BROWN MEDICINE

Volume 21 | Number 2 | Spring 2015

PLUS:

MATCH MADNESS
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A FICTIONAL ACCOUNT
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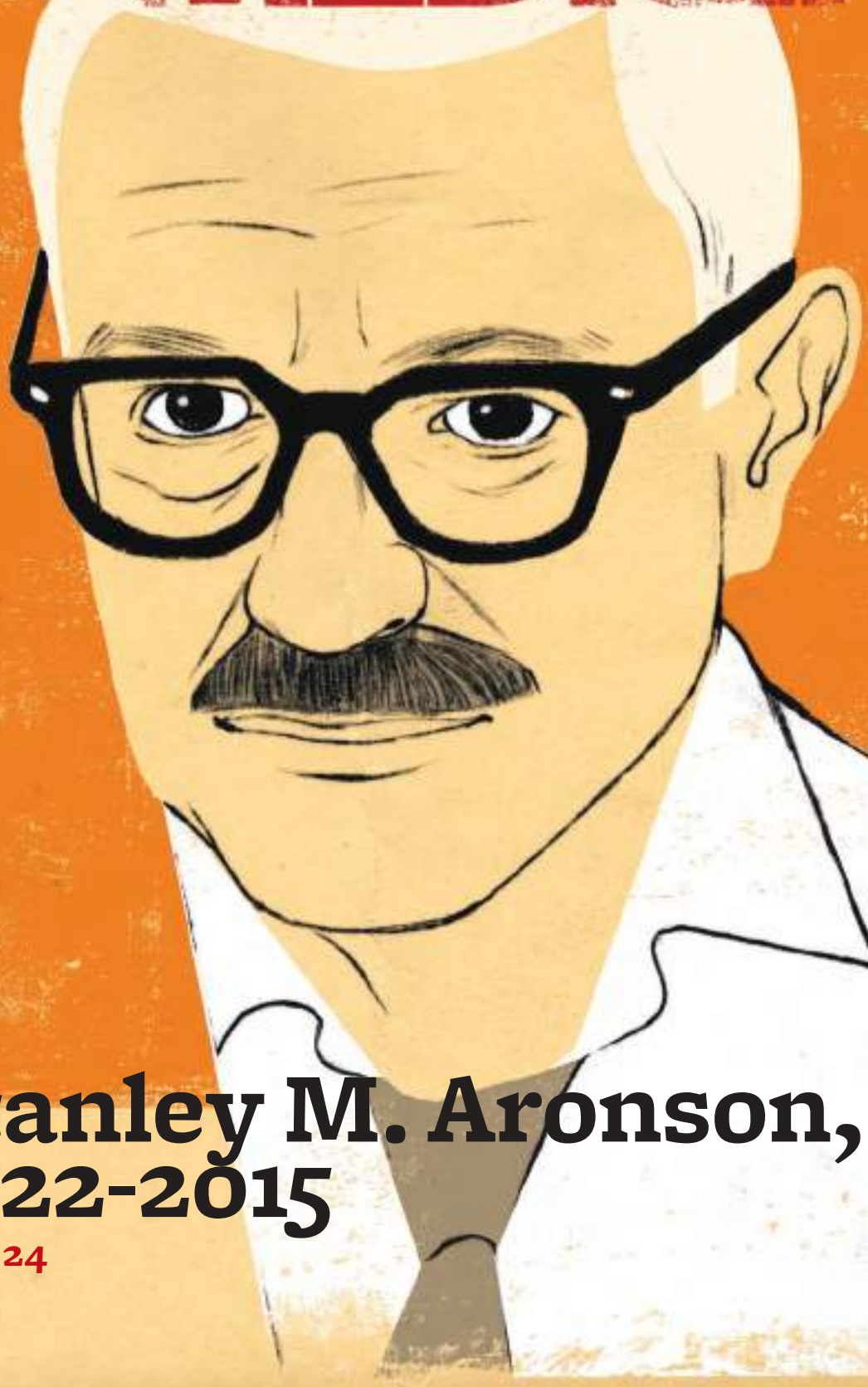


Stanley M. Aronson, MD 1922-2015

Page 24

LETTER FROM THE DEAN

Aronson's Legacy

When my wife, Sandy, and I moved to Providence, one of the warmest welcomes we received was from Dean Stanley Aronson. He and his wife, Gale, took us under their protective wings, into their home and into the Brown medical community. It was immediately clear that we were in the presence of a giant, but one who was not above helping the new guy out.

After Stan passed away in January, one of his former students wrote a tribute that noted, despite Stan's advancing age, "it seemed like he would be around forever." In many ways, that's true; it seemed entirely plausible that though a nonagenarian, Stan would always write his columns for the *Providence Journal* and the *Rhode Island Medical Journal*, he'd keep coming to the White Coat Ceremony and Commencement, and he'd be forwarding interesting email news from alumni. But as he wrote in what turned out to be his last newspaper article, "death is as certain as tomorrow's sunrise."

This Reunion-Commencement Weekend we'll have an opportunity to come together as a community to celebrate Stan's life and accomplishments. It's poignant that we'll also be marking the 40th anniversary of the Medical School's first graduating class. In this issue of *Brown Medicine*, we share tributes from many of Stan's former students and colleagues.

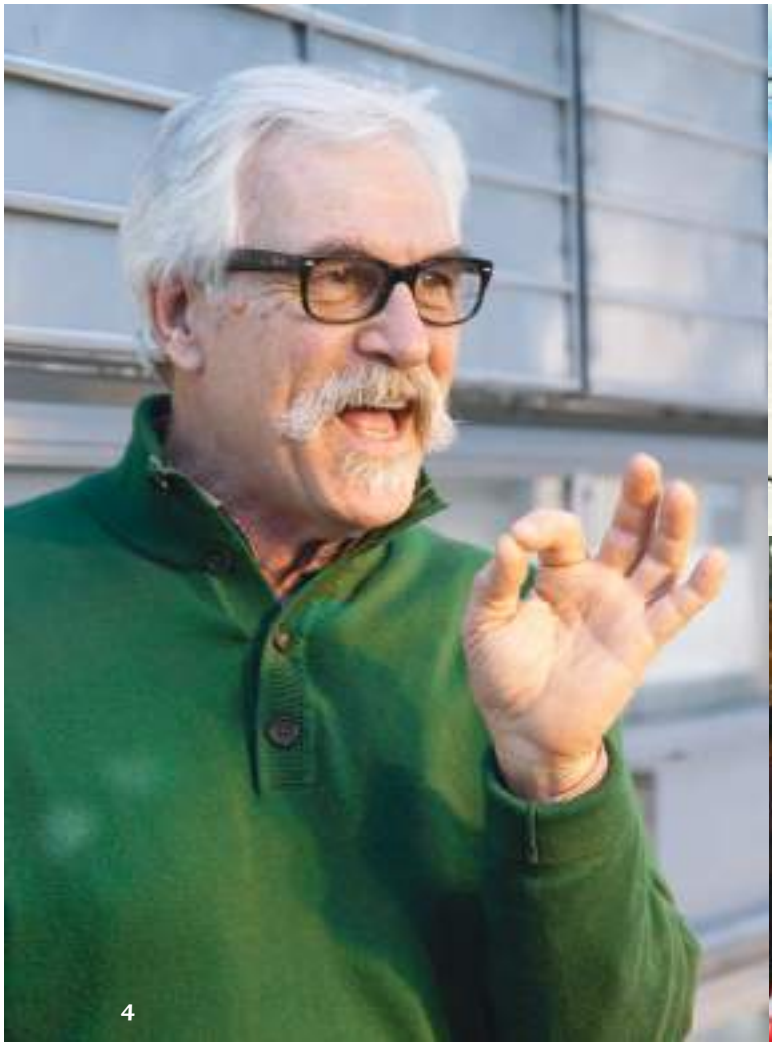
Also in this issue are the results of the 2015 Match. Our graduates are heading off to some of the best residency programs in the country. These budding Brown-trained physicians—and all those who will come after them—are Dean Aronson's true legacy.

Sincerely,

Jack A Elias MD

Jack A. Elias, MD
Dean of Medicine and Biological Sciences

SCOTT KINGSLEY



"The Holy Grail of mental health is intervening during childhood and adolescence."

—former US Rep. Patrick Kennedy, *Page 16*

INSIDE

ADAM MASTOON; BLAIR THORNLEY; SCOTT KINGSLEY

DEPARTMENTS

Cover: Stanley Aronson portrait by Edel Rodriguez

LETTER FROM THE EDITOR

So This Is 40

Up until last fall, we used to say that Alpert Medical School was so young all of its former deans were still living. Then came a series of losses—Stan Aronson, David Greer, Ruth Sauber, Marge Thompson—that reminded us that no one is getting any younger, even the Medical School.

June 2 marks 40 years since the first Medical School class of the modern era graduated. And Alpert Medical School is in the same place many 40-year-old humans are. We strive to raise the next generation even as we work to preserve our elders' history, to make sure we hear their stories before they are gone. We take stock of our lives and assess whether they've turned out as we thought they would, or as we wanted them to. We grapple with weighty questions: how are we going to finish strong and make the next 30 or 40 years count?

Forty is not old but it's no longer young. At the Medical School, we are asking, how big do we want to grow? How do we increase our capacity for and impact on clinical research? Change is hard, and maybe not everyone will agree with the chosen tack. But we owe it to both our students and to our forebears to take the next steps forward.

We'll tell you more about those plans in future issues. For now we'll reflect on our beginning with founding dean Stanley Aronson, and where we are in the field of medicine, which he called "intensely imperfect." We honor the past while watching the future take flight in our graduates.

This is what it's like to be 40.

BROWN MEDICINE

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INBOX

Behind the Scenes

Before commissioned illustrations come to life in the magazine, the artists submit sketches to the editor and art director to ensure they've captured the essence of the written article. These are the artists' original sketches for the illustrations in this issue.

EQUAL EXCHANGE

As a reader from the South and a former Harlem science teacher, respectively, we took interest in the recent article on Brown's relationship with Tougaloo College ("Closing the Gap," Winter 2015). The perspective of our classmates who hail from this important linkage has been an invaluable component of our medical education, yet we are concerned that the exchange may not go both ways, as the piece points out. Specifically, we wonder why the elective clerkship that once sent Alpert Medical School students to Jackson Memorial Hospital to learn medicine and explore health disparities in Mississippi has fallen by the wayside. Considering the experiences of our classmates, Alpert Medical School students are eager to learn outside of Rhode Island. Many pursue research or engage in volunteer activities overseas; still more complete away electives at prestigious academic medical centers around the country. Why does nobody want to go to Jackson? Just in the past year, Alpert students launched the Ferguson Decoded Project, hosted a "die-in" to protest police brutality, and have taken to social media to post #BlackLivesMatter. In the spirit of the Brown-Tougaloo Partnership, we would like to encourage our classmates to leverage this momentum by considering a rotation in Jackson. And Brown, known for supporting students, should step forward to re-open the elective. Where better to learn and advocate for patients than in a state that was at the epicenter of the civil rights movement and has long ranked as having the least equitable health care in the country?

Sean R. Love MD'17 and Linnea Sanderson '06 MD'17
Providence, RI

In the recent article "Closing the Gap," by Phoebe Hall, the author states that a "significant number of Americans may not find a doctor who looks like them." This statement is both ill conceived and offensive. Perhaps Ms. Hall can explain how being the same age, sex, or race as a patient improves my ability to care for them? As a white, male physician in his 50s, does this prevent me from practicing obstetrics, pediatrics, or in areas with mostly minority residents?

In the spirit of Martin Luther King, I would hope that I am judged not by the color of my skin but by the content of my character. It is dangerous to label individuals by age, race, sex, or sexual orientation. It is further dangerous to assign behaviors to an individual based on that individual's membership in a certain demographic. To do so encourages intolerance of others and of our differences. Let people show you what they are about.

Nicholas G. Carras, MD ScM'87
Long Island, NY

We're Honored

Sarah Baldwin-Beneich's article "Body of Evidence" (Winter 2014) won the Association of American Medical Colleges' 2015 Award for Excellence in the Robert G. Fenley Writing Awards. Phoebe Hall's article "Ahead of the Game" (Fall 2013) won Honorable Mention in the same category.

A WORD, PLEASE

Please send letters, which may be edited for length and clarity, to:

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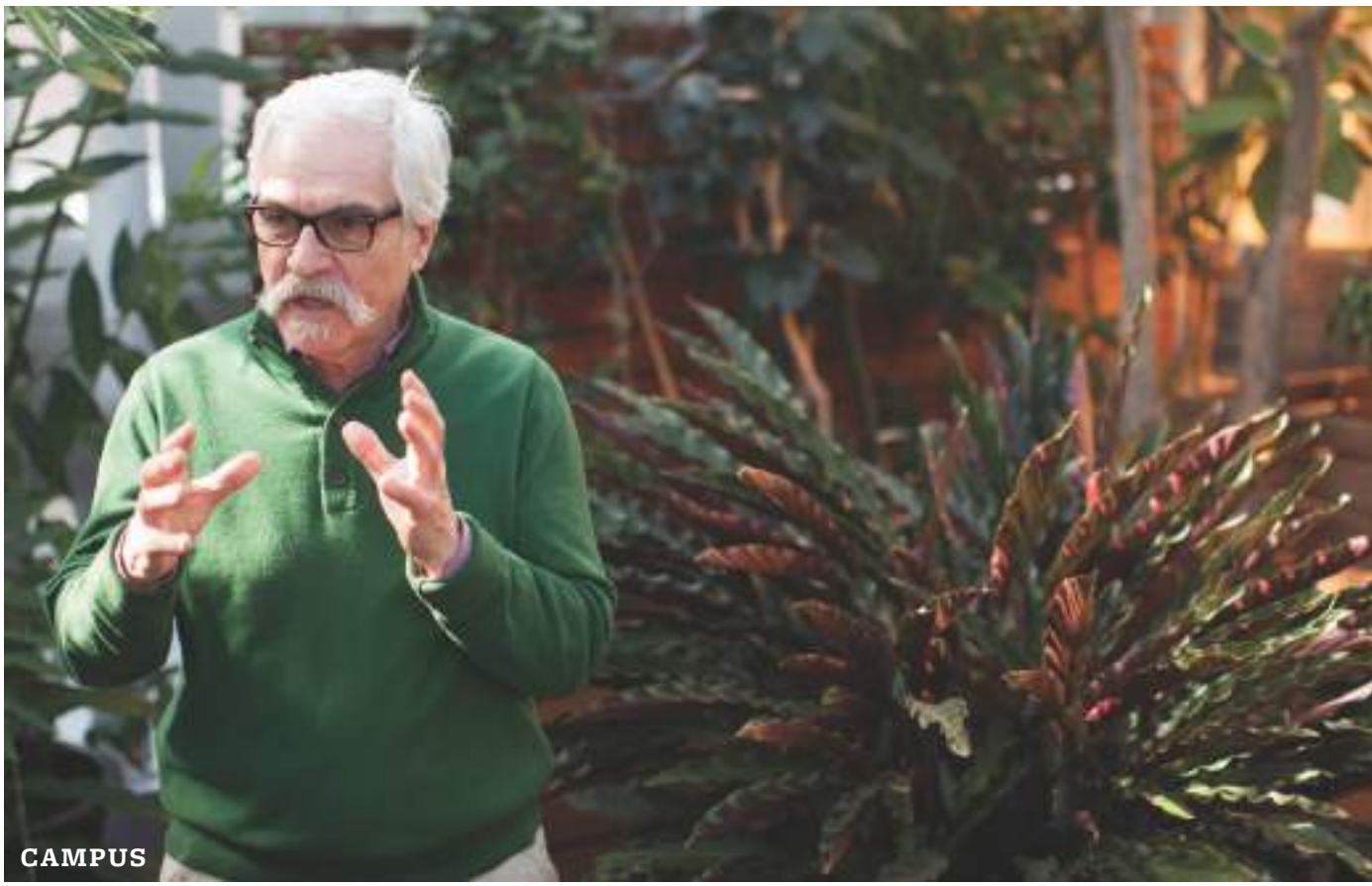
- Brown_Medicine@brown.edu
- Brownmedicinemagazine.org

EDEL RODRIGUEZ; JESSICA DEANE ROSNER; BLAIR THORNLEY

The BEAT

WHAT'S NEW IN THE CLASSROOMS, ON THE WARDS, AND IN THE LABS



CAMPUS

Bio's Big Day

The life sciences at Brown go under the microscope.

From climate change to the microbiome, from aging to brain science, the mysteries, discoveries, and revolutions in life sciences research at Brown were on full display one Saturday in early March at the Day of Biology. The event, part of Brown's year-long 250th anniversary celebration, drew alumni, students, and faculty together to showcase their work and share ideas at colloquia, TED-style talks, and a keynote by Nobel laureate Craig Mello, PhD '82. You can view more photos from the day, as well as videos of several of the talks, at brownmedicinemagazine.org.

—Phoebe Hall

PLANT MAN: Fred Jackson, MEd, above, director of the Plant Environmental Center, leads a tour of the new rooftop greenhouse, a light-filled, climate-controlled research facility and a luxurious tropical escape from Providence's challenging winter.

ADAM MASTOON

RUBBING ELBOWS: Above, from left, Craig Mello, PhD ’82, co-director of the RNA Therapeutics Institute at the University of Massachusetts Medical School, with Amylyx Pharmaceuticals co-founders Justin Klee ’13 and Joshua Cohen ’14. Right, pathobiology graduate student Anika Toorie PhD’15 discusses her research during the poster session.

WILDLIFE SUPPORT: Lucy Spelman, DVM ’85, above, discusses her lifelong work to save endangered species at a TED-style talk. As a veterinarian board certified in zoological medicine, she said, “My patients basically are going away.”

OLD FRIENDS: James Cimino, MD ’77, below left, director of the Informatics Institute at the University of Alabama at Birmingham, and Mark Musen, PhD ’77 MD’80, professor of medicine at Stanford School of Medicine, take part in a panel discussion about how big data can offer clues to new therapies.

ADAM MASTOON (4)

The BEAT

DOCTOR TO DOCTOR

Clinical Trials and Tribulations

Can progesterone protect the brain after injury?

Lisa H. Merck, MD, MPH, is an assistant professor of emergency medicine and diagnostic imaging and director of the Division of Emergency Neurosciences in the Department of Emergency Medicine. Her research focuses on neurological emergencies, such as traumatic brain injury.

TBI affects 1.7 million people a year, causing 50,000 deaths and costing $76 billion in health care annually. Merck was an investigator in a large NIH-funded trial, ProTECT III, and co-authored the resulting study published in the *New England Journal of Medicine* in December 2014. The randomized, placebo-controlled trial evaluated the use of IV progesterone to treat patients with moderate to severe TBI and involved 881 patients at 49 trauma centers. The trial was stopped early because preliminary analyses did not show a significant difference between progesterone and placebo in clinical outcome at six months after the injury.

As an emergency room physician, how important is it for you to find new methods to treat TBI?

In the acute phase of brain injury, time is critical to patient outcome; maintaining adequate cerebral perfusion pressure and triaging patients for surgical intervention are vital to the care of these patients. Identifying new and effective treatments in the constellation of injuries associated with TBI is essential to improving care.

What is unique about the physiology of progesterone and the brain?

My collaborator, Donald Stein, PhD, of Emory University, one of the leading experts on this topic, describes progesterone as unique because in addition to anti-inflammatory properties, research studies have shown that it is also neurotrophic—it upregulates the genes that make factors that rescue neurons from necrosis and apoptosis-induced cell death. In preclinical studies progesterone has shown substantial promise in treating stroke, diabetic neuropathy, optic nerve injury, and some animal models of ALS.

Why do you think your study of progesterone to treat TBI did not show a benefit over placebo?

When we started ProTECT III, there were more than 200 previous studies showing that progesterone does have a neuroprotective effect in brain injury in animal models, and so it was certainly disappointing to get to the phase III trial in humans and not have significant results in the primary analysis. We are

Signs and Symptoms

Concussion diagnosis and treatment are notoriously complicated by their subjective nature. Lacking a measurable, objective diagnostic, physicians must rely on patients' reporting of cognitive effects.

Now that Holy Grail—a physical signal of mild traumatic brain injury—may be within doctors' grasp. Alpert Medical School researchers identified a panel of four blood proteins that can accurately indicate concussion within hours, using standard, widely available lab arrays. The results appeared in the *Journal of Neurotrauma* in March.

"We wanted to look at proteins that are produced in response to injury and then appear in the circulation," says corresponding author Adam Chodobski, PhD, an associate professor of emergency medicine (research).

His team found that, within eight hours of a concussion, concentrations of the proteins galectin 3, matrix metalloproteinase 9, and occludin increased four times, while the concentration of copeptin was three times lower in concussed patients compared to uninjured controls. The correlation of galectin 3 and occludin distinguished patients who had a concussion from those who suffered an orthopedic injury, such as a bone break.

LORENZO GRITTI

Though the proteins can be measured with standard assays, the researchers want to develop a microfluidic chip that can get reliable readings within two hours—around the duration of many emergency room visits. Chodobski says they already have filed for a patent: "Our plan is to commercialize this." *—David Orenstein*

now completing the secondary analyses, developing regression models to measure the confounders implicit in human data (such as polytrauma events, comorbidities, and pathophysiology). I am hopeful that this will provide us with more insight into the relationship between progesterone and outcome.

Do you think progesterone does work to treat TBI?

Yes. I don't think that the initial analysis closes the door on progesterone. I think it is a huge setback because this was a massive undertaking. However, there is much work left to do.

What was one unforeseen and immediate benefit of the ProTECT III study?

In order to successfully treat TBI across multiple study centers, we developed standardized physiologic goals of therapy and essentially brought neurointensive care into the emergency room. We worked very closely within our teams of neurointensivists, trauma surgeons, neurosurgeons, emergency doctors, and emergency medical services personnel. From the moment the patient arrived in the emergency department through their tenure in the ICU and visits to the operating room, there was a coordinated effort to maintain specific physiologic goals of therapy.

In the ProTECT III trial, the mortality rate for both groups of patients, progesterone and placebo, was among the lowest mortality rates reported in TBI trials. These standardization guidelines have now been adapted by the American College of Surgeons and will be distributed to all trauma centers in the country.

It is my opinion that the way that this study was conducted transformed TBI care across the country at academic medical centers. ***—Teresa L. Schraeder, MD***

Teresa L. Schraeder *is the director of the Physician as Communicator Scholarly Concentration at Alpert Medical School.*

FOOTLOOSE Lou Rice and his dance partner, Joanne Lapierre, strut their stuff for cancer research.

LIAM LOUIS/ELLEVIGNETTEIMPRESSIONS.COM

WHO KNEW?

Saturday Night Fever

Luckily, there's a doctor on the dance floor.

Next time you see Louis Rice, MD, Joukowsky Family Professor of Medicine and chair of the Department of Medicine, waltzing through the hallways of Rhode Island Hospital, ask him to show you his moves. Rice won the People's Choice award during the Leukemia & Lymphoma Society Rhode Island Chapter's Dancing with the Doctors fundraiser in April. He and his dance partner, Joanne Lapierre, performed a combination of the foxtrot and west coast swing.

Full disclosure: this was not Rice's first time on the dance floor. One Father's Day, his wife, Jana, gave him the gift of a dance lesson, which was so much fun that they continued lessons until they left Cleveland for Providence in 2010. The Rices have not found much time to dance in the Ocean State, so in addition to raising money for this worthy cause, Rice says he was grateful for the opportunity to don his dancing shoes again.

"It was hard work, but my lessons were very enjoyable and challenging. I am grateful for Joanne's patience and for all of the things she taught me about proper dance techniques," Rice says. "It was also a pleasure to meet and get to know several other physicians from the area and to watch their performances, which were uniformly impressive and included a wide range of dance styles, from Viennese waltz to hip-hop. All in all, it was a great crowd, a great cause, and a great night!"

Rachel Sullivan, MD, an instructor in surgery, won the female People's Choice award, while chief resident in medicine Megha Garg, MD RES'14 captured Most Entertaining. For her complicated Argentine tango, Assistant Professor of Medicine Iris Tong, MD RES'01 took home Most Technical. ***—Kris Cambra***

The BEAT

Ask THE EXPERT

Protect Your Elders

An old problem gets new attention.

How can doctors prevent elder abuse?

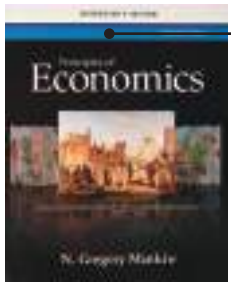
Elder abuse—the physical, psychological, or sexual harm, neglect, or financial exploitation of older people—is estimated to affect one in 10 elderly Americans every year. Compared with peers who have similar medical problems, victims of elder abuse are three times more likely to be admitted to the hospital, four times more likely to be admitted to a nursing home, and three times more likely to die prematurely. ***Richard W. Besdine****, MD, the David S. Greer, MD, Professor of Geriatric Medicine, director of the Division of Geriatrics and Palliative Medicine at Alpert Medical School, and director of the Brown School of Public Health's Center for Gerontology and Health Care Research, explains how physicians can protect older patients.*

Health care professionals can include elder abuse in conversations with patients and educate ourselves on the resources available. Physicians initiate only about 2 percent of the reported cases of abuse and neglect. In a survey of internists and family physicians in Ohio, more than 60 percent of clinicians indicated they had never asked elderly patients about abuse. This needs to change.

But this problem cannot be left to health care professionals alone; its solution truly will take a village. We need multidisciplinary teams, including representatives from the justice and financial systems as well as health care, who work collaboratively to identify victims and meet their needs. We also need more funding: in 2009, federal agencies spent $11.9 million for all activities related to elder abuse, a tiny fraction of the $649 million for violence against women programs. Advocates working on child abuse and domestic abuse have overcome similar hurdles; now is the time for elder abuse research to flourish.

For now, families, caregivers, and professionals alike must know that if they see or suspect any kind of elder abuse, the first call is state-based Adult Protective Services (www.napsa-now.org), which has many local offices. You can also find state resources through the National Center on Elder Abuse (www.ncea.aoa.gov).

The good news is that elder abuse has become a domain of increasing scientific scrutiny, with more research, education, and awareness in the past 20 years. In an arena where health care, finances, the law, and social services intersect, knowledge is power, and empowerment is a big part of the solution.



PAY IT FORWARD

Principles of Economics was the first econ course Liu ever took. Now he's a TA because, he says, "I wanted to share my enthusiasm."

CALL TO ORDER

A Model UN member since high school, Liu helped plan conferences on campus and attended others in Beijing and France.

SPECIAL INTEREST

Liu worked on health care policy in the Rhode Island lieutenant governor's office one summer. "I saw the sausage being made," he says. "It's a pretty painful and slow process."

GOOD BOOK

Liu, a member of Brown's Branch Christian Fellowship and Renaissance Church in Providence, got his leather-bound Bible in middle school.

STARTUP UPSTARTS

Liu competed twice for the Hult Prize, a social entrepreneurship challenge. His teams didn't win, but they learned a lot about creating and pitching business plans. Plus, "we had the most fun of any team."

YAO CAN COOK

Liu makes lunch for his friends every Sunday. "I love to cook," he says. "I call home a lot to get recipes." He picked up these spices, and a Ghanaian cookbook, in a market in Accra.

HEALING ARTS

For a month-long PLME program, Liu and three classmates shadowed traditional Chinese medicine doctors at Zhejiang University in Hangzhou.

ADAM MASTOON (8)

HI THERE!

"Enthusiastically welcoming people" is one of Liu's hobbies.

ANATOMY OF A PLME

MD in the Making

Yao Liu '15 MD'19 applied to Brown's Program in Liberal Medical Education, which grants admission to Alpert Medical School, to become a doctor. But two first-semester courses refined his goals. Economics got him thinking about social ventures that "use business thinking to achieve systems change"; anthropology opened his eyes to how poverty and other circumstances impact health even more than access to care. "I want to use human understanding as a clinician … to chip away at the structural issues that prevent people from living healthy and prosperous lives," says the Portland, OR, native. As an undergrad concentrating in biology and economics, Liu has worked on health care policy in the government and nonprofit spheres and volunteered with MED International, an NGO started by Jayson Marwaha '14 MD'18, to build sustainable business models in African hospitals. "I like the idea of taking action," he says. Closer to home, Liu makes campus a better place with ice cream socials, homemade cookies, and karaoke. "I'm always singing a song." ***—P.H.***

Big Science in Little Rhody

Researchers show off NIH-funded projects.

Rhode Island is packing a wallop against diseases such as malaria, cancer, autism, and preeclampsia in large part because of a National Institutes of Health program that has funded nine major biomedical research centers across the state in the last 15 years. As biologists and physicians gathered in the Alpert Medical School building in April to celebrate participation in the Institutional Development Awards (IDeA), they had plenty of science to showcase.

> The mission is to **ensure that all states share** in substantial **NIH funding.**

"These [NIH-funded research centers] have been incredibly successful," says James Padbury, MD, the William and Mary Oh–William and Elsa Zopfi Professor of Pediatrics for Perinatal Research and pediatrician-in-chief and chief of neonatal/perinatal medicine at Women & Infants Hospital. He directs one of the centers, and says the grants have built a modern and powerful infrastructure for studying genomics and proteomics, for example, and accelerated many young science careers in the state.

With more than $170 million of funding, the state's eight Centers of Biomedical Research Excellence (COBRE) and the IDeA Network for BioMedical Research Excellence (INBRE) have brought economic opportunity to Rhode Island, says Jack A. Elias, MD, dean of medicine and biological sciences. IDeA's mission is to ensure that all states—including small ones—share in substantial NIH funding.

Jennifer Sanders PhD'05, assistant professor of pediatrics (research) and a Rhode Island Hospital researcher, described her findings that administering the chemical rapamycin in a critical three-week window can reduce cancerous lesions in the liver. Her work in the COBRE for Cancer Research and Development has traced the molecular mechanisms underlying the effect of a pathway called mTOR. The hope is inhibition of mTOR, or its downstream effectors, may be a chemopreventive strategy against hepatocellular carcinoma.

In the COBRE for Cancer Signaling Networks, Richard Freiman, PhD, associate professor of medical science, is elucidating molecular pathways he's linked to ovarian cancer. His team has found that decreasing the levels of the protein Notch3 reduces the levels of a particular collagen protein in ovarian cancer cells. That, in turn, reduces the cells' ability to resist cell death through a process called anoikis. "We are presently testing a number of biological and small molecule inhibitors of Notch3," he says. "We're hoping we'll be able to slow down the ability of these ovarian cancer cells to spread."

Deyu Li, PhD, INBRE researcher and University of Rhode Island assistant professor of pharmacy, is taking on HIV with a novel idea called "lethal mutagenesis." Viruses replicate and sometimes mutate naturally. The idea Li is advancing in the lab is to artificially accelerate that process to compel the virus to mutate too much. Eventually it reaches the "error catastrophe limit" and can no longer survive, he says.

The presentations represented just a fraction of what the IDeA centers have produced. Dozens of posters in the building atrium highlighted even more projects in a small state's formidable quiver of COBREs. ***—D.O.***

FROM THE TOP: Governor Gina Raimondo shares her enthusiasm during the lunch program.

CHECK IT OUT: Jun Feng, MD, PhD, assistant professor of surgery (research), discusses his work during the poster session.

The BEAT

HOSPITAL

Labor of Love

Yoga could lessen prenatal depression.

As yoga has surged in popularity, so, too, have studies testing its effects on people suffering from depression, anxiety, insomnia, and a host of other mental disorders. Now Alpert Medical School researchers have found evidence suggesting that the practice may help reduce significant depression in pregnant women.

Lead author Cynthia Battle, PhD, associate professor of psychiatry and human behavior (research), says depressed pregnant women are often reluctant to use medications and some also have difficulty engaging in individual psychotherapy. "This is really about trying to develop a wider range of options that suit women who are experiencing these kinds of symptoms during pregnancy," says Battle. "What we don't want to do is have people fall through the cracks."

Battle's study, published in the March-April issue of the journal *Women's Health Issues*, is an initial test of whether a 10-week program of prenatal yoga could be feasible, acceptable, safe, and effective for mild to moderately depressed women. "We found what we think are very encouraging results," she says.

At regular points during the 10-week pilot study, the researchers measured depressive symptoms in the women, participation in yoga classes, home yoga practice, and changes in mindfulness. Of the 34 participants, only four women engaged in any other treatment for depression. The prenatal yoga program did not include any type of counseling or psychotherapy specifically to address depression.

The study was not a blinded, randomized, controlled trial, which would provide stronger, more rigorous evidence, Battle says. She and second author Lisa Uebelacker, PhD, associate professor of psychiatry and human behavior (research), have since led a small randomized, controlled trial with similarly positive results and are seeking funding for a larger research study, with investigators from Brown and several local hospitals, to gather more definitive evidence.

Though there was no control group to compare against, the pilot study suggests that prenatal yoga could be helpful, Battle says. For example, depressive symptoms declined during the 10-week program on two standardized scales, from levels consistent with moderate or significant depression to well into the mild range.

The data also show that the more prenatal yoga that pregnant women did, the more they benefited psychologically. It's the first study showing a proportional association.

The results of the pilot study show that a larger trial would be worthwhile, Battle says. "This is not the definitive study where we can say that this is an efficacious frontline treatment; however, it is a study suggesting that we know enough now to warrant the next, larger study," she says. "This is an important first step in trying to understand if this is a potentially viable treatment approach." ***—D.O.***

STEPHANIE EWENS PHOTOGRAPHY

OVER HEARD

"It's simultaneously humbling and inspiring to be in this cohort of big thinkers. The fellowship will allow me to dive deeply into my current nonfiction book project, which explores the intersections of mental illness and the criminal justice system."

—Assistant Professor of Psychiatry and Human Behavior **Christine Montross** *MD'06 MMS'07 RES'10, on winning a Guggenheim Fellowship. Professor of American Studies Steven Lubar, PhD, who curated The Lost Museum project that recreated the Jenks Museum of Natural History at Brown, also won a fellowship, to support his book about the history and future of museums.*

The BEAT

FINDINGS

Of Mice and, Maybe, Men

Mutation may cause early loss of sperm supply.

The loss of a single gene in male mice may offer clues in the complex puzzle of human male infertility.

Male mice lacking the gene that makes the protein TAF4b have fewer progenitor cells at an embryonic stage of their reproductive development, Brown researchers reported in a recent study in the journal *Stem Cells*. Without these cells, the mice struggle to develop a robust stem cell infrastructure to sustain sperm production for the long term. Though they are fertile at first, the affected mice quickly deplete their limited sperm supply.

"What's fascinating about these mice is they can reproduce," says Richard Freiman, PhD, associate professor of medical science and senior author of the study. "Mice can usually reproduce until they are 2 years old, but these mice can only reproduce until they are 4 months old."

TAF4b affects how genes are regulated and transcribed, and its absence has profound impacts on the reproductive system. In previous work, Freiman's research group has shown that female mice without TAF4b are totally infertile and that their ovaries age prematurely. But in males, the effect proved more subtle.

Research led by postdoctoral researchers Lindsay Lovasco, PhD, and Eric Gustafson, PhD, found that in mice with TAF4b, progenitor cells for sperm in the male embryo arise and proliferate normally, laying the groundwork in the testes for a robust pool of spermatogonial stem cells to develop. Those stem cells go on to produce a renewable supply of sperm.

Mice without TAF4b have fewer progenitor cells and consequently fewer stem cells. They still produce sperm at first, but they can't renew production for the long haul. Ultimately the testes, which develop normally, become unproductive and atrophy. What's not yet clear is why the process fades out rather than just continuing, albeit at a very low level of productivity.

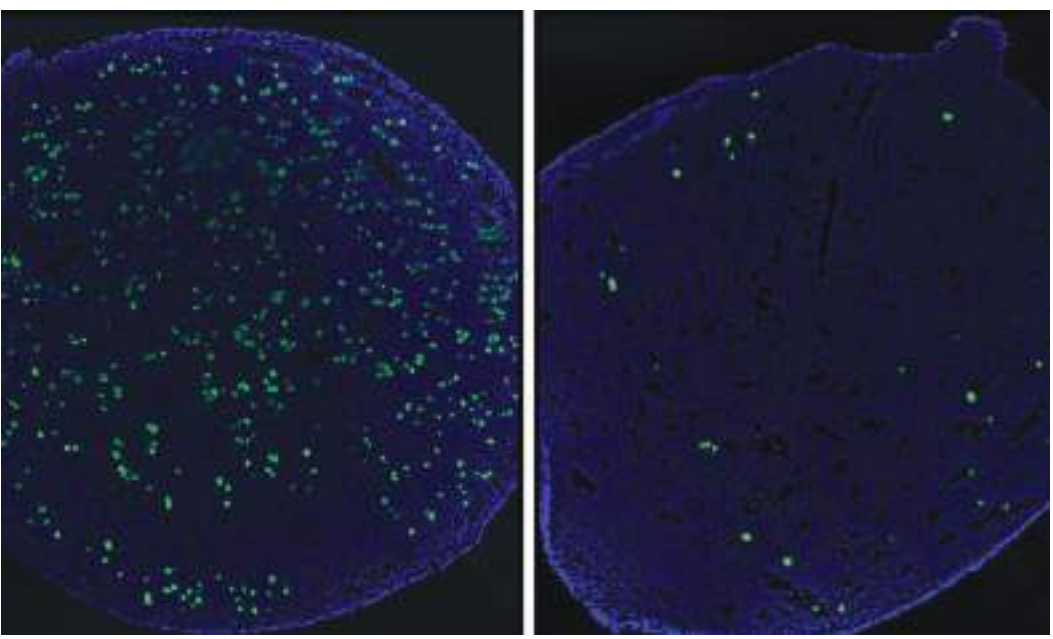
Not only do humans have a gene for TAF4b, but a study last year in the *Journal of Medical Genetics* suggests that it also matters for sperm count. That research reported that four Turkish brothers who carried a mutation in the TAF4b gene had low sperm counts. Their mutation was in the same region of their gene as the one Freiman's team generated in the mice.

> "If we **understand the process**, we might be able to **do something** we couldn't do before."

"The human implications are very exciting," he says. "It is possible that those men, as teenagers, were able to make functional sperm."

Certainly more research is needed, Freiman says, but if TAF4b mutation plays out in men the way it plays out in mice, his hope is that detecting the mutation in teenage boys could allow doctors to freeze their sperm so that if they want to have children when they are older, they could draw on that banked supply.

"This is why fundamental knowledge is so important," Freiman says. "If we understand the process, we might be able to do something we couldn't do before." ***—D.O.***



A DEPLETED POOL: Mice lacking the gene for the protein TAF4b (right) produce fewer undifferentiated germ cells (green) than mice with the gene (left).

COURTESY FREIMAN LAB/BROWN UNIVERSITY

OPINION

BY ERIN WU '13 MD'17 AND EDWARD FELLER, MD

Miracle Cure!

Press releases often mislead the public on health issues.

"New lung cancer drug improves survival." This typical newspaper headline offers hope for patients with a disease that kills more than 150,000 Americans every year.

But what if the research described is incomplete, preliminary, or a study of an experimental drug? What if the drug was tested exclusively on animals or in the lab? The results of these types of studies have little relevance for actual lung cancer patients. The sensationalism of the headline misleads readers.

It's easy to blame newspapers, but the real problem may be the accuracy and completeness of the press releases from universities, medical centers, and scientific meetings that journalists use. These articles can be unbalanced, biased, and incomplete, yet studies suggest that as many as one-third of health-related newspaper stories seem to rely exclusively or heavily on press releases.

We analyzed more than 150 press releases about cancer research from EurekAlert!, an online database for scientific press releases. What we found is troubling. Press releases often describe unpublished, unproven, and incomplete investigations—features not evident to the non-scientist reader.

Preliminary research that involved too few patients was present in two-thirds of press releases. Every article we reviewed discussed study strengths, but limitations, costs, risks of treatment, and failed research were rarely noted. Inappropriate, dramatic, or exaggerated titles were present in a majority of reports.

For example, "Circulating tumor cells correlate with poorer survival in pancreatic cancer patients" is the title of a press release in our study and of a subsequent newspaper feature story. Although it may seem reasonable, the story in question described a small preliminary trial, with a difference in survival measured only in days. These data have no current utility for actual patients.

More than half of the releases discussed unpublished data from academic meetings. What many readers don't know is that as many as 40 percent of national medical meeting abstracts are never published in peer-reviewed journals. That means that they will never undergo scrutiny from independent experts that characterizes final manuscripts in high-quality medical journals.

In our study, 90 percent of reports of animal or laboratory studies lacked warnings about applying results to humans. The majority of publicized animal studies never develop into successful human treatments.

Newspapers rely on press releases when reporting medical advances. Future reliance may increase because of the financial pressures on print media, newsroom cutbacks, and the insatiable appetite of the 24-hour news cycle. One study of 165 reporters identifying themselves as health reporters at 122 daily newspapers found that most reported on health half or less than half of the time. Some 80 percent reported no prior training in covering health news.

Media health messages affect patients' choice of health care, influence physician referrals, and may have direct consequences on a reader's understanding of available health care options. Some press releases give readers an overoptimistic assessment of therapy. Press releases also appear routinely on medical center or research university websites—frequent sources of health information for consumers.

Press releases are a form of advertising, much of which is relevant and accurate. These reports are one tool to disseminate scholarly investigation to potential patients, the medical community, funding agencies, donors, and media. They increase the likelihood of newspaper coverage and influence its content.

Institutions should use press releases to help journalists develop accurate news. Too often, they disseminate incomplete information without the context required for journalists and their readers to understand and act on it. Bias, marketing strategy, and media hyperbole can interfere with what medical information the public receives.

Erin Wu *is interested in the fields of bioethics and medical education.* **Edward Feller, MD**, *is a faculty leader of the developing Writing Center/Writing Fellows Program at Alpert Medical School. This piece is adapted from an op-ed in the February 4, 2015,* Providence Journal.

RESIDENTEXPERT

BY ALEXIS DRUTCHAS, MD RES'15

Early Morning Light

Which lessons will last a lifetime?

The room hung silent when he was done speaking. It was Monday afternoon and I had just barely woken up from sleeping off my overnight shift in the ICU. A few days prior the poet laureate of Rhode Island, Rick Benjamin, asked me to join a poetry seminar he hosts weekly at a local assisted living community. Despite the ache as I lay my head down that morning, I set my alarm knowing it would be worth it. He recited one of my favorite Mary Oliver poems in which she asks, "what is it you plan to do with your one wild and precious life?" This profound query was then reframed as Rick asked each of us, "If you were speaking to someone younger whom you love, what would you tell them you have done to make your life wild and precious?"

I sat there in contemplation as I glanced around the room at the many storied faces around me. There were men and women in their seventh decade up to those in their late 90s. Each of these individuals had lived through World War II, Sputnik, and the Great Leap Forward. There were some who could write with ease, and others who struggled with every move of their pen, fighting tremor and memory loss. I sat there feeling apprehensive of what I, at my comparatively young age, could possibly offer to someone younger than me. This question continues to feel particularly poignant with my residency graduation right around the corner. What have all of these years meant and what have I held onto throughout? My little brother, Jake, came to mind, and the words I had been trying to find started to pour out.

Jake was seven years behind me when he was born on a calm Libra day. My sister and I showed up at the hospital wearing blue, holding blue cupcakes. Most mornings I would hear him rustling or crying through the wall we shared. I would tiptoe over creaking pine boards, quietly lift him up, and we would be together in the early light until our family woke up. Last spring I watched him walk across the college stage—oh, do the years go by. As he was making his way through college, I was finishing medical school and starting residency. What can I offer him that he doesn't already know? He can pass his economics test with hardly a moment of study whereas I would be in the library for days. As for savoring life's wild and precious moments, my journey through residency has shed a particular light.

Over the last three years I have been present for a raw spectrum of human experience. Yet unlike medical school, residency not only compels you to observe these, but to truly be a part of your patients' lives and experiences, all with the backdrop of exhaustion and doubt riding along the way. It is a true roller

BLAIR THORNLEY

coaster of emotions. I have held a newborn during her very first breath of life, and I have written comfort measures only orders and held my patient's hand at the very end. These past three years I have learned how to diagnose, how to care for and treat my patients, and there continues to be more to learn. But what has it meant to bear witness to this humanity? What lessons will I take with me after I turn in my Memorial Hospital badge?

WILD AND PRECIOUS

The other night I was working through the midnight hours into the early morning with a patient in the ICU. Just as the burning in my eyes and deep exhaustion were setting in, I happened to look up and out the fourth-floor window. I tell you, amid the beeps of IV lines, the press of ventilators, and the looming dark in the hallway, there was the most gorgeous sunrise climbing over the river that wraps around the hospital's edge. And that same night, in a hurry to get my patient's admission history so that I could finish my note and write orders, I noticed a hint of the most wonderful accent while we were talking, one that I could not pinpoint. I decided to slow down and took a detour to ask about her childhood. To my astonishment, she said she grew up in the Congo when it was still under Belgian rule. She lived there straight through the revolution until she was kicked out. While we were talking, a strand of her silvery hair fell over her forehead and covered her eyes. She was chilled, wrapped in blankets, and I carefully moved this strand of hair behind her ear like my mom used to do for me.

> The **darkness of loss** is inevitable, but there is always **an invitation for joy.**

As I sat there in Rick's class, writing next to those with much more life lived than I, I no longer remembered that burning in my tired eyes or the hunger in the pit of my stomach. I no longer remembered if I was at work for 24 or 28 hours. I did, however, remember the lavender tone that rose with the sun over the Seekonk River, and my surprise in this beauty. I did remember the look in my patient's eye when I tucked her in, and she closed her eyes safe and sound despite the fear and the cold. I remembered the smell of freshly ground coffee beans when I got home, the sweet, syrupy aroma poured into my favorite cup lingering through my apartment. I could still feel the bright red strawberry that had finally ripened on my porch, and the satisfaction of knowing I grew it on my own. I still remember all of these things; the slowed-down moments I took with me.

So I write you and my little brother this as I sit on the brink of graduating residency, after three years of training not only in doctoring, but in the astonishing veracity of life, its beautiful elations and its deeply felt sorrows. Write a list of what you want to do, your ambitions, your missions, your truths—and hope to live out maybe one or two. The days, they will pass by. If there is anything that I have learned in my daily work, time and time again, it is just how short and unpredictable it all is. Those in Rick's class with me were in their late years, writing lessons learned to grandchildren of their own. Did they foresee the history they have lived through? Are they what they hoped they would become when they were my age, and does that even matter now if they can say they have truly lived despite it all?

No matter what the day brings, the inevitable trials and tribulations, there is time to slow down, make moments precious, to take notice of the bright life all around us. The darkness of loss is inevitable, but there is always an invitation for joy. Everyone you meet has a truly incredible story if you take the time to ask, and every day something beautiful happens; a newborn first opens her eyes, a family fight is reconciled, a life ends with meaning, a meal is shared with those you love, a gorgeous sun rises over the river's edge. Jake went from a crib in the next room to his college stage in what feels like a blink of an eye. But do you know what I remember? The stillness when I picked him up and he would stop crying. Waiting for the rest of the family to wake in the early morning light.

Alexis Drutchas *will graduate in June from the family medicine residency program. Originally from Detroit, she studied environmental health and biology at the University of Wisconsin-Madison and completed medical school at Wayne State University.*

ZOOM

BY PHOEBE HALL

DAVID DELPOIO

The Fighter

A longtime local advocate for kids' mental health care gets a national stage.

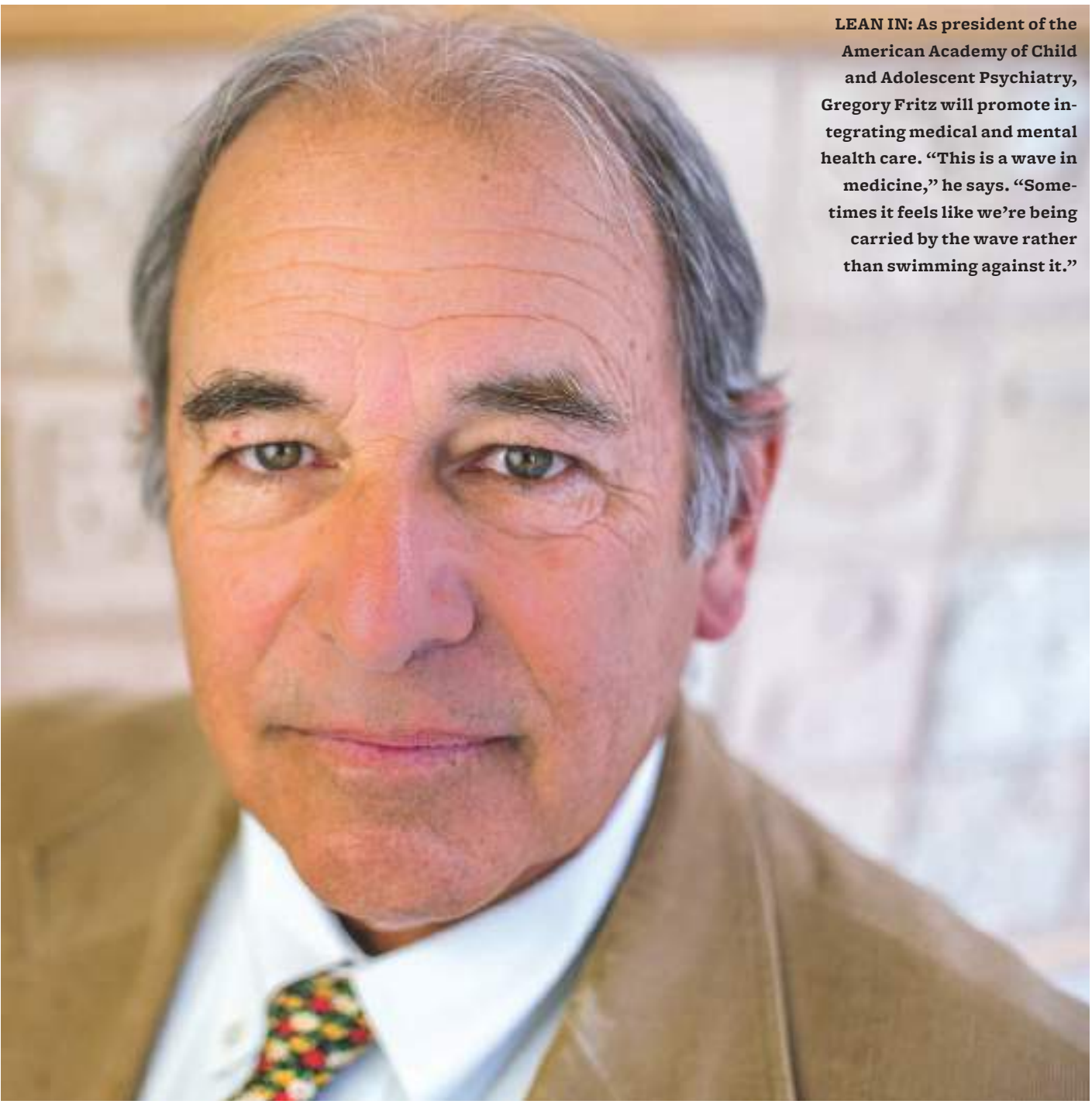
A large tarpon can measure up to 8 feet long and weigh well over 200 pounds. Called the silver king for the shimmering scales that plate its sides, it's legendary among sportfishermen for its stamina and fighting spirit. Once hooked, those hundreds of pounds of muscle launch into the air, throwing the hook again and again. But the battle's only begun when the hook finally sets; even a veteran angler can take hours to reel it in, with patience and strategy, applying the right amounts of pressure and slack until he wears down his formidable opponent and pulls it on board.

It may be that Gregory Fritz, MD '67, a "fanatic fisherman" by his own description, is uniquely qualified to tackle some of health care's most entrenched problems. The director of child psychiatry at Hasbro Children's Hospital and at Alpert Medical School, he has been fighting for mental health parity—equal coverage for mental and physical health conditions—for much of his four-decade career.

His most recent catch took Fritz eight years to reel in. In March, a provision went into effect that requires federal funding for pediatric residency programs to include children's psychiatric hospitals such as Bradley Hospital in East Providence, where he is academic director. Closing that loophole involved maneuvers that made Fritz "very unpopular" nationally, says Bradley's medical director, Henry Sachs III MD'88 RES'92 F'93.

"He took the heat," Sachs says. "I have no doubt this would not have happened without Greg's persistence. ...

"But that encapsulates Greg. When he believes in something, he advocates incredibly effectively for it," Sachs adds. "If



LEAN IN: As president of the American Academy of Child and Adolescent Psychiatry, Gregory Fritz will promote integrating medical and mental health care. "This is a wave in medicine," he says. "Sometimes it feels like we're being carried by the wave rather than swimming against it."

you don't have patience, you'll get frustrated and give up. Greg will see the long-term view of things and follow them out."

EVERYONE HAS A STORY

Fritz always wanted to be a doctor, though he never anticipated the path he took. "I didn't know anything about psychiatry," the Schenectady, NY, native says. "I'm sure my father thought I'd be a surgeon." His dad was an engineer; his mother, a pathologist who earned her PhD when Fritz was in sixth grade, was a "frustrated doctor," who had been told women don't go to medical school.

At Brown Fritz fulfilled his premed requirements while majoring in American literature. The future editor of the *Brown University Child and Adolescent Behavior Letter*, a nationally respected newsletter, continues to draw on that intensive writing experience, but his love of people's stories tied into his choice of specialty. Still, he insists it was chance that led him to psychiatry.

ZOOM

Medical schools of that era—Fritz went to Tufts—"were eight hours a day of memorization and droning lectures," he says. "We had no patient contact." But for a first-year elective, he went to the office of a psychiatrist, who would interview a patient on the ward as the students observed, and then they'd discuss the case. "It was so interesting because it was a live human being," Fritz says. "It could have been anything. It could have been urology."

Fritz completed his residency, in child psychiatry, at Stanford, along with a fellowship in psychiatric research. He stayed eight more years in Palo Alto, providing psychiatric consultations at the Children's Hospital and studying childhood cancer survivors. "Always clinically and in my research I've been at the boundary of psychiatry and medicine," he says. "I'm fascinated by how the mind affects the body and the body affects the mind."

He and his wife, Nancy Fritz AM'95, a Maine native, had their three children in California. "We were very happy out there," he says, though "it always seemed odd to go to the beach on Christmas." Then Stanford's director of child psychiatry, Thomas Anders, MD, came to Brown in 1984; he recruited Fritz a year later to build the pediatric psychiatry service at Rhode Island Hospital (Hasbro Children's Hospital opened in 1994). It was a new idea in medicine; most child psychiatrists worked as consultants, as Fritz had at Stanford. "I never looked back," he says.

The child and adolescent psychiatry division at Brown has grown rapidly during Fritz's tenure, from about 25 faculty in 1985 to 90 today. Child mental health researchers were consolidated in 2002 under one umbrella, the Bradley Hasbro Children's Research Center, of which he is director. The center brings in millions of dollars of federal funding annually.

The treatment offerings at Bradley have expanded as well, including a nationally respected autism center, partial programs addressing numerous disorders that draw teens from around the country and the world, and schools for kids with special needs. Recounting how Fritz confronted stiff opposition from insurance companies and other red tape to create some of the programs, Sachs says, "Greg gets a ton of credit for that spectrum of care."

At Brown, Fritz switched his research focus to pediatric asthma, a chronic illness with a major psychosomatic component. As he studied symptom perception in his patients, he found cultural differences as well as disparities: minorities had higher rates of asthma diagnoses, emergency room visits, and death compared to white children. In 2002 he partnered with the University of Puerto Rico School of Medicine to investigate those disparities in Puerto Rican kids, who have the highest rates of asthma among Latinos.

"That collaboration really allowed our lab to evolve into doing very relevant research in asthma disparities," says Elizabeth McQuaid, PhD, who came to Brown to work with Fritz as a postdoctoral research fellow in 1994 and is now a professor of psychiatry and human behavior (research). "It was a tremendous period of growth and productivity. … We all look back at that as a major turning point."

MR. PRESIDENT

It was a turning point for Fritz as well. "Disparities fit with his larger interest in advocacy," McQuaid says. In the early 2000s he began working with US Rep. Patrick Kennedy, D-RI, first on legislation that helped young children and their families access services to address social and emotional needs that could affect kids' cognitive development; and then on the Mental Health Parity and Addiction Equity Act, which was signed into law in 2008. "He's an enormous champion for eliminating financial and treatment barriers for mental health," Kennedy says.

"I learned a lot from him about the legislative process," Fritz says of Kennedy. It was good preparation for the eight-year slog to fund residency programs at children's psychiatric hospitals. Graduate medical education is partially funded by Medicare, and until 2000 all children's hospitals were left out of that equation. But the legislation that finally authorized payments for residents at children's hospitals inadvertently excluded children's psychiatric hospitals from the GME funding formula.

"It got in my bonnet that this is discriminatory," Fritz says. "Why are incentives to train more [child and adolescent] psychiatrists not in place?" In addition to Kennedy, Fritz had worked closely on mental health issues with Rhode Island's senators, Jack Reed and Sheldon Whitehouse. When the children's hospital GME bill came up for reauthorization, in 2011, Whitehouse authored a provision to include funding for children's psychiatric hospitals. When it failed, Whitehouse, with Reed's support, placed a hold on the bill on the Senate floor.

"It was so moving because no one ever does that for mental health," Fritz

says. "He went out on a limb to address this as a parity issue." The maneuver meant that no pediatric GME funding would be authorized until the hold was lifted—and though children's hospital lobbyists agreed with Whitehouse's provision in principle, they weren't pleased to become collateral damage in the process. The hold remained in place for two years, with the bill finally passing the Senate in 2013; in March the funds reached Bradley, which had been paying residents from its operating budget. "It's been quite an education about how to get these things changed," Fritz says.

This October Fritz will have a national platform to apply those lessons, when he becomes president of the American Academy of Child and Adolescent Psychiatry (AACAP). Since his election to the post, two years ago, he has been working on his presidential initiative: to integrate physical and mental health care, an effort that would entail training psychiatrists so they can be effective in medical settings, and primary care physicians to deal with psychiatric problems. It's an approach that exemplifies Fritz's belief that the mind and body work together and thus must be treated together; but that also addresses the ongoing shortage of child psychiatrists.

"The demand is greater even though the epidemiology hasn't changed," Fritz says. He rattles off statistics: 20 percent of children have a diagnosable psychiatric disorder; 7 to 10 percent have a problem that impairs their functioning or development; only about a quarter of them are getting treatment. As health care access has improved and stigma has diminished, more kids are seeking care, overwhelming mental health services. But it's critical that treatment begin as soon as possible, while the brain is still developing. "Childhood is the most promising time to nip problems in the bud, because it's easier," Fritz says. "If we intervene early, we can, in effect, inoculate against future problems."

Kennedy, who after he left Congress, in 2011, founded the Kennedy Forum, which is focused on implementing the mental health parity act, is thrilled he'll have his friend's help on Capitol Hill. "The Holy Grail of mental health is intervening during childhood and adolescence—which means Greg Fritz is where the action is going to be," Kennedy says.

"It's been exciting to see him taking his leadership to the national level," McQuaid agrees. "Becoming president of AACAP is a capstone for him." But the local pride is bittersweet: Fritz will go half time at Brown and the hospitals this fall; and after his two-year term is up, he plans to retire. McQuaid, who, as director of the Clinical Psychology Training Consortium, continues to look to Fritz as a mentor, says he serves as a role model in multiple contexts: as a leader, an activist, a researcher, and a family man. "It will be a huge loss to us," she says.

Sachs, who collaborates with Fritz on hiring decisions at Bradley, says Fritz's retirement will have a "significant" impact there. "This is a remarkably large and eclectic department," Sachs says. "Everyone gets along, treats each other with respect, works well together—which is not the case everywhere—and that's Greg. He fostered that right from the start." Fritz and his wife invite the entire division to their Warren, RI, home every December for "one of the most anticipated parties of the year," Sachs says. McQuaid says her children, ages 11 and 13, "always want to know, 'when is Greg's party?'"

> "Childhood is the most **promising time to nip problems in the bud,** because **it's easier."**

In addition to his many administrative duties, Fritz, who is 70, still sees patients, supervises trainees, and is on call nights and weekends. "I consider myself fortunate I can have my hand in so many things," he says. "I haven't figured out which of my duties I will cut" when he assumes the AACAP presidency.

He does know what he'll do when he retires: "I intend to write hunting and fishing stories for outdoor magazines." He'll continue to hunt birds with his wirehaired pointing griffon, Jack; he'll keep up his winter fishing trips with friends to exotic locales, and, with Nancy, his regular visits to the Bay Area to see old friends, and to Oregon to see their oldest daughter and their two grandchildren.

"I thrive on variety and a fairly high stimulation level," Fritz says. "After having worked energetically for 40-plus years, is it possible to slow down?"

Sachs bets no. "I don't see him fading into the sunset," he says.

FIELDNOTES

BY ALLISON KAY MD'15

Remembering Our Impermanence

When the medical mission ends, what happens to patients left behind?

JESSICA DEANE ROSNER

I met Claudine when I traveled to Rwanda with a team of urogynecologists on a surgical mission trip to repair obstetric fistula, an unfortunate condition in which a woman develops a hole between her bladder and vagina or rectum and vagina during an obstructed labor process. Claudine appeared like many of the other patients, with her slight frame wrapped in a skirt of colorful *kitenge* fabric, but what set her apart was how adamantly she stared at her hands in her lap and how rigidly her sorrow was etched in her face. As the Rwandan medical student translated her story for me, Claudine silently nodded in confirmation, and looked away.

Claudine has been leaking urine and feces for 30 years. To suffer that long seems almost incomprehensible. When Claudine had her first, and only, child she labored for four days before being transferred to a district hospital. There she learned that her baby was dead. Two days later she discovered that she no longer had control over her bodily functions.

Afraid of being a wife who could not satisfy her husband and ashamed of the smell that constantly followed her, Claudine moved back to her family's home. While at first her husband resisted her decision to separate, he soon chose another wife, confirming Claudine's fear that she was inadequate. Two years after she started to leak, Claudine heard about *mzungu* (white) doctors coming to Rwanda and hoped they might be able to help her. It was 1984. The doctors saw

the tragedy in her scar tissue, and knew there was no simple way to restore her former life. They opted to perform a urinary diversion to her sigmoid colon. It is unclear whether they checked the integrity of her anal sphincter before operating, but Claudine had none. After surgery she found she was still leaking both urine and feces, but now they leaked together from her anus. Alone and ashamed, Claudine has dredged through the last 30 years of her life making diapers of plastic bags and cloth.

Claudine's symptoms did not improve, and her risk of developing colorectal cancer is now 100 to 550 times greater after having had a ureterosigmoidostomy. Her surgery failed and she needed cancer screening, but unfortunately the mzungus were gone.

The first time I heard the word **"inoperable,"** it seemed **repugnant.**

With the fervor that only a medical student can have, I arrived in Rwanda ready to save lives, to collect the tragic stories of patients, and to feel that this pilgrimage would change my life permanently. And I did change in an irreversible way, but not because I satisfied my desire to see all of the patients healed in entirety. Claudine's story taught me that we could not heal everyone.

The first time I heard the word "inoperable," it seemed repugnant. It echoed of an ancient caste system, of people left behind. That categorization was given to those for whom surgery had a high risk of making the incontinence worse, or no different. These women were given waterproof underwear and an apology, and they returned home. I struggled to understand the reasoning behind our triage. Hadn't we come to help? I wanted the surgeons to perform urinary diversions and colostomies in every Rwandan woman with urethras too short or rectal tissue too scarred for a successful fistula repair, so that they could live nearly normal lives. But Claudine's story was a sad lesson that the benefits of a surgery must always outweigh the long-term risks.

HARD CHOICES

I came to understand that our responsibility, as a medical mission team, was to make the tough decisions that balanced our transience with the needs of the patients. Urinary diversion surgeries would necessitate cancer screening, something to which most of these women did not have access, while a colostomy would mean a lifelong requirement of medical supplies, which these women could not afford. Performing these operations would leave, in our absence, more women like Claudine. We were not there to satisfy our egos or fulfill a quota; we were there to heal those who were good candidates for surgery, to train local physicians on techniques of fistula repair, and to raise awareness with the goal of improving prevention in the future. Our hope was to help, but our stay was too short to responsibly help everyone.

Though we did make a difference in the lives of many, I returned home knowing there was so much more to do: as many as 3.5 million women in the world suffer from obstetric fistula, with an estimated 67,000 new cases each year in Africa, while rates of fistula repair lag far behind. The 125 women we evaluated in February 2014 were only a small representation of the population affected. Until sustainable changes are made in Rwanda, such as improving access to emergency obstetrical care and local physicians' surgical training, achieving gender equality in education, and stabilizing the infrastructure, fistula will continue to occur and short mission trips like ours will quickly become insignificant. The days to weeks of a fistula repair trip are not nearly enough to help everyone in need, and our impermanent efforts can feel futile.

I have a new awareness of the emotional and logistical challenges of working in global health. It is easy to feel inadequate, that one's efforts are insufficient when faced with the magnitude of the problem, and that there are limits to what one can do. But this sense of frustration is my motivation as I begin the process of growing into the global health community. I will never forget Claudine's story or those of the other women who silently suffer with her.

Allison Kay *will begin a residency in obstetrics and gynecology at the University of Washington after graduation. She traveled to Rwanda in 2014 and 2015 after conducting research on obstetric fistula with her faculty adviser, Associate Professor of Obstetrics and Gynecology B. Star Hampton, MD.*

BIG SHOT

IMAGE BY JASON HACK, MD

Pick Your Poison

Flowers have the power to cure or kill.

Jason Hack, MD, an associate professor of emergency medicine and medical toxicologist, has been taking pictures of medicinal and poisonous plants for years. His photos, which are on display in the Alpert Medical School building this spring, remind us that the "sterile white pills we take often originated as fragrant flowers and delicate plants growing in warm soil."

This flower, *Datura stramonium*, or jimsonweed, contains atropine, hyoscyamine, hyoscine, and scopolamine: belladonna alkaloids that block peripheral and central muscarinic receptors from binding acetylcholine. This blockade results in an anticholinergic toxidrome. The mnemonic for this syndrome—"blind as a bat [big pupils], mad as a hatter [altered mental status, hallucinations, delirium], red as a beet [flushed skin], hot as a hare [fever], dry as a bone [dry mouth], full as a flask [full bladder but can't urinate], silent as a mouse [no bowel movements]"—helps doctors remember its symptoms.

Belladonna alkaloids were once used to make women's pupils large and beautiful (*bella*). These chemicals can speed up dangerously slow heart rates, slow bowel functions, and dry mucus in the lungs to help people breathe better. Overdose can cause very high fever, heart arrhythmias, seizures, and death. ***—Kris Cambra***

EDITED BY KRIS CAMBRA

A Gentleman and Scholar

WE SAY FAREWELL TO THE MEDICAL SCHOOL'S FOUNDING DEAN.

ON A FRIGID JANUARY DAY, the Brown community woke to nearly two feet of snow and the news that the founding dean of its Medical School, Stanley M. Aronson, MD, MPH, had died, at the age of 92. Aronson was born, educated, trained as a physician, and employed as a doctor and professor in New York City, but in 1969 he and his wife, Betty, decided to raise their children outside the city and he accepted a job as chief of pathology at Brown and The Miriam Hospital.

Aronson's decision was contingent upon the University pursuing plans to establish a medical school. He worked tirelessly with then-Provost Merton Stoltz and others to achieve that goal, advocating for the idea within Brown and around the state to build support. The School launched in 1972 with modest means—43 faculty members, 16 students, and little research infrastructure—but during his years as dean, 1973 to 1981, Aronson guided it through its crucial first accreditation and blazed the trail of its growth.

"We had a group of graduate students at Brown," Aronson recalled in an interview last year. "We asked them, 'Your records are excellent, you could probably get into Harvard or Boston University immediately. Would you gamble on a school that does not even have a building, has a faculty so small in number that we could fit the entire faculty in one classroom? We don't have permission from the federal government to go ahead. Are you willing to gamble?'"

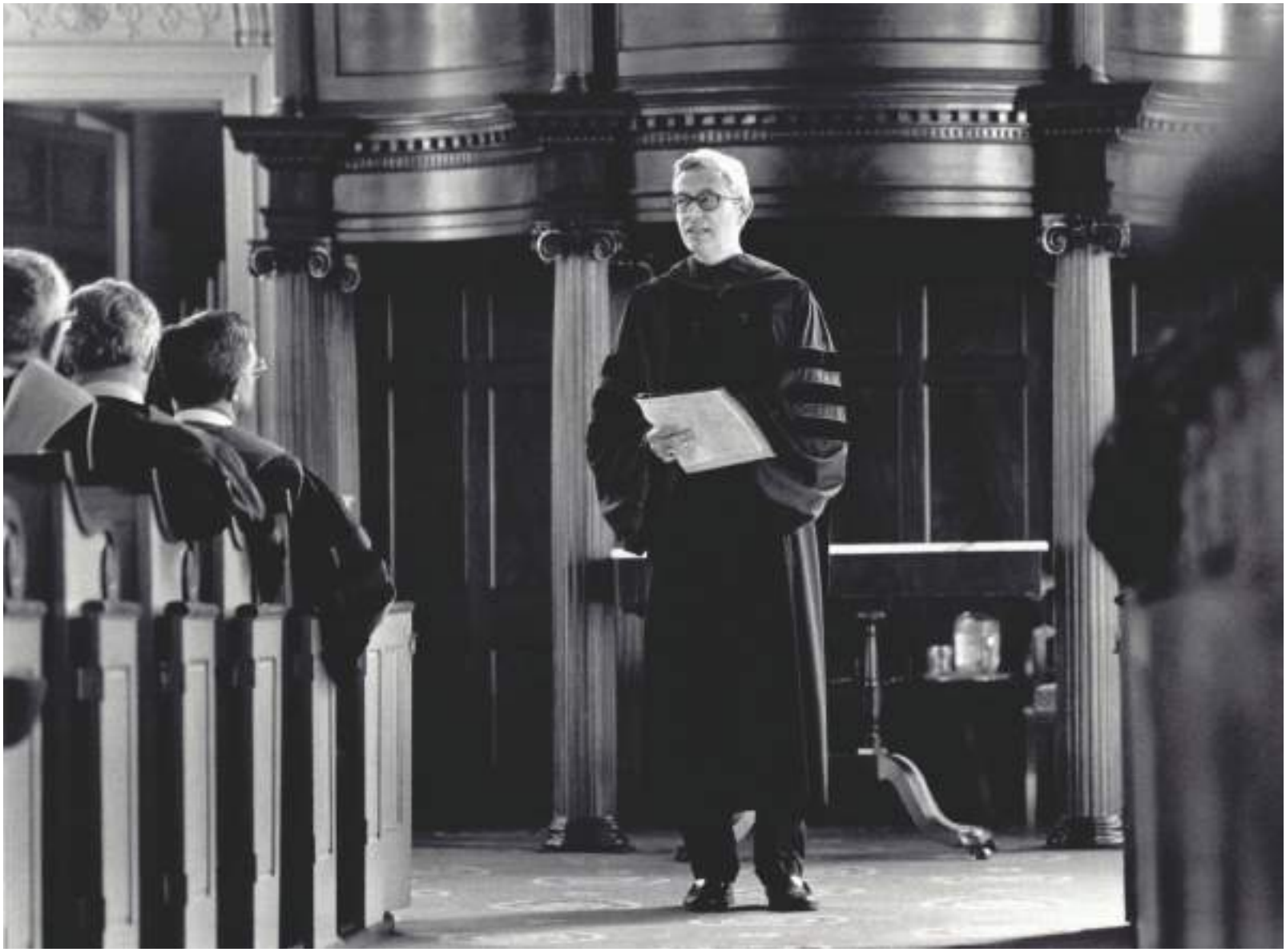
Sixteen students did gamble, and Aronson credited them for their courage. During his tenure, he created one of the nation's first departments of family medicine, in 1978. He also inaugurated the Early Identification Program, a special route of admission for college students from Rhode Island as well as from Tougaloo College (see *Brown Medicine*, Winter 2015).

Aronson intended for Brown's medical school to be different from others; unlike the mid-century model that espoused detachment and aloofness, Brown's would emphasize modesty and compassion. In a recent interview he recalled telling state legislators, "I tried to explain that we're going to train men and women to be individual physicians, to learn both responsibility and humility, and a long-term commitment in a profession that is intensely imperfect."

After stepping down from the deanship, Aronson served as editor of *Medicine & Health Rhode Island*, he penned a weekly column for the *Providence Journal*, and remained active at the Medical School, meeting and advising students. He was an advocate for palliative medicine, having helped to found Home & Hospice Care of Rhode Island in the 1970s.

Aronson is survived by his wife, Gale; his daughter, Sarah '83 MD'87; his stepdaughter, Susan Symons; five grandchildren; and six great-grandchildren.

The following are some of the remembrances shared by alumni, faculty, and friends.



FULL CIRCLE: Stan presided over the first medical graduation of the modern era on June 2, 1975, in Providence's First Unitarian Church. On May 1, 2015, the first of two memorial services in his honor was held there.

ALPERT MEDICAL SCHOOL ARCHIVES

Southern Comfort

ROBERT SMITH, MD, CENTRAL MISSISSIPPI HEALTH SERVICES INC.

Stan, a family man, one of the great men of modern medicine, a physician, educator, researcher, prolific writer, neuropathologist, and much more, who had the foresight to bring into fruition an Ivy League medical school that looked beyond the Harvard model and, in a very short period of time, trained and influenced generations of medical educators and physicians who would influence the country and the world.

I am proud that he would come to Mississippi personally, a state with some of the most serious health disparities in the country, and form a relationship with what was then Mississippi Family Health Center–Tougaloo College, and would devote unparalleled personal time and effort to help us overcome some of the most severe health disparities in the country.

Modern medicine, this country, and the world, and especially us here in Mississippi and Tougaloo, will owe him an eternal debt of gratitude.

Trailblazer

PARDON R. KENNEY '72 MMS'75 MD'75 RES'80, P'03

HE WAS A BEACON to our class as we together forged through the challenges of creating a medical school in the early 1970s. And in recent years he had become a strong advocate for alumni involvement with the affairs of the School. A great loss indeed—it is comforting to think that he at least got to see the establishment of the innovation fund that bears his name.

Father Figure

MICHAEL MIGLIORI '79 MD'82, P'11, P'12, P'14

Aside from my father, Stan was probably the most significant role model for me, not only professionally but also personally. Nobody taught me more about the profession of medicine, and what it means to be a professional, from the lexiconography of the term to the actual practice of it. He taught me that it wasn't enough to be a good student of medicine, you had to be a good student of people. Having been in practice now for 27 years, it becomes more and more clear to me every day how important those lessons were. Stan retired as dean in my last year of medical school and my only regret from my time there was that I was not hooded by Stan at graduation.

My wife is the graphic designer for the *Rhode Island Medical Journal*, for which Stan was editor emeritus and still wrote a monthly essay and "The Physician's Lexicon." He was still very active in the production of the journal, and over the past few years, especially since it became a digital edition, my wife and I had become closer with Stan and Gale. Although we all knew his health was failing, it still always seemed like he would be with us forever. He was a remarkable person and I am sorry that future generations of Alpert medical students will not have the benefit of having known him.

Incredible Leader

ARTHUR HORWICH '72 MD'75

I'M SO SORRY TO HEAR THIS, but rejoice that we all got together at Commencement last spring to celebrate Stan—that was just the right thing at the right time, and was an occasion not ever to be forgotten. Looking back, what an incredible leader he was of that fledgling school, with all the right instincts on how to make it fly high. I am so glad that we celebrated him on many occasions, and particularly last spring.

For the Greater Good

TERRIE FOX WETLE, PHD, DEAN OF THE BROWN SCHOOL OF PUBLIC HEALTH

Stan Aronson should be remembered as a man of towering intellect with an amazingly broad range of knowledge. He loved language and the etymology of words, as well as the history of medicine and public health. He should also be remembered for his warmth and sense of humor; his particular delight in crafting puns in the middle of serious discussions was notable. My conversations with Stan always began with questions about my work, the emerging School of Public Health, the Medical School, and Brown. He was truly interested and provided valued observations and advice.

Dr. Aronson was engaged and making contributions to the community to the very end of his life. His activities ranged from working with his wife, Gale, to organize summer concerts on Blackstone Boulevard to helping with political campaigns. He remained deeply committed to education and mentoring into the last week of his life, hosting groups of students to discuss medicine, politics, history, and how to be an ethical and effective provider of care.

ALPERT MEDICAL SCHOOL ARCHIVES

PROUD DAY: The first graduating class had 58 students, 45 men and 13 women.

THE PROFESSOR: Aram Arabian MD'75 says, "[We] were in awe of the Chief for allowing each of us to pursue our goals without any badgering to lead us into a specific medical outcome such as research, primary care, or academics."

Steady Presence

CHARLES R. EFFRON '80 MD'83, P'16

I am deeply saddened by the loss of such a great man. Stan was a father figure to me and so many others in my class. It was a welcome pleasure to join him for coffee after collecting firewood in his backyard on a cold Sunday afternoon, or years later when he hosted the late afternoon gathering at his home on a Reunion weekend.

He will long be remembered for the profound impact he had on the students and his tremendous role in the success of our Medical School. He was one of the few who truly deserved being called a gentleman and a scholar. He will be greatly missed.

Human Memory

JONATHAN ELION '72 MD'75, P'05

I HAVE A VERY VIVID MEMORY of that portion of the graduation ceremony where Stan was handed the list of graduates, expecting that he would use that list to call each graduate up to receive their diploma. Upon receiving the list, Stan gave that indescribable smile that he had, put the list aside (as it was totally unnecessary!), then called each of us up to the stage *with proper pronunciation to boot!* And of course, for the rest of his life he could tell you all of those names along with where they lived and what they were up to.

ALPERT MEDICAL SCHOOL ARCHIVES

A Real Mensch

JOSEPH FRIEDMAN, MD, PROFESSOR OF NEUROLOGY

My first interaction with Stan Aronson occurred a few months after I arrived in Providence in 1982. I had never heard of him. I was paged while making rounds in the hospital, and this quite distinguished voice introduced himself as a part-time physician who was acting as a neurology consultant at the Brown student health service—who wanted to give up the position, asking if I'd be willing to take over.

I later learned that Stan, an eminent neuropathologist, who had also spent many summers as a doctor at his daughters' sleep-away camp, had been "helping out" at student health service because Rhode Island had a shortage of neurologists at the time. He hadn't told me that he had recently retired as dean of the Medical School, nor did he tell me that he was traveling to Boston to get an MPH at Harvard.

I will always remember Stan as the embodiment of a polymath, a person who knows everything about everything, yet he was caring, humble, and anxious to help others. If there's one word to remember him by, he would probably be most proud to be recalled as a *mensch*, a Yiddish word that simply means "man," but really conveys a lot more, encompassing terms like caring, smart, responsible, anxious to help others, leading by example—in short, "role model."

CLOUD NINE: Tracey Martin MD'15, right, celebrates her match with Rachel Blake MD'16.

It's a Match

For 102 med students, the future is now.

INTERVIEWS BY JOSEPHINE BENSON '17 AND THOMAS PETTENGILL '17

PHOTOGRAPHY BY SCOTT KINGSLEY

IT ALL COMES DOWN TO THIS: Match Day. High noon, the third Friday in March, when Alpert medical students at last tear open their red envelopes and learn where, after four grueling years, their careers will begin. As the party got started at the Medical School, more than a dozen students from the MD Class of 2015 reflected on the decisions and sacrifices and very hard work that brought them to that fateful moment. You can read excerpts from six of those interviews on the following pages; go to brownmedicinemagazine.org to hear from eight more students. *—Phoebe Hall*

• *Anesthesiology*

KEITH BUTTS
University of Utah Affiliated Hospitals/
University of Utah School of Medicine

DIANA ESCOBAR
Stony Brook Teaching Hospitals/Stony Brook University School of Medicine

SHAKIR MCLEAN
Medicine-Prelim: St. Vincent's Medical Center/Frank H. Netter MD School of Medicine
Oregon Health & Science University/
Oregon Health & Science University

COREY SPIRO
Massachusetts General Hospital/
Harvard Medical School

• *Dermatology*

PATRICK MULVANEY
Medicine-Prelim: Beth Israel Deaconess Medical Center/Harvard Medical School
Massachusetts General Hospital/
Harvard Medical School

"Both my parents were doctors and would have the most stimulating dinner table conversations. You can ask any of my grade school buddies, and they'd say, **'Yep, Rob was always gonna be a doctor.'**"

—ROB HEINL MD'15

SEEING DOUBLE: Isha Parulkar MD'15, left, and her twin brother, Anshul Parulkar '10 MD'18, right, with Associate Dean for Medical Education Allan Tunkel, MD, PhD.

ISHA PARULKAR
Medicine-Prelim: Saint Vincent Hospital/University of Massachusetts Medical School
Rhode Island Hospital/Alpert Medical School

MICHAEL XIONG
Transitional: Christiana Care/
Sidney Kimmel Medical College
Stony Brook Teaching Hospitals/Stony Brook University School of Medicine

• *Emergency Medicine*

ANDRE ANDERSON
NewYork-Presbyterian Hospital/
Columbia University College of Physicians and Surgeons

TED APSTEIN
Maricopa Medical Center/University of Arizona College of Medicine

MATCHDAY

IVY CHANG
NewYork-Presbyterian Hospital/ Columbia University College of Physicians and Surgeons

AVERY CLARK
Boston Medical Center/Boston University School of Medicine

HANNAH JANEWAY
Harbor-University of California, Los Angeles Medical Center/ David Geffen School of Medicine

DANIEL RESNICK-AULT
Boston Medical Center/Boston University School of Medicine

ROHIT SANGAL
Hospital of the University of Pennsylvania/University of Pennsylvania Health System

TAYLOR STAYTON
University of California, Davis Medical Center/UC-Davis School of Medicine

JONATHAN THORNDIKE
Rhode Island Hospital/Alpert Medical School

• ***Family Medicine***

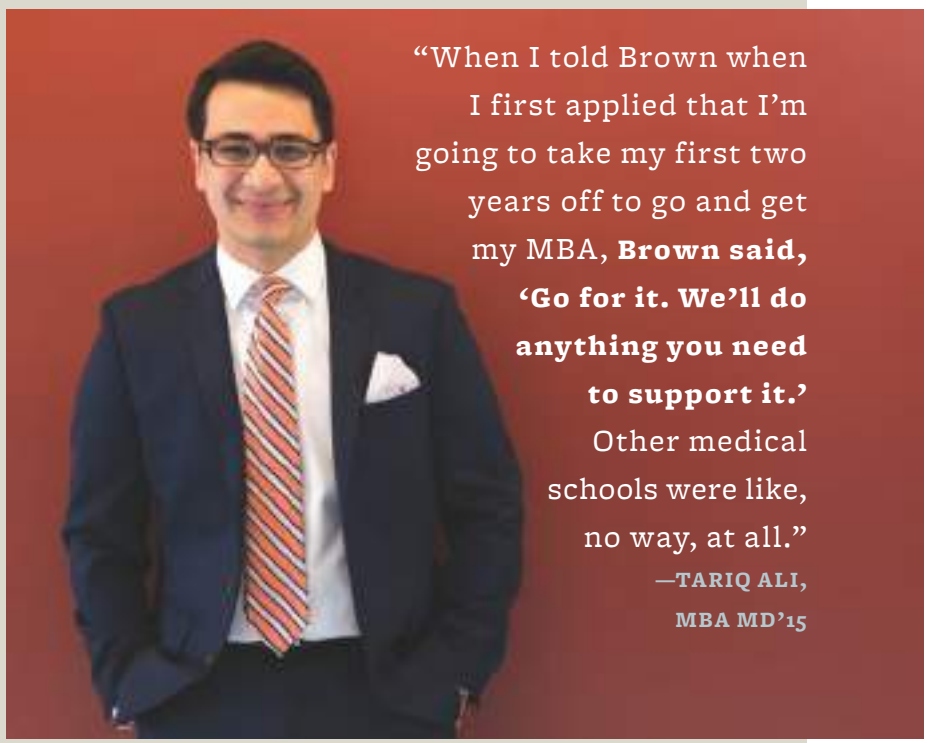
NICHOLAS CANELO
University of California, San Diego Medical Center/UC-San Diego School of Medicine

ROBERT COOK
Swedish Medical Center/University of Washington School of Medicine

ANGELA ESQUIBEL
La Crosse-Mayo/Mayo Clinic

RYAN HENEY
Memorial Hospital of Rhode Island/ Alpert Medical School

GROUP HUG: Two friends congratulate Allison Kay MD'15.



"When I told Brown when I first applied that I'm going to take my first two years off to go and get my MBA, **Brown said, 'Go for it. We'll do anything you need to support it.'** Other medical schools were like, no way, at all."

—TARIQ ALI, MBA MD'15

MADELINE MCKEEVER
Swedish Family Medicine Residency/ University of Colorado School of Medicine

SARA SCHLOTTERBECK
Boston Medical Center/Boston University School of Medicine

JOANNA SHARPLESS
Einstein/Montefiore Medical Center/ Albert Einstein College of Medicine

NATHAN SISON
University of North Carolina Hospitals/ UNC School of Medicine

DAVID STAT
Memorial Hospital of Rhode Island/ Alpert Medical School

JAMILLE TAYLOR
MedStar Franklin Square Medical Center/University of Maryland School of Medicine

• ***Med/Peds***

SAMUEL YANG
Ohio State University Wexner Medical Center/OSU College of Medicine

• ***Medicine***

TARIQ ALI
Hospital of the University of Pennsylvania/University of Pennsylvania Health System

ZUNAIRA CHOUDHARY
North Shore-Long Island Jewish Health System/Hofstra North Shore-LIJ School of Medicine

ALICE CHUANG
Santa Clara Valley Medical Center/ Stanford University School of Medicine

RAHUL DALAL
Hospital of the University of Pennsylvania/University of Pennsylvania Health System

JUSTINA GAMACHE
Olive View-University of California, Los Angeles Medical Center/David Geffen School of Medicine

ALMA GUERRERO
Rhode Island Hospital/Alpert Medical School

ROBERT HEINL
Emory University School of Medicine/Emory University School of Medicine

JOY LIU
Beth Israel Deaconess Medical Center/ Harvard Medical School

TRACEY MARTIN
New York University School of Medicine/NYU School of Medicine

MAY MIN
University of Massachusetts Medical School/UMass Medical School

ARON MOHAN
Hospital of the University of Pennsylvania/University of Pennsylvania Health System

NICHOLAS NASSIKAS
Rhode Island Hospital/Alpert Medical School

JERRY NNANABU
University of Chicago Medical Center/ Pritzker School of Medicine

"We've been **in Rhode Island for like six years now** and we're really hoping to stay. ... This is a big day for the students, but it's a **huge inflection point for families.**"

—RYAN HENEY MD'15, WITH HIS WIFE, JESSICA HENEY MD'13 RES'16, AND THEIR DAUGHTER, PHOEBE

MATCHDAY

SATYAJIT REDDY
Temple University Hospital/Temple University School of Medicine

RACHEL ROME
Rhode Island Hospital/Alpert Medical School

MATTHEW SCHWEDE
University of California, San Francisco Medical Center/UCSF School of Medicine

SARAH SWANSON
University of California, Los Angeles Medical Center/David Geffen School of Medicine

GRETEL TERRERO
Beth Israel Deaconess Medical Center/Harvard Medical School

• ***Medicine (Research)***

WAIHONG CHUNG
Icahn School of Medicine at Mount Sinai/Icahn School of Medicine at Mount Sinai

• ***Medicine-Primary***

GINA CHEN
Boston Medical Center/Boston University School of Medicine

CAITLIN COHEN
Massachusetts General Hospital/Harvard Medical School

KEVIN LIOU
NewYork-Presbyterian Hospital/Weill Cornell Medical Center

ELIZABETH MARSHALL
University of California, San Francisco Medical Center/UCSF School of Medicine

CATHERINE PANISZYN
Yale-New Haven Hospital/Yale School of Medicine

TERRA SCHAETZEL-HILL
Rhode Island Hospital/Alpert Medical School

• ***Neurological Surgery***

JOHN WILLIAMS
University of Washington Affiliated Hospitals/UW School of Medicine

• ***Neurology***

JUSTINE CORMIER
Medicine-Prelim: Rhode Island Hospital/Alpert Medical School
Yale-New Haven Hospital/Yale School of Medicine

AMI CUNEO
University of Washington Affiliated Hospitals/UW School of Medicine

HANNAH PARK
Medicine-Prelim: New York University School of Medicine/NYU School of Medicine
New York University School of Medicine/NYU School of Medicine

• ***Obstetrics/Gynecology***

CALVIN LAMBERT
Howard University Hospital/Howard University College of Medicine

GRACE CHOW
North Shore-Long Island Jewish Health System/Hofstra North Shore-LIJ School of Medicine

"My dad's actually why I was interested in medicine. He was a garbage man and got into an accident and had to have his leg amputated. So **I went with him to all of the doctor appointments."**

—JACQUELYN SILVA '10 MD'15, WITH BOYFRIEND JERRY NNANABU MD'15; THEY COUPLES MATCHED

"I'm 41—**I'm the old man of the med school here.** I did my undergrad and grad degrees in English ... [and] a second bachelor's in nursing. I was a nurse for four years. **I've been on a long winding road to get here today.**"

—BOB COOK MD'15

FAMILY AFFAIR: Nicholas Nassikas MD'15, center, celebrates his match with, left to right, his grandmother Virginia Chafee; his mother, Georgia Chafee Nassikas; his fiancée, Hopestill Kraft; and his cousin Marcy Hall, assistant director of admissions at the Medical School.

ELLA DAMIANO
Dartmouth-Hitchcock Medical Center/
Geisel School of Medicine

RAFAEL GONZALEZ
Brigham and Women's Hospital/
Harvard Medical School

IJEOMA IKO
University of California, Davis Medical
Center/UC-Davis School of Medicine

ALLISON KAY
University of Washington Affiliated
Hospitals/UW School of Medicine

AMRIN KHANDER
Mount Sinai Hospital/Icahn School of
Medicine

AMIE LEAVERTON
Oregon Health & Science University/
OHSU School of Medicine

CHRISTINA PANTON
Loma Linda University/Loma Linda
University School of Medicine

BIANCA STIFANI
Einstein/Montefiore Medical Center/
Albert Einstein College of Medicine

• ***Ophthalmology***

GRAYSON ARMSTRONG
Transitional: Cambridge Health
Alliance/Harvard Medical School
Massachusetts Eye and Ear Infirmary/
Harvard Medical School

DEIDRYA JACKSON
Medicine-Prelim: St. Vincent's
Medical Center/Frank H. Netter MD
School of Medicine
Medical University of South Carolina/
MUSC College of Medicine

EMILY LI
Transitional: Beth Israel Deaconess

MATCHDAY

Medical Center-Brockton/Harvard Medical School
Yale-New Haven Medical Center/Yale School of Medicine

• ***Orthopedic Surgery***

GREGORY ELIA
Rhode Island Hospital/Alpert Medical School

ZACHARY GRABEL
Emory University School of Medicine/Emory University School of Medicine

JOANNE WANG
University Hospitals Case Medical Center/Case Western Reserve University School of Medicine

• ***Otolaryngology***

NIGAR AHMEDLI
Einstein/Montefiore Medical Center/Albert Einstein College of Medicine

SARAH RAPOPORT
MedStar Georgetown University Hospital/Georgetown University School of Medicine

• ***Otolaryngology (Research)***

SURESH MOHAN
Massachusetts Eye and Ear Infirmary/Harvard Medical School

• ***Pediatrics***

CATHERINE BERGER
University of Chicago Medical Center/Pritzker School of Medicine

HONORA BURNETT
University of California, San Francisco Medical Center/UCSF School of Medicine

JOHN BUTLER
Rhode Island Hospital/Alpert Medical School

READ ALL ABOUT IT: Grayson Armstrong MD'15 shares the good news.

"I matched at my number one—I'm going to Oregon for anesthesiology! **I had a really good shadowing experience after my first year in college,** so I knew I wanted to do it for a while."

—SHAKIR MCLEAN MD'15, WITH HIS MOTHER, DIANE FRENCH-MCLEAN

MORAL SUPPORT: Six-month-old Luke helps his mom, Helen Johnson '11 MD'15, collect her envelope.

CRYSTAL-ROSE CUELLAR
Baylor College of Medicine/Baylor College of Medicine

TENDO KIRONDE
University of Washington Affiliated Hospitals/UW School of Medicine

COURTNEY MANNINO
University of California, Los Angeles Medical Center/David Geffen School of Medicine

SHANNON MARRERO
University of Washington Affiliated Hospitals/UW School of Medicine

AIDAN PORTER
University of Pittsburgh Medical Center/University of Pittsburgh School of Medicine

JULIANN REARDON
University of Massachusetts Medical School/UMass Medical School

JOSEPH SCHMIDHOFER
Rhode Island Hospital/Alpert Medical School

JACQUELYN SILVA
University of Chicago Medical Center/Pritzker School of Medicine

KARY VEGA
Florida Hospital/University of Central Florida College of Medicine

• ***Plastic Surgery***

DANIEL CHO
University of Washington Affiliated Hospitals/UW School of Medicine

ALEXANDER MAYER
Virginia Commonwealth University Health System/VCU School of Medicine

• ***Psychiatry***

GREGORY BARNETT
Cambridge Health Alliance/Harvard Medical School

KELLY MACDONALD
Walter Reed National Military Medical Center/Walter Reed National Military Medical Center

EDGAR WOZNICA
Johns Hopkins Hospital/Johns Hopkins University School of Medicine

• ***Radiology***

ERICA ALEXANDER
Surgery-Prelim: Hospital of the University of Pennsylvania/University of Pennsylvania Health System
Hospital of the University of Pennsylvania/University of Pennsylvania Health System

YI CAO
Medicine-Prelim: Roger Williams Medical Center/Boston University School of Medicine
Beth Israel Deaconess Medical Center/Harvard Medical School

LINDSEY NEGRETE
Transitional: Scripps Mercy Hospital-San Diego/UC-San Diego School of Medicine
University of California, San Diego Medical Center/UC-San Diego School of Medicine

• ***Surgery***

BRENDON ESQUIBEL
Gundersen Medical Foundation/University of Wisconsin School of Medicine and Public Health

HELEN JOHNSON
Vidant Medical Center/Brody School of Medicine

CAROLYN LUPPENS
University of Utah Affiliated Hospitals/University of Utah School of Medicine

OLIVIER VAN HOUTTE
Abington Memorial Hospital/Temple University School of Medicine

JASON WADE
Robert Wood Johnson Medical School/Robert Wood Johnson Medical School

• ***Triple Board***

VERONICA ALEXANDER
Tulane University School of Medicine/Tulane University School of Medicine

CLAIRE WILLIAMS
Rhode Island Hospital/Alpert Medical School

Want to see more photos? *Go to flickr.com/alpertmedicalschool*

CALLING

Emergency physician JAY BARUCH, MD, explores the complex realities of health care in this short story from his new fiction collection, *What's Left Out*.

THE PHYSICIAN sweeps a final, downcast eye over the body tucked between white sheets. Silver hair combed into a sharp part. Aftershave lingering in the lamplight. Stubborn traces of life that sting the physician. The man had plans that evening, had been well enough to care about style, the physician thinks, holding onto a deep, unsatisfying breath. Now he must call the next of kin. The only phone number belongs to the man's sister. When she answers, he reveals only that her brother is in the emergency department and he's critically ill. A chilled silence follows, but words are accumulating meaning, gaining a charge. The physician braces for a storm of grief. "I need to find a ride. The legs don't work too good," the sister finally says, unexpectedly calm.

The physician sighs sweet relief. "Take your time. We'll wait."

Nurses close off the room. The emergency department teems with life, making it a more charitable space for viewing the body than the sterile tranquility of the basement morgue. The physician scrambles to catch up with the many patients lost on his radar during the long code. He's also haunted by the horde of people camping in the waiting room for a bed.

An hour later she calls back. "How is he?"

Deceit aches. The physician bites his tongue. The years have taught him that news of sudden death demands intimacy, awkward and ill fitting as it may be. Over the phone it can feel like bumping against a darkness where some objects are fragile and others wired with explosives.

"It would be easier if we can talk face to face," he says.

"I'm on my way. Please tell him that?"

"Sure," he says, rubbing beneath the sweat-stained neck of his scrub top. Manifesting a breezy tone is stressful when the very condition for the conversation is bad news, where words pass through a filter of self-doubt and second-guessing, grind

THE CODE

against alternative treatments, even crazy ones; this is what the wounded ego feeds on in its efforts to pretend a better outcome and an easier discussion.

Another hour passes. "I just spoke to the sister," says the social worker, his voice sinking. "No ride."

"Seriously? She can't call a cab?"

The social worker removes his glasses, blows fog to clean the lenses. "You have no other choice."

The physician drops his chin to his chest, still tight from the failed resuscitation. Decisions weren't so much made as options eliminated. "The code cart is empty," a younger physician finally joked, "no meds left," which softened the strain and frustration in the nurses' faces, but not by much. The code had gone on way too long, he knew that, but he couldn't find that sense of an ending, recognize when enough is enough, or even worse, when enough is too much. Then he caught sight of the medical student lost in the brutish chore of chest compressions, sweat limping off his forehead and onto the patient. The student was exhausted, or maybe sick from the realization that the crunching beneath his thrusts were cracking ribs. "Breaking bones is part of CPR done well," the physician told the student. "Hope and bruising often come in the same package."

The physician calls back, breaks the news. He believes he can trace the sister's tears by her gulping breaths. He even reaches for a box of tissues. A bystander might suspect he's consoling the slow and outdated computer. "Again, I'm sorry for your loss." The physician can't figure out whether the sister needs space to cry or feels abandoned in anticipation for more details. Or maybe she hung up, disappointed and disrespected by his audacity. He had lied to her.

"Hello?" the physician says.

The clumsiness of the scene is complicated by the TV blasting in the background at her home.

"Hello?"

"My son isn't very considerate," the sister says.

An angry voice rips through the canned television laughter, tells her to be quiet. It belongs to a man who probably owns a car, the physician believes, or could steal one if he needed to.

"Can you hear me?" she says.

"I'm sorry? Are you speaking to me?" says the physician.

"Who else would I be talking to?"

"Maybe your son..."

"I've wasted enough breaths on him." Sniffling mists the phone line. "Where's he at? My brother?"

"The ER. His body. Thinking it was best for you to see him..."

"You lied to me," she interrupts. "He was dead when you first called me, wasn't he?"

"Giving the news over the phone can be dangerous. Sometimes folks become very upset. They dash to the hospital and crash and become patients themselves. We try to avoid that."

"I don't drive. I can't."

"Yes, you told me." The physician squeezes the receiver, nestles against it, then pulls away. It stinks of ear sweat and cheap plastic. "Your brother called 911 himself. The medics said he was breathing when they found him on the floor of his apartment."

"He kept that place spotless," she says. "Not much need for furniture, except for that futon. Who can get up from those things?"

"Your brother's heart stopped in the ambulance. The medics were all over it."

"What makes you think I want to hear all this?"

"The chain of events were lined up just so. I thought we could save him. We tried everything."

The explosions from the TV float over the physician.

"He had a heart attack a few weeks ago," the sister says. "You knew that, right? A small one."

He hears the ping of gunfire, hollering and music throbbing with faux suspense.

"What's this?"

"Can you hear me?"

The physician forces the phone against his ear.

"He walked out of a hospital in Connecticut. His heart had blockages, the doctors said. Next day, he's back on the site lugging rebar."

"Say again?"

"He didn't have medical. He never bought a stitch if he didn't have the cash in his pocket. He was responsible in that

Baruch talks about his book at the Cogut Center for the Humanities' Creative Medicine Lecture in April.

ASK THE AUTHOR

The doctors in *What's Left Out* are rarely portrayed as heroic—and sometimes they're the antithesis. How did they end up that way?

One of the impulses driving me to write about medical worlds—because I didn't start out that way—was the impression that many stories written by physicians followed standard narratives that didn't coincide with my complicated personal experiences as a physician, student, teacher, patient, and overall observer of medicine. Sure, physicians (and nurses and midlevel providers) are heroic at times, but we're also human, facing great challenges, and when stressed, the same person can inhabit contradictory behavior. That's what interests me, probing this turbulent emotional territory that, true to Rhode Island, is rich with passion, drama, humor, and jaw-rattling potholes.

How did your personal experience as a physician play a role in these stories?

Donald Barthelme famously once wrote that writing is a process of dealing with "not-knowing." Personal experiences and intense emotions might serve as a source of trouble, fascination, and unrest that provoke me to think of narrative possibilities. But that only starts the process of filling pages. Eventually, at some point, the material makes its way into fiction. The stories come to life, imposing demands and asking questions.

Physician-writers who choose to write about the medical experience must carefully balance their moral and legal duties to safeguard patient privacy and confidentiality with their obligation to readers and creating what they believe to be important and powerful stories.

One of the biggest challenges of my work as an emergency physician is gaining a measure of comfort with uncertainty. After 20 years of practice, I still stay awake nights thinking about the patients I cared for during that ER shift. In that way, my patients continue to live in my consciousness. Interestingly, a frequent comment about my stories points to their lack of closure, though I spend a lot of time with my endings. Maybe the open-ended nature of my clinical work has influenced the narrative structure of my writing. Regardless, I like my stories to end in such a way that readers wonder about the futures of the characters beyond the page.

In "Calling the Code," the doctor lies to the sister of the deceased on the phone, underscoring an ongoing discussion, in medical education and beyond, about how to have difficult conversations with patients and their families. Does the plot of this story have a basis in reality?

way. I told him to stop being stupid. He said the hospital bills would kill him before any heart attack."

"He knew he might die?"

"It had to be on his mind, right?" she says.

This news shouldn't diminish the tragedy, but the physician feels a smile, a reprieve from responsibility, slipping into his face. The distance from the sister now offers refuge. "Can you lower the sound?" the physician asks, aware that it's *her* home. "Maybe go into another room?"

"It's a landline," she says. "The cord only stretches so far."

The physician remembers what she had said earlier, that she didn't walk too well.

"You need to show some respect," she says.

"Excuse me?"

"Not you." She appeals to her son. "My brother just died. Please."

The television sounds recede.

"That's better. You were saying, doctor?"

"I'm sorry," the physician says.

"You already said that. Doesn't matter anyway. I was hoping ..."

"What's that?" the physician says.

"I wanted to see him," she says, her voice crumbling. The wave of television noise slowly rising.

"Doesn't your son drive? Have a car?"

"He does. He does. But he's very busy. It's better this way. He and his uncle didn't see eye to eye. We weren't close."

"Put your son on the line," the physician says.

COURTESY COGUT CENTER FOR THE HUMANITIES

"Health care has become surreal on its own and doesn't need any help from fiction writers."

Breaking bad news is difficult, and each instance can be difficult in unexpected ways. We must be cautious when educating students that there is a "right" way to do it. These situations are so complicated. You're thinking about the patient who just died, working through your own feelings. Could I have done something differently? Did I miss anything? This story emerged after several experiences when the family discussion was so unusual and bizarre that I found it hard to keep grief at the center of the conversation.

The doctor rationalizes his guilt about lying because of her family's problems—they seem to care even less than he does. With so much at stake, do doctors blame others to assuage their own guilt?

We serve communities challenged by terrible and unimaginable burdens and hardships. Patients often engage in habits and make choices that contradict their best interests. Parsing out blame is hard because the nature of bad choices presumes that patients have choices to begin with. Even so, there are particular ER shifts when it feels I care more for my patients than they care for themselves. At the same time, there are many patients doing everything that is humanly possible to care for themselves or loved ones, but they've fallen so deeply into the cracks of our fragmented health care system that whatever I can offer doesn't come close to meeting their complex web of needs.

Many of the stories border on the surreal. For example, in "The Telephone Pole," a moving utility pole is to blame for a series of drunk driving deaths—not the drivers themselves. How did you arrive at these unconventional story lines?

My imagination is inspired by my experiences as a physician, though health care has become surreal on its own and doesn't need any help from fiction writers. Through my work I'm trying to make sense of the non-sensible. As an emergency physician in the region's trauma center, I'm part of a team that cares for a lot of drunk drivers who crash into poles, some repeatedly, and it seems often they escape legal consequences. Why is that? If they're not at fault, it must imply that telephone poles are to blame, right? I wanted to explore such a community. In particular, would this absurd belief serve a necessary social value or purpose?

This is your second book of short stories. You're a practicing emergency physician, co-director of the scholarly concentration in Medical Humanities and Ethics, director of the Program in Clinical Arts and Humanities, and associate professor at Alpert Medical School. You're a husband and father. How do you find time to write?

Honestly, it's becoming harder and harder. I write slowly, and I rewrite extensively. So, I'm lobbying for a 28 hour day...

"Nothing good would come of that," she says.

The physician wants to argue, except he has not earned the right. He couldn't save her brother. What's left is an irrational need to rescue, or at least salvage, this conversation.

"Don't you want to say goodbye?" says the physician. "Closure is important."

"You know, I was once an excellent driver."

Shrieking tires peel through the phone line. The physician listens for the sister's voice. "Mrs.—?" The physician doesn't remember her name. He knows her only as the sister of the deceased, the next of kin who needed to be notified. "Hello?" Enough bad television dialogue. The longer he waits the sillier he feels. Silliness sharpens into anger, then anger morphs into doubt. Should he be concerned for her safety, calling the police? No. Enough with the crashing vehicles, the insane whoops. *What are you doing*, he presses himself. Hanging on the line, abandoned by logic, he sees himself in the moment and looking back on it, an illusionary hindsight that offers no answers, but carries no regrets either. *Enough*, he tells himself, *you did your best; enough*, and returns the phone to its cradle.

ALUMNI ALBUM

CHECKING IN WITH BROWN MEDICAL ALUMNI

THROWBACK THURSDAY
Back in 2002, Match Day was a less grand affair, with students picking up the important envelopes from their mailboxes in the BioMed Center.

ALPERT MEDICAL SCHOOL ARCHIVES

WHAT'S THE BUZZ?

Career news, weddings, births—your classmates want to know. Go to **med.brown.edu/alumni** and click on "Updates and Class Notes."

CLASSNOTES

1975

Alexander Swistel received a Lifetime Achievement Award from the Cancer Research and Treatment Fund in November 2014 for his pioneering work in breast cancer surgery. He is an associate professor of clinical surgery and an attending surgeon at NewYork-Presbyterian/Weill Cornell Medical Center. He and his wife, **Patricia Myskowski** '72 ScM'74, a dermatological oncologist at Memorial Sloan Kettering Cancer Center, live

EYE
ON ALUMNI

The Second Power

Frustrated by the education system, an alumna founds a school for exceptional students.

Year after year, Kimberly Busi MD'97 watched in frustration as her son fell deeper down the rabbit hole. When he was 18 months old, she and her husband suspected that he might have some developmental challenges. By age 8, they knew he had Asperger syndrome and would be classified as a "twice-exceptional" student (gifted in one area but with special needs in another).

"While my son excelled academically, he was becoming increasingly anxious and sad about school," Busi says. "His traditional school environment, despite its vigorous academic standards, had little understanding about how to provide the support he needed."

In 2009, Busi took matters into her own hands. She left behind an academic appointment in psychiatry at New York University School of Medicine to organize a parents' group and found and direct an after-school program and a 10-week summer camp for twice-gifted children. Her goal—to evolve the program into an alternative college preparatory school—was realized when the Quad Preparatory School opened its doors in September 2014 for students ages 10 to 14.

"My medical education at Brown emphasized thinking outside the box, and I leaned on that philosophy to reconstruct all the pieces that go into figuring out what school means," Busi says.

She brought in other clinicians with twice-gifted educational experience to design individual, customized instruction. They came up with a plan in which half a student's time is devoted to one-on-one training in four core academic areas, and the other half to collaborative projects in a group setting. "If you solely provide tutoring, your students will never learn the skills to work in a world where collaboration and social awareness are often required," Busi says.

Located in a synagogue on the Lower East Side of Manhattan, the school is designed with flexible walls and a large, open, and well-lit area to facilitate movement and energy, as well as quieter space that's available as needed. Cross-curricular inquiry projects and off-site trips build self-esteem and foster social interaction—areas generally neglected for special needs students in traditional school settings.

Busi and her supportive advisory board want to grow by eight to 10 students a year, find a permanent home, and expand to K-12. Staying solvent has become a complicated, never-ending challenge that ties into families receiving special needs financial assistance from the New York City Department of Education and state and federal agencies in accordance with the federal Individuals with Disabilities Education Act.

Despite the hard work that it will take to accommodate more students in what she calls "a vastly underserved population," Busi takes comfort in knowing that her son, now age 14, looks forward to school every day. That he and so many of his classmates are meeting their potential has made her more fully appreciate one mantra she continually heard while she was at Brown: go out into the world and make it a better place. ***—Bill Glovin***

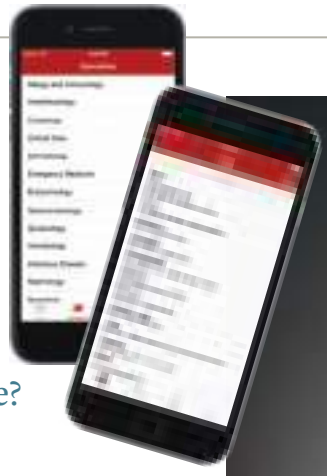
Kimberly Busi

COURTESY KIMBERLY BUSI

EYE ON ALUMNI

Phone Consult

Need a summary of a landmark journal article? There's an app for that.



Manuel Lam

Manuel Lam '04 MMS'09 MD'09 recalls the endless clinical trials his attending physicians referenced during rounds when he was a resident at Stanford. "AFFIRM, ACCORD—we would try to jot down all the acronyms to look up later, but there were just so many," he says.

Now residents can pull out their phones and consult an app, Journal Club, when their attending mentions an unknown trial. Journal Club is the result of collaboration among Lam and colleagues David Iberri, MD, of Stanford and Timothy Plant, MD, of Johns Hopkins.

The app focuses on the top articles in medicine, summarizing the main points and outcomes. Written by physicians, these summaries are designed to be easily read and understood quickly. "Think of it as CliffsNotes for medical research," Lam says.

> "Everyone assumes that **doctors know everything** about everything. That's **not true.**"

Authors and editors are recruited directly though wikijournalclub.org, an independent, online journal club built upon MediaWiki, the open-source software engine that powers Wikipedia. The wiki software allows for collaborative editing of the website's pages. From this site, important summaries are selected for inclusion in the read-only app.

Journal Club first hit the Apple App Store in April 2012. It boasted 100 articles just months after its debut; three years later that number has more than doubled.

Lam, who concentrated in computer science as a PLME, is one of the curators of Journal Club, selecting which summaries on the website should be included in the app. In his day job, he's an internist at the Facebook Health Center in Menlo Park, CA, and hospitalist for the Palo Alto Medical Foundation at Stanford Hospital. Some of the residents there use Journal Club, he says: "It brings smiles to our faces when we hear residents and interns talking about Journal Club."

Both the app and website have grown quickly—since the Android app debuted in March 2013, downloads and revenue have almost tripled, the iPhone app has grown 72 percent, and the website is nearing 1 million views. The app sells for $4.99.

"It's definitely an upward trajectory," Lam says. "Everyone assumes that doctors know everything about everything. That's not true. But now, in one minute, you can whip out your phone, access the article, and absorb the major details." ***—Josephine Benson '17***

COURTESY MANUEL LAM

in New York City. They have three children.

1979

Preston Calvert '76 received the 2015 Thomas Carlow Distinguished Service Award from the North American Neuro-Ophthalmology Society at their annual meeting in February. A longtime member of the society, he has served on numerous committees and on its board of directors, as a board member as well as president and vice president. Preston is the president of the Brown Medical Alumni Association Board of Directors.

Peter Hollman '76 was named the inaugural chief medical officer of University Medicine, a group practice in Rhode Island, in February. He maintains a private practice in Pawtucket for University Medicine's Division of Geriatrics and Palliative Medicine and is a clinical assistant professor of family medicine at Alpert Medical School. He recently served as associate chief medical officer at Blue Cross & Blue Shield of Rhode Island and as medical director for a long-term care hospital, skilled nursing facility, and hospital-based home care company. He lives in Cranston, RI.

Edward W. Martin '76 MPH'07 received the 2015 Josefina B. Magno Distinguished Hospice Physician Award from the American Academy of Hospice and Palliative Medicine. Ed is the chief medical officer at Home & Hospice Care of Rhode Island, where for 26 years he has provided "expert, compassionate care to people facing serious illness and their families." He also is a clinical associate professor of medicine at Alpert Medical School, where he has received teaching recognition awards for his work with medical students and physicians-in-training.

> Ed Martin provides **"expert, compassionate care** to people facing serious illness and their families."

1981

Richard Migliori '78, executive vice president of medical affairs and chief medical officer of UnitedHealth Group, delivered the State of the Industry speech at the general session of the 2015 Armada Specialty Pharmacy Summit in Las Vegas in May. He serves on the Governor's Blue Ribbon Committee at the University of Minnesota Medical School, the American Society of Transplant Surgeons, and the US Department of Health and Human Services Advisory Committee on Organ Transplantation.

Es Rolnick Nash '78, P'09 joined Health Advocate as vice president of comprehensive care in 2012. Her son, Jake, graduated from George Washington University, and her daughter Rachel Nash '09 graduated from medical school and began her residency. Rachel's twin, Leah, works as a program analyst at CMS.

1987

Mark Hosley began practicing neurology in January at the Southcoast Brain and Spine Center in Dartmouth, MA. Prior to Southcoast, he practiced in New Bedford, MA, and East Providence. His clinical interests include EMG/NCS; neuromuscular disease; sleep medicine; chemodenervation therapy for spasticity and dystonia; dizziness/vertigo; EEG interpretation; and multiple sclerosis/spinal cord and central nervous system injury.

1988

Eric L. Sievers '85 was named chief medical officer of Trillium Therapeutics Inc., an immuno-oncology company that develops cancer therapies. He will lead the evaluation and implementation of clinical development strategies for advancement and approval of Trillium's clinical programs. Previously Eric was senior vice president of clinical development at Seattle Genetics, where he played a key role in the development and approval of Adcetris, which is used to treat lymphomas.

1990

David Carcieri '87 has been named the designated institutional official for Women & Infants Hospital of Rhode Island's graduate medical education programs. David is a clinical assistant professor of obstetrics and gynecology at Alpert Medical School.

1992

Joel Selanikio treated Ebola patients in Lunsar, Sierra Leone, with the International Medical Corps in December. NPR broadcast part of his audio diary in January; the feature was titled "Death

ALUMNI ALBUM

Becomes Disturbingly Routine: The Diary of an Ebola Doctor," and can be found at npr.org.

1993

Mark Clark will fulfill a dream from his med school days on July 1, when he becomes the Block Island, RI, physician. Currently director of the emergency medicine residency program and an assistant professor at the Icahn School of Medicine at Mount Sinai, he vacations on the island every year. He told the *Block Island Times*, "Medicine is a wonderful way to serve, and one of the benefits of training in emergency medicine is that the skills are applicable in almost any setting." Mark and his partner, Michael Chapman, a graphic designer and yoga instructor, and their three dogs will move to the island this summer.

1994

Quyen D. Chu, MBA, is a co-editor of *Surgical Oncology: A Practical and Comprehensive Approach* (Springer), a new textbook for medical students, surgical oncology fellows, general surgeons, and educators. Quyen is a professor of surgery, chief of the Division of Surgical Oncology, and director of the Surface Malignancies Program at the Louisiana State University Health Sciences Center in Shreveport. Contact him at qdchu2010@gmail.com or qchu@lsuhsc.edu.

1999

Sara Newmann, MPH, and her husband, Douglas Sovern '82, announce the birth of twins Jacob and Maya.

2003

Adam H. Skolnick '99 is an associate professor of medicine in the Leon H. Charney Division of Cardiology at the NYU Langone Medical Center and a fellow of the American Heart Association. He writes: "I am the director of the NYU medical student cardiology course, associate director of the telemetry unit, and have a busy cardiology practice in Manhattan, where I am blessed to live with my wife and daughter. I send my best wishes to my fellow Brown Med alums."

2005

Michael Harwood RES'09 appeared on *Jeopardy!* in October 2014. Mike, a dermatologist with the L+M Medical Group in Westerly, RI, led most of the game, answering questions about *Othello* and rhombuses before being stumped in Final Jeopardy (correct answer: "What is Baffin Island?") and coming in third. "Strangely," he said in a Westerly Hospital press release, not winning "didn't bother me at all. ... It really was a lot of fun." Mike lives in Westerly with his wife, Vanessa, a speech pathologist, and their two children.

2007

Jared Jagdeo '02 MMS'06 received the 2015 Dr. Horace Furumoto Innovations Young Investigator Award from the American Society for Laser Medicine & Surgery. Jared is an assistant professor of dermatology at the University of California, Davis, and the director of the Photobiomodulation Laboratory and of Lasers, Light, and Complementary Medicine at the Sacramento VA Medical Center.

> Mark Clark will **fulfill a dream** from his med school days on July 1, when **he becomes the Block Island physician.**

2010

Jacquelyn Hatch-Stein '06 and **Ronen Stein** announce the birth of their daughter, Abigail, on January 11, 2015. Both are second-year fellows at the Children's Hospital of Philadelphia: Jackie for pediatric endocrinology and Ronen for pediatric gastroenterology. They completed their pediatrics residencies at University Hospitals Case Medical Center in Cleveland, OH.

2011

Rajiv Kumar '05 is the chairman of the American Heart Association's 2015 Southern New England Heart Ball, which takes place June 13 in Newport, RI. ShapeUpRI, an exercise and weight loss campaign that he founded in 2005,

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EYE
ON ALUMNI

Medical Maverick

An emergency medicine doc traces the evolution of the specialty.

Who is the prototypical emergency medicine doctor? An adrenalin junkie who enjoys lots of stress and never knowing what will happen next, and who can work in a fast-paced, information-poor environment, according to emergency physicians interviewed in the documentary *24|7|365*, which was written and produced by Mark Brady, MPH MD'09. Brady is himself an emergency physician, living in Memphis, TN, and practicing with Baptist Memorial Health Care and the Methodist Hospital systems.

Inspired by the book *Anyone, Anything, Anytime: A History of Emergency Medicine*—written by Brian Zink, MD, Frances Weeden Gibson–Edward A. Iannuccilli, MD, Professor and chair of the Department of Emergency Medicine at Alpert Medical School and Brady's former professor—Brady wanted to capture the voices of the aging founders of the field before it was too late.

Each year more than 130 million people receive care in emergency departments, but that health safety net is relatively new. Emergency medicine became a board-certified specialty in 1979. "Today, we are basically a full generation removed," Brady says. "The people who started it knew why they did it, where it came from, what it was like before, and why it was important to do. I wanted people to know why we do what we do."

Mark Brady

COURTESY MARK BRADY

Brady does it, he says, out of a desire to care for underserved populations. "We are the only place anyone can go when they are sick, regardless of their ability to pay," he says. "If you don't have money, we still take care of you"—a service that was legislated in 1986 by the Emergency Medical Treatment and Active Labor Act. "I am personally proud of the fact that the average emergency provider delivers about $140,000 of unreimbursed care per year," he says.

The film describes the founders of the field as mavericks. "That's built into the DNA of an emergency physician. We fight for the patients that need care," Brady says. "If a patient needs surgery, it is our job to convince the surgeons to take them to the OR. Sometimes you have to wake the CEO up in the middle of the night to free up hospital beds. We have to be advocates for the patients."

After earning his Master of Public Health at Harvard, followed by an NIH fellowship in infectious diseases in South America, Brady did a medical writing internship at the Discovery Health Channel. "That's how I learned about the media industry and really learned how to write accessible medical content," he says. "When I heard about an idea from some emergency medicine residents to do interviews of the founders of our specialty, I convinced them that we could do something bigger—and I knew how to go about it." After *24|7|365* Brady teamed up with director Dave Thomas and other emergency physicians to establish a small independent film company that focuses on socially relevant medical documentaries.

Brady's next ventures include international travel with the Navy Reserve and joining the faculty of Memphis's first emergency medicine residency, at the University of Tennessee, in July. His next film, he says, "is about end-of-life care. We are horrible at it and we can do better."

—Mary Stuart

Visit 247365doc.com to watch 24/7/365: The Evolution of Emergency Medicine. *See the trailer for Brady's new documentary at neversaydiefilm.com.*

is the ball's signature sponsor. Rajiv is also the chief executive officer of ShapeUp, a social networking company that supports employer wellness programs, which he cofounded in 2006 with **Brad Weinberg** '03. Brad cofounded Blueprint Health, an accelerator program in New York that supports health startups, in 2011, and is a member of the board of directors of ShapeUp.

2013

John Luo '09 and his wife, Leah, welcomed their first child, Orion Luo, in February. John is founder and president of Doctor's Choice, helping people navigate Medicare options.

2015

John Butler married Alison McBride on October 11, 2014, at St. Margaret Church in Rumford, RI. John will begin the pediatrics residency program at Alpert Medical School/Hasbro Children's Hospital this summer.

Brad Weinberg cofounded Blueprint Health, an accelerator program that **supports health startups.**

2017

Neil Parikh '11 was named one of *Forbes*' 30 Under 30 Social Entrepreneurs in 2014. Neil took a leave of absence from Alpert Medical School to cofound Casper, a company with about $15 million in venture funding that ships mattresses directly to consumers and has proprietary sleep technology. Now serving as Casper's COO, Neil previously founded Consignd, a virtual consignment marketplace.

RESIDENTS

1996

Renee Eger, MD '85 is the medical director for the Women's Primary Care Center of Women & Infants Hospital in Providence. A clinical assistant professor of obstetrics and gynecology at Alpert Medical School, she has practiced in Rhode Island and southeastern Massachusetts for more than 20 years. Renee lives in Sharon, MA, with her husband and two daughters.

2005

Brian Patel, MD, was named chief of emergency services at Sturdy Memorial Hospital in Attleboro, MA, in March. Brian joined Sturdy in 2005 and most recently served as associate chief of emergency services. He also oversees Sturdy's stroke program and emergency preparedness/disaster management committee.

2006

Kristin Anderson, MD, joined the clinical faculty of Alpert Medical School as an assistant professor in medicine and pediatrics. She provides direct care and precepting in MedPeds clinic and also supports resident advocacy. In addition she is continuing in her role as the CEO of FIT Club for Kids (Teachfitclub.org), which creates lesson plans on nutrition and fitness for the classroom. She has authored curriculum on health policy and practice management with an ongoing commitment to didactic teaching. She practices at Buttonwood Internal Medicine and is on the staff of St. Luke's Hospital, both in New Bedford, MA.

Kristen Wright, MD, was named a Top Doctor in the category of Reproductive Medicine and Infertility by *New Hampshire Magazine*. Kristen is the chief fertility specialist for IVF New England's New Hampshire Center in Bedford and Portsmouth. This is the third year in a row she has been named a Top Doctor by the magazine, which surveys state physicians. She and her husband have three children.

2011

Kristin Laraja, MD, is a pediatric cardiologist at the UMass Memorial Children's Medical Center and assistant professor of pediatrics at the University of Massachusetts Medical School. A graduate of Tufts University School of Medicine, Kristin completed the pediatrics residency program at Hasbro Children's Hospital and her pediatric cardiology fellowship at Boston Children's Hospital.

2014

Lauren Hedde, DO, opened her own practice, Direct Doctors, in North Kingstown, RI, offering house calls as well as office visits. She founded the concierge medicine practice a week after completing her family medicine residency at Memorial Hospital of Rhode Is-

land last summer. Her husband, **James Hedde**, DO, a fellow family medicine resident, practices at Great Woods Family Medicine in Mansfield, MA.

FELLOWS

1987

Thomas Malone, MD, MBA, became president and CEO of Summa Health System in January. He was previously chief operating officer for Summa's Care Delivery System and has held administrative positions at Harper University Hospital, Hutzel Women's Hospital, and Detroit Medical Center. He did his residency in pediatrics at Columbus Children's Hospital and his perinatal-neonatal fellowship at Brown. He and his wife, Megan, live in Cuyahoga Falls, OH.

2001

Robert Lyons, MD, joined the Summit Orthopedic Group in Chambersburg, PA, in April. He is an assistant professor of orthopedics at the Pennsylvania State University College of Medicine and the team physician for the Harrisburg Senators baseball team. He completed the fellowship in hand, upper extremity, and microvascular surgery at Brown.

2010

Allison Graziadei, MD, is an endocrinologist with Ellis Medicine and the Capital Region Diabetes & Endocrine Care in Clifton Park, NY. She completed her medical degree and residency at the University of Buffalo School of Medicine and Biomedical Sciences in Buffalo, NY, and her fellowship in endocrinology, diabetes, and metabolism at Brown. She has two sons.

OBITUARIES

FACULTY

ABRAHAM HORVITZ, MD '32, P'70

Abraham Horvitz, 103, of Providence, died January 27, 2015. A Providence native, he decided to become a doctor as a teenager. He studied biology at Brown, and completed his medical degree at the Columbia University College of Physicians and Surgeons and residency at Washington University in St. Louis. He was working at Harlem Hospital in New York when Pearl Harbor was attacked and, although exempted from the draft because he was a doctor, he enlisted. A captain in the Third Army Surgical Corps, he operated on wounded American and German soldiers on Utah Beach in Normandy after D-Day and came under fire in the Battle of the Bulge. Witnessing the liberation of a concentration camp strengthened his identity as a Jew and his ardent support of Israel. In 1948 he and his wife, Eleanor, and their new son, Leslie '70, moved to Providence, where Abraham opened a surgical practice. He was affiliated with The Miriam Hospital for 41 years and served as medical staff president, and was a clinical assistant professor of surgery at Brown for nearly 30 years. After retiring, at age 79, he continued to serve Brown as a clinical associate professor emeritus and to attend medical conferences at The Miriam. A longtime member of Temple Beth-El, he is survived by his son. Donations in his memory can be made to the Rhode Island Jewish Historical Association, 130 Sessions St., Providence, RI 02906; or to a charity of the donor's choice.

RESIDENT

WILLIAM ROBERT JENKINS, MD RES'85

William Jenkins, 75, of Millinocket, ME, died February 27, 2015. He grew up in the Bangor, ME, area and, after attending the University of Maine, he served in the US Army for several years, including two years in Vietnam, where he earned two Bronze Stars; he retired from the Army Reserve as a lieutenant colonel. Having resolved to become a family physician while in Vietnam, he graduated from George Washington University School of Medicine in 1982 and, after his residency at Memorial Hospital of Rhode Island, opened a private practice in the Katahdin area of Maine. Bill was board certified in geriatrics and served as medical director of the Millinocket Regional Hospital emergency room and of the Katahdin Nursing Home. For several years he traveled to Vietnam with Vets With A Mission to provide medical care. His many recognitions included Maine Family Doctor of the Year in 1999 and the Maine Primary Care Association Clinical Excellence Award in 2007. A layreader and member of the vestry at St. Andrew's Episcopal Church, he loved music, nonfiction books, photography, and the natural beauty of Maine. Survivors include his wife of 40 years, Leslie, and their two sons, Mark and David. Donations in his memory may be made to Vets With A Mission, 1307 Caldwell St., 3rd Floor, Newberry, SC 29108; St. Andrew's Episcopal Church, 40 Highland Ave., Millinocket, ME 04462; or Millinocket Regional Hospital, 200 Somerset St., Millinocket, ME 04462.

"Throughout my four years at Alpert Medical School, I have been encouraged to find and pursue my passions. I found my calling during my research and clinical experiences in orthopaedics. I am thrilled that I will remain a part of the community as a Brown orthopaedic resident and am grateful to the Brown Medical Annual Fund for supporting the programs that helped me find my place in medicine."

—Gregory Elia MD'15

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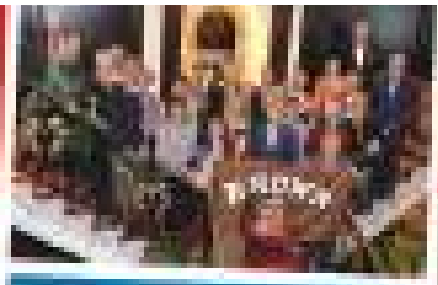

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