

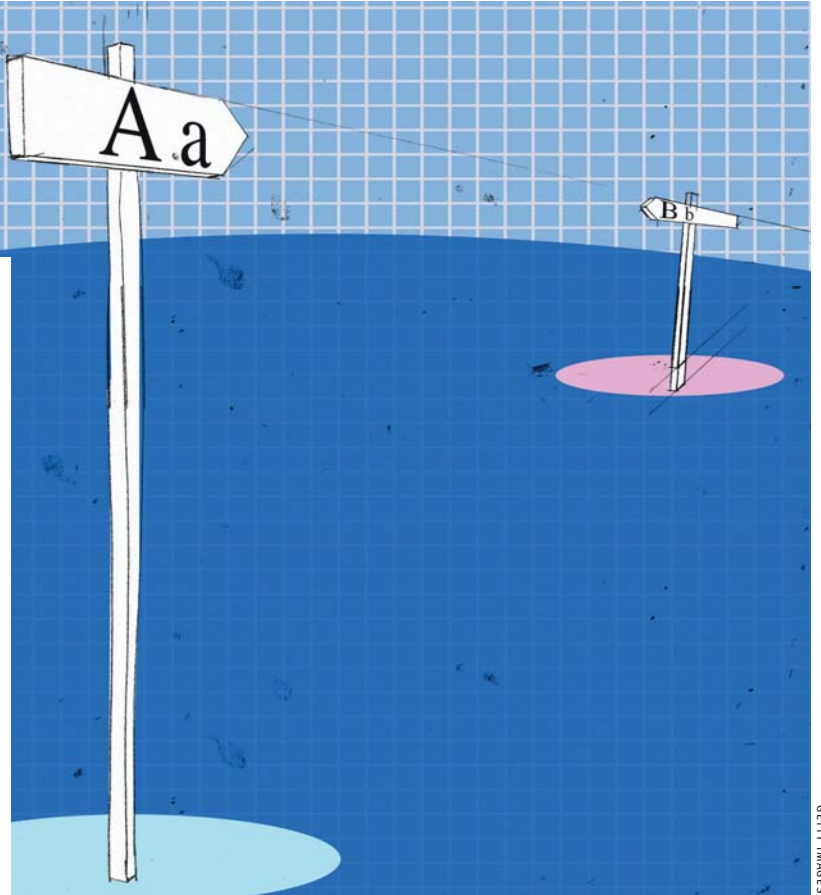


Devoted to noteworthy happenings at the medical school ... To stay abreast of school news day by day, see www.health.pitt.edu.

Autism's ABCs

Some children with autism can recite the alphabet backwards as easily as they can say it forwards. "That's something that even brilliant normal children can't do," says Nancy Minshew, an MD professor of psychiatry and neurology. A new study by Minshew and collaborators shows that people with autism don't process the alphabet in the same region of the brain as other people do. They use the brain region normally reserved for understanding shapes when dealing with the alphabet, rather than the brain region involved in language, reports Minshew in her study, published earlier this year in *Neuroimage*. "They see the letter 'A' as a picture. They don't see the letter 'A' as the 'A' sound," says Minshew. Because children with autism often have an apparent facility with language, parents and teachers may talk over the child's head and then become frustrated when the child doesn't do what's requested.

"The comprehension part of their brain is not developing normally," says Minshew. There's a disconnect between what autistic people can say and what they can understand, she adds. —Dottie Horn



GETTY IMAGES

FLASHBACK

What folks were humming 90 years ago:

Drinking water's just as risky

as the so-called deadly whiskey,

And it's often a mistake to breathe the air.

Some little bug is going to find you some day.

Some little bug will creep behind you some day.

Then he'll send for his bug friends,

and all your earthly trouble ends.

—“Some Little Bug is Going to Find You”

B.H. Burt and R. Atwell, c. 1915

ON THEIR HONOR, THEY WILL TRY

The woman was in preterm labor. She'd been beaten by her boyfriend and was worried that she'd miscarry because of the abuse. She was high on cocaine, agitated and crying, and kept calling her mother, who wasn't answering the phone. She kept saying, "I don't want to be alone. I don't want to be alone." For about an hour, Laura Warren (Class of '05) sat beside her, not saying much, as doctors and nurses came in and out of the room, providing care. The next day, the woman said to Warren, "Miss, I remember you. Thank you for not leaving me."

The medical school recently created the Humanism in Medicine Honor Society to recognize students, like Warren, who show exceptional sensitivity, respect, compassion, altruism, and other such qualities toward patients and colleagues. Each spring, third-year med students will nominate their classmates, as well as faculty members and residents, for membership in the society. —DH



A&Q

With Gretchen Dickson

“I just never thought that sitting in meetings for eight hours a day would energize me,” says Gretchen Dickson (Class of '05), the only medical student in the country on the board of the American Academy of Family Physicians. At the meetings, Dickson delves into a variety of issues: How can the academy influence politicians and increase public understanding of the specialty? Should there be greater diversity among students entering medical school? Why is health care in some geographic areas insufficient? It's a chance to discuss topics that often aren't considered in med school, says Dickson. “You spend so long doing biology and chemistry that you forget about all the nice social science stuff that you left behind in undergrad,” says the Latrobe, Pa., native. “It's a chance to revisit that.”

On the inspiring people she has met through the board:

There's a physician on the board who said, “Are we likely to have more people go into family medicine if we have more [family physicians] on [medical school] admissions committees?” That may or may not be true, but he said, “I can apply to be on my admissions committee.” He did and got on.

What was interesting about that to me is this is someone who's already busy and has a lot of responsibilities. But he was willing to say, “I can do one more thing.” It's not necessarily something that's ever going to be on *60 Minutes*. ... But it'll probably change someone's life. There will probably be somebody who goes to medical school, maybe becomes a family physician, because of him. I think that's the whole point of advocacy—getting people to say, “I can do this one little thing.”

It makes me realize that saying, “I don't have enough time” is not an excuse. You can do it. You can find the time.

Her questions for us:

Why don't people choose to get involved with their specialty society or the American Medical Association or the group that they feel close to? Why don't they take on leadership roles? Why don't they go sit on commissions and committees? —Interview by Dottie Horn

Faculty Snapshots

An African American woman had a curable breast tumor but didn't go to a surgeon to have it removed. Nine months later, she came back to the doctor who'd diagnosed the cancer. The disease was now much more serious—she had metastases. “The reason why she didn't follow up with a surgeon is she didn't have transportation to get back to the hospital,” says Dwight Heron, assistant professor of radiation oncology, who treated the woman. Heron, who is an MD, is now the principal investigator on a \$3.5 million National Cancer Institute grant—he's seeking to better understand why African Americans have worse outcomes from cancer than Caucasians. He's also trying to develop models for programs to reduce the disparities. He'll be looking at the impact, for example, of offering cancer patients free transportation to their appointments.



Heron

About 20 percent of National Institutes of Health-funded geriatric psychiatrists are trained at Pitt, according to Charles Reynolds, professor of psychiatry. And that impressive number is increasing. The John A. Hartford Foundation recently named Pitt a Center of Excellence in Geriatric Psychiatry (one of only two such centers in the country). As part of this recognition, Pitt will receive \$450,000 throughout three years to support fellowship training—increasing the number of geriatric psychiatry fellows trained each year at Pitt from seven to nine.



Plant

What sets off puberty? Tony Plant, a PhD professor of cell biology and physiology, has shown that a receptor previously known only as a tumor suppressor plays a role. In 2003, scientists first reported that several patients who didn't experience puberty had a mutation in the GPR54 gene. In a February *Proceedings of the National Academy of Sciences* paper, Plant and his colleagues showed that, in monkeys, activating the gene's receptor induces early puberty. Plant also found that reaching puberty increases a normal male monkey's production of a protein known as kisspeptin (its gene aptly shorthands to KISS-1 and activates GPR54). When females reach puberty, they also turn on KISS-1; in addition, the number of their GPR54 receptors increases. No one knows why females are different. —DH

No Stone Unturned

Rumors circulating in the Indian state of Uttar Pradesh that the polio vaccine transmits HIV and makes boys infertile hasn't helped eradication efforts. Maggie McDonald, associate vice chancellor for academic affairs, health sciences, saw some of the fallout from such untruths herself this February when she participated in the Global Polio Eradication Initiative's immunization program there. She also saw how determined the vaccination teams were to meet their 2005 worldwide eradication goal. McDonald was impressed by the "absolutely exhaustive, detailed planning" the teams employed. They made detailed maps of neighborhoods. They enlisted women and children in targeted neighborhoods as volunteer informants to alert them to where young children and pregnant women lived and whom they might have missed. And they were pretty darned persuasive, too. When one mother came to the doorway and said, of her 1-month-old daughter, that the girl didn't need to be immunized, she was told, "But Dr. McDonald has come from America to give your child the drops." The mother then invited the team inside.

When McDonald arrived back at Pitt, she put together the final touches for a multiday program commemorating the 50th anniversary of the announcement that the Salk vaccine was "safe, effective, and potent." As part of the festivities, more than 400 people who'd participated in Pittsburgh field tests or had polio came together on April 10 in the Commons Room to be honored for their crucial contributions to abating the scourge.

Will the eradication initiative meet its 2005 goal? McDonald hopes so but wouldn't be surprised if it took a few more years. One thing is certain. If they don't wipe out polio this year, it won't be for lack of trying. —Erica Lloyd



Watching polio immunizations in Uttar Pradesh.

HEALTH UPGRADE

When Vioxx was recalled, thousands of UPMC patients needed to be notified that they would have to use a replacement medication. It only took one day for doctors to track down and contact all of those patients.

Abilities like this compelled *Information Week* magazine to name UPMC number one in information technology among healthcare organizations and number five among all U.S. companies. What's the medical center's secret? A software network made up of more than 15 programs integrating records from UPMC hospitals and physician offices.

The network, called eRecord, was developed by the medical center. Daniel Martich, vice president of eRecord and codirector of cardiothoracic intensive care at UPMC Presbyterian, compares the old way of doing things to a game of Telephone. The game stops being fun when, for example, the word potassium gets mixed up with phosphate. "Person-to-person communication is error filled," says Martich, an MD. "Systems like eRecord have reduced medication errors by over 50 percent nationally." —Jen Dionisio

MED STUDENT COURTSIDE

Stephen Esper rocks in his chair at the side of the basketball court, slapping his legs to the beat of the horns from the Pitt band playing in the corner. Then, he slips his headphones on and welcomes an invisible audience back to his broadcast. As he talks while watching the women on the court fight for control of the ball, he throws his hands up passionately. He seems to describe every movement of every player on the court. "Since the listeners aren't watching the game, I have to make them see exactly what I'm seeing," he explains.

Esper is a second-year med student and volunteer sportscaster at WPTS 91.2, Pitt's radio station. Four years ago, he did an internship with Steelers and Panthers announcer Bill Hillgrove. "He taught me everything I know," says Esper. This school year, Esper will broadcast 16 games. On this February day, it's women's basketball; he also covers men's football and basketball. He typically spends several hours preparing for each game: making charts listing each player's stats, memorizing names and numbers.

As Esper stumbles over a fact, he shakes his head and sticks out his tongue. (He encourages friends and family to listen in and help him improve.) It's looking like Pitt could catch up to Villanova, and Esper starts shouting out movements and baskets at the pace of a possessed auctioneer. He can't help getting excited when the game intensifies. He knows he should be studying for a test, but instead he's nearly out of his seat following Mercedes Walker's trek down the court.

"If you need to get psyched," he says, "you shouldn't be doing this job." —JD



Esper

PITT ATHLETIC DEPARTMENT

PLAGUED BY HISTORY When Douglas Bacon, associate professor of anesthesiology and history of medicine at the Mayo Clinic in Rochester, came to the school in February to speak about the history of biological warfare, he didn't need to look far for examples. A well-documented case of targeted biowarfare happened in Pittsburgh's front yard.

It was 1763, and Fort Pitt was under siege. William Trent, in charge of the Pittsburgh militia, was among the English settlers at the fort. An entry from Trent's journal, dated May 24, describes the visit of two Indians from tribes friendly to the English. Great numbers of hostile Indians are coming, reported the allies. According to Trent's diary, out of "regard" for their visitors, the English gave them smallpox-infested items to be carried to the hostile forces. Within a month, smallpox broke out among the targeted groups, according to Bacon. A more infamous record of the incident is shown here. It's from a letter dated July 16, 1763,

from Lord Jeffrey Amherst, commanding general of the British forces in North America, written to the colonel responsible for Fort Pitt: "You will Do well to try to Inoculate the Indians by means of Blanketts, as well as to try Every other method that can serve to Extirpate this Execrable Race."

Robert Doherty, Pitt professor of history, says that both through instances of deliberate infection, like at Fort Pitt, and incidental contagiums, disease devastated Native Americans. (Not insignificant was their lack of domesticated herd animals; Old World people shared many microorganisms, and eventually resistance to many diseases, with livestock.)

"By 1890, only 250,000 Native Americans were left," Doherty says, out of what was "probably many millions." He is convinced that it wasn't the superiority of European technology that conquered the Americas so decisively. It was disease. —DH & EL

B.L.
 You will Do well to try to Inoculate the
 Indians by means of Blanketts, as well as to try
 Every other method that can serve to extirpate
 this execrable Race. I should be very glad your
 Scheme for Hunting them Down by Dogs could take
 Effect
 Effect; but I judge is at too great a Distance
 to think of that at present

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Appointments

In 2000, **Mitchell Fink**, chair of critical care medicine, started a company, Critical Therapeutics, with two other professors. Within four years of its creation, the new company had an initial public offering; it's now listed on NASDAQ, employs about 100 people, and has licensed an asthma treatment from Abbott Laboratories that will be on the market soon. As the new associate vice chancellor for translational research and commercialization, Fink will help other Pitt researchers become entrepreneurial. He'd like to increase the number of invention disclosures made by health sciences faculty as well as the number of faculty technologies being licensed. "It starts with helping people plan their research so that they actually end up with an invention," says Fink.

This summer, **James Conway** will bring a new way of seeing to the medical school. The PhD works with the structural biology technique called cryo-electron microscopy. Conway is originally from New Zealand; he comes to Pitt from the Institut de Biologie Structurale Jean-Pierre Ebel in Grenoble, France, and will be an associate professor in Pitt's new Department of Structural Biology. Cryo-EM lets researchers create 3-D models of proteins as they interact with one another. It's especially useful for looking

at complexes of proteins, like the outer coats of viruses (capsids), which may be composed of five or six different proteins. Conway studies the capsids of the HK97 bacteriophage (which infects bacteria) as well as the human hepatitis B virus.

Susan Dunmire (MD '85, Res '88), award-winning teacher and associate professor of emergency medicine, will serve as the executive director of the Medical Alumni Association. Students get to know the MAA through programs such as the White Coat Ceremony and, of course, scholarships—where 80 percent of all MAA contributions are invested. The MAA is eager to play a more significant role in the lives of the school's graduates as well—beyond reunions. So the association is developing new education programs for alumni. Dunmire also wants to boost scholarship contributions. She has already lined up 200 enthusiastic students who will call alumni in an October telethon. She asks, "Please do not hang up or tell them you are out of town for the next decade. Only 25 percent of alumni contribute anything to the MAA or any part of the medical school. Our goal is to increase this to at least 50 percent participation." —DH & EL



Dunmire