

Devoted to noteworthy happenings

at the medical school

FACE TRANSPLANTS APPROVED

UPMC, in partnership with the School of Medicine, has become the third American medical center certified to perform face transplants.

The University of Pittsburgh's Institutional Review Board and UPMC approved the procedure in June. Joseph Losee, MD professor of surgery and of pediatrics in the School of Medicine, heads the initiative.

With UPMC and Pitt's experience in allotransplantation, which involves tissue that isn't genetically identical, Losee says that his team is in an optimal position to join the Cleveland Clinic and Brigham and Women's Hospital in Boston as providers of this procedure. A transplant can offer some normalcy to people with devastating facial deformities.

"It is the next horizon in reconstructive surgery," Losee says. "And we at Pitt have both the technology and the innovative approach to minimizing lifelong immunosuppression."

There is no timetable for the first face transplant in Pittsburgh, Losee says, though the screening of prospective patients is expected to begin soon. *—Joe Miksch*

FOOTNOTE

Survey says: Pitt researchers are delivering the goods and enjoying their work at the same time. Pitt has climbed to 12th on *The Scientist*'s 2009 "Best Places to Work in Academia" list, up from 46th in 2008. Pitt receives the most federal funding of the top 15 institutions. Respondents cited research resources and a collegial work environment as among the University's greatest strengths.



Ginkgo biloba's reputation as a cognition enhancer doesn't stand up to rigorous study.

GETTY IMAGES

Supplement(al) Information

Ginkgo has been used in traditional Chinese medicine for ages and remains one of the most popular herbal treatments for improving cognitive function. A recent study suggests that, for such uses, ginkgo might better be forgotten. The research was led by Beth Snitz, a PhD research associate in the Department of Neurology, and Steven DeKosky, an MD and former chair of Pitt's Department of Neurology, who now serves as vice president and dean of the University of Virginia School of Medicine.

The Ginkgo Evaluation of Memory study, a six-year project that followed 3,069 older adults and spanned six U.S. medical centers, is the largest double-blind, placebo-controlled study of dementia prevention to reach completion. Each of the subjects began the trial with little to no cognitive impairment. Six years later, those who took ginkgo and those who didn't showed little disparity in tests of memory, language, attention span, visuospatial judgment, and executive function. The team's findings were published this winter in the *Journal of the American Medical Association*.

According to Snitz, the results suggest it makes more sense to "do things we already know are good for cognitive health rather than take medications or supplements that lack evidence of efficacy." *—Ben Korman*



CAMI MESA

A&Q

Rachel Berger and Janet Squires: Fighting Child Abuse

In 2006, the American Board of Pediatrics recognized a heart-wrenching new subspecialty. Two hundred U.S. physicians are now board-certified in child abuse pediatrics, including Pitt's assistant professor of pediatrics Rachel Berger (Res '99, Fel '01), shown left, and professor of pediatrics Janet Squires, shown right. Berger talked with us about the subspecialty.

Why the subspecialty helps

The number one advantage is that it draws attention to a group of kids who really need the voice. The constituency for children with autism is the parents of children with autism. The constituency for children with cancer is the parents of children with cancer. But there is no natural constituency for children who are abused. And there are three million children in the United States who are reportedly abused every year—that's more than almost any other disease that you can possibly think of.

On what it takes to be a child abuse expert

It's a unique amalgam of medical skills borrowed from a variety of subspecialties, like general pediatrics, orthopaedics, emergency medicine, neurosurgery, and radiology. And there are many different aspects to child abuse. The person who's a child abuse specialist really has to have a good knowledge of all of them—physical abuse, sexual abuse, emotional abuse, neglect. They're all things that the general pediatrician or any other subspecialist may not be very comfortable with.

On the hardest parts of the job

Telling somebody their child is being abused is probably one of the most difficult things that you do as a doctor. You have to be a very, very good communicator. You're dealing with families in crisis who are angry almost all the time. The other thing is being able to explain extremely complicated medical things to non-medical people. The decisions about child protection are made by child protective services and police. Their assessments need input from a medical expert.

A question for us from Janet Squires

We all know that it is very hard to see what we are not looking for. So how can we elevate the awareness of abuse and neglect in children among medical professionals and in the general population as a whole? *—Interview by Melinda Wenner Moyer*



Next Generation

Six years ago, Pitt's School of Medicine implemented the scholarly project requirement to give students a taste of research early in their medical careers. The Bert and Sally O'Malley Award for Outstanding Medical Research recognizes those who excelled with their projects. Four members of the Class of 2010 were so honored:

Given the prevalence of coronary artery disease, Malolan Rajagopalan wants to make sure patients get an accurate diagnosis. To image myocardial perfusion, doctors often use single photon emission computed tomography (SPECT). Yet during SPECT imaging, tissue and body fat can disrupt signaling and falsely create the appearance of blood-flow blockage to the heart. Rajagopalan found that taking a separate CAT scan with a timed respiratory protocol can clarify the SPECT image. Rajagopalan's project mentor was Pitt's Prem Soman, MD/PhD assistant professor of medicine and associate director of nuclear cardiology research.

Alexandra Lewis, who worked with Pitt's George Michalopoulos, MD/PhD chair of pathology, studied hepatocellular carcinoma—the most common form of primary liver cancer. For the study, samples of solid tumor tissue were analyzed to further understand what triggers the development of the disease. The study also provides insight into why some chemotherapy drugs don't perform as well in the body as in culture.

Patients undergoing gastric bypass can lose hundreds of pounds, but they're left with excess skin that can become infected if not surgically removed. Devin O'Brien Coon worked with Pitt's J. Peter Rubin, MD and associate professor of plastic and reconstructive surgery, to develop safer post-bariatric reconstruction techniques.

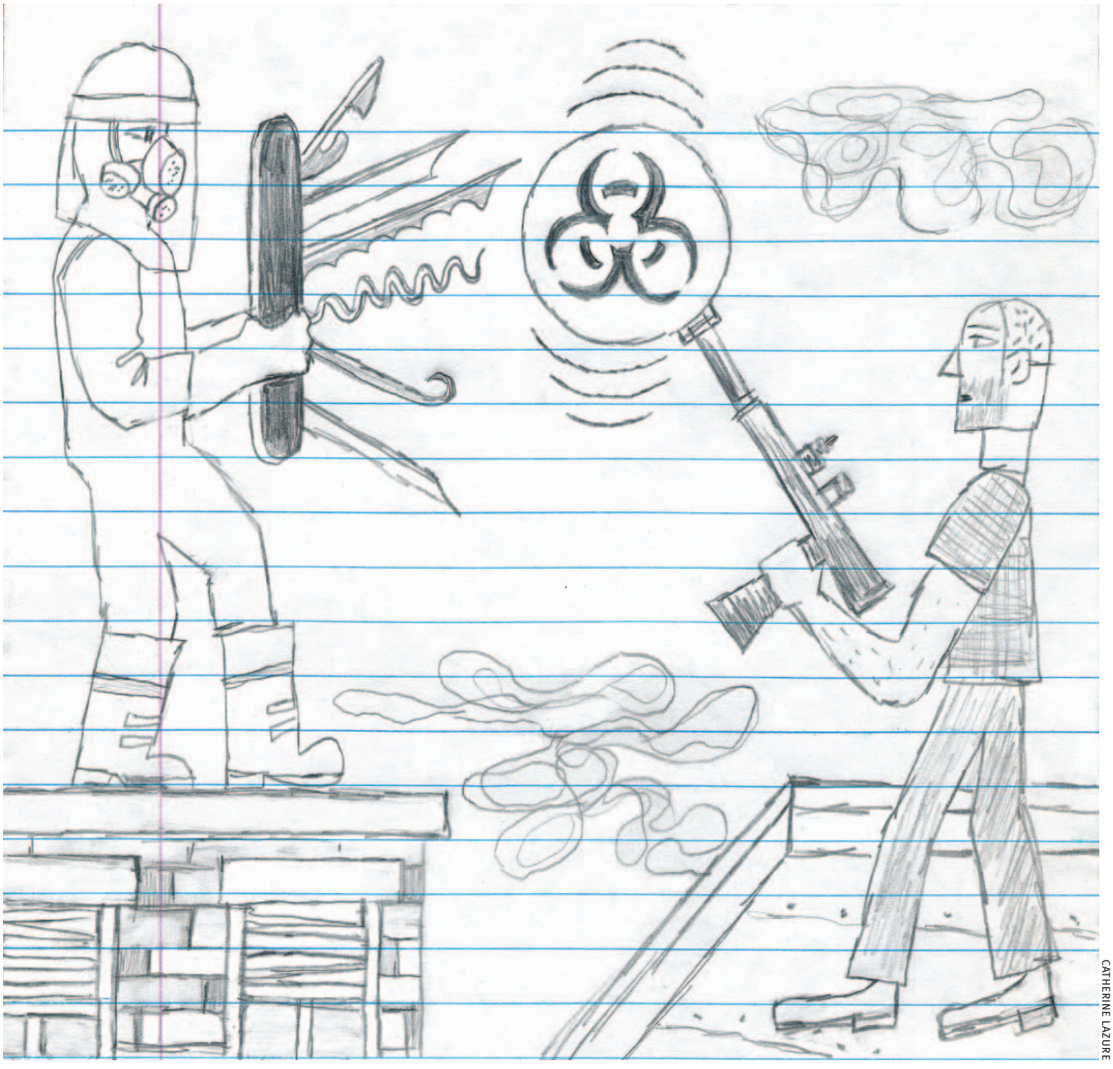
Survival rates of head and neck cancer patients haven't changed much for three decades. Sun Ahn has contributed to the understanding of how these tumors relay messages. Head and neck cancer tumors secrete a protein that allows them to form additional blood vessels necessary for tumor growth. Ahn, working with Pitt's Seungwon Kim, MD assistant professor of otolaryngology, found that the protein also sends a message to the tumor itself to help it become more migratory and invasive. *—Keith Gillogly*

