

CLASS NOTES

'80s

Though he modestly claims he's "just doing administrative work," **Frank Castello** (MD '82) is anything but your average administrator. Recently named Physician of the Year by *NJ Biz Magazine*, he has been medical director of Children's Specialized Hospital, the country's largest pediatric health-care rehabilitation system, for 11 years. During that time, the Mountainside, N. J.–based hospital has grown substantially, from treating 3,000 patients in 2000 to six times as many today. Castello says, "The most rewarding aspect has really been the ability to help grow programs, recruit physicians, and expand the services that we can offer to kids." Those expanded services include a sophisticated pharmacy system that significantly reduced the hospital's error rate, a new method for priming IV tubes that resulted in 18 bloodstream-infection-free months, and the Chronic Illness Management Program, an inpatient program that teaches adolescents with chronic illnesses how to manage their health.

Byers Shaw (Transplantation Surgery Fellow '83), one of many Thomas Starzl protégés who've gone on to lead transplantation programs of their own, has a new title to add to his CV: prize-winning essayist. In August, Shaw—professor of surgery and cofounder of the liver-transplantation program at the University of Nebraska—was presented with a $5,000 check at a packed public reading in Pittsburgh's Garfield neighborhood, which was attended by Starzl and other members of the Pitt transplant team from the 1980s. Shaw's essay, "My Night With Ellen Hutchinson," tells of a liver transplant Shaw performed late one winter night in 1983—one of his first without his mentors by his side. The contest was sponsored by the Salt Institute for Documentary Studies, based in Portland, Maine, and judged by *The New Yorker*'s Susan Orlean of *The Orchid Thief* and *Adaptation* fame. The essay was published in the summer 2011 issue of the literary journal *Creative Nonfiction*.

Alakananda Basu (PhD '85) pours a lot of effort into grant writing—to fund her research in signal transduction and chemotherapy resistance, certainly, but also to support another pleasure: mentoring. She's been shepherding teen scientists since her Pitt days; as a postdoc she took an 8th-grader under her wing. Now at the University of North Texas Health Science Center in Fort Worth, Basu is a professor of molecular biology and immunology and graduate advisor for the cancer biology program, which she launched in 2007. Through the school year, her plate is full teaching and mentoring grad students. She spends summers mentoring high schoolers in her lab, too—"especially minority students," she says. This summer, one of her charges, 17-year-old Shree Bose, won the grand prize—a $50,000 scholarship and a trip to the Galapagos—at the first Google Global Science Fair for a cisplatin-resistance project she completed with Basu's guidance.

When pain specialist **Mark Hashim** (MD '89) volunteered to coach his son's soccer team in 2010, he didn't expect that it would lead him to practice medicine in a Third World country. As it happened, one of his son's teammates' fathers was Leo Vieira, cofounder of People for Haiti, a nonprofit that provides basic necessities and medical care on the island. Hashim has since traveled to Haiti on two of the organization's five-day medical mission trips, during which medical volunteers treat up to 1,500 patients. The ailments they treat range from severe infections to physical deformities to vision loss. It's the Haitians' spirit and thankfulness that Hashim says he misses most after a trip. "After a while of practicing back in the U.S., you go, 'God, I really need to go back to Haiti again.'" He's planning to do that in January 2012.

Hashim (right) in Haiti





Arnold

WE KNEW YOU WHEN: JAN D. SMITH

Jan Smith (Critical Care Fellow '67, Pulmonary Diseases Fellow '69, Internal Medicine Resident '71), an MB ChB, originally came to Pitt to complete a fellowship in critical care medicine with Peter Safar in his burgeoning program. Under Safar's leadership, Smith experienced a revolution in resuscitation and critical care medicine. He describes Safar as "extremely dynamic" and admits that he "had to run to keep up." But it can be hard to keep up with Smith himself.

As a White youth growing up in South Africa under apartheid, Smith knew he had a privileged life. But in 1961, he was the odd man out. He was working at McCord Hospital in Durban, South Africa, which at the time was still a racially segregated hospital. He was the only White intern. "It was a tremendous social experience," he says—one that has remained with him in his decades of work as a professor of anesthesiology, internal medicine, and critical care medicine at Pitt and in his travels.

