



BROWN MEDICINE

Volume 18 | Number 1 | Winter 2012

PLUS:

THE DAWN OF
MEDICAL EDUCATION
AT BROWN

CUTANEOUS
ACUMEN

Ways of Knowing

Can the arts shape how doctors think,
process, and understand?

LETTER

FROM THE DEAN



Going Places

As I write this letter it is snowing—another wintry day in Providence. However, what makes this day a bit more exciting is that I am reflecting on the visit by Dr. Darrell Kirch, president and CEO of the Association of American Medical Colleges, during the dedication of the Medical School building last October. The dedication was another historic milestone, complete with regalia, members of the Corporation, Chancellor Tisch, President Simmons, Warren Alpert Foundation President Herb Kaplan, Providence Mayor Taveras and Governor Chafee.

The dedication was a very important event, but as important was Darrell's message to us that evening and in this issue. You will read more about his visit to Alpert Medical School in his essay, titled "A Vision for the Future."

As Darrell points out, the future of health care is very important around the nation and here in Rhode Island. Brown has a new medical school building that is a catalyst for growth in the burgeoning Knowledge District, as well as an opportunity for more collaboration with our hospital partners and faculty. Closer alignment among our teaching hospitals and within our faculty will be essential for success in the new health care landscape.

Another special segment in this issue is about my friend Charles McDonald, who is stepping down after 40 years at the Medical School. Charlie was one of the original pioneers of this school and, in his quiet way, a huge proponent for medical education and outstanding clinical care for patients. He built the Department of Dermatology from almost nothing because he knew the importance of high-quality medical care for Rhode Island. I encourage our alumni readers to reach out to Charlie and reminisce.

Edward J. Wing

PETER GOLDBERG



“I remember a sense of pride in the kelly green striping on the doctoral hood—it was the first time that a piece of Brown academic regalia had been so designed.”
—50 Years Young, Page 40

INSIDE

28 A Vision for the Future

BY DARRELL G. KIRCH, MD

The president of the Association of American Medical Colleges reflects on where Alpert Medical School is headed and offers a new definition of excellence.

32 Think Different

COVER STORY

BY KRIS CAMBRA

This is your brain on art: a new curriculum uses the humanities to shape the way a doctor’s mind works.

40 50 Years Young

Hard to believe it was 50 years ago that Brown’s Board of Fellows gave the green light for the Program in Medicine. In their own words, graduates from that era describe those heady, formative years before Brown officially awarded the MD degree.

DEPARTMENTS

InBox	3
The Beat	4
Brown Med bhangra Dr. Provost	
It takes an academy.	
Field Notes	16
Standing shoulder to shoulder	
in Honduras.	
Zoom	18
Forty years at Brown, and counting.	
Big Shot	22
A painter’s eye.	
Opinion	24
It was good for the goose ...	
Resident Expert	26
Would you like fries with that?	
From the Collections	27
Medicinal chocolate and other	
dreams come true.	
Momentum	46
Thank you, thankyouverymuch.	
Alumni Album	47
Class Notes Climb ev’ry mountain	
It’s all about access.	
Obituaries	52

Cover: Breanna Jedrzejewski MD’15
 Photographed by David DelPoio

ADAM MASTOON; SCOTT KINGSLEY; JESSICA DEANE ROSNER

Winter Mind

So much in this issue is about seeing. Really seeing. Seeing without preconceptions or prejudice, seeing beyond assumptions and despite habits (including habits of mind) that blind us.

Ophthalmologist William Tsiaras travels the same route to work every day, yet he still sees the beauty of industrial Providence, sees purple and orange in the steam rising over the power plant, triangles and trapezoids in the factory buildings, the silvery green of the river in the rain and the tangle of long shadows cast by fire escapes on a January afternoon. When it comes to doctoring, med student Kevin Liou and emergency medicine doc Jay Baruch, too, are preoccupied with perception: *What is my patient's real story? What are the details, and what is the bigger picture? What are my biases and how do they affect how I am seeing this person?* In this (and in their work on the curriculum, described in these pages) they are right in line with the AAMC's report, published last fall, on the importance of incorporating social and behavioral sciences into medical education. The rewards of this approach? "Attention, curiosity, imagining others' perspectives, tolerating uncertainty, and developing meaningful human relationships," according to the report. True seeing, it would seem, is akin to empathy and emotional intelligence. Not bad qualities for a physician to have.