A Mesh of All Trades

Researchers in Alan Russell's laboratory at the University of Pittsburgh-UPMC McGowan Institute for Regenerative Medicine have developed a biological Swiss army knife—a polymer capable of fighting a range of biological and chemical toxins. Russell, a PhD, director of the institute, and Distinguished University Professor of Surgery at Pitt, hopes this versatile material will be an effective countermeasure against bioterrorism.

The material is a polyurethane fiber mesh that resembles a slice of a latex glove. It can be used to build detoxifying sponges, pellets, or wound dressings to safeguard victims of biological terrorism. In tests, the material was able to kill off one million bacteria per milliliter in an hour and detoxify 75 percent of a simulated nerve agent compound in seven hours.

"Terrorists are not going to announce what kind of agent they will unleash in their attack, and a single defensive material is easier to deploy and decreases the response time," says Gabi Amitai, a PhD visiting professor of pharmacology and the project's lead investigator. *—BK*



CATHERINE LAZURE

Teaming up

Delivering quality medical care is not a solitary pursuit. To get a handle on the teamwork necessary to properly treat a patient, a group of Pitt students—including Sean Tackett (MD '10), Garrett Eggers from the School of Pharmacy, and Maria Falcone and Debra Thompson from the School of Nursing—traveled to the University of Minnesota in April. There, they participated in the 2010 CLARION (Clinician/Administrator Relationship Improvement Organization) National Interprofessional Case Competition.

After spending hours studying a fictional scenario in which a 47-year-old woman with a spinal cord injury died while undergoing an MRI, the team presented its analysis of what went wrong to a panel of judges. They came back to Pittsburgh winners, sharing a $7,500 prize.