And travel he does. Smith, a Pitt anesthesiology clinician emeritus (he still teaches part-time), has regularly served as a volunteer physician in several African countries. In South Africa, Smith has helped set up educational programs and works with the University of Pretoria on HIV medicine, TB, and critical care programs. He has also worked in Tanzania at Kilimanjaro Christian Medical College, helping to train medical professionals in the delivery of anesthesia care and serving as an external examiner

JIM JUDKIS



COURTESY UPMC

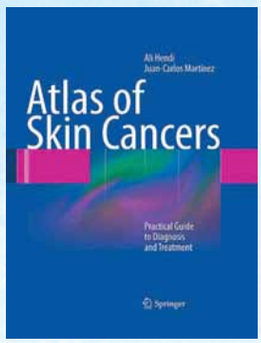
In September, Pitt celebrated the 30th anniversary of the emergency medicine residency program. Among those who helped celebrate (from left): Susan Dunmire (MD '85, Res '88); Michael Turtorro (Res '90); Walt Stoy (PhD '90); Robert Whipkey (MD '81, Res '84); Pitt's academic EM program founder Ronald Stewart; Dave Ellis (behind Stewart) (MD '82, Res '85); former EM department chair and the residency program's first director, Paul Paris (MD '76); Sandra Schneider (MD '75, Res '78); Kevin O'Toole (behind Schneider) (MD '83, Res '86); Mike Plewa (Res '88); Pitt's current chair, Donald Yealy (Res '88); Vince Verdile (Res '87); and Ronald Roth (MD '82, Res '85).

'00s

Prostate-cancer hormone treatment tends to follow an unfortunate yet predictable pattern, explains **Nima Sharifi** (MD '01), assistant professor of internal medicine at University of Texas Southwestern Medical Center: The patient is given medication to block testosterone, the staple food of prostate-cancer cells, but within a year, the cancer returns. The cancer cells' workaround, we've long assumed, is to use a particular pathway to make their own testosterone, which they subsequently use to produce DHT (dihydrotestosterone), an even more potent superfood. In recent years, new drugs have been deployed to block this pathway, but many patients' cancers have proven resistant to these second-line therapies, too.

Recently, Sharifi found what appears to be the reason why—a discovery even he didn't believe at first. "We looked at this in six cell models," he says, "and all six showed the same thing." (The same was true in patient biopsies, he'd later find.) Turns out that late-stage prostate-cancer cells use an additional, completely separate pathway to produce DHT directly—no testosterone required. The study was published in *Proceedings of the National Academy of Sciences* in July. A multicenter, Prostate Cancer Foundation–funded effort is now in the works.

When television producers first asked **Jen Arnold** (Pediatrics Resident '03, Neonatal/Perinatal Fellow '07) and her husband, Bill Klein, who both have spondyloepiphyseal dysplasia resulting in short stature, to star in their own reality show, the couple was skeptical. Then something happened while she was out shopping. "A little girl came up to me and said, 'You're a little person like in *Little People, Big World*,'" (another reality show) Arnold recalls. In the past, children had often pointed or used derogatory terms. The experience helped her see the educational possibilities. Says Arnold, "I've always been happy to share awareness." Now entering its fifth season, *The Little Couple* follows Arnold and Klein through their daily lives, from searching for a home to considering their options for starting a family. The show also depicts Arnold's work at Texas Children's Hospital in Houston, where she's a neonatologist and medical director of the Pediatric Simulation Center, a program she helped build after training at Pitt's WISER Center.



Hendi's 2011 book

While working at the Mayo Clinic in 2005, **Ali Hendi** (Dermatology Resident '03, Mohs Micrographic Surgery Fellow '04) noticed a gap in medical literature. As a skin cancer specialist and Mohs surgeon, Hendi often received referrals from general practitioners for lesions that mimicked skin cancer but were not. "There was really no atlas of skin cancers geared toward primary care physicians," he recalls. It also occurred to him that he had access to high-quality images of every tumor treated at the Mayo Clinic, which "were not being utilized to their maximum potential." So with Juan-Carlos Martinez, Hendi wrote *Atlas of Skin Cancers, Practical Guide to Diagnosis and Treatment* (Springer, 2011), which details skin cancers in their many forms, as well as conditions that commonly mimic them.

Jill Hagenkord (Pathology/Oncology Informatics Fellow '07, Molecular Genetic Pathology Fellow '08) recalls facing criticism for how she saw the future of medicine before she came to Pitt. Genomic technologies were too expensive—totally impractical for clinical use, her instructors told her. That changed when she began her training in informatics and molecular genetic pathology here. The directors of these programs—Michael Becich and Jeffrey Kant, respectively—had each "defined their fields," she says. "To have access to these two pioneering guides who actually got what I wanted to do was amazing." Hagenkord, who was recently named chief medical officer of Complete Genomics, a human-genome-sequencing service company, hopes to continue her mentors' tradition of innovation. "Whole genome sequencing as a diagnostic tool breaks the mold in so many ways. It's really utterly game changing."

—Jessica Titler and Elaine Vitone



Smith

for the local Tanzanian anesthesia board examinations. And Smith has served on medical missionary trips to many other countries.

"Jan is one of a handful of physicians I know who has truly dedicated his entire life to medicine," says John Williams, an MD, the Peter and Eva Safar Professor, and chair of Pitt's anesthesiology department. "I know very few physicians who will take their vacations and continue to work in a foreign country."

Smith is quick to point out that he feels he gets more than he gives in his volunteer work. "You appreciate what your medical colleagues are doing with minimal resources. You learn from them, because their physical examination skills and their clinical acumen are so great. We have a lot to offer them with things like TB testing and malaria vaccination. It's a true collaborative spirit," he says. *—Maureen Passmore*

ELSIE R. BROUSSARD

JAN. 30, 1924–SEPT. 12, 2011

As a pediatrician in the late 1950s, Elsie Broussard noticed that when mothers brought infants in for their well-baby visits, they brought a range of perceptions to the exam table. "Some mothers would see their babies in a positive light—active, energetic—while others would describe [babies who were just as active] as out-of-control difficult," explains Broussard's daughter, Jude Cassidy, a PhD professor of psychology at the University of Maryland. Curious as to how those perceptions would influence their parenting—and in turn, their children's development—Broussard pursued a master's and a PhD in maternal and child health at Pitt. In the ensuing decades, she helped legitimize the newly emerging field of infant mental health as her hunches about the roots of mental health in parent-child relationships bore out.



Broussard

In September, Broussard, professor emeritus of public health psychiatry and clinical associate professor of psychiatry in the School of Medicine, died of a heart attack while driving in Shadyside. She was 87.

In 1963 Broussard launched a longitudinal study called the Pittsburgh First-Born Project, and for nearly 40 years, Broussard worked with families to determine what stood in the way of positive parenting behaviors and developed interventions that proved successful in improving children's outcomes. Recalls Broussard's son, Francis Cassidy (MD '79), "She told us many times you can never spoil a baby. You can never love them too much."

—Elaine Vitone

BERNARD I. MICHAELS

DEC. 26, 1917–JULY 22, 2011

There are few people who can claim to enjoy going to work every single day. Bernard I. Michaels (MD '42, Res '48), clinical professor of pediatrics at Pitt and former president of the medical staff at Children's Hospital of Pittsburgh of UPMC, who practiced there for almost 60 years, was one of those rare people, says his son, Robert Michaels. "He loved being helpful, liked making a difference in the well-being of families, and adored watching children grow up." The elder Michaels cared for many of his patients from birth into adulthood and many families through multiple generations. He also took pride in the "huge number of patients of his who became pediatricians," adds Robert Michaels, who pursued the same path himself.



Michaels

Bernard Michaels died of a heart attack in July. He was 93.

When Children's Hospital of Pittsburgh of UPMC installed a historical timeline mural in its new location two years ago, Michaels was one of the few physicians to be included in the painting, notes Andrew Urbach, medical director for clinical excellence and service. "He had a passion for pediatrics and for his families," Urbach explained. "He had a level of excellence that set a standard for Pittsburgh." *—Jessica Titler*

FÉLICIEN M. STEICHEN

OCT. 13, 1926–JUNE 27, 2011

Since Félicien Steichen, professor emeritus of surgery at New York Medical College, died in June, it's been difficult breaking the news to his mentees, says long-time colleague Jean-Michel Loubeau (Res '77). One said he felt like he'd just lost a second father. Steichen was known to join his residents on call even late into the night. "He always said, *We have to teach these young people not how to do an operation but how to operate*," Loubeau recalls, adding that many of Steichen's pupils went into academic surgery.



Steichen with his grandson Adrien.

Steichen was professor of surgery at Pitt and associate chief of surgery under Mark Ravitch at UPMC Montefiore in the 1970s. Together, they developed a course in surgical stapling at Pitt, instructing hundreds of surgeons from all over the world on "how to operate" as a new surgical paradigm emerged. Ravitch and Steichen worked with U.S. Surgical Corporation to create these instruments, as well as several of the first miniaturized staplers, trocars, and other devices that ushered in the era of minimally invasive surgery. Ever wary of a conflict of interest, they did all their consulting gratis.

