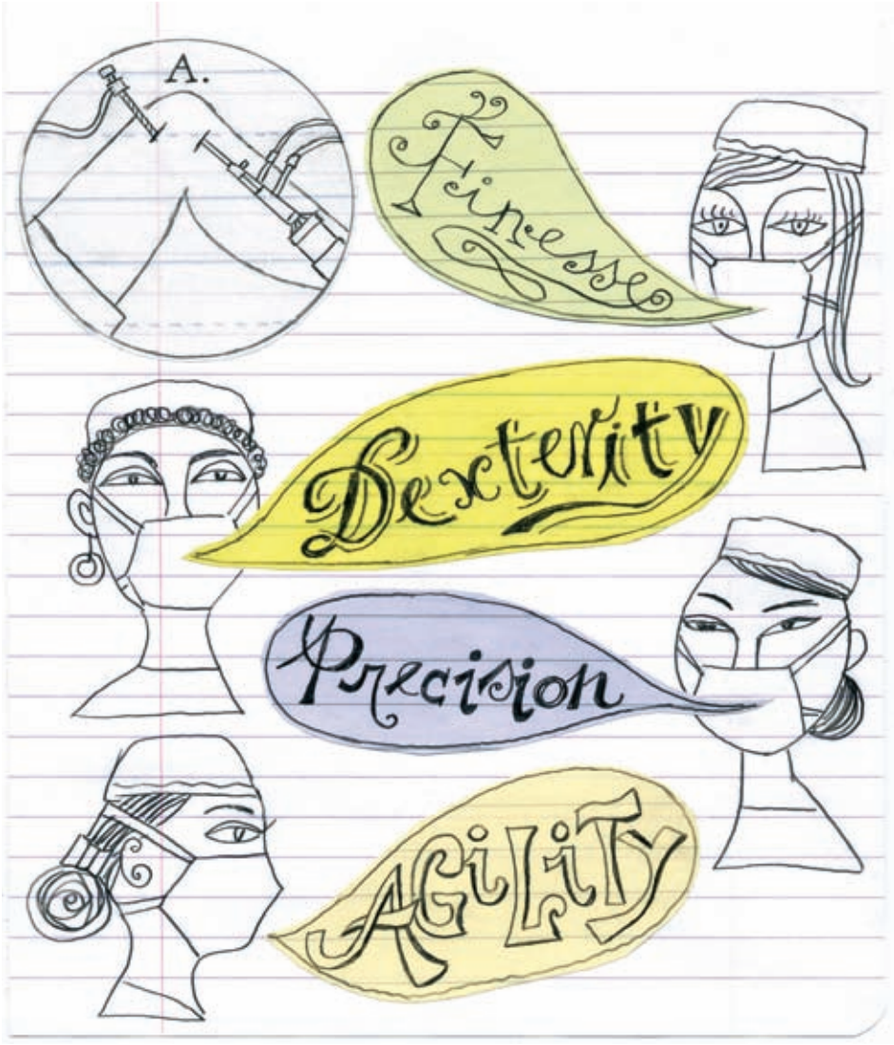
The percentage of women graduating from American medical schools increased from 8 in 1970 to 43 in 2001. The percentage of women filling orthopaedic residency posts, according to a comprehensive study published in 2003, rose from .6 to 9 during that time span. The perception of the strength required for the job may have kept some women from pursuing such training (and kept some men from encouraging their female colleagues to do so).

Things are changing. Especially in the University of Pittsburgh's Department of Orthopaedic Surgery. Of the eight-member residency class accepted in 2008, says department chair Freddie Fu, five are women. And all five scored in the 99th percentile on their USMLE exams, Fu adds.

"Twenty percent of the people in our program are women," says Fu, including seven of the department's clinical faculty members. Having a significant female faculty presence, says Fu, helps attract highly qualified women residents.

Robin West, MD assistant professor of orthopaedic surgery, says that women are drawn to Pitt because of the environment Fu has created. "He loves children and is very supportive of family obligations," says West, a mother of two.

West predicts orthopaedics will continue to draw more women into the fold. "With arthroscopic surgery, finesse is more important than strength," she says. *—JM*



CATHERINE LAZURE

RENEE ROSENSTEEL

GUNS 'N HOSES

Undoubtedly, there are less painful ways to raise money than this. Still, in February, 18 city police, firefighters, and paramedics donned boxing gloves, entered the squared circle, and duked it out in front of 250 people at the Hilton Pittsburgh for departmental bragging rights. (They also raised more than $12,000 to help build a program to screen city emergency workers at risk for heart disease.)

The screening program began in May. It was created by UPMC's Cardiovascular Institute, directed by Barry London, an MD/PhD who serves as Pitt's Harry S. Tack Professor of Medicine and chief of the Division of Cardiology. *—JM*

BRUSSELS SPROUTS AT PITT

The University of Pittsburgh is now a repository for archival material the European Union has accumulated since its formation in the 1950s. This is the most complete collection of the material anywhere, though constituent elements can be found in Europe, according to Phil Wilkin, the University's curator for the collection. The materials consume 3,400 feet of shelf space and 300 feet of microfiche.

Jonathon Erlen, history of medicine librarian for the Health Science Library System at the University, says the archive is a boon for Pitt med students and faculty.

Erlen notes that the collection includes documents on the progression of HIV/AIDS in Europe and Africa, health policy material in fields ranging from maternal health to immigrant health, five decades of demographic data, and medical research on myriad topics.

"A nearly endless supply of material for our students doing their scholarly projects," he says. *—JM*

COURTESY ROBERT WAGNER

FALCON FYSICALS

Pediatricians may face some pretty uncooperative tykes in the exam room, but at least they don't have talons.

Robert Wagner, chief of surgical veterinary services at Pitt, faces frenetic raptor offspring each year when he performs annual physicals for peregrine falcon chicks born atop the Cathedral of Learning. The baby birds manage to endure throat and rectal swabs, avian phlebotomy, and a chilly stethoscope on their chests before they're cleared for takeoff. *— Hayley Grgurich*

Name Dropping

The School of Medicine is home to its share of scientific superstars, but on Oct. 2 and 3 it will welcome the following standouts from out of town as part of Science 2008, its annual celebration of research in medicine, engineering, computation, and basic science.

The University of California, Berkeley's Randy Schekman, PhD professor of cell and developmental biology and Howard Hughes Medical Institute investigator, will deliver the Dickson Prize in Medicine Lecture. Schekman's lab focuses on the processes of membrane assembly, vesicular transport, and membrane fusion among organelles of the secretory pathway. He has received the Eli Lilly and Company Research Award in microbiology, the Lewis S. Rosenstiel Award for Distinguished Work in Basic Medical Science, the Gairdner International Award, and the Albert Lasker Award for Basic Medical Research.

Peter Walter of the University of California, San Francisco, will give the Mellon Lecture. Walter, a PhD, is professor and chair of UCSF's biochemistry and biophysics department. He's also a Howard Hughes Medical Institute investigator. Walter studies the endoplasmic reticulum (ER). The ER is a gateway for proteins leaving cells, keeping misfolded proteins in its grasp rather than letting them run amok. ER malfunctions are thought to contribute to the progression of diseases such as cancer, diabetes, cystic fibrosis, and vascular and neurodegenerative conditions. Walter also has won the Searle Scholar Award, Eli Lilly Award in Biological Chemistry, Passano Award, Alfred P. Sloan Jr. Prize, and the Wiley Prize in Biomedical Sciences.

Marcus Raichle is this year's Klaus Hofmann Lecturer. An MD, he is a professor of radiology, neurology, neurobiology, and biomedical engineering at Washington University in St. Louis. Raichle has helped lead advances in the development and use of positron emission tomography and functional magnetic resonance imaging to study the living brain. His work resulted in the first integrated strategy for the design, execution, and interpretation of functional brain images. He is a member of the National Academy of Sciences, the Institute of Medicine, and the American Academy of Arts and Sciences, as well as a fellow of the American Association for the Advancement of Science. ***—JM***