Loren Roth, MD/MPH associate senior vice chancellor for the health sciences at Pitt and co-advisor for the team, says that good cross-disciplinary communication is vital to good care, and building an awareness of that is an important part of Pitt's curriculum. To see how well the team competed suggests that this idea has taken root, he says. *—JM*

A BIG LITTLE DISCOVERY

Small discoveries can lead to big things. The University of Pittsburgh's Robert Squires—in collaboration with researchers at Indiana University, Riley Hospital for Children, and the Clinic for Special Children in Strasburg, Pa.—helped identify a gene responsible for a newly recognized disease in Amish children.

Squires, an MD and the clinical director of Children's Hospital of Pittsburgh of UPMC's Division of Pediatric Gastroenterology and professor of pediatrics at Pitt, is coauthor of a paper published in the March 12 edition of the *American Journal of Human Genetics*. The paper presents evidence that a mutation in a gene called ITCH causes an autoimmune disease that results in the enlargement of the spleen and liver, developmental delays, and chronic diarrhea.

Although the disease is rare and specific to the Amish, Squires thinks this sort of discovery can deepen our knowledge of how "the intestine handles immunological challenges," perhaps leading to advances in immunosuppression and the treatment of intestinal allergies. *—JM*







CAMI MESA

NICU @ ZOO

Erin Perry went into labor 12 weeks early after carrying six babies. "It was scary from the moment I became pregnant," she says. "I was lucky enough to have fantastic doctors." Today her sextuplets—the smallest was 1 pound 11 ounces at birth—are 7 years old and healthy.

This summer, Perry, now a member of the Magee-Womens Hospital of UPMC's parental advisory committee, and other volunteers organized a gathering at the Pittsburgh Zoo and PPG Aquarium of former patients of Magee's Neonatal Intensive Care Unit.

Organizers draped a large banner with marker tracings of children's hands over a table. Some of the kids insisted on tracing a hand themselves, resulting in a colorful, if slightly messy, display. Inside each print was the child's name, birthday, and birth weight. The banner was taken back to the NICU so everyone there could see how the children had grown. *—KG*

Faculty Snapshots

Nancy Davidson, director of the University of Pittsburgh Cancer Institute, has been honored with the 2009 Gianni Bonadonna Breast Cancer Award. The award, administered by the American Society for Clinical Oncology, carries with it a $10,000 honorarium (which Davidson has donated to the Frieda G. and Saul F. Shapira BRCA–Associated Cancer Research Program at UPCI) and $50,000 for her to hire a research fellow. The MD researcher investigates the role of hormones in gene expression and cell growth in breast cancer. She was elected to the Association of American Physicians this year.



Davidson

Physician-scientist Mark Gladwin has been elected to the Council of the American Society for Clinical Investigation. He is the first Pitt med faculty member to serve in this capacity at ASCI, one of the nation's oldest and most respected medical honor societies. Chief of Pitt's Division of Pulmonary, Allergy, and Critical Care Medicine and director of its Vascular Medicine Institute, Gladwin made a name for himself by discovering that the nitrite anion is a regulator of blood pressure and blood flow.



Gladwin

Pitt's Ian McGowan recently became the lead investigator of two multicenter federally funded projects intended to prevent HIV infection. McGowan, an MD/PhD professor of medicine and of obstetrics, gynecology, and reproductive sciences, will coordinate an $11 million effort to formulate existing retroviral drugs into a topical gel that can be applied to the rectum.

His other project, funded at $6.5 million over four years, will survey gay men about the acceptability of using such a gel while counseling them on safer sex practices.



McGowan

Susan Amara is president of the Society for Neuroscience. Amara, a PhD, is the Thomas Detre Professor and Chair of the Department of Neurobiology in the School of Medicine. Amara's research aims to sort out the molecular and cellular biology of membrane transporters.



Amara

Jennifer Rubin Grandis (MD '87, Fel '92, Res '93) was elected to the Association of American Physicians. The Pitt med alumna is vice chair for research and the UPMC Head and Neck Cancer Research Professor in the School of Medicine's Department of Otolaryngology. Grandis, an expert in head and neck cancer oncogenesis, also recently joined the American Association for Cancer Research's board of directors. *—JM*



Grandis