Change helps us see. It throws familiar things into relief, makes us perceive them anew. It's one reason why I love seasons. Here in Rhode Island we've had unusually mild weather—more of a prolonged fall than anything resembling winter. But a week ago, at long last, it snowed, and everything was different. Outside there was a comforting, cottony silence and a blue note in the light. The trees at sunrise were pink. It was the same world, only new.



EDITOR

Sarah Baldwin-Beneich '87

ART DIRECTOR

Min O. Design

STAFF WRITER

Kris Cambra

ASSISTANT STAFF WRITER

Kylah Goodfellow Klinge

EDITORIAL INTERN

Kia Mosenthal '12

PRODUCTION ASSISTANT

Frank Mullin

PRINTING

The Lane Press, Inc.

EDITORIAL BOARD

Gale M. Aronson

George Bayliss MD'03 RES'06

Robert Becher MD'06

Norman Boucher

Benjamin Brown '08 MD'12

Christopher Dodson '99

MD'03

Dana Cook Grossman '73

Krista Hachey '07 MD'11

Galen Henderson MD'93

Phyllis Hollenbeck '73 MD'77

Natasha Hunter MD'12

Susan Adler Kaplan '58 MAT'65

Robert B. Klein, MD

Akanksha Mehta '02 MD'06

Christine Montross MD'06

MMS'07 RES'10

Andrew E. Robin MD'13

Brown Medicine may not be reproduced without prior consent and proper credit. Address all requests to the editor. The opinions of contributors do not necessarily reflect the views of the Warren Alpert Medical School of Brown University or its affiliated hospitals. *Brown Medicine* is published three times a year by the Office of Biomedical Advancement.

© BROWN MEDICINE 2012

INBOX



First, the Good News

In the 2012 CASE District 1 Communication Awards, *Brown Medicine* won a Bronze in the Magazine/Best Writing category. **Score!**

RESPECT YOUR ELDERS

I read with dismay and disappointment the Spring 2011 article (“Without a History”) by Dr. Samuel Evans, a third-year resident in internal medicine. His words regarding elderly nursing home patients with “altered mental status” were stereotyped and hurtful: “Among the elderly ... an undercooked egg at the nursing home, a tiff with a family member, or a distressing bingo outing can

sufficiently perturb a patient to seek ... medical evaluation.” I would hope that a physician so early on in his experience would have a little more heart for the elderly than what he expressed. His words betray a lack of life experience and a disinterest in understanding an individual patient at his or her level. Perhaps I sound a little too PC but I wouldn’t want him taking care of my grandmother!

Cristina Pacheco
'00 MD'04 RES'07
Clinical Assistant Professor
of Family Medicine
Alpert Medical School

LIKE. COMMENT. SHARE.

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

- *Brown Medicine*
Box G-ADV
Providence, RI 02912
- Brown_Medicine@brown.edu
- Brownmedicinemagazine.org

FAUX PAS

The article “Hey, Baby!” (Fall 2011) contained an inaccurate description of the organization MomDocFamily. Co-founder and co-director Lynn E. Taylor, MD, AAHIVS, FACP let us know membership is open only to physicians and medical students who are mothers. Kathleen Moren, RN, is not a member.

We'd like a SECOND OPINION. Yours.

So don't be shy. Whether you agree, disagree, or have something more to say, send us your comments. You can tell us what you think by sending us an email (brown_medicine@brown.edu) or by going to the online magazine brownmedicinemagazine.org and commenting at the end of any article.

THE BEAT

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

SHOWTIME



Alpert's Got Talent

Med student performers have the audience in stitches.

A lecture on granulomatous inflammation no doubt has its riveting moments, but it's a safe bet that on a Saturday evening last December, the Medical School's new lecture hall was the scene of more thunderous applause than even Luba Dumenco inspires. *Low Yield*, the School's first-ever variety show, played to a full—and enthusiastic—house.

Organized by second-years Suresh Mohan and Joe Tofte, *Low Yield* was modeled after similar shows at other schools, such as Michigan, Northwestern, and Harvard.

While the Medical School does hold

an annual Biomed Musicale, Mohan says, *Low Yield* was intended as “a more casual artistic outlet for the community—a venue for comedy, medical humor, light music, and dance.” And there was all of that. The dozen acts included a cappella singing, short animations, a music video, a surprise serenade, and skits that poked fun in equal measure at faculty, students, even a standardized patient.

It was also a fundraiser for Hasbro Children's Hospital Child Protection Program. Admission was free, but \$850 was raised in donations alone.

What looked like fun had in fact

demanded enormous time and effort despite the students' already packed schedules. “Suresh and I spent lots of time over the last few months delegating tasks, writing, filming, and editing video segments, recording audio, renting and troubleshooting equipment, and rehