

# Tufts

## MEDICINE



# STAYIN' ALIVE

Cardiac resuscitation  
to a disco beat

PLUS: OUR SCIENCE PROBLEM • DOCTOR AND MOM • PLAYING TENNIS AT 100

## Swing, Swing, Swing

Tall, slim, poised upright in her chair, Lisa Gualtieri looks like she's about to go dancing from the instant you meet her. And she just might. Gualtieri, an assistant professor trained in computer science who teaches courses at the intersection of medicine and the Internet, has discovered swing dancing and pursued it avidly over the past few years in the company of her partner, Mike. She never took dance lessons as a girl, but says she always loved watching Fred Astaire and Ginger Rogers perform on film—"the evening out, the band, the gowns, the whole bit."

Lisa and Mike, who works as an analyst for Forrester Research, started dating six years ago and took a dance class together at a community center in Lexington, Mass., just for fun. The class offered a sampling of dance styles, including rumba, waltz, fox trot and swing. "Of these, we both loved swing the most," Gualtieri reports. "Mike and I started dancing all the time." Since their wedding, they haven't missed a step. Although still fairly green in technical terms, they have managed to improve steadily, never hesitating to turn to a fellow dancer and say, "Oh, can you teach us that move? How did you do that?"

Now, Lisa and her husband circulate among dance sites near and far. The chosen spot may be an American Legion hall in Bedford, Mass., that features a DJ every Friday night, or an Elks Lodge in Leominster that hums to a swing combo on Sunday evenings, or the lounge at Luciano's in Wrentham, or Swing 46, their favorite New York City club, featuring live music every night of the week.

Just last Sunday they were down in Providence, Gualtieri relates, in a small plaza framed by a splashing fountain atop Federal Hill. A man was crooning Frank Sinatra classics as she and her husband dipped and twirled in the open air. "It was a perfect summer evening," she says.



Lisa Gualtieri  
and her partner, Mike

# contents

FALL 2012 VOLUME 71 NO. 2

## features

### 12 Local Hero

Ben Shapero, '39, turns 100 years old.

### 14 Baystate Chronicles

We present a two-part report from our western affiliate. *by Tony Zhang, '13, and Bruce Morgan*

#### COVER STORY

### 20 The Trick of Staying Alive

A disco hit from the 1970s is being used as the soundtrack for cardiac resuscitation by people around the world. *by Bruce Morgan*

### 24 Science Denied

Why, in 2012, are creationism and the antivaccine movement going strong? *by Phil Primack*

### 30 Time Enough

When the roles of doctor and mom collide, all bets are off. *by Rachel Salguero, M.D./M.P.H., '03*



## departments

- 2 LETTERS
- 3 FROM THE DEAN
- 4 PULSE  
A SCAN OF PEOPLE & EVENTS
- 8 RESEARCH  
WHERE IDEAS TAKE ROOT
- 33 UNIVERSITY NEWS
- 35 ON CAMPUS  
MEDICAL SCHOOL NEWS
- 38 ADVANCEMENT  
GIVING. GROWTH. GRATITUDE.
- 40 ALUMNI NEWS  
STAYING CONNECTED

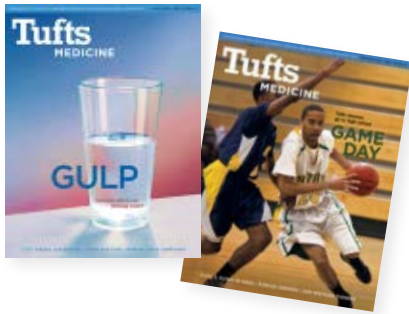
Cover illustration by John Ritter

## COMMUNITY BUILDER

Each edition of *Tufts Medicine* gets better. You have been presenting a wonderful balance of people, their activities and accomplishments, the school and its interests and direction. Even your clinical intercepts are of a nature to intrigue a physician—beginning or ending a medical career.

Keep up the good work. The magazine is a superb vehicle to bring us together.

WILLIAM MCDERMOTT, A53, M58  
FALMOUTH, MASS.



## AWARD WINNER

Your school magazine, *Tufts Medicine*, was awarded a Silver Medal for special constituency magazines in the 2012 National Council for Advancement and Support of Education (CASE) Circle of Excellence awards program. The magazine also received two regional awards from CASE, a Silver Medal for best writing and a Bronze Medal for best overall magazine.

Additionally, the magazine design was recognized with an Award of Excellence from the University and College Designers Association for the story titled “Cracked at the Top,” which appeared in the Fall 2011 issue.



## UNFORGETTABLE

A few years ago I was attending a medical editors' conference at Yale when someone raised the question of what doctors talk about when they bump into each other between rounds at a hospital. The speaker, a physician, said that a conversation often begins with something like, “I’ve got to tell you about this amazing patient I just saw. . .” That got me thinking that a medical community like ours must have a million such stories to tell.

Lately we have run a periodic series of personal essays called “My Unforgettable Patient,” and these have been among our best-loved features. A recent entry described the joy experienced by a mentally ill geriatric patient (and her doctor) when she reunited with her family near the end of life.

Do you have a story you’d like to share? We are always careful to protect patient identity. It’s the story we’re after. We’re looking for something that would fill a page or two in the magazine, and we can help you get there. Let us hear from you.

BRUCE MORGAN  
EDITOR  
BRUCE.MORGAN@TUFTS.EDU

**TALK TO US** *Tufts Medicine* welcomes letters and suggestions from all its readers.

Address your correspondence to Bruce Morgan, Editor, *Tufts Medicine*, Tufts University Office of Publications, 136 Harrison Ave., Boston, MA 02111. You can also email [bruce.morgan@tufts.edu](mailto:bruce.morgan@tufts.edu). Letters are edited for length and clarity.

# Tufts

## MEDICINE

VOLUME 71 NO. 2 FALL 2012

Medical Editor  
John K. Erban, '81

Editor  
Bruce Morgan

Editorial Director  
Karen Bailey

Design Director  
Margot Grisar

Designer  
Betsy Hayes

Contributing Writers  
Julie Flaherty, Rachel Kowalsky, M.D./M.P.H., '03, David Levin, Kristin Livingston, Jacqueline Mitchell, Phil Primack, Mark Sullivan, Tony Zhang, '13

Alumni Association President  
Laurence S. Bailen, '93

Vice President  
Thomas R. Hedges, '75

Secretary/Treasurer  
Carole E. Allen, '71

Medical School Dean  
Harris Berman

Executive Council  
Joseph Abate, '62, Mark Aranson, '78, Paul G. Arrigg, '82, Robert Baevsky, '87, Joseph E. Bornstein, '09, Alphonse F. Calvanese, '78, Stephen J. Camer, '65, Joshua M. Careskey, '77, Gena Ruth Carter, '87, Do Wing Chan, '01, Bartley C. Cilento Jr., '87, Eric R. Cohen, '86, Paul D. D'Ambrosio, '88, Ronald W. Dunlap, '73, John K. Erban, '81, Jane H. Fay, '84, Charles Glassman, '73, Rebecca D. Glassman, '11, William H. Goodman, '89, Donna B. Harkness, '79, David A. Klein, '93, Kenneth A. Levitsky, '86, Joseph J. Levy, '82, Frederic F. Little, '93, Kathleen M. Marc, '80, Brendan McCarthy, '97, Tejas S. Mehta, '92, Louis Reines, '05, Karen Reuter, '74, Laura K. Snyderman, '04, Paul J. Sorgi, '81, Elliott W. Strong, '52, Gerard A. Sweeney, '67, Louis A. Tramontozzi, '07, Jack J. Tsai, '06

*Tufts Medicine* is published three times a year by the Tufts University School of Medicine, Tufts Medical Alumni Association and Tufts University Office of Publications.

The medical school's website is [www.tufts.edu/med](http://www.tufts.edu/med).

© 2012 TRUSTEES OF TUFTS UNIVERSITY



**Tufts Prints Green**  
Printed on 25% postconsumer waste recycled paper. Please recycle.

## Our Family Ties



I RETURNED RECENTLY FROM A LARGE FAMILY gathering at our favorite lake in New Hampshire. Seventeen members of our extended clan, including a scattering of grandchildren and children from as far away as England and China, talked, laughed and played together at the scenic spot we all love. That got me thinking about the common thread that links us, despite our differences and the miles between us. There's just something about family that transcends those kinds of details.

I think of our medical school and its affiliated hospitals in the same way. We rely on a network of 21 clinical associates across Massachusetts and in Maine to share in the teaching of our students during their third-year clerkships. Although the affiliates come in different shapes and sizes, we think of ourselves as one family in spirit, and we share a standard of excellence that extends from one end of the network to the other.

One valuable consequence of this dispersed educational model is that our students receive excellent academic training in a variety of settings, from big urban hospitals to small, more-intimate-feeling community hospitals. The demographics, economic profiles and medical practice models differ markedly from place to place. Our students have the chance to interact with all kinds of patients in all kinds of places, and I think this prepares them well for the kind of medicine they will be practicing once they begin their careers.

Different students want different things in their clerkships. We find that some like the idea of moving from site to site during the third year—to study surgery at Lahey and then rotate to St. Elizabeth's for their ob/gyn coursework, for example—while others prefer staying put for the entire year and gaining a more intimate sense of the culture of one place, as we offer students who do clerkships Baystate Medical Center in Springfield, Mass. (see story, page 14) and Maine Medical Center in Portland.

When students consider their choices at the end of their second year, we provide them with a wealth of information and personal guidance. They can scan our detailed reviews of each site: Every year we rate each site in 26 categories (such as quality of teaching, mix of patient interactions, exposure to specialty, general atmosphere) based on student appraisals of their experiences.

In addition, we ask some third-year students who have just completed their clerkships to participate in a panel discussion for second-years that lends a human voice to the written evaluations. This gives the curious applicants some personal detail that's pitched, in effect, to their own sensibilities. Our second-years are thus able to absorb information from a number of sources, and once they've made their picks, conclude, "This fits me best."

The system seems to be working well. Most students tell us they were really happy with their clerkship experiences, and this is borne out in the ratings that we collect. We ask each student to rate his or her clerkship site on a scale from one (low) to five (high). We have found that 90 percent of our major sites are rated better than four, an outstanding level of performance and one that we're proud to maintain.

Dr. Amy Kuhlik, our dean of students, tells me she's always struck by the consistently positive tone expressed by third-year students at the panel presentations to the second-years. "They'll stand up and say, 'I loved every site I went to,'" she reports.

In their site evaluations, we give students the opportunity to offer personal remarks on the year gone by. What stood out for them amid the hustle, the pressure and the learning? Dr. Kuhlik has shared with me comments from the most recent evaluations. One student wrote, "I was grateful for the hands-on experience I got in the OR." Citing an impressive teacher, another said, "He teaches us in a way that makes things simple. He was enthusiastic and compassionate about what he taught." Another student singled out a notable professor who had made a deep impression on her: "He genuinely listened to my concerns."

Not to stretch things too much, but isn't this the essence of family? I think there may be a parallel worth considering.

A handwritten signature in dark ink that reads "Harris A. Berman".

HARRIS A. BERMAN, M.D.  
DEAN, TUFTS UNIVERSITY  
SCHOOL OF MEDICINE



Olympian Gevvie Stone has returned to the medical school.

## Big Splash

With the row of a lifetime, Gevvie Stone caps her Olympic dream by **Jacqueline Mitchell**

**G**EVVIE STONE, '14, A MEMBER OF THE U.S OLYMPIC ROWING TEAM, placed seventh in the world in women's single sculls at the 2012 London Games. She had failed to qualify as one of six rowers in the "final A," from which the Olympic medalists emerged. But two days later, on August 4, during a cold, steady rain at the Eton Dorney Rowing Centre at Dorney Lake, west of London, Stone finished ahead of five other "B final" competitors. She told a reporter from the *Newton Tab* that she had savored every moment of what she called "my great race. Not a good one, a great one."

Representing the United States in the Olympics was the culmination of a goal Stone first set 12 years ago, as a sophomore in high school. That's when the Newton, Mass., native, on official leave from the medical school since 2010, first fell in love with rowing on the Charles River. "I think every kid who plays sports dreams of going to the Olympics," she says. By her junior year of college, at Princeton, that dream began to seem attainable. "I started to train more and be in a position where, if I worked hard enough, I would get to where I needed to be."

Her daily routine was a grueling one. Most days this summer Stone was on the water rowing by 6 a.m., followed by weight-lifting and calisthenics under the supervision of her trainer, Glenn Harris, head strength and conditioning

coach at Boston University. After lunch and a break, she would typically return to the river for her second row of the day. All of this preparation came under the gaze of her father and coach, Gregg Stone, who was the nation's top-ranked men's single sculler in 1980. Something was working. In recent years Stone has proven her competitive mettle by winning the Head of the Charles regatta three times in single sculls.

Although she had earlier said she expected to retire from rowing after the Olympics (and has now resumed medical school), she sounded less sure of that decision in her exhilarated postrace comments to the *Tab*. "I love rowing," Stone told the paper. "I love racing. And at this point, I can't imagine stopping."

# Fracture Prevention

**You're going to need a bigger pill. A new study has found that daily vitamin D supplementation works to prevent fractures in the elderly, but only if taken at higher-than-recommended doses.**

**In their analysis, Tufts researchers studied data from 11 randomized trials—a total of 31,000 older adults—looking at vitamin D supplements and fractures. Then they divided subjects into quartiles ranging from zero to 2,000 International Units (IUs) of daily vitamin D intake and performed a meta-analysis. The study appeared recently in the *New England Journal of Medicine*.**

**“Taking between 800 IUs and 2,000 IUs of vitamin D per day significantly reduced the risk of most fractures, including hip, wrist and forearm in both men and women age 65 and older,” said Bess Dawson-Hughes, ’75, professor of medicine and director of the Bone Metabolism Laboratory at the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts. “Importantly, we saw there was no benefit to taking vitamin D supplements in doses below 800 IUs per day for fracture prevention.”**

**Current guidelines from the Institute of Medicine recommend that adults between ages 51 and 70 take 600 IUs of vitamin D daily and that adults over age 70 take 800 IUs.**



ILLUSTRATION: PHIL WRIGGLESWORTH

# GAMBLING WITH THEIR HEALTH

Entering a casino may mean taking a chance on more than the cards you play. Many people don't realize that some states allow smoking in casinos, and health researchers are raising concerns about the potential damage secondhand smoke may pose for otherwise-healthy patrons and casino employees.

Casinos are bucking recent trends. “Smoke-free environments are now normal coast to coast,” Bronson Frick, speaking on behalf of an advocacy group called Americans for Nonsmokers' Rights, told the *Kansas City Star*. In contrast, smoke-free casinos are rare in the U.S., where 88 percent of commercial casinos and nearly 100 percent of tribal casinos (not subject to state regulation) allow smoking.

Researchers who collected air-quality data inside casinos in the Kansas City area recently determined that all had pollution levels varying from unhealthy for people with lung or heart disease to unhealthy for all people. Only one casino's nonsmoking area had good air quality. When researchers at Stanford and Tufts combined such data from 66 casinos across the country, they found that at half the venues, inhaling secondhand smoke for even two hours was enough to impair the heart's ability to pump blood. In contrast, the three smoke-free casinos surveyed had pollution levels as low as the outdoors.

Casino workers are among those at greatest risk. Levels of cotinine, a biomarker of tobacco that shows up in human tissue, were markedly higher in nonsmoking casino dealers tested than among the nonsmoking general population, even rising between the beginning and end of a work shift, James Repace, a biophysicist and visiting assistant clinical professor at Tufts Medical School, pointed out. “This is clearly due to secondhand smoke in the casino,” he told the *Stanford University News*.

# Time for Delivery

IT CAN BE A GOOD IDEA TO TAKE YOUR TIME WITH LIFE'S GREAT EVENTS. AN EXTENSIVE new study has found that babies who stayed in their mothers' wombs longer seemed to do better on tests of intelligence later.

The study, published in *Pediatrics* in early July, showed that babies born at 37 or 38 weeks scored slightly worse on third-grade English and math tests than their counterparts born at 39 to 41 weeks. (A typical pregnancy is 40 weeks.) The finding, based on the birth records of 128,000 babies born in New York City between 1988 and 1992, has implications for doctors and parents who often prefer early deliveries, either for the sake of convenience or because of a hint of complication with the pregnancy.

Jonathan Davids, professor of pediatrics and chief of newborn medicine at the Floating Hospital for Children at Tufts Medical Center, who was not involved in the research, confirms that the womb is really the best place for a baby to be. "The message is that unless you really feel that there's an irreversible or really dangerous thing going on, you should wait until at least 39 weeks to deliver," he told WBUR's CommonHealth blog.

The new finding aligns with some recent dramatic shifts in thinking. About a decade ago, Harvard hospitals decided to start delivering some babies via C-section at 38 weeks to improve scheduling flexibility and spread out the demand for operating rooms, according to Tamara Takoudes, a clinical instructor at Harvard Medical School. More recently, however, those same hospitals went back to the 39-week rule after data suggested more babies were ending up in intensive care, she said in the WBUR blog.

Kimberly Noble, an assistant professor of pediatrics at Columbia University Medical Center and one of the authors of the *Pediatrics* paper, cautioned that the study did not prove that early birth caused lower test scores. It's not that simple. Although researchers tried to account for as many factors as they could in the study, including socioeconomics, birth weight, age of the mother and the number of C-sections, for example, some unidentified common factor might have caused both, she noted.

Noble tells parents who do have to deliver at 37 or 38 weeks not to worry about their child's eventual third-grade test performance. There's plenty of time, she says, to make up whatever small deficits come from being a week or two early.



## KNOWN AROUND THE WORLD

"After a sea voyage of 55 days, the U.S.S. *General D.E. Aultman* finally docked in Hollandia, New Guinea. Watching the steam rising out of the jungle, Dr. Kirsner found a Jeep driver who would take him into the jungle to observe the vegetation and the remnants of the fighting that had taken place in the area. He was surprised to hear, in the middle of the New Guinea jungle, someone call out 'Hello, Joe,' and looking around he saw a native 'climbing down from a tree' and wearing discarded army fatigues. Of course, the native recognized the Jeep and Dr. Kirsner's uniform as belonging to the U.S. Army and had already learned to use the slang expression 'G.I. Joe.' Over the years, whenever Dr. Kirsner related this anecdote, he could count on the double meaning of the sobriquet 'G.I. Joe' to draw a laugh."

(Excerpted from *GI Joe: The Life and Career of Dr. Joseph B. Kirsner*, by James L. Franklin, M.D., published in 2009. Kirsner, '33, a world-renowned gastroenterologist based at the University of Chicago, died on July 7 at age 102. His obituary appears on page 44.)





# Fitness in a Bottle

Sports drinks like Gatorade and Powerade are heavily promoted as beverages that are essential for replenishing carbohydrates and electrolytes lost during exercise. But are these drinks any better than water for the average weekend warrior?

Miriam Nelson thinks not. Nelson, a professor at the Friedman School of Nutrition Science and Policy, told the “Radio Boston” program on WBUR-FM recently that “unless you’re in the Tour de France, the Boston Marathon or the Iron Man Triathlon, for the most part drink water, eat well, nourish yourself well and train appropriately.” When the host laughed at her unexpectedly direct

and blunt statement, Nelson added good-naturedly, “Sorry it’s not more sparkly than that.”

The most elite endurance athletes, such as marathoners, who exert themselves at high intensity for more than two hours, represent a special category, she says. They may benefit from the replenishment available in sports drinks. “But you have to realize we’re talking about less than 0.1 percent of the population,” she points out. For most, the drinks deliver little more than “an added sugar load” that doesn’t help improve anyone’s health or performance in a time of widespread obesity.



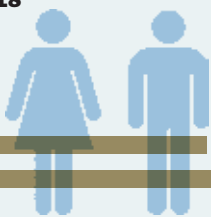
## MEET THE CLASS OF 2016

### WHO THEY ARE

Completed applications: **8,318**

Offered admission: **584**

Enrolled: **200**



### GENDER

Male: **98**

Female: **102**

### PROGRAM ENROLLMENT

M.D.: **159**

M.D./M.P.H.: **19**

M.D./M.B.A.: **17**

M.D./Ph.D.: **5**

### TOP FEEDER SCHOOLS

Tufts: **30**

Northeastern: **10**

Brandeis: **9**

Cornell: **7**

Michigan: **7**

Brown: **6**

Harvard: **5**

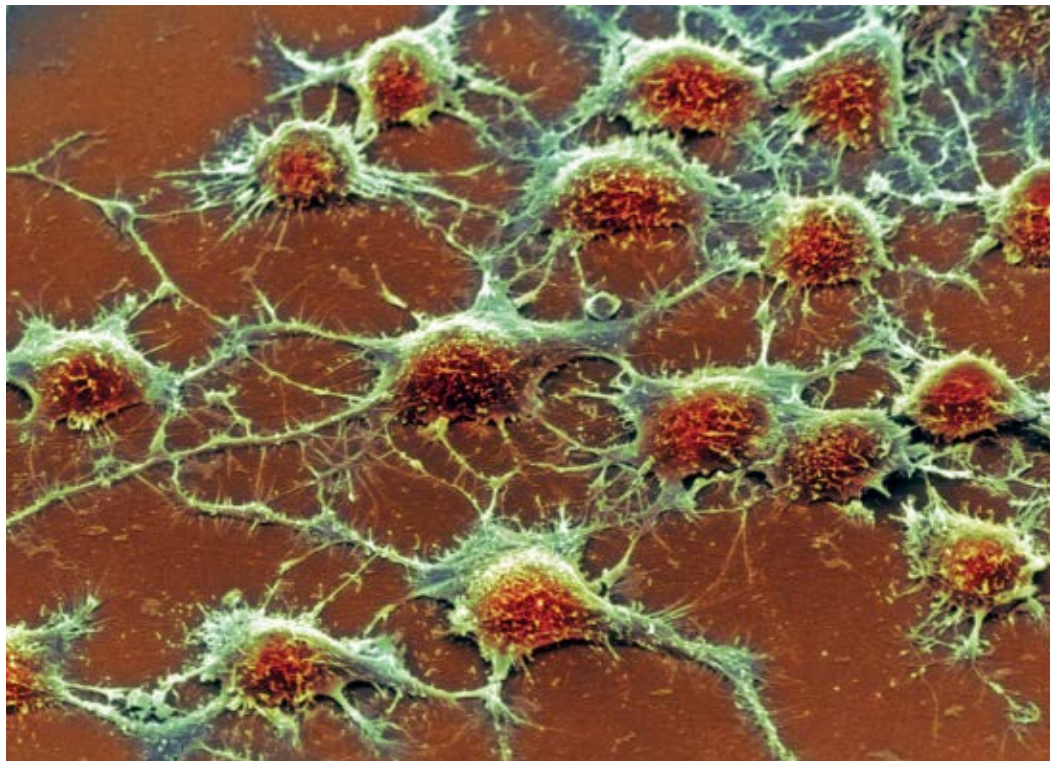


## day in the life

By Michael Schecht, '14



*“Then this one I take three times a day. Or maybe that was the green one, or was it?”*



**These cells used in Alzheimer's research have been engineered to produce amyloid plaques.**

BACE1. Elevations of this enzyme cause elevated levels of amyloid-beta, the key component of brain plaques associated with senility and Alzheimer's disease," she says.

Moderate-to-severe TBIs are caused most often by severe falls or motor vehicle accidents in which a victim loses consciousness. Not all head traumas result in a TBI. According to the Centers for Disease Control, 1.7 million people sustain a TBI every year. Concussions, the mildest form, account for about 75 percent of all TBIs. Studies have linked repeated head trauma to brain disease, and some previous studies have associated single events of brain trauma with brain disease, including Alzheimer's.

Building on her previous work, Giuseppina Tesco, an assistant professor of neuroscience, led a research team that first used an in vivo model to determine how a single episode of TBI could alter the brain. In the acute phase (the first two days) following brain injury, researchers found reduced levels of two intracellular trafficking proteins, GGA1 and GGA3, and observed an elevation of

## PATHWAY TO ALZHEIMER'S

**A single brain trauma affects an enzyme associated with the disease**

**A STUDY PERFORMED** in mice and using postmortem samples of brains from patients with Alzheimer's disease found that a single moderate-to-severe traumatic brain injury (TBI) can disrupt proteins that regulate an enzyme associated with Alzheimer's. The paper, published in *The Journal of Neuroscience*, identifies the

complex mechanisms that result in a rapid and robust postinjury elevation of the enzyme, BACE1, in the brain.

The research may lead to the development of a drug that targets this mechanism and slows the progression of Alzheimer's. As many as 5.1 million Americans suffer from Alzheimer's.

"A moderate-to-severe TBI, or head trauma, is one of the strongest environmental risk factors for Alzheimer's disease," says first author Kendall Walker, a postdoctoral associate in the Department of Neuroscience at Tufts School of Medicine. "A serious TBI can lead to a dysfunction in the regulation of the enzyme

MODERATE-TO-SEVERE TRAUMATIC BRAIN INJURIES ARE CAUSED MOST OFTEN BY SEVERE FALLS OR MOTOR VEHICLE ACCIDENTS IN WHICH A VICTIM LOSES CONSCIOUSNESS.

BACE1 enzyme levels.

Next, in an analysis of postmortem brain samples from Alzheimer's patients, the researchers found reduced GGA1 and GGA3 levels and elevated BACE1 levels in the brains of Alzheimer's patients compared to the brains of people without Alzheimer's, suggesting a possible inverse association.

In an additional experiment using a mouse strain genetically modified to express the reduced level of GGA3, the team found that a week after a traumatic brain injury, BACE1 and amyloid-beta levels remained elevated, even when GGA1 levels had returned to normal. The research suggests that reduced levels of GGA3 were solely responsible for the increase in BACE1 levels and therefore the sustained amyloid-beta production observed in the subacute phase, or seven days, after injury.

"When the proteins are at normal levels, they work as a clean-up crew for the brain by regulating the removal of BACE1 enzymes and facilitating their transport to lysosomes within brain cells, an area of the cell that breaks down and removes excess cellular material," says Tesco. "BACE1 enzyme levels may be stabilized when levels of the two proteins are low, likely caused by an interruption in the natural disposal process of the enzyme.

"We found that GGA1 and GGA3 act synergistically to regulate BACE1 postinjury," she says.

## NERVOUS DADS, ANXIOUS DAUGHTERS

### Male mice exposed to chronic social stress early in life produce anxiety-ridden female offspring

**A WOMAN'S RISK** of anxiety and dysfunctional social behavior may depend on the experiences of her parents, particularly her dad, when they were young, according to a study in mice conducted by researchers at Tufts School of Medicine. The study, published online in *Biological Psychiatry*, suggests that stress caused by chronic social instability during youth contributes to epigenetic changes in sperm cells that can lead to psychiatric disorders in female offspring across multiple generations.

"The long-term effects of stress can be pernicious," said the study's lead author, Lorena Saavedra-Rodríguez, postdoctoral fellow in the laboratory of Larry Feig, a professor of biochemistry. "We first found that adolescent mice exposed to chronic social instability, where the cage composition of mice is constantly changing, exhibited anxious behavior and poor social interactions through adulthood," she said, noting, "these changes were especially prominent in female mice."

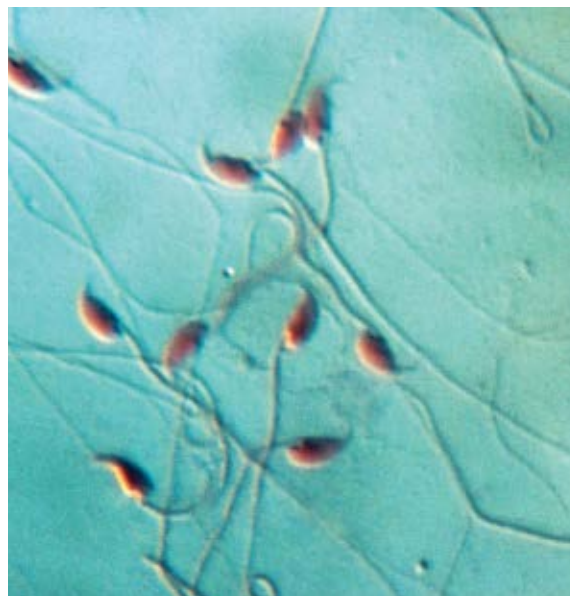
The researchers then studied the offspring of these previously-stressed mice and observed that again female, but not male, offspring

exhibited elevated anxiety and poor social interactions. Notably, even though the stressed males did not express any of these altered behaviors, they passed on these behaviors to their female offspring after being mated to nonstressed females. Moreover, the male offspring passed on these behaviors to yet another generation of female offspring.

"We are searching for biochemical changes in the sperm of stressed fathers that could account for this newly appreciated form of inheritance," said

Feig, who is also a member of the biochemistry and neuroscience program faculties at the Sackler School of Graduate Biomedical Sciences. "Hopefully, this work will stimulate efforts to determine whether similar phenomena occur in humans."

The research was funded by the National Institute on Alcohol Abuse and Alcoholism, the National Institute of Mental Health and the National Institute of Neurological Disorders and Stroke.



Mouse sperm may carry stress to daughters.

# WEIGHT WATCHERS

The link between TV and obesity expands along with our viewing time  
by **Jacqueline Mitchell**

## THE AVERAGE AMERICAN

spends more than 150 hours a month in front of the television—that's six days—and never mind other sedentary hours we spend with computers or mobile devices. As our screen time has exploded, so has the national waistline. Two-thirds of adults are overweight, and childhood obesity has more than doubled in the last 20 years.

One reason why obesity may be on the rise is that people who watch a lot of television may eat more, particularly pizza, soda and other fast foods, according to a recent Tufts study that evaluated 30 years of research linking TV viewing with weight gain. The paper, authored by four students and their advisor, Robin Kanarek, interim dean of the Friedman School of Nutrition Science and Policy, was published online in the June 4 edition of the journal *Physiology and Behavior*.

The link between watching TV and unhealthy eating is not surprising. Consider one fact: The food industry spends \$1 billion annually on advertising that targets children and teenagers, according to the Tufts analysis of the research. They point to a 2010 study conducted by public health researchers at Armstrong Atlantic State University in Savannah, Ga., that calculated if children chowed down on the foods espoused by such advertising, they would be consuming 25

times the sugar and 20 times the fat—but less than half the fruits and vegetables—recommended by current dietary guidelines.

Kanarek and the students—Rebecca Boulos, N13; Emily Vikre, N08, N13; Sophie Oppenheimer, N11, MPH11; and Hannah Chang, A10—also presented research indicating that television can shape societal views about overweight and obese people. They found evidence that excess weight is heavily stigmatized on television, often used as shorthand to indicate a character is evil, unattractive, incompetent, not to

Kanarek, a psychologist who studies nutrition and behavior, and Boulos, a USDA doctoral fellow in obesity at the John Hancock Research Center on Physical Activity, Nutrition and Obesity Prevention at the Friedman School, discuss how our TV habits might be affecting our health.

**How does TV make us fat? Couldn't the same be said for any sedentary activity, such as reading or sitting at work all day?**

**Rebecca Boulos:** The perception is that if you're watching TV, you're not exercising,



be taken seriously or simply greedy. At the same time, fat people are underrepresented. Only 14 percent of female characters on TV are overweight, compared with more than a third of American women.

and it really isn't that simple. TV plays a role not just in energy expenditure, but also in energy intake. Many people eat particularly high-calorie foods while they're watching TV. They are also more prone to eat the foods they see

advertised on TV, and those are energy-dense ones. So it's not just that they're watching an hour of TV instead of taking an hourlong walk or bike ride. Ultimately, that choice to watch TV is a triple whammy: You're moving less, you're eating more, and your perceptions of what is normal are being altered.

**Robin Kanarek:** We were interested in things like product placement and how often people on TV are seen eating. It's not in the paper we just published, but I did very rough calculations watching a few situation comedies, *The Middle*, *Friends* and *How I Met Your Mother*. The characters on *Friends* spend a large amount of time either in the coffee shop or in an apartment, and they are frequently eating. On *How I Met Your Mother*, they're in a bar, and they're often eating hamburgers, cheeseburgers and French fries. In one episode of *The Middle*, I counted 18 occasions when characters were eating, with the food of choice being either pizza, popcorn or sweetened cereal. I don't like to say those foods are unhealthy, but they were never eating anything most people would call healthy food.

**What about reality shows—do they portray weight issues more realistically than children's shows and situation comedies?**

**Kanarek:** A paper that came out after ours looked at the effects of the weight-loss shows, like *The Biggest Loser*. Weight-loss shows seem like such a great idea, but it's not realistic for most individuals to have a personal trainer come regularly to their homes,

or to live on a weight-loss farm for several months. I think it's interesting because very few people have looked at whether weight-loss programs ultimately increase or decrease peoples' desire to diet. What happens, for instance, if an individual goes on a diet, but doesn't experience that same kind of miraculous weight loss as shown on television?

**Boulos:** The news media can also influence society's understanding of the obesity epidemic. It typically oversimplifies the complexity of the situation by emphasizing the role of the individual, rather than environmental and social causes. This can lead people to blame individuals rather than look at more systemic problems and social patterns, such as our cultural approach to time management, the role of advertising and marketing and the kinds of food we serve

in schools.

One thing we hadn't thought much about until we started working on this was the role of cooking shows and how they influence viewers' perceptions of food preparation. There's a term we came across called "food porn." Effectively, people watch others prepare food and imagine eating it, but don't actually intend to prepare or eat the foods themselves. This can set unrealistic expectations about what it means to cook at home, which can deter people from preparing a meal instead of ordering take-out. This idea has been covered more in popular media, but has been less explored in more rigorous, large-scale research studies.

**It doesn't seem like most people are willing to curb their TV watching. How can we**

**break the link between viewing habits and obesity?**

**Kanarek:** We have to be realistic. We are never going to go back to the '50s, when the mother was at home all day, and kids came home from school and played outside. People just have to be educated. I don't think people realize how much TV they watch. In some households, the TV is on almost all the time, and many children start watching TV when they're less than a year old. People don't even have to be in the home anymore. With iPads, people can watch TV or a movie anywhere they want.

**Speaking of iPads, has there been any research on how viewing content on mobile devices may impact obesity?**

**Boulos:** I really think it can go both directions. People might be watching TV or movies

on their tablets instead of playing or exercising. But mobile devices can also serve as motivation. People can upload runs and bike rides with other users, such as mapmyrun.com and mapmyride.com. They can share their activities on Facebook and get social support that way, too. They can also download apps for their smart phones that let them enter which foods they've eaten and which physical activities they've done, and encourage lifestyle change that way. There is a little research that supports text messages as a way to encourage weight loss. So while there is variability in the ways in which people use their mobile devices, there is potential for both positive and negative influences on obesity depending on how it's used; this is another area in which we could use more research.

## FIT BUT FAT

**Even if kids carry extra pounds, fitness has lasting health benefits by Julie Flaherty**

### BEING OVERWEIGHT

doesn't necessarily mean that you can't shoot hoops and run bases like the rest of them. For overweight or obese children, it seems being or becoming fit may even lead to a healthier weight as they grow.

For a study published in the journal *Obesity*, Friedman School Assistant Professor Jennifer M. Sackeck, N01, and colleagues examined the association between weight and fitness levels in first through seventh graders attending school in Cambridge, Mass.

They collected data on 2,793 students over four years. Regardless of their weight, students were classified as "fit" if they passed five different fitness tests, such as a 20-yard shuttle run.

"Obese and overweight girls who achieved fitness were almost five times as likely, and obese and overweight boys were two and a half times as likely, to reach a healthy weight as those who stayed underfit," says first author Adela Hruby, N10, a Ph.D. student at the Friedman School.

It turns out that maintaining fitness is beneficial, too. "We observed that obese and overweight girls and boys who started and ended the study being fit were more likely to have a healthy weight by the end of the study," Hruby says.

Staying fit also benefited the healthy-weight boys and girls; they were more likely to maintain their weight than those students who declined from fit to underfit over the course of the study.

The assessments coincided with a citywide weight

and fitness initiative that prompted improvements to gymnasiums and promotion of physical activities outside school.

Of the 1,069 students who were initially obese or overweight, 17 percent achieved a healthy weight within the study period. That compares with 6 percent of students who began the study at a healthy weight and became obese or overweight.

"It is encouraging to see any kind of reversal in unhealthy weight patterns," Sackeck says.

# THE CENTENARIAN

A VISITOR WAS CHATTING WITH BEN SHAPERO, '39, AND HIS WIFE, Rosalie, at their home in West Palm Beach, Fla., this spring when Ben had to duck out to play some tennis. That would be nothing remarkable except that the doctor was 99 years old. Ben turned 100 on July 5, surrounded by his family, including (among others) his pediatrician son Paul Shapero, '73, his daughter-in-law Jane Laeger, '79, an obstetrician/gynecologist, and his granddaughter, Kayle, who has deferred entry to Tufts Medical School but will be a member of the Class of 2017.

Ben Shapero was born in Bangor, Maine, in 1912, one of six children in an Orthodox Jewish family. He served as a major in the U.S. Air Force during World War II. After the war he returned to Bangor, where he practiced as a pediatrician for 56 years. "You were an amazing physician to my children," one woman wrote Shapero on the occasion of his centennial. "Will always remember the night you saw my daughter in your kitchen—my husband fixed a doorknob for you, and you called it even." We spoke with Ben and Rosalie in mid-July.

## **What was growing up in Bangor like?**

It was a small community, and people were very good to each other. If anybody needed something, they were very generous in helping other people.

## **What memories do you have of medical school?**

There was a very close friend of mine from the University of Maine [where Shapero attended college] who went on to Tufts with me: Abe Rosen, '39. We shared a room near the medical school. We were both very poor. We struggled.

## **How did you meet Rosalie?**

Well, I was in the Air Force during the war. I was stationed in England for three years. After the war, I went back to the States. I had about a three months' wait to get my discharge papers. They sent me to Wichita Fall, Texas, where I got my discharge. At Wichita Falls we used to go to the city for recreation. . .

**Rosalie** [exasperated]: He's going into every little detail. Do you want all that?

## **Sure, it sounds like a good story.**

**Rosalie:** May I tell part of it?

**Ben:** Let me tell it. One night a bunch of us were going into town in a taxi, and the taxi stopped and picked up another man, a soldier who told me about his problems, which were that he was 39 years old, lived in Pittsburgh and had been engaged to be married two months before he went into the service. He told me that his fiancée broke the engagement. I felt sorry for him. Later [after Shapero had helped the man secure an honorable discharge] he made me promise to stop in Pittsburgh on my way back to Bangor, Maine, which I did.

He had a receptionist in his office, a Jewish woman, and I asked her if she knew of any nice Jewish women that I could meet on my way back to Maine. She said, Oh, she had gone to Philadelphia and taken a postgrad course there with [Rosalie]. She had her phone number. I called Rosalie and asked if she wanted to have lunch with me, told her I was getting out of the service. She said, "Yes, I'll meet you at lunchtime." We met and seemed to hit it off.

## **How long have you been married?**

**Rosalie:** Sixty-six years. Not bad [laughs]. We love each other very much, and we have lovely, lovely, wonderful children and grandchildren.

## **Doctor, what has medicine meant for you?**

Well, it was a very enjoyable practice for me because I enjoyed helping people. I'd feel good when patients got better. Most of them were infants and children—they didn't talk back to me like some others do. [Rosalie laughs.]

## **Now that you're 100 years old, how do you spend your time?**

I play a little tennis and a little golf.

**Rosalie:** Let me tell you. Three days a week he plays tennis, and three days a week he plays golf. He doesn't sit still too much, unless he's reading. He's very active.

**Ben:** When I play tennis, it's always doubles. I pick a partner who can run. They cover the court. I stay put, and my partner runs.

## **Do you still serve?**

I can serve OK. I can't serve very fast or hard, but I get it in the court.



Ben and Rosalie Shapero

*We pay a visit to our  
westernmost affiliate,  
where first-rate medicine rules*

# THE Baystate CHRONIC

Baystate Health

- Emergency Entrance
- Daily (Inland) Entrance
- Daily Garage Parking
- Children's Hospital

Quality  
Safety  
Network  
Management

TOP TOPS  
HOSPITALS





100 miles from  
Baystate Medical  
to Boston



THERE'S SOMETHING BIG OUT THERE. One hundred miles west of Boston, amid a landscape of former mill towns and gently rumpiled hills on the eastern bank of the Connecticut River, lies Springfield, the fourth largest city in New England and the home of Baystate Medical Center,

a 650-bed colossus and major Tufts affiliate that ranks among the brightest stars in our medical constellation.

Baystate, which is exploding with growth at a time of national belt-tightening, is in the final stages of a successful \$300 million capital campaign designed to expand and deepen the medical center's already profound regional impact. The hospital employs 10,000 people in an economically depressed area. Medically speaking, Baystate's punch is even greater. It offers the only Level 1 trauma facility in western Massachusetts; it runs the state's second busiest emergency room; it performs more than 80 percent of all regional cardiac surgeries; and it has helped train roughly one-third of the primary care doctors in the area, among other distinctions.

Our report contains two parts. In the first, Tony Zhang, '13, writes about his enthusiastic (and, in truth, somewhat accidental) immersion in Baystate culture during his clerkship last year. His experience proved life-changing. The second part concerns the successful surgery that Springfield resident Donald MacKay, age 84, underwent in May in the freshly christened Davis Center, where a surgeon and an interventional radiologist combined their skills seamlessly to prolong his life.

PHOTOGRAPHS BY ALONSO NICHOLS

# LES



**1** A student practices suturing at the Simulation Center.  
**2** Elizabeth D'Amour, R.N., helps students with a mannequin.

## MAKING A MARK

**TOP-RANKED SITE** When clerkship satisfaction among third-year students is scored, Baystate Medical Center consistently ranks as one of the top sites. Being in a single location for the whole year gives many students the chance to benefit from multi- and interdisciplinary classes, including ethics, clinical skills and simulations, over the long term.

**SOME GREAT TEACHING** The Dean's Outstanding Mentor award for 2012 was given to Adam Kellogg, assistant professor of emergency medicine at Baystate and director of medical student education there. Baystate faculty members and residents win teaching awards (recipients are chosen by the graduating class) year after year.

# My BIG Surprise

*Who knew that a year spent in training at Baystate would pay off in so many ways, from superb mentorship to fine dining*

BY XIAO CHI (TONY) ZHANG, '13

**T**O THOSE INTERESTED IN LEARNING MORE ABOUT THIS HOSPITAL IN WESTERN Massachusetts, I must admit upfront that I have a bias. After training at Baystate Medical Center last year, and getting to know this unfamiliar corner of the state, I can say that my experiences there were wonderful and irreplaceable.

I first heard of the hospital—sometimes called “the Western Campus of Tufts University School of Medicine”—as a second-year student through word-of-mouth (the most reliable form of communication). Before I had time to register for where I would spend my clinical years—the third and fourth years of medical school—I had nearly missed the deadline!

With impulsivity and blind faith, I opted to camp myself at Baystate for the entire year, unaware that it would be one of the best decisions I've made since coming to Tufts. So when I was asked to write about my experiences there, I felt as if I were being tasked to recreate the splendors of the Sistine Chapel using nothing but crayons and finger paint. Nevertheless, I will try my best.

From day one of every rotation, I was immediately welcomed into the “family” of

physicians as a valued member of the team. The residents frequently offered sage advice to a newbie like me, who arrived brimming with preclinical knowledge but not knowing how to apply that in a hospital setting. Even before learning medication dosage, electronic medical records or even the names of our weekly supervising attending, I was let in on the secrets of hospital survival: 1) “EAT when you can”; 2) “PEE when you can”; and when possible 3) “ALWAYS take care of yourself first.”

## THE GREATEST LESSON

Working at the only Level 1 trauma center in western Massachusetts, I witnessed on a weekly basis some of the most fascinating trauma and surgical cases—cases that my colleagues based in Boston may only see once or twice during their entire clerkship year. A specialized trauma center such as Baystate has been shown to increase a patient's chances of survival by up to 25 percent, compared to a typical ER.

During the first two weeks of my surgical rotation, I assisted on an open thoracotomy (an emergency procedure in which the physicians make a bold incision across the patient's chest to gain access to the internal organs) and observed a team of surgeons, anesthesiologists and scrub techs perform a 10-hour pancreatoduodenectomy (a.k.a. Whipple Procedure) on a patient with pancreatic cancer. In the face of insurmountable odds, the trained healers at Baystate worked seamlessly in the operating room, all performing in synchrony, like a well-rehearsed symphony.

However, more than surgeries, it was my teachers who endeared me to this hospital. Most important, David Page, professor of surgery and director of student programs in surgery, taught me about being a great physician. At first glance, Dr. Page



Tony Zhang, '13

presents as a white-haired sage with an eclectic taste in ties and a wealth of knowledge about Canadian hockey teams. But a five-minute conversation brings you to his core: You will be hard-pressed to find another individual as compassionate and as knowledgeable.

Kind and intelligent, he always took time in his busy schedule to give me feedback, great teaching vignettes and appropriate amounts of encouragement. He always challenged me to see past the pathology and treat my patients along with their ailments. As I struggled to find my true passion in medicine, Dr. Page listened patiently and caringly. Even after I had declared my career choice, emergency medicine, Dr.

Page remains one of my closest advisors and mentors, in medicine and in life.

There were other great teachers, too. The tall and gentle Bryant “Bear” Benson, assistant professor of pediatrics, taught me to meet “eye to eye” with patients, even if it meant carrying a stool during three hours of rounds every morning, and Gurmuk Singh, a nephrology fellow, taught me to “treat the patient, not a bunch of labs.” Lucienne Lufty-Clayton, assistant professor of emergency medicine, personally introduced herself as the new supervising physician to every single patient before her shift began, and always asked if there was anything she could do to make visiting family members more comfortable.

While these tiny details may seem trivial, collectively, these doctors taught me the greatest lesson in medicine: The little things make the biggest difference in patient care.

While these tiny details may seem trivial, collectively, these doctors taught me the greatest lesson in medicine: The little things make the biggest difference in patient care.

Already a huge enterprise, Baystate Medical Center is moving to complete its ambitious expansion project, aptly named the Hospital of the Future. Of all of the departments, I was most impressed with the 48-bed emergency department, which sees 120,000 patients each year. Take a stroll through the Baystate ED and you immediately notice the command center of emergency medicine physicians, nurses, paramedics and consultants tending to a deluge of incoming patients. Despite these large influxes, I was amazed at the efficiency of these scrub-topped, khaki-wearing healers as they deftly stabilized each patient and organized the appropriate consults and admissions for sicker patients. You have to appreciate the subtle signs of order within the chaos.

As an aspiring emergency medicine physician, I strove to be versatile with my medical knowledge. Fortunately, I was able to take full advantage of the hospital’s simulation centers, which included multiple high-fidelity patient simulators—lifelike

**BIG**, continued on next page

**BIG**, continued from preceding page

mannequins that can blink, sweat and even bleed—that function as anatomic models for placing central lines, treating lumbar punctures and practicing intubation. There are also multiple stations where students can practice suturing and laparoscopic procedures.

These teaching aids proved invaluable. Initially, I had difficulty performing subcutaneous closures (an advanced, but aesthetically favorable wound-closure technique), but I was able to hone my skills after spending many hours in the lab, running suture after suture. The availability of this facility not only sharpened my procedural skills, but also boosted my confidence.

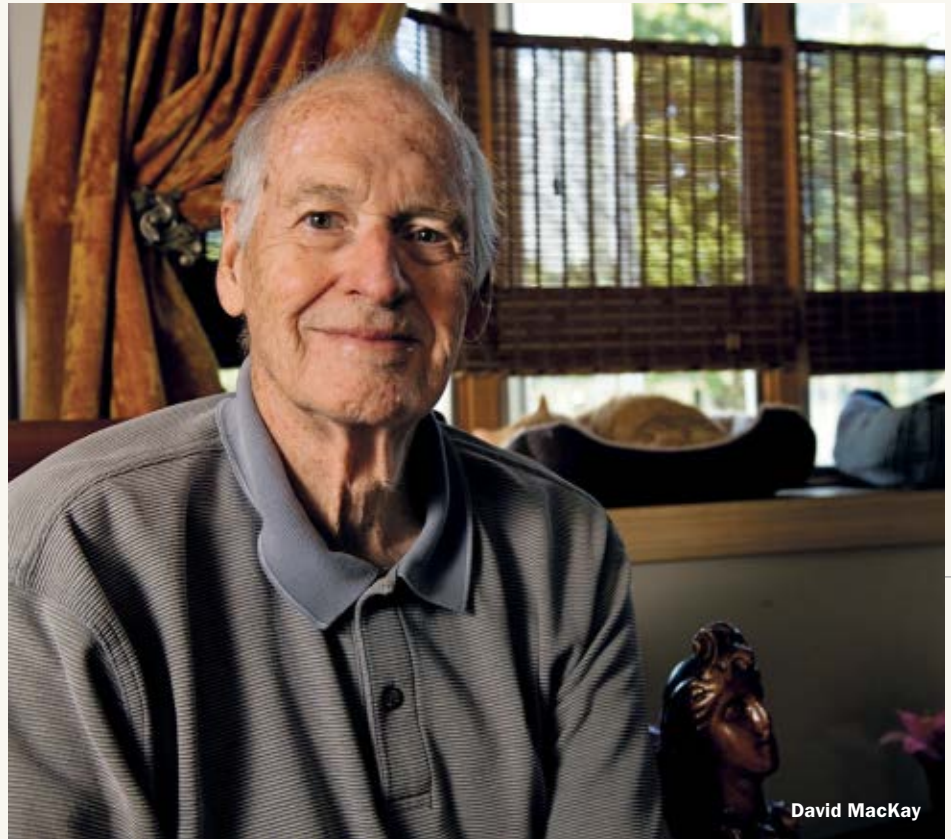
#### OUT THERE

At first I was skeptical about spending an entire year removed from the bustle of Boston. I ended up being pleasantly surprised at the wealth of activities in the Springfield area. I rocketed through space at 90 miles per hour at the Six Flags amusement park, hiked the serene hills of Mt. Tom, rocked out to live music at the Iron Horse in the hipster town of Northampton, ate an embarrassing amount of fried Oreos (and even butter) at the nationally acclaimed Big E Fair, chilled out with the locals at the Springfield Hoop City Jazz & Arts Festival and even dined with Chef Wayne, owner of the popular Cajun restaurant Big Mamou, which serves up crawfish étouffée, mouth-watering Memphis-style short ribs and freshly mashed seafood mofongo, all just a few blocks from the hospital.

You could say Baystate—and Springfield, too, for that matter—was not, for me, just a place to work. It has become my new “home away from home.” This year I elected to return to the hospital for most of my fourth-year rotation, hoping to take further advantage of the terrific teaching environment, diverse patient population and intriguing case presentations. Baystate is a hidden gem, chock-full of surprises and treasures waiting to be discovered. I promise you will find something memorable and unexpected here. I did.

---

*Zhang is a fourth-year student who intends to specialize in emergency medicine.*



David MacKay

## A PATIENT'S Story

*The design of surgical suites in the Davis Center, the first installment of Baystate's Hospital of the Future, provides for faster, safer treatment*

BY BRUCE MORGAN

**S**PRINGFIELD, MASS., RESIDENT DAVID MACKAY HAD A PROBLEM THAT HIS DOCTOR HAD been watching and monitoring through ultrasound for a decade. Technically, it was an abdominal aortic aneurysm, but MacKay, 84, who worked for years helping to build printing presses at a company located just across the Connecticut River in Agawam, calls it simply “this thing that I’m happy to have taken care of.”

MacKay entered the sparkling new Davis Family Heart & Vascular Center for surgery in May to head off a potentially fatal rupture of the bulging artery in his abdomen. Assistant Professor of Surgery Neal Hadro, ’90, and Sidney Lowell Kahn, assistant professor of surgery and radiology, were the doctors who meshed their talents during the operation. Both men say they love the operating room design in Davis, which

has been thought out and implemented in a way that means everything they need is both state-of-the-art and within easy reach, in effect smoothing the rough edges of contemporary surgical practice.

“They have a new method of operation there, and it worked quite well,” says MacKay, who certainly noticed the newness of the place without necessarily understanding or needing to understand



**Sidney Kahn and Neal Hadro meshed their talents to repair the patient's abdominal aortic aneurysm.**



## DAVIS CENTER AT A GLANCE

**6** cross-functional surgical/endovascular suites for complex and hybrid cardiovascular procedures bring technology and care teams to the patient.

**20**-room CARE unit allows patients undergoing outpatient procedures to go from preop to discharge in the same room, with the same nursing team.

**96** private medical-surgical rooms, each equipped with telemetry, accommodate less critically ill patients who require an overnight stay.

**22** cardiovascular critical-care rooms create comfortable environments for patients, with plenty of room for visiting family and friends.

all the implications of its design.

One architectural innovation of the approach at Davis consists of the hybrid endovascular suites that incorporate a fully outfitted OR side by side with the latest fluoroscopic imaging equipment, thereby increasing the speed and efficiency of any operation. So, according to Hadro, instead of needing to wheel MacKay to the radiology department wway off in another wing of the hospital for imaging tests on his aneurysm, and then having to wheel him back, as would have occurred before—or alternately, needing to use sub-par portable radiologic devices in the OR, as is often the case in a more conventional layout, MacKay never budged. The top-notch equipment surrounded him where he lay. In his role as interventional radiologist, Kahn could access the superb technology and help complete the endovascular procedure.

“Baystate is so far ahead of the curve—that is what drew me across the country,” says Kahn, who was practicing in Florida until a year ago. It’s more than gadgetry he’s talking about. Kahn cites the spirit of

collegiality he’s found at Baystate, where interventional cardiologists, vascular surgeons and interventional radiologists like him pitch in together, devoid of ego. This is all too rare, he suggests.

Hadro, who came to Baystate from the Cleveland Clinic three years ago (he did a clerkship at Baystate during medical school), concurs, pointing out that the perfect blend of radiology and surgery in the Davis Center ORs is “good for the patient and speaks to the way we practice today. It’s a lot safer and more efficient.” Both Hadro and Kahn add that having a facility like the Davis Center enlarges the pool of patients they are able to take on, because tougher cases no longer need be referred to a Boston hospital. “It ups the ante in terms of the complexity of cases we’re able to do. There’s not much we would shy away from,” Kahn says.

That’s nothing but good news for patients like MacKay. Abdominal aortic aneurysms, most often seen in men over age 60, occur when the aorta, the largest blood vessel in the abdomen descending towards the pelvis and legs, grows too large and balloons

outward. Although the exact cause is unknown, some common risk factors are obesity, smoking, high blood pressure and elevated cholesterol. The condition develops slowly over many years and can be fatal if the vessel ruptures and goes untended.

MacKay’s operation went smoothly. Through two small incisions at the groin, Hadro and Kahn inserted a covered stent graft into the artery and guided it to the appropriate site. They then deployed the device, shutting off blood flow to the aneurysm and virtually eliminating the chance of rupture. This minimally invasive endovascular approach meant that instead of enduring a prolonged recuperation of days or weeks after the surgery, MacKay was home and up on his feet the next day, puttering around the house in the company of his wife, Jean.

“I feel very grateful and happy,” he says of his experience at Baystate. “I feel fine, and I get around quite well.” With any luck he’ll be back soon helping to run bingo games on Thursday nights at the local Moose Lodge, just a few miles down the road. **TM**



THE TRICK OF  
**STAYI**

ILLUSTRATION BY JOHN RITTER



Prompted by one doctor's inspired moment in the classroom, a disco hit from the 1970s has morphed into a life-saving soundtrack for cardiac arrest victims around the world

# STAYIN' ALIVE

ALSON INABA, '87, WAS DOING A GRAND ROUNDS PRESENTATION FOR physicians at the Kapi'olani Medical Center for Women and Children, in Honolulu, back in 2005 and decided to deviate from the normal curriculum. "I don't like boring presentations," he explains, "so I created a skit in which one resident walked up onto the stage and suddenly collapsed. Then a group of pediatric residents, sporting dark glasses, gold chains and a boom-box blaring 'Stayin' Alive' rushed up to the stage to perform CPR."

BY BRUCE MORGAN

It was more than sparkly fun and games. "My teaching point was, Let's do everything we can to help this guy stay alive. That got me to thinking about the beat of 'Stayin' Alive,' which has about 100 beats per minute—the same rate the American Heart Association recommends for CPR chest compressions," says Inaba, an associate professor of pediatrics at the University of Hawaii John A. Burns School of Medicine and head of the Division of Pediatric Emergency Medicine at the Kapi'olani Medical Center.

Some personal, even intimate, history lay behind the concept. Back in 1977, when the movie *Saturday Night Fever* first came out, with its stirring tale of young John Travolta's character fighting his way out of a dead-end job in Bay Ridge, Brooklyn, through glissando moves on the dance floor of a neighborhood disco, Inaba and his pals had loved cruising around Honolulu in his Cadillac Sedan DeVille, the eight-track cassette player going full tilt and that very tune cycling again and again through the speakers. Inaba had always loved the punchiness of the tune, but now, as a physician, he realized it could serve a larger purpose. It could help save lives.

Once the American Heart Association (AHA) caught wind of Inaba's approach, they asked him to write it up for *Currents*, the organization's newsletter for its CPR instructors. Popularizing a simpler approach to CPR had found its moment. Research conducted by the AHA had shown that survival rates among cardiac arrest victims at home, at work or in public were just as good with "hands-only" CPR as they were when the traditional mouth-to-mouth efforts were included. That being true, it made sense to promote the importance of compressions far and wide.

Approximately 400,000 Americans suffer cardiac arrest each year, and about 90 percent of them—some 1,000 people every day—die because they don't get immediate CPR. Hands-only CPR, properly administered, can double or even triple the chances of survival, according to the AHA.

The new, updated message really couldn't be much simpler. There are just two steps: First, dial 911 to summon help, and then push fast and hard in the middle of the victim's chest to the beat of "Stayin' Alive" until help arrives. Don't worry about hurting the person in the process, experts say. If you did nothing, the individual would surely die.

A heart attack and a sudden cardiac arrest, though often confused, are distinct events. Heart attacks result from blockage in blood flow to the heart. Although impaired, the heart may continue beating even during or after a heart attack, like a kinked garden hose that still permits a trickle of water to flow. With SCAs, often triggered by a heart arrhythmia, the heart has stopped cold. Blood and oxygen can't circulate. Death occurs within a matter of minutes.

News of the hands-only approach to CPR spread through the media. National Public Radio aired a story in April 2008, where host Robert Siegel quizzed Gordon Ewy, a cardiologist from the University of Arizona and a longtime advocate of the hands-only technique, about the revision in AHA guidelines. "I gather the research now shows that there's no better result for using the mouth-to-mouth in addition to chest compression," Siegel suggested at the start.

"Yes, that's correct," Ewy said. "Because if you or I were to collapse right now, our blood would have plenty of oxygen in it. And when someone starts compressing the chest, the flow to the heart and the

## **SHE JUMPED ON HER HUSBAND AND BEGAN PUSHING HARD AND FAST IN THE MIDDLE OF HIS CHEST WHILE SINGING SNATCHES OF "STAYIN' ALIVE."**

brain is so marginal, that if you stop for anything, including breathing, it decreases the chances of the patient surviving." A moment later, Ewy mentions the ideal cadence of 100 beats a minute for the tempo of compressions, and attempts to sing a measure or two of the disco hit to demonstrate: "*Ta, da, da, da, da, staying a-LIVE.*"

"Well, thank you very much for this guidance," Siegel offers lightly at the end of the interview, "and also for helping us to never hear the Bee Gees singing 'Stayin' Alive' in quite the same way ever again for the rest of our lives."

Later that year, the *Today* show ran a segment in which cohost Matt Lauer did a demonstration for his viewers under the guidance of Dr.

Nancy Snyderman, chief medical editor for NBC News. Lauer, clad in coat and tie, gamely knelt over a beige mannequin on the studio floor and began exerting compressions on its chest—at first too slowly, and then more quickly, at Snyderman's prompting—to show the proper life-saving technique.

### **TWO SURVIVORS**

One summer day three years ago, Debra and Christopher Bader went out for a walk. The husband and wife, both in their 50s, entered some woods north of Boston accompanied by their three dogs. A jaunt like this was a regular routine for the couple. Everything was going fine until Chris, headed up a steep hill, suddenly turned and looked back with what Debra describes as "a bad look" on his face. "It was almost like he'd forgotten something," she says now. Chris immediately keeled over backward and crashed to the ground. He had suffered cardiac arrest.

Debra flew into action. She fished Chris's cell phone out of his pocket and dialed 911 to summon help. Then she jumped on her husband and began pushing hard and fast in the middle of his chest while frantically singing snatches of "Stayin' Alive," pumping her interlocked hands up and down and yelling instructions to the EMS crew over the open phone. "I was talking and yelling and singing," says Debra, who kept at it for 15 minutes until the EMTs arrived and shocked Chris with paddles to get his heart going again.

Her husband's collapse was not entirely unexpected. Chris, a software developer, had survived a heart attack on a busy street near their home just five months earlier. On that occasion, Debra admits she felt "helpless and horrified." Should she apply mouth-to-mouth, or push on his chest, or do them both or leave him alone until help arrived? "The old approach was kind of complicated," she says in her defense.

This time, deep in the woods, Debra knew what to do because she had heard a story on the radio about doing CPR chest compressions to the "Stayin' Alive" tune, and had gone online to watch a video on the topic. She had further schooled herself by visiting multiple websites. "I became obsessed with it," says Debra, a lawyer. "But as far as obsession goes, it was the right thing to be obsessed about."

Chris and Debra were not the only ones who have gained from being up to speed.

Tom Maimone was a retired guy in his 50s who lived in Delray Beach, Fla. In top physical shape, he was a runner who frequented the gym nearly every day and who watched his diet carefully. In fact, at a recent physical exam, his doctor had gone so far as to tell him, "Everything looks great—how do you stay so ripped?" On April 25, 2009, while out on a 10-mile run, he was within a half mile of home when he dropped like a stone directly in front of a car driven by Tom Elowsen.

Maimone had suffered sudden cardiac arrest from a near-total blockage in an artery leading to his heart.

Elowsen, who had jumped out of his car, began pumping Maimone's chest fast and hard while singing "Stayin' Alive" in his head. It was a stroke of luck that he knew what to do. Elowsen had





**This past June, Alson Inaba (above) was recognized at a disco-themed media party in New York City as the brains behind the American Heart Association's "Stayin' Alive" national campaign. Using a custom van, the campaign will visit 24 cities over the next three years. Tom Maimone (left), a cardiac arrest survivor from Florida, and Debra and Christopher Bader (right), a couple who faced death in the woods north of Boston, were also there.**



gone to pick up his girlfriend recently, and while waiting for her to get ready, he had watched a *Today* show segment promoting the simpler approach to

CPR. Seeing Maimone crumple to the ground, Elowsen sprang into action. Assisted by several others at the scene, he kept pumping to the disco beat for nine or 10 minutes until the EMTs arrived and shocked Maimone with defibrillators to restart his heart.

Maimone and Elowsen since have become friends and fellow evangelists for the heart association's "Stayin' Alive" campaign. The two Toms have appeared at public events and gone on the *Today* show to tell their story, helping spread the word about how easy it can be to save a life.

Historically, as good as it was, the mouth-to-mouth version of CPR had people hesitating too much at the moment of truth. Statistics gathered by the AHA say that fully 70 percent of Americans feel helpless to act during a cardiac emergency, either because they don't know how to administer CPR or because they're afraid of hurting the victim. Timing the compressions is critical. If the tempo is too slow, not enough blood (and oxygen) will flow to the heart and brain. If too fast, the heart will not have time to refill properly between compressions. Inaba says that in his experience, without any guidance, most people compress either "way too fast" or "way too slow."

#### ON THE ROAD

Once the AHA had secured the rights to use the Bee Gees' song, the Hands-Only CPR "Stayin' Alive" campaign was officially up and running. Everything about it is a reflection of the original skit at Inaba's Grand Rounds presentation, with the same rakish look and the same unexpected mix of gravity and fun as that first enactment. The campaign's official icon is a white disco suit modeled on the one Travolta wore in the movie. And the campaign seems to be gaining steam.

In early June, as part of National CPR Awareness Week, the AHA recognized Inaba at an elaborate media event in New York City—featuring actress Jennifer Coolidge backed by a cadre of dancers in flashy white suits, as well as Debra and Chris Bader, Maimone and Elowsen—for the teaching innovation that launched it all. Inaba was interviewed by *NBC News*, the *New York Times* and *Men's Health*. The event marked the start of a national three-year, 24-city promotional tour, funded by a \$4.5 million grant from the WellPoint Foundation, that features a custom-designed van and trailer, complete with a whirling mirror ball and a sound system perfect for promoting disco-based CPR to dozens of people at once.

Just how far the message has reached is hard to say. Inaba has gotten emails from an emergency room nurse in Alaska and a hospital CEO in Botswana, among others, who say they have adopted his approach and saved lives.

The British Heart Foundation came aboard in January of this year with a droll TV ad featuring former football star Vinnie Jones, who plays a Cockney-tongued thug who threatens to teach viewers "a lesson you'll never forget" by demonstrating proper CPR. For a sample victim, he uses an unconscious bloke who comes sliding into the frame on his back, propelled by two gum-chewing associates. Jones bends to his rescue task. "Don't forget—push fast and hard to 'Stayin' Alive,'" he growls after he's done. "It ain't as hard as it looks." The online version of the ad has drawn millions of hits.

What sense does any part of this story make? The elements in it are whimsical, crazy, far-fetched—improbable, at best. But seven years ago, out on a speck in the middle of the Pacific Ocean, one man had a bright idea. And because of it, some people, basically dead, have lived to see another day. **TM**

*Bruce Morgan, the editor of this magazine, can be reached at [bruce.morgan@tufts.edu](mailto:bruce.morgan@tufts.edu).*

## Why, in this age of scientific and technical marvels, are creationism and the antivaccine movement going strong?

BY PHIL PRIMACK

# SCIENCE DENIED

THE SIGN IN FRONT OF THE TALL DISPLAY CASE AT THE Smithsonian Institution's Museum of Natural History lures visitors to "meet one of your oldest relatives." Inside stands a morganucodon, a mouselike animal from the Late Triassic period, 210 million years ago. "A close relative of this tiny creature was the first mammal on Earth," the sign says. "Its DNA was passed on to billions of descendants, including you." Nearby, hominid skulls, ancient tools, and maps of early migrations spell out humanity's deep past. Surely, such a mix of strong visuals and clear explanations brings the theory of evolution to life for young minds, right? "You'd be surprised," says a guide who has answered countless questions since the collection, called the Hall of Human Origins, opened two years ago. "I've heard visitors call evolution a secular conspiracy to eliminate God. They

tell me that they bring their kids here to show them how ridiculous the other side is."

The facts of evolution may be written in stone and bone and DNA, but close to half the American public "accepts a biblical creationist account of the origins of life," according to the Pew Research Center for People & the Press. Evolution is just one front in a broader conflict between science and individual belief. Climate change is another: According to a 2009 Pew survey, about half of Americans doubt that human activity contributes to global warming, despite strong scientific evidence that it does. Smart and caring parents, swayed by a purported though discredited link between vaccines and autism, are refusing to immunize their children. Other issues are also returning to the hot-button table, among them fluoridation of public drinking water.

PHOTOGRAPH BY DAN WINTERS



WARMING



FLUORIDE



VACCINE



EVOLUTION

While doubters of evolution are often linked to the political or religious right, the rejection of science knows no social, economic or ideological bounds. Fifty years ago, the opposition to fluoridation came from the John Birch Society and other right-wing groups that equated the practice with Communism. These days the charge is led by left-leaning organic foodies and ecoactivist organizations, such as the Sierra Club and change.org. Antivaccine sentiment is highest among the better educated, the more affluent, and the more environmentally conscious. Looking to find higher-than-normal rates of vaccine noncompliance? “Go to any Whole Foods market,” one public health official remarked.

A few Metro stops from the Smithsonian Institution, Sean B. Carroll, Ph.D.’83, is working to change the country’s often distorted conversation about science. An evolutionary developmental biologist and author of books that engagingly explain evolution, DNA and other science to lay readers (he is also a regular talking head for science documentaries), Carroll was recently named vice president for science education at the Howard Hughes Medical Institute. It’s his job to find ways of fostering public respect for, understanding of, and enthusiasm about science.

Nobody knows more about public disrespect for science than another Tufts alumnus, Paul Offit, A72. Offit is chief of the Division of Infectious Diseases and the director of the Vaccine Education Center at the Children’s Hospital of Philadelphia and a coinventor of the anti-diarrhea vaccine RotaTeq, one of those vaccines supposedly linked to autism. He is the author, most recently, of *Deadly Choices: How the Anti-Vaccine Movement Threatens Us All*. Offit’s outspokenness has made him the target of vaccine opponents, their invective occasionally punctuated with physical threats (as detailed in a *Wired* cover story in 2009). The abundant science that backs up his confidence in vaccines has done nothing to change their minds.

As a society, we are indeed a contradictory lot. We welcome, even demand, medical and other advances from our scientists, yet we choose not to believe those same experts when their research rebuts notions

we hold dear. This denial of science is certainly grist for psychology journals. But does it really matter?

CARROLL THINKS IT MATTERS A LOT. “Otherwise, why would a happy scientist with a very fulfilling research career bounce between Madison, Wisconsin, and Washington, D.C.?” he asks. Instead of

working in his genetics laboratory at the University of Wisconsin, where he is a professor, he has begun to spend most of his time at the campuslike offices of the Howard Hughes Medical Institute, just outside of Washington. Carroll has a long history with the institute as a principal investigator, but he now has access to its vast resources for his broader mission of bringing science to the public.



Sean B. Carroll

His ability to bridge hard science and popular culture is evident from the artifacts in his institute office. In one corner is a detailed model of HMS *Beagle*, the ship that carried Charles Darwin on his epic five-year voyage nearly two centuries ago. A nearby wall displays a poster for the 1980 movie *Airplane*, autographed by Carroll's friend Jerry Zucker, the comedy's executive

asked if I believe that autism is associated with vaccines. It doesn't matter what I believe. All that matters is what the data show."

Something else tilts the playing field toward those untroubled by an allegiance to scientific rigor: "What if the message of one story is more appealing than another?" Carroll asks. "If you have been told that you have been specifically created by a higher

*Facts*, has become a student of "confirmation bias"—people's tendency to give greater credence to arguments that support their beliefs and grasp for ways to discredit facts that don't. "We like to think that we're smart, rational beings, but most of our perceptions are subjective and powerfully influenced by instinct and emotion," Ropeik says.

And in today's world, such biases get a

"THERE'S GOOD REASON TO BE SKEPTICAL ABOUT INFORMATION WE GET. BUT YOU HAVE TO BE DISCRIMINATING IN THE AUTHORITIES YOU'RE GOING TO DOUBT." —SEAN B. CARROLL, L83

producer. "Be careful where you hang this," wrote Zucker. "I don't want you to lose your funding."

Yet Carroll's most formidable advantage in the fight against science denialism may be his sense of what makes people tick. Humans, he says, are creatures of stories: "It's why we read books and go to the movies and hang out at the water cooler." In fact, he says, the power of stories—even wrong or misguided ones—is such that "people who refuse to get vaccines are maybe not to be blamed. There's no one regulating how much truth and how much bullshit is out there." Instead of bemoaning the situation, he says, the scientific community must counter the b.s. with reliable, compelling stories of its own. And with that in mind, he aims "to produce inspiring, content-rich films about great science and great scientists." The Hughes Institute, historically low-profile and focused on research, is getting into the film business.

Carroll acknowledges, however, that in the business of spinning stories, science is at a competitive disadvantage. "Science is in an asymmetric fight to stick to the rules of professional conduct," he explains. "We are about evidence and weighing evidence. Because we are not going to issue statements that could smack us in the face, we can't use the media in the same way."

Paul Offit's experience with the vaccine furor underscores this difficulty. "All I have on my side is reason," he says. "I keep getting

being with some plan for your life, that can be a bit more reassuring than thinking that you're just one of billions of genetic combinations that has come about at this moment in time after millions of years of hominid evolution, with no plan and no explicit purpose."

Science is waging an uphill battle against the phenomenon known as cognitive bias—which Seth Mnookin, a Boston-based writer, defines as "a set of unconscious mechanisms that convince us that it is our feelings about a situation and not the facts that represent the truth." *The Panic Virus*, his book debunking alleged links between vaccines and autism, takes a hard look at such biases. In an interview, Mnookin seconds Carroll's remarks. "The common thread with hot-button issues such as climate change, vaccines and evolution is that the arguments that go against scientific evidence are typically more satisfying," he says. "You are never going to convince broad swaths of the public by using data. It's not how the human brain works. With autism, for example, science can't really tell us much more than we knew a decade ago. All science can say is that it is not caused by X or Y, while the other side says, I know exactly why autism is happening and how you can make it better." For parents desperate to protect their children against an enigmatic and devastating neurological disorder, which side holds more appeal?

David Ropeik, a former TV journalist whose latest book is *How Risky Is It, Really? Why Our Fears Don't Always Match the*

power boost from the Internet. Support for cherished opinions is not only in the eye of the beholder but at the fingertips of the Googler, as Mnookin notes in *The Panic Virus*. "One of the first effects of [the] hyper-democratization of data was to unmoor information from the context required to understand it," he writes. "On the Internet, facts float about freely and are recombined more according to the preferences of intuition than the rules of cognition: Mercury is toxic, toxins can cause development disorders, mercury is in vaccines; ergo, vaccines cause autism."

Offit voices a similar complaint. "A whole group of people believe they can Google the word *vaccine* and know as much as any doctor," he says. "These are often upper-middle-class people who are in control, who are their own bosses. In this postmodern thinking, anyone's attitude and belief is as valid as anyone else's simply because they have it."

In Dunedin, Florida, a recent (and unsuccessful) movement to halt fluoridation of the public water supply drew strength from online claims like this one, posted by change.org: "Current and historical studies document that non-naturally occurring fluoride water additives cause harmful illness and disease to adults and children." One of the town's antifuoridation leaders was Bree Cheatham, who helps run the local food co-op and is active in progressive causes. She has a ready response when asked about decades of research that

have shown fluoride to be safe and effective. “With any issue, it goes back to corporations with lots of money,” she says. “They are not looking at humanity or community—they are looking at profit. Science doesn’t matter, because I know who pays for it. I don’t want it, and I don’t need to know about it.” Never mind that the Centers for Disease Control has recognized water fluoridation as “one of

CDC’s advisory panel to oppose a proposal to give smallpox vaccine to Americans shortly after 9/11 as an antidote to real or imagined terrorist threats. At the time, he felt that the potential risk from the vaccine outweighed the danger of citizens getting smallpox. Nor is he a pure apologist for big pharma, which he agrees “can act unethically and even illegally,” although when it

better. So he decides to drink a lot of fruit juices and does other alternative medicine. By the time he has surgery, it’s too late. The tumor has metastasized, and he is on a downward spiral that ultimately kills him. I am amazed that Steve Jobs made that decision, and you and I can argue that it was not reasonable, but that was his choice.” Such disregard of hard facts “is worse than

“I KEEP GETTING ASKED IF I BELIEVE THAT AUTISM IS ASSOCIATED WITH VACCINES. IT DOESN’T MATTER WHAT I BELIEVE. ALL THAT MATTERS IS WHAT THE DATA SHOW.” —PAUL OFFIT, A72

ten great public health achievements of the twentieth century,” ranked between family planning and recognition of tobacco use as a health hazard.

Cheatham is right about one thing: Science should not always be accepted without question. Some scientists allow funding or other nonempirical agendas to taint their research. They may adjust data and findings to cater to corporate sponsors. Or they may fail to speak up when big business withholds inconvenient findings about a product—as in the case of Vioxx, the prescription painkiller that Merck marketed for years, all the while concealing data about the increased risk of heart attack and stroke.

Carroll knows that such tainted research goes on, and he accepts that skepticism is in America’s DNA. “Doubt goes way back in this nation,” he says. “The government lied about Vietnam, and politicians lie about lying. Corporations have lied about what they dump into rivers, and tobacco companies and pharmaceutical companies have lied. There’s good reason to be skeptical about information we get.” But, he adds, “you have to be discriminating in the authorities you’re going to doubt.”

Offit, for example, makes a poor target for charges of corporate bias. Though he did receive compensation when Children’s Hospital sold the RotaTeq patent, he makes no money from the sale of any vaccine. And far from being an all-vaccines-are-good absolutist, he was the only member of the

comes to vaccines, he feels the industry has been generally ethical. But none of that prevented Robert F. Kennedy Jr.—speaking at a 2008 antivaccine rally in Washington—from calling Offit a “poster child for the term ‘biostitute.’”

The involvement of celebrities like Kennedy, magnified by social media, only intensifies many of the influences behind science denial. The model and actress Jenny McCarthy, whose son has been diagnosed with autism, regularly reinforces the cognitive biases that lead parents to blame the disorder on childhood vaccines. Says Offit, “She gets on TV and believes she is an autism expert, but she is an expert on her son. I don’t try to change her mind. I can only hope to influence other people who may be influenced by her.”

THE REPERCUSSIONS OF IGNORING SCIENTIFIC evidence can be grave. Offit cites the example of Apple’s founder and CEO, Steve Jobs, who died last October of pancreatic cancer at the age of 56. Several sources, including Jobs’s biographer Walter Isaacson, contend that Jobs put off potentially life-saving cancer surgery for nine months after his diagnosis in 2003, choosing instead to pursue alternative medicine. “Jobs learns that he has a neuroendocrine tumor,” says Offit. “That is an eminently treatable tumor with early surgery. Jobs, however, is a smart guy with a lot of resources. He is a Buddhist and vegetarian, and he knows

know-nothingism,” Offit observes. “It’s like thinking you know something when you don’t.”

Denial of science works its harm on a larger scale as well. For instance, when parents, driven by baseless fears, resist vaccinating their kids, the wall of immunity that has kept measles, whooping cough and other childhood diseases at bay for decades can break down. In some geographic regions, that is happening already. “We are starting to see outbreaks of measles bigger than they were in 1996,” Offit says. “California has had the biggest outbreak of whooping cough since 1947.” France and other European nations also report more measles cases. Rebecca Martin, head of the Office for Vaccine-Preventable Diseases and Immunization at the World Health Organization, is worried. “There’s been a buildup of children who have not been immunized over the years,” she explained in an Associated Press interview last year. “When you have enough people who have not been immunized, then outbreaks can occur.”

Ropeik, the author on risk, speculates that such events may be the hard slap needed to bring public officials to their senses. “People who oppose vaccines will not be changed, no matter the evidence, but they are putting themselves and society at risk,” he says. “So government’s role is to step in and, in the case of vaccinations, make it harder for people to opt out, which you can now do in many states by simply

saying you have a philosophical opposition. You should have to prove a real religious exception. And if your kid is not vaccinated, he or she can't go on that weekend trip to Washington during measles season."

The dangers of rejecting science are nowhere more apparent than in our country's stalled progress on climate change. Evidence is strong that the planet is indeed

warming and that such warming will have real consequences. Evidence is also strong that human activity contributes to warming. Nevertheless, critics persist in the belief that climate scientists are driven by ideology instead of research and that they are trying to mislead the public for political purposes.

But the wages of science denialism are not always obvious. According to Carroll,

Americans' resistance to the theory of evolution, while less noxious than measles outbreaks or climate woes, has had a real impact. "Thirty years ago," he says, "there was not much interest in evolution within the life sciences community. Life scientists were interested in biological mechanisms, but they were studying them without an evolutionary context. Now it's a different ball game. As we've leaped forward and conquered biological frontiers on so many fronts, all of life science now sees that evolution is the fundamental thread that holds together the whole picture of life on Earth." But public education has not yet caught up to that reality. Evolution is still "under-taught and underemphasized."

Denial of science could have serious economic consequences, Carroll argues. "If we don't value science and education, there is not a lot of incentive for people to pursue those fields, which means we will see less implementation of knowledge in our public policy. We'll have forfeited an edge in science that the world has envied for 60 years."

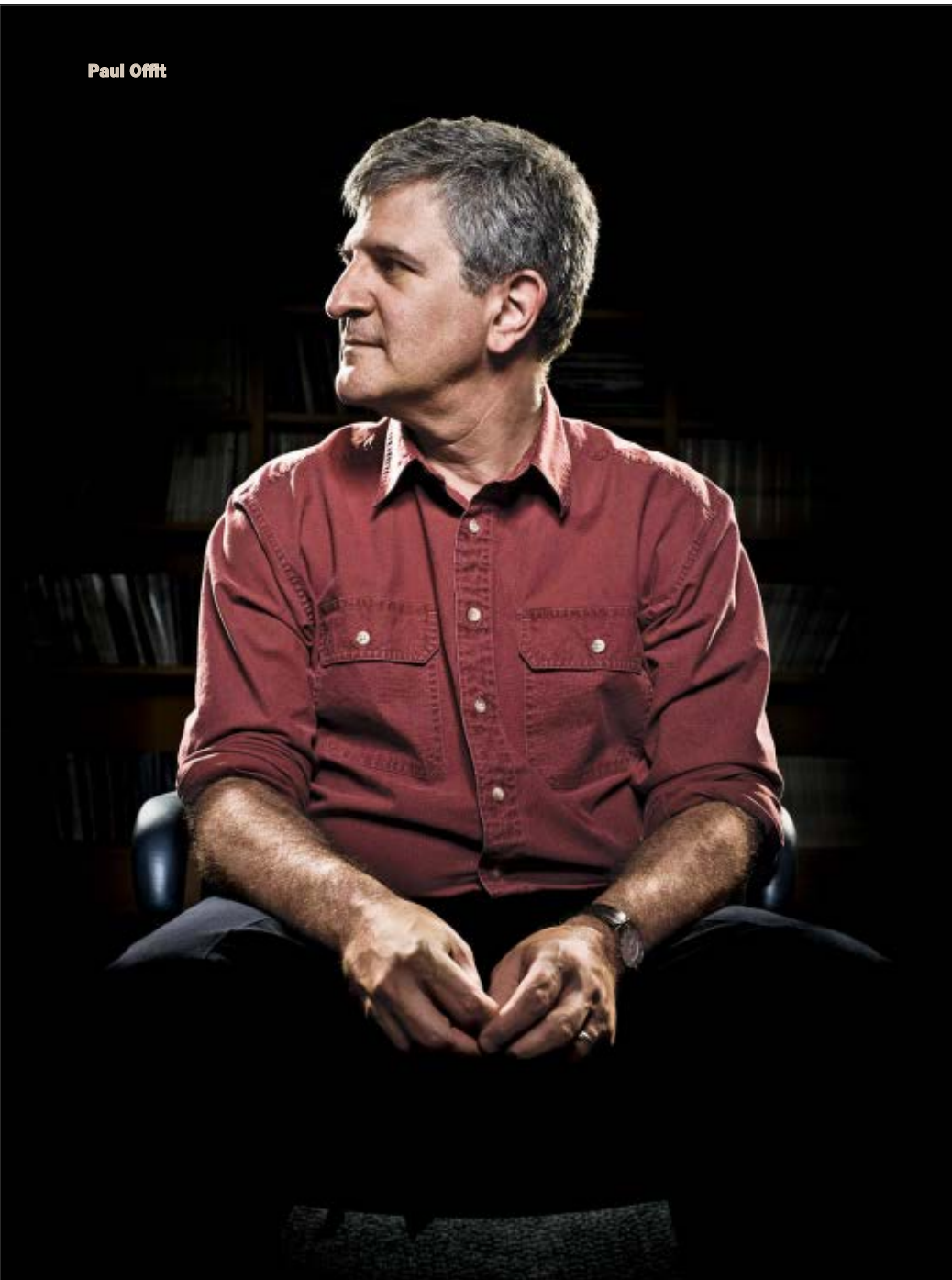
Americans' resistance toward science is hardly new. Witness the 1925 "monkey trial," in which John Scopes, a Tennessee biology teacher, was prosecuted for the crime of teaching evolution. What's different today is that the nation is infinitely more dependent on science. That makes it all the more important, Carroll says, for today's schoolchildren—tomorrow's scientists, engineers, researchers, parents and voters—to learn the centrality of evolution and other science to how the world works and humans develop.

Carroll aims to give vivid form to such lessons in the educational videos he is overseeing on evolution and other topics. The Hughes film production unit will spend \$60 million over the next five years. ("I'm putting Howard's money where my mouth is," Carroll deadpans.) Under his creative stamp, he promises there will be no talking heads, no dull graphics, just great storytelling. "Teachers deserve all the help we can give them," he says. **TM**

---

*Phil Primack, A70, is a freelance editor and writer in Medford, Mass. He also consults on policy issues and teaches media law and ethics at Tufts.*

Paul Offit







When the  
roles of being  
a doctor and  
being a mom  
collide, all  
bets are off

BY RACHEL KOWALSKY, M.D./M.P.H., '03

# Time Enough

IT WAS MY TURN TO BRING THE APPLES. I WAS AT TODDLER music class with eight other mommy-baby duos on a Tuesday morning. I am free Tuesday mornings because I am a pediatric ER doctor, and I work part time. This particular morning I was nervous, because the apples were at least a week old. To be honest, I wasn't sure how old—that week I had worked an overnight, which is always hard to recover from with two small kids at home, and I had spent extra time in meetings about a clinical pathway for managing abdominal pain in the emergency department. Plus, there had been the usual flurry of child-related activity: playgroups, fireworks, a Fourth of July pool party. But the apples looked OK. They were red and firm on the outside.

The first apple was fine. The teacher used a hand-held apple slicer, cutting the fruit open in front of the children to show them how it looked inside. She sang in rhyme as she worked: "Here is an apple chew for you!" But then she sliced the second apple. Her face fell. The inside was a rotten mess—brown and slimy, the seeds barely discernible from the surrounding flesh. "Oh my goodness," she sang, holding out the apple to her wide-eyed students. "This one is brown; we can't eat it!" My face burned red. I couldn't meet the eyes of the other mommies in the room.

How had this happened? It was an equation malfunction—the term I now use when a piece of my delicately balanced life goes awry.

I am lucky in many ways. Growing up in the United States at the end of the 20th century, it was a given that I would go to college, and then become whatever I wanted. Married to a fellow physician, I can work full-time, part-time or not at all. It would seem, from the outside, that I can do anything I want.

Well, almost anything. When my husband finished his fellowship, we both looked for jobs in the Northeast. We had a 2-year-old daughter and another baby on the way. How should we best balance our lives?

We were finishing a grueling year in the Midwest, with my husband working as a fellow and me working fulltime in a busy emergency department. There was an avalanche of housework that was never completed, the cupboards were bare, and laundry was outsourced to an incredibly energetic woman who picked up and dropped off on Fridays at 5 a.m., the only time that one of us was reliably home. More importantly, holidays went unplanned and barely celebrated, birthdays were an afterthought, and my daughter spent 10 hours a day in day care. If she were sick, a babysitter from an agency picked her up and cared for her until one of us was home. This didn't feel right.

*Part-time academic.* It came to me at a division meeting one day, scanning the room and considering the life of each woman in my group. Two of them worked part-time. They each had two children, an academic title and a significant list of publications. As part-time faculty, they were eligible for benefits, but not for tenure. I considered this tradeoff: family life versus the possibility of tenure. Family won.

The next day I got in touch with an old mentor at an academic medical center in New York City, and we set up a phone interview. "What sort of job are you looking for?" he asked.

"Part-time academic," I said, relishing this new term and fully expecting a warm "welcome aboard." Instead, I was met with silence. It was a lengthy silence, in which I slowly came to realize that my vision of a perfectly balanced life was not a shared vision.

Finally, he said, "I'm not really sure what you mean by that."

And there I was, in unexpected territory. "Well," I said, "I would work half the clinical hours of a full-time attending, and I would

be involved in teaching and research."

"That can be hard to do," he said. He wasn't unkind, but he also didn't offer me a job.

Part-time academic jobs are a relatively new phenomenon. Young fellowship graduates are expected to hit the ground running, carve out a research niche and get an NIH grant in their first few years as an attending. And my old mentor was right—this can be very hard to do if you are the mother of small children. Or, put another way, if you are the author of your own equation—picking the

**It was an  
equation  
malfunction—  
the term I now  
use when a piece  
of my delicately  
balanced life  
goes awry.**

variables, freely assigning their importance and weight, you can do anything you want, but it will be at the expense of something else.

Would that "something else" be my academic career? It seemed unfair. I'd spent four years completing my M.D. and M.P.H., then six years training to work in children's emergency medicine. During my first year as an attending, I'd had the opportunity to teach at a continuing medical education course, and I was inspired by the experience. The conference hall was filled with people who cared for ill and injured children: physicians and surgeons, nurses and EMTs. When it was my turn to speak at the podium, I felt exhilarated. I was part of a community that could actually make the world a better place for children. Would I have to give this up to work parttime?

Luckily not. New York City has five academic medical centers with children's emergency rooms that I can reasonably commute to, and I had two offers for part-time work. I joined a 12-person group, five of whom are moms who work part-time. When I told

my then-future division chief that my son was due two months after my start date, she wrote back, "Mazel tov! This will be fun."

I've had my part-time academic job for two years. Every day is a carefully orchestrated production in which five people (parents, kids, babysitter) and two cars go in different directions. The rapid turnaround time and last-minute meetings of academic medicine require an enormous amount of creativity, flexibility and baby-sitting dollars. Institutional review board applications and clinical guidelines have been written at the Toyota dealer, the Starbucks down the road from my daughter's nursery school, Grand Central Station and the parking lot of the public library (they closed early that day). Sometimes I miss out on a nursery school event. Sometimes I miss a meeting and fall out of the loop. And sometimes I bring rotten apples to music class.

But here's what I get in return: My part-time job allows me to spend fewer nights in the ER and more at home. And on nights that I don't work, I can put my kids to bed. My son is the youngest, so he goes first. He always smells sweet from the bath. I comb his mop of hair just so. Then he runs back and forth picking out his favorite books and nestles in my lap, little hands and feet adjusting themselves until he is quiet and comfortable. I rock him to sleep. If you told me, in those moments, that I was being promoted to surgeon general, I might not hear you. Or if I did, I might say, *Call me back when he's grown.*

It is amazing how far women have come and how much we are able to do. While some external barriers remain, most of my challenges have to do with the equation that I built myself: the struggle among variables, the struggle to find the perfect balance between my family and my career.

About the bad apple—we didn't eat it, of course. And the kids were fine, having survived their first lesson in decomposition. I wasn't shunned by the group. In fact, I think the whole episode made me a sympathetic character. One mom asked for a playdate, another for medical advice. **TM**

---

*The author is an assistant professor of pediatric emergency medicine at Weill Cornell Medical Center in New York City and the mother of two children.*



"It's sort of a needle-in-a-haystack problem," says Eric Miller.

## Hidden Hazards

Engineer uses imaging science to zero in on underground pollutants and malignant tumors by David Levin

**M**OST OF THE ELECTRICAL ENGINEERS I'VE MET HAVE A peculiar love for games and puzzles. Some tear through Sudoku books. Others are chess masters who plan so many moves ahead. I'm toast when I reach for my first pawn. Eric Miller isn't one of these people.

Miller, a professor of electrical and computer engineering at Tufts School of Engineering, isn't a big fan of games. He seems to be saving his energy for the serious stuff: inverse problems.

In the scientific world, Miller says, questions can break down into two broad categories. There are "forward problems," which you probably recognize from grade school: If two factories are on a riverbank, and each one releases a certain amount of pollutant into the water, how much pollution is in the river? (Easy: It's a matter of  $A + B = C$ ; just plug in the numbers and solve the equation.)

Inverse problems, though, flip that construct: You have a river flooded with a certain level of pollutants, but you don't know which factory is putting what into the water. How do you begin to solve the problem?

Questions like these are what get Miller up in the morning. "It's just sort of a perverse fascination," he says, laughing. "It's the only type of puzzle that I like."

Miller's specialty is a field called image processing—the art of taking raw data from a sensor and working backward, mathematically, to turn it into a detailed picture. He's done research to improve medical imaging devices, creating software that can highlight cancerous tumors in breast tissue, for example. He's worked with the federal Department of Homeland Security on systems that can automatically find "objects of interest" (read: explosives) in airport baggage.

But the work Miller is most excited about is also his most challenging—creating images of chemical spills that have leached deep into the ground, using only the little bit of evidence that's available. The resulting images—with much more detail than previously possible—could give clean-up crews the ability to target specific areas of a contaminated site, making cleanup cheaper, more efficient and more effective.

### AN ACCURATE PICTURE

More than 250,000 locations around the United States—former industrial sites, landfills and military installations—have dangerous levels of chemical pollutants in the soil, according to the U.S. Environmental Protection Agency. In some cases, those contaminants stay close to the surface, but in many, they seep slowly downward, eventually reaching the water table. Because nearly half of Americans get their drinking water from wells and aquifers, those sites pose a big problem.

Cleanup, if it's going to happen, needs to be focused on the areas where the chemicals are *actually* located. But you can't just go and dig up pollutants, Miller says. In many cases, chemical plumes stretch 50 or 60 feet under the surface.

Unfortunately, it's extremely difficult to get an accurate picture of the shape and size of these chemical plumes. Unlike a CT scanner or an MRI, which encircles the human body to collect images from all sides, the data that researchers can

**HIDDEN**, continued on next page

**HIDDEN**, *continued from preceding page*  
pull from underground is pretty sparse. So Miller is faced with the challenge of creating a detailed picture of a pollutant plume from very limited information.

“It’s sort of a needle-in-a-haystack problem, but you don’t get to see the needle or the haystack,” he says. “You just get indirect information about them.”

#### EXPECTED AND MEASURED

To get around this limitation, Miller and his collaborator, Linda Abriola, dean of the School of Engineering and a professor of civil and environmental engineering, have developed a novel approach. Instead of trying to build an image of the pollutant plume directly, Abriola first creates a model that predicts the spill’s geometry—its potential shape and structure—by analyzing site-specific data, such as the type of soil and the rate at which chemicals might seep through it.

It’s an inexact method, and can only give a ballpark sense of the size of each plume. But that’s where Miller’s expertise comes in. He’s developing computer algorithms that combine limited information from wells and other sensors to fine-tune these geometric models, creating a detailed map of the plume’s shape and size. It’s a multistep process that involves complex mathematics.

“First, you start with the physics—

understanding the physical relationship between the data that you get, the sensors that you’re using and the quantity of material that you’re interested in imaging,” says Miller. He then uses the geometric models to predict what data might be expected at the site, and compares the two. “Is that data



similar to the data that the sensors actually collected? If it is, you’re done.”

If it’s not, Miller looks at the difference between what was expected and what was measured and tweaks the parameters of the model for a better fit. Using computer programs he’s written, Miller repeats the process over and over until the final geometric model takes shape.

Although this method looks promising,

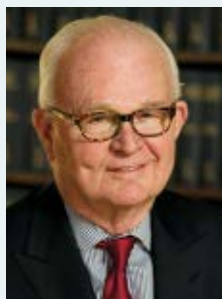
more research needs to be done, Miller says. At the moment, he’s working with computer simulations, rather than real-world data, to refine his technique.

It may be awhile until his image-processing methods are used for environmental cleanup, but Miller’s colleagues—including Kurt Pennell, chair of civil and environmental engineering—are eagerly awaiting the day when it’s ready for prime time.

“There are real-world sites that could really benefit from this method,” Pennell says, citing a heavily polluted area in Groveland, Mass., where chemicals from an industrial site have seeped down into the water table. For residents of Groveland, a town of roughly 7,000 people, a successful clean-up effort could mean regaining a source of clean water within town boundaries. When the underground pollutants were first discovered in the 1970s, the town was forced to close both its municipal wells—then its sole sources of drinking water.

“Attempts to treat it over the last 10 years haven’t been very effective,” says Pennell. “Eric’s technique could better characterize a site like this, so when you apply technology to clean it up, you’d have a better chance of making it work.”

*David Levin is a freelance science writer based in Boston.*



## FLETCHER DEAN TO RETIRE IN 2013

**Stephen W. Bosworth**, the former U.S. ambassador who has served as dean of the Fletcher School of Law and Diplomacy at Tufts for 11 years, will retire at the end of the 2012–13 academic year.

Bosworth “has made an enduring impact on the education of professionals and scholars who seek to make a difference in solving the world’s challenges,” Tufts President Anthony P. Monaco said. “He has also continued, as an engaged participant in exceptionally challenging diplomatic arenas, to lead by example.”

During his tenure, Bosworth increased the size of the Fletcher faculty and student body while

securing the financial soundness of the school during a period of economic uncertainty. He oversaw the creation of three new degree programs that have significantly expanded the scope of the school’s teaching, research and global outreach.

Bosworth has been a distinguished public servant for many decades. While at Tufts, he was appointed by the Obama administration as U.S. Special Representative for North Korea Policy. Before coming to Fletcher, he had served in several top diplomatic posts, including U.S. ambassador to the Republic of Korea (1997–2001), to the Philippines (1984–1987) and to Tunisia (1979–1981).



At center left, Meredith Thomas beams in anticipation of getting her M.D. degree. Above, Naomi Rosenberg, dean of the Sackler School, awards the Ph.D. to Debaditya Bhattacharya.

## Passion for the Days to Come

Graduates urged to be ‘agents of change’ in a challenging time **by Jacqueline Mitchell**

**T**HE STUDY OF MEDICINE ALWAYS MOVES IN TWO DIRECTIONS—backward, into the rich history of the discipline, and forward, to anticipate and resolve likely future challenges for the field. This past May, at the joint commencement ceremony for the School of Medicine and the Sackler School of Graduate Biomedical Sciences, held in the Gantcher Center on Tufts’ Medford/Somerville campus, the focus was on the future of health care and scientific research and the psychological cast of mind needed for graduates to make the most of their professional lives.

Dean Harris Berman noted the tremendous changes rippling through the American health-care system. “What an opportunity to be agents of change,” he said. Noting that these graduates will face more fiscal constraints than previous generations, he urged them to use the tools they were given at Tufts to think critically, to be caring and to be socially responsible. “Never forget that you entered the health profession to make the world a better place. You are poised to have wonderful careers doing good. Go do it.”

In the medical class president’s address, Neel Shah, A06, M12, recalled the advice former Tufts President Lawrence S. Bacow gave the Class of 2012 at their first-year orientation. “Don’t become a medical nerd,” Shah said, paraphrasing Bacow’s admonition to students that they remain the interesting, well-rounded and engaged citizens the admissions committee admitted.

Shah noted that one member of the Class of 2012 was not present because she was taking part in the U.S. Olympic Rowing trials in Lucerne, Switzerland, while 12 more ran the Boston Marathon in April. Several

**PASSION**, continued on next page

**PASSION**, continued from preceding page graduates have published research; many have been advocates for underserved communities; at least one is a classically trained jazz musician, and another has published books. “If it sounds like I’m bragging about our class, I am,” Shah said.

“You are all here because you’ve done something amazing,” said Naomi Rosenberg, dean of the Sackler School, in her address to the graduates. “You have all discovered new knowledge, and, more important, you have contributed that knowledge to the world so that everyone can benefit.”

Like Berman, Rosenberg noted that “we are entering a time of both changing science and constrained resources for science.” Sackler students’ training, she reminded them, can be applied not just to academia, but also to industry and many other careers.

The Sackler student address was delivered by triple-Jumbo Robert Howard Goldstein, A05, a graduate of the M.D./Ph.D. program. “You could never design a school like Tufts,” Goldstein said. “The Sackler School is what it is because of the people here today,” he added, noting not only the close relationships students develop with their professors and mentors, but also “the pivotal role each of us played in each other’s education. I am proud to call everyone not only a colleague, but a friend.”

Earlier in the day, at Tufts’ all-university commencement ceremony, Eric Greitens, a former Rhodes Scholar and Navy SEAL who has been involved in humanitarian efforts around the world, urged graduates to match their passions to the world’s needs and find a way to be of service. “If you do that, life will not be easy, but you will have chosen for yourself a very meaningful adventure,” said Greitens, who was awarded an honorary degree.

Other honorary degree recipients were Tufts President Emeritus Bacow; Bonnie Bassler, the Squibb Professor of Molecular Biology and Howard Hughes Medical Institute investigator at Princeton University; Cecilia Ibeabuchi, manager of the Boston Health Care for the Homeless clinic at St. Francis House; and Farooq Kathwari, chairman, president and CEO of Ethan Allen Interiors and director and former chair of Refugees International.

## STEPPING UP

**At this year’s White Coat Ceremony on September 15, Beth Lown, ’77, associate professor of medicine at Harvard Medical School, implored students to listen carefully to their patients and learn from them.**

**“Medicine is filled with opportunities for joy,” she told the 200 first-years gathered for the occasion.**

**“In fact,” she said, “I can’t think of too many activities that are more fun than using your head, heart and hands to help someone feel better.”**

**The medical school has been observing the White Coat Ceremony each year since 1997.**



## DEVELOPMENT HEAD

**Rebecca Scott**, the former director of gift planning at Tufts University, has been appointed senior director of development and alumni relations for the medical school. Since arriving at Tufts in 2005, Scott has secured some \$30 million for the university with the help of her colleagues. In the past year, she has raised a significant portion of the medical school’s capital achievement, including both planned and outright gifts in support of financial aid, an endowed professorship, research and the dean’s priorities.



**Tufts Alumni**  
SCHOOL OF MEDICINE

## A NETWORK OF KNOWLEDGE

A world of physicians and medical professionals, with all the experience and perspectives thousands of your peers have amassed. That's the **Tufts Medical Alumni Association**. As a member, not only is this world uniquely yours—through events, publications, and e-media—the distinction of Tufts alumni and all they've accomplished reflects well upon you. Belonging to TMAA is, in itself, a badge of honor. Wear it proudly.

**Become a contributing member today.**  
Visit [giving.tufts.edu/med2](http://giving.tufts.edu/med2)

866-351-5184 | 617-636-6771 [medicine-giving@tufts.edu](mailto:medicine-giving@tufts.edu)



Margie Skeer

## The Greater Good

**Public health practitioners care for the global village**  
by Kristin Livingston and Mark Sullivan

**M**ARGIE SKEER NEVER INTENDED TO GO INTO PUBLIC HEALTH. She had planned on a business career, until an internship at a drug and alcohol rehabilitation center in New Jersey changed her path. She listened to heart-wrenching stories of lost childhoods and broken lives. “They were so young when they started using drugs,” she said. Sometimes, she would shut her door and sob.

Today Skeer is one of many at Tufts School of Medicine who have devoted themselves to the greater good. An assistant professor of public health and community medicine, she works to prevent substance abuse and risky sexual behavior in adolescents. Sometimes the solution to these kinds of big issues can be elegantly simple, family mealtimes, for example.

“Various studies have determined that eating meals together as a family can reduce the probability that adolescents will smoke, drink and use drugs, as well as lower the incidence of risky sexual behaviors,” Skeer said. “It is generally thought that what happens at family meals, rather than the meals themselves, fosters this protective effect. If family meals are frequent and consistent—five or more dinners together each week—mealtime can serve as a conduit for open, ongoing communication, a time when family members talk about their days.”

This focus on the well-being of whole populations has been embedded in the DNA of Tufts University School of Medicine since its early days—from Joslin Diabetes Center co-founder Priscilla White, ’23, a faculty member whose work led to a doubling of the survival rate of infants born to diabetic mothers, to Jack Geiger and Count D. Gibson, the faculty members who founded the nation’s first community health centers in the 1960s, one in rural Mississippi and the other in a Boston housing project, to those like Skeer who are working on the frontlines of public health today.

Lately, the medical school is seeking to build philanthropic support for its programs in public health and community medicine and draw greater attention to its scholarship and research in the field. A gift pledged by Harris Berman, dean of the School of Medicine, and his wife, Ruth Nemzoff, has given a significant boost to that goal (see “The Dean’s Gift”).

“Community health and medicine are an important part of the solution to making health-care reform work, yet they tend to be grossly underfunded by federal and state governments and universities,” said Berman, who became interested in population medicine as a young Peace Corps doctor in India.

“We want public health to be integral to the teaching of medicine,” Berman said. “How do we keep people healthy beyond the individual patient who walks into our office? How do we take care of populations?”

Public health at Tufts encompasses more than 250 medical students who also train in public health, health communication



and pain research, education and policy, said Aviva Must, N87, N92, the Morton A. Madoff, M.D., M.P.H., Chair of Public Health and Community Medicine and dean of public health and professional degree programs.

M.P.H. concentrations are offered in epidemiology and biostatistics, health management and policy, health communication, nutrition and global health. “Our tagline, ‘Working Across Disciplines and Global Boundaries,’ is realized through these dual-degree programs, as well as our research and focus on applied training for master’s students in global health,” said Must, whose own research explores the epidemiology of obesity.

Tufts Public Health sends 10 to 15 students each year to the Christian Medical College in Vellore, India, which serves more than 300,000 people in the region. “Our students learn how to take care of villages,” Berman said. “We send students abroad not just to see tropical diseases they won’t see at home, but to learn what it’s like to take care of a population.”

#### PERSONAL MISSIONS

Alejandro Alvarez, M.P.H.12, learned this lesson as a young boy. The son of a physician and a nurse, Alvarez spent the first 15 years of his life in Peru, watching his parents treat the poor in underserved communities and advocate for their civil rights. This year, Alvarez is headed back to Peru to

pick up where his parents left off.

Working with the Pan-American Health Organization, he will investigate the rates of malnutrition in Peruvian children. While the overall prevalence of chronic malnutrition has dropped by 12 percent in the past decade, there is great disparity among children, depending on the region in which they live. Alvarez will tap into 40 years of Peruvian health survey data to determine if government socioeconomic reform has affected the nutritional status of children under age 5.

Nani Loui Morgan, M.D./M.P.H.12, of Honolulu, also wants to help folks back home.

She was aware of the high rate of diabetes among Native Hawaiians and Pacific Islanders but was stunned by the results of a health needs assessment she conducted as part of her public health capstone project: “Native Hawaiians and Pacific Islanders are three times more likely to be diagnosed with diabetes than whites in Hawaii,” said Morgan, who is part Native Hawaiian.

Morgan, who’s currently doing research in rheumatology and cardiology at Tufts Medical Center, plans on returning to Hawaii next year to practice internal medicine. She says her experience in public health will be an asset. The combined-degree program in medicine and public health, she says, “has broadened my appreciation for the many determinants of health extending beyond the individual.”

## THE DEAN’S GIFT

Harris Berman, dean of the School of Medicine, and his wife, Ruth Nemzoff, have pledged to support global health programs and other priorities of the Department of Public Health and Community Medicine.

“My wife and I hope our gift will be a seed, inspiring further gifts in support of scholarships and research in public health at Tufts,” Berman said. The couple has established the Harris A. Berman, M.D., and Ruth E. Nemzoff, Ed.D., Endowed Fund through a combination of gifts they plan to make during their lifetime as well as a planned gift they have put in place in their estate.

“We really need to look for new ways of approaching philanthropy in public health,” said Berman, who said building the program at Tufts will require an investment of millions for financial aid and research.

Berman has spearheaded the expansion of global and public health programming at Tufts. Prior to being named dean in 2011, he was dean of Public Health and Professional Degree Programs and chair of the Department of Public Health and Family Medicine at Tufts. Earlier in his career, he was a pioneer in the development of managed care in New England, first as a cofounder of the Matthew Thornton Health Plan in New Hampshire, and then as CEO of Tufts Health Plan for 17 years.

Nemzoff, a resident scholar at Brandeis University’s Women’s Studies Research Center, served three terms in the New Hampshire state Legislature, rising to assistant minority leader. She was the Granite State’s first female deputy commissioner of health and welfare. The author of two recent books, one on parenting adult children and the other on in-law relationships, she is also a popular speaker on these topics.

## How You Can Help

### Interested in making a gift to Tufts University School of Medicine in your estate plan?

If you would like information on including the school in your will or trust, or are interested in establishing a life income gift, such as a charitable gift annuity or a charitable remainder trust, please contact Tufts’ Gift Planning Office.

If you already have included the medical school in your plans, please let the Gift Planning Office know so we can thank you by welcoming you into the Charles Tufts Society.

**1-888-748-8387**

**[giftplanning@tufts.edu](mailto:giftplanning@tufts.edu)**

**[tufts.edu/giftplanning](http://tufts.edu/giftplanning)**

**[facebook.com/charlestuftssociety](https://facebook.com/charlestuftssociety)**

## Excitement in the Air



I AM HONORED TO TAKE ON THE ROLE AS PRESIDENT OF your Tufts Medical Alumni Association and to write my first column for this magazine. I look forward to an exciting two years ahead. There is much to be done.

First, I want to thank David Rosenthal, '63, for his exemplary leadership of the alumni association these past two years. David has guided us with unwavering commitment in multiple capacities, from chairing his reunion committee to instituting the Dean's Distinguished Alumni Award for deserving medical alumni from the 25th and 50th reunion classes. For this kind of dedication, he was a 2011 recipient of the Tufts University Alumni Association Distinguished Service Award. Please join me in congratulating David for his years of service to the medical school and to your alumni association.

This past spring I was fortunate to attend the annual Senior Awards Dinner sponsored by our Medical Alumni Association. The event honored an amazing group of graduates of the class of 2012, and at commencement ceremonies in May we welcomed them as our newest alumni. The graduates have started their residency training, and this year a record number of them, some 12 percent, are training in family medicine.

The Medical Alumni Association not only supports the Senior Awards Dinner

and the White Coat Ceremony, but critically needed financial aid for students and important activities for them. I encourage you to visit the Tufts Medical Alumni Association website ([go.tufts.edu/medalumni](http://go.tufts.edu/medalumni)) to read some of the amazing activities in which our students have participated.

Thank you to all those alumni who renew their memberships to our association each year. I encourage everyone reading this to join us in continuing to support critical financial aid and student activities during the year to come.

LAURENCE S. BAILEN, '93  
PRESIDENT, TUFTS MEDICAL  
ALUMNI ASSOCIATION  
[laurence.bailen@tufts.edu](mailto:laurence.bailen@tufts.edu)



# Save the Date

APR 26-28, 2013

[medicine-alumni@tufts.edu](mailto:medicine-alumni@tufts.edu)  
or 617.636.6770

## REUNION

TUFTS MEDICINE : 2013



**At left, Louis Perl, '72, and his wife, Ilene, both J96P, emerge from their tour of the Jaharis Center. Above, some recent graduates commingle. At top, Phil McCarthy, '59, and his wife, Jean, both M97P, M97P, take a spin.**

## Mixing Old and New

**T**HIS YEAR'S REUNION, HELD MAY 11–13, WAS A festive affair marked by scholarly presentations, recognition of a bevy of notable graduates of the school, an eye-opening campus tour and the scent of tasty barbecue.

Events kicked off on Friday with a luncheon for senior alumni, featuring keynote speaker Philip Haydon, the Annetta and Gustav Grisard Professor of Neuroscience, presenting his groundbreaking research on nervous system disorders. This was followed by a CME lecture from John Leong, professor and chair of the Department of Molecular Biology and Microbiology, concerning the role of bacteria in human cell function.