Years ago, Steichen's son, François Steichen, happened to meet one of his father's trainees. The younger Steichen was at an appointment for an insurance physical when the doctor realized François was his mentor's son and sheepishly offered a hug, recalls François. "I told him, 'Yes, it's okay. I've heard this before.'" *—EV*

IN MEMORIAM

'40s

THOMAS R. SARACCO
MD '43A
JULY 19, 2011

CONSTANTINE Z. MORAITIS
MD '47
OCT. 10, 2011

'50s

MELVIN L. COHEN
MD '53
SEPT. 4, 2011

GEARY EICHER JR.
MD '54
SEPT. 10, 2011

MICHAEL LADO
MD '55
AUG. 11, 2011

JOSEPH TANNENHAUS
RES '56
MAY 24, 2011

STEPHEN A. STEVENS
MD '58
JULY 15, 2011

RICHARD DIETRICK
MD '59
AUG. 6, 2011

ROBERT G. O'BRIEN
MD '59
JUNE 3, 2011

NICHOLAS N. VASILOPOULOS
MD '59
AUG. 19, 2011

'60s

JOHN L. MINARD
MD '61
AUG. 20, 2011

THEODORE M. TABACHNICK
MD '61
SEPT. 2, 2011

'70s

JUDITH E. ORIE
MD '78
NOV. 5, 2011

FACULTY/STAFF

GEORGE THIERS
JUNE 9, 2011

JULIE MAGARIAN BLANDER IMAGINES A NEW KIND OF VACCINE

BY KRISTEN COSBY



FRANK HARRIS

Magarian Blander solved the mystery of why vaccines based on live bacteria outperform their killed-pathogen counterparts.

When the American embassy in Lebanon was bombed in 1983, the immigration paperwork of Julie Magarian Blander's family went up in flames—along with their chances of escaping the civil war that had been raging since 1975.

Blander was 9 when the war began. "You'd be in school, and all of a sudden, there would be bombs falling," she says. "You would have to be picked up under great danger."

By the time her family was able to escape to the United States, she was a year away from completing her bachelor's degree at the American University of Beirut. She made the decision to see it through and keep her scholarship—she was used to living in danger, she says.

Now, Blander (PhD '97) faces grave threats of a different sort—deadly microbes—as an associate professor of immunology and director of the Innate Immunity Research Program at Mount Sinai in New York City. In July, Blander received the 2011 Burroughs Wellcome Fund Award in Pathogenesis of Infectious Diseases.

As a postdoc at Yale, she worked with the late Charles Janeway Jr., a founder in the field of innate immunology. He'd put forth the "far-fetched" proposal that the cells that make up our immune systems have receptors that can tell the difference between cells that make up our own tissues and the cells of foreign infectious agents; therefore, there must be identifiable structures on foreign microbial cells that provoke our immune system to react. When Blander joined Janeway's lab in 1997, he and postdoc Ruslan Medzhitov had just confirmed the existence of such a mammalian cell receptor.

Blander was eager to learn more about the immune system—in particular, why vaccines made of living, attenuated strains of a pathogen are more effective than vaccines made of dead pathogens. She proposed her own far-fetched hypothesis: Not only can our immune systems tell the difference between our own cells and foreign cells, but also between living foreign cells and dead foreign cells.

Blander studied immune-cell reactions to live bacteria and found that the immune cells' receptors responded to a certain kind of messenger RNA molecule that is structured very differently from our own messenger RNA molecules. But when the invading bacterial cells died, their load of RNA molecules was rapidly lost. The messenger RNA molecules served as signatures of microbial viability. They were missing from dead vaccines, hence the weaker immune response to them, and adding them back augmented dead vaccines to perform as well as live vaccines. Blander's findings were published in *Nature* in May 2011.

Blander imagines that in the future we will be able to take molecules made from dead pathogens and supplement them with these signature molecules. "So you can combine the best of both—what's good in a live vaccine and in a dead vaccine—and it's safe," says Blander. "You can vaccinate people without having the fear of being injected with a viable strain of microorganism."

If Blander is successful in synthesizing these signature molecules, her efforts could lead to the creation of a universal vaccine, one that could be adapted to fight any microorganism—or even tumor cells, she says. (Her research applies only to bacteria, yet she is confident that similar signature molecules indicative of microbial viability will be found in viruses, parasites, and fungal infections, too.) Such a vaccine would greatly reduce the time it takes to launch immunization efforts against new microbial contagions. It would also make it easier to vaccinate populations in disaster zones and developing nations, where it is difficult to administer the multiple doses dead vaccines require.

"It seems like a simple idea," she says, "but it has tremendous implications for the development of vaccines for infectious disease, or even for cancer immunotherapy." ■

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Members at Large

M-200K Scaife Hall
University of Pittsburgh
Pittsburgh, PA 15261
tel 412-648-9090; fax 412-648-9500
medalum@medschool.pitt.edu