The evening highlight was a reception and tour of the JFK Library and Museum at Columbia Point. During the cocktail and dinner reception, the Tufts Medical Alumni

Association presented its new members and awarded the association Dean's Award to Lawrence K. Altman, '62; Frank M. Calia, '62; Sherwood L. Gorbach, '62, J84P; Steven M. Jaharis, '87; and Michael J. Paidas, '87. The award recipients had been nominated by their peers for exemplary service to medicine.

Tufts President Anthony Monaco spoke about the overall health of the medical school at a talk on Saturday. Attendees then joined in a student-led tour of current facilities, enabling them to survey a campus that looks markedly different from when they were students. The tour was followed by a barbecue for family and friends. More than 200 alumni continued to catch up with each other at their individual class dinners Saturday evening and at the farewell breakfast on Sunday.

**62 James F. Brown** of Portland, Maine, is a pediatrician who enjoys the great outdoors, hiking, skiing and kayaking when he can. Looking back over his career, he says he is proudest of having been a leader in the Rhode Island Lead Poisoning Control Program some

advances in medical science and technology into compassionate and humane patient care.”

**87 John Carroll** of Portsmouth, R.I., a urologist affiliated with Charlton Memorial Hospital and St. Anne’s Hospital, both in Fall River,

on patient surveys. Last year, nearly 100 million patients across the United States used websites including *Vitals.com*, *PatientsChoice.org* and *UCompareHealth.com* to provide feedback about experiences with their physicians, rating them on various aspects of the care they provide, including bedside manner. The annual Compassionate Doctor recognition program honors the top 3 percent of U.S. physicians. Hanau is an assistant psychiatrist at Massachusetts General Hospital and an instructor in psychiatry at Harvard Medical School.

began her career as a journalist and won several writing awards prior to attending medical school.

**Matthew Weissman** of New York City and his wife, Juliet, welcomed Jonas Jacob Weissman on May 31, 2012. He joins older sisters Liana and Daria. Weissman holds dual positions as the chief medical officer and vice president of medical affairs for Community Healthcare Network, a nonprofit that provides access to comprehensive community-based primary care, mental health care and social services for diverse populations in underserved communities

## Follow Tufts Medical Alumni

 [facebook.com/TuftsMedicalAlumni](https://www.facebook.com/TuftsMedicalAlumni)

years ago. Brown and his wife, Jae, have three adult children and four grandchildren ranging in age from 4 to 15.

**74 Joel Frader** of Chicago, Ill., professor of pediatrics and medical humanities and bioethics at the Feinberg School of Medicine at Northwestern University, will be honored by the American Academy of Pediatrics with the 2012 William G. Bartholome Award for Ethical Excellence at the organization’s annual meeting in New Orleans in October. The award recognizes an individual who significantly affects public discussion of ethical issues in pediatric medicine.

**76 David Roeltgen** of Cherry Hill, N.J., has been recognized as one of New Jersey’s top doctors by Castle Connolly Medical Ltd., based on nominations of doctors who know his work. He is a neurologist based at the 242-bed Cape Regional Medical Center in Cape May Court House. “This recognition by his peers is well deserved,” said Richard Falivena, vice president of medical affairs at the hospital. “Dr. Roeltgen is that rare physician who can translate the latest

Mass., sounds like he had fun as a student. Today, when pressed to name his proudest medical accomplishment, he says simply, “great friendships that made medical school so enjoyable.” He has also been chief of urology at St. Anne’s Hospital. Carroll coaches soccer and golf in his spare time. He and his wife, Elizabeth, have three children, Jack, Ellen and Mary.

**Anita Honkanen** of Palo Alto, Calif., is a clinical professor of anesthesia at Lucile Packard Children’s Hospital at Stanford University, where she specializes in pediatric anesthesia. She and her husband, Frederick, a surgeon and graduate of Boston University Medical School, have five children ranging in age from 14 to 21.

**93 Michael Hanau** of Boston has been honored by Patients’ Choice as one of the country’s Most Compassionate Doctors based

**01 Erica Frank**, an assistant clinical professor of medicine at Tufts, received the Competency-based Apprenticeship in Primary Care (CAP) Award at the School of Medicine’s Clinician Educator Leadership Awards Dinner on June 18. She completed her postgraduate training at the Lahey Clinic Medical Center in Burlington, Mass., and remained on staff there as an attending physician for five years. While at Lahey, Frank established and directed the first Weight Center, a medical approach to weight loss. She also was involved in the administration of the residency program and taught hundreds of students and residents. In 2009 she joined Beth Israel Deaconess Medical Center and continues to work as a primary-care physician, with a clinical interest in obesity. She



throughout New York City. Previously, he was the medical director at the Ryan-NENA Community Health Center in Manhattan.

**07 Maisha Robinson** of Rochester, Minn., a resident in neurology at the Mayo Clinic, has been chosen as a 2013 Robert Wood Johnson Foundation Clinical Scholar, meaning she is one of 27 of the country’s “most promising physician leaders,” according to the foundation. Through the program Robinson will learn to conduct innovative research and work with communities, organizations, practitioners and policymakers to improve health care in the U.S. She will begin her two-year fellowship at the University of California, Los Angeles, in the fall of 2013.

## WE WANT TO HEAR FROM YOU!

Send your Class Note information to: **Tufts Medical Alumni Relations**  
**136 Harrison Avenue, Boston, MA 02111**  
 email: [medicine-alumni@tufts.edu](mailto:medicine-alumni@tufts.edu)

## In Memoriam

**Joseph Giammalvo, '45**, of Peabody, Mass., former professor of pathology at Tufts, died on March 30, 2012, at age 93. He was a pathologist at Providence Hospital in Holyoke, Mass., for 33 years. He is survived by three daughters, two grandchildren and a great-grandchild.

**Joseph Sherer, '45**, of Vero Beach, Fla., died on June 20, 2012, at age 93. He had a urology practice in Worcester, Mass., for 35 years. He is survived by a daughter, a son, two stepsons, seven grandchildren and four great-grandchildren.

**John Lippas, A43, M46**, of Dallas, Texas, died on May 31, 2012, at age 92. He maintained an ophthalmology practice in Dallas for 45 years and in the 1950s was one of the founding members of the Department of Ophthalmology at the UT Southwestern Medical School, helping to train countless local physicians. He is survived by two sons and two grandchildren.

**Michael Lovezzola, '47**, of Puyallup, Wash., a surgeon, died on July 13, 2012, at age

88. He was the first surgeon in Puyallup and retired in 1989. He is survived by two daughters and three grandchildren.

**Margaret Hopkins Hannigan, '48**, of York, Maine, a dermatologist who practiced in the Lewiston-Auburn area of Maine for many years, died on May 19, 2012, at age 88. She was the wife of classmate Charles Hannigan, '48, who predeceased her. She is survived by her husband, David, three sons, two daughters and five grandchildren.

**William Howard Waugh, '48**, of Greenville, N.C., died on July 18, 2012, at age 87. He was instrumental in founding the East Carolina School of Medicine and served as professor of medicine and professor of physiology there. He is survived by his wife, Eileen, three children and a grandson.

**Frank Carter, A47, M51**, of Swanzey Center, N.H., died on June 2, 2012, at age 87. A general practitioner, he was generally known as "the father of family medicine" around Keene, N.H., where he saw patients for many

years. Carter retired in 1991, the same year that he was chosen Family Physician of the Year by the New Hampshire Academy of Family Physicians. He is survived by his wife, Harriette, three children, four grandchildren and three great-grandchildren.

**Dougald MacGillivray, '51, M81P, M88P, M90P**, of Danvers, Mass., died on August 5, 2012, at age 88. He was chief of staff and chief of surgery at Hunt Memorial Hospital in Danvers and a senior clinical instructor of surgery at Tufts. He is survived by his wife, Dorothy, 10 children, including Dougald MacGillivray, '81, Thomas MacGillivray, '88, and John MacGillivray, '90, as well as 20 grandchildren and three great-grandchildren.

**James Whelton, '53**, of Wayland, Mass., who served 25 years as chair of the Department of Obstetrics and Gynecology at St. Elizabeth's Medical Center and taught at Tufts Medical School, died on May 12, 2012. He is survived by his wife of 47 years, Louise, three sons and four grandchildren.

**Robert Cooney, '59**, of Wareham, Mass., an obstetrician/gynecologist for more than 40 years, died on August 4, 2012, at age 79. He is survived by his wife, Marie, 11 children and 24 grandchildren.

**Carl Sandler, '71**, of Houston, Texas, a radiologist who spent 27 years at the University of Texas Medical School and was a widely recognized expert in genitourinary radiology, died on July 27, 2012, at age 66. He is survived by his wife, Susan, and three children.

### STAFF

**John Ludden** of Lincoln, Mass., a psychiatrist and director of the M.D./M.B.A. in Health Management degree program at Tufts School of Medicine, died on April 5, 2012, at age 72. Before coming to Tufts, he was medical director of the Harvard Community Health Plan (now Harvard Pilgrim Health Care) for 20 years. He was concerned throughout his career with the delivery of high-quality medicine to patients at a manageable cost, and facing the challenges that this entailed.

## CLAIRE GORDON, FRIEND OF THE MEDICAL SCHOOL

Claire Braverman Gordon, M76P, of Milton, Mass., a longtime friend and supporter of the medical school, died on May 31, 2012, at age 88. She met her future husband, Edward T. Gordon, '47, when they were still in high school. They were married during Dr. Gordon's second year of medical school and settled in Milton in 1963, where she was always active in the community. An ardent supporter of the preservation of community hospitals, she was state president of the

Massachusetts Medical Society Alliance. She was active in the first campaign to make seat belts mandatory in the state. Twelve years ago, she endowed a lecture series at Tufts Medical School to explore the human dimensions of contemporary medical care, with special focus on the critical relationships among physician, patient and family. She is survived by her husband of nearly 67 years, Edward; three sons, Michael, '76, Steven and John; and nine grandchildren.

## JOSEPH B. KIRSNER, PIONEER IN GASTROENTEROLOGY

RENOWNED GASTROENTEROLOGIST JOSEPH B. KIRSNER, '33, THE Louis Block Distinguished Service Professor of Medicine at the University of Chicago and one of Tufts Medical School's most notable graduates, died of kidney failure on July 7. He was 102.

Kirsner was a pioneer in the understanding and treatment of inflammatory bowel disease and a role model for physicians learning how to care for patients. A leader in understanding the immunology and genetics of inflammatory bowel disease, he was one of the first to show the increased risk of colon cancer in patients with ulcerative colitis. Every gastroenterologist should feel "at least slightly indebted to Joe Kirsner," said Stephen Hanauer, the Joseph B. Kirsner Professor of Medicine and section chief of gastroenterology at the University of Chicago.

After coming to Chicago in 1935, Kirsner helped transform the field of gastroenterology from an art—in his words, "speculative, impressionistic, anecdotal, almost mystical at times"—into a science. "I had a hand in changing the whole field," he told *Tufts Medicine* in 2005. Kirsner helped found the American Gastroenterological Association, the American Society for Gastrointestinal Endoscopy and the American Association for the Study of Liver Diseases. His fundamental contributions to the field were many, according to Hanauer, who noted, "He was among the first to demonstrate that stomach acid was necessary for ulcer development, and he drew attention to the complex relationships between bacteria in the gut and the immune system in the development of inflammatory bowel disease."

In recognition of his central role in the evolution of gastroenterology, Kirsner received every major award in his field but one—for which he was not eligible—the American Digestive Health Foundation's Joseph B. Kirsner Award. The Crohn's and Colitis Foundation gave him their lifetime achievement award twice, in 1991 and 2002.

During a long career in Chicago, Kirsner earned a reputation as an extraordinary, tough-minded mentor who demanded passion and commitment from his team in caring for patients. His reputation led to an unusual long-distance patient/doctor relationship beginning in 1976, when he was recommended by NIH Director Donald Frederickson to King Hassan II of Morocco (who suffered from complex digestive problems) as the nation's top expert for addressing his

medical complaints. Kirsner made 55 trips to Morocco over the next 22 years.

The oldest of five children, Kirsner was born in Boston in 1909 to Ukrainian Jewish parents who had emigrated to the U.S. Throughout his adolescence he held a variety of jobs, including delivering newspapers, stocking a grocery store and working as a library clerk. He then enrolled in a six-year program at Tufts University that combined college and medical school. Graduating near the top of his medical

class in 1933 and planning a career as a general practitioner, he moved to Chicago, where he began attending lectures given at the University of Chicago by Walter Palmer, known for having established the first academic gastroenterology unit in the U.S. in 1927. "I was entranced," Kirsner later told a reporter.

In 1935, Kirsner joined the hospital staff as an assistant in medicine and began working with Palmer, who was then engaged in pioneering studies of stomach and intestinal disorders. Kirsner simultaneously began a Ph.D. program in biology, which

he completed in 1942. His early research focused on peptic ulcers, stomach-acid secretion and body chemistry, but by the late 1930s, he had shifted his attention to the inflammatory bowel diseases of ulcerative colitis and Crohn's disease.

During World War II, as a U.S. Army physician, Kirsner cared for soldiers at Utah Beach, Normandy, and at hospitals in France and Belgium. Later, serving in the Pacific Theater, he advised on the rehabilitation of prisoners of war. He was discharged in 1946 at the rank of major.

Over his career he published more than 750 scientific papers and 18 books, including six editions of his authoritative textbook, *Inflammatory Bowel Disease*. He trained more than 200 of the field's leading specialists and continued to see patients until age 95. Kirsner also raised money for gastrointestinal research. In 1962, a group of his grateful patients founded the Gastro-Intestinal Research Foundation, which has provided some \$30 million to support related research at the University of Chicago. The university opened the 17,000-square-foot Joseph B. Kirsner Center for the Study of Digestive Diseases in 1986.

Kirsner's wife of 64 years, Minnie, died in 1998. He is survived by a son, Robert, two grandchildren and four grandchildren.



Joseph B. Kirsner



**“My classmates are wonderful, compassionate doctors who understand the importance of forming trusting relationships. That’s what makes Tufts stand out, and that’s why I’m committed to supporting the medical school.”**

The invitation reads: “Come to Carole and Tom’s for the afternoon.” For nearly 30 years, **CAROLE ALLEN, M71**, and her husband, Tom, have opened their Arlington, Massachusetts home to her medical school classmates during reunion weekend.

The highlight of their party is a sing-along to the music her classmates composed for their class show more than 40 years ago. As Tom’s recording of the original show plays in the background, guests gather around to belt out tongue-in-cheek lyrics that celebrate various organ systems and their functions and poke fun at favorite professors. Now, just as then, her classmates “play together” as much as they support each other, says Carole.

Grateful for her well-rounded education, Carole recently designated TUSM as a beneficiary of her IRA. “Tufts helped me understand the art of medicine, the skills beyond the science,” she says. Her gift will support future physicians in their clinical training.

A retired pediatrician, Carole continues to ensure the well-being of New England-area youth, as well as children across the country, in her role as District I chair on the board of directors for the American Academy of Pediatrics.



For more information  
please contact Tufts’  
Gift Planning Office  
888.748.8387  
giftplanning@tufts.edu  
www.tufts.edu/giftplanning

**Tufts**  
UNIVERSITY  
School of Medicine

[www.facebook.com/CharlesTuftsSociety](http://www.facebook.com/CharlesTuftsSociety)



SCHOOL OF MEDICINE

136 Harrison Avenue  
Boston, MA 02111  
[www.tufts.edu/med](http://www.tufts.edu/med)

NONPROFIT ORG.  
U.S. POSTAGE

**PAID**

BOSTON, MA  
PERMIT NO. 1161



TUFTS UNIVERSITY OFFICE OF PUBLICATIONS 8985 10/12 PHOTO COURTESY BAY STATE MEDICAL CENTER

## THE GIANT OUT WEST

It's all too easy for those of us based in Boston to forget the impressive Tufts affiliate on our western horizon.

We offer a refresher course, beginning on page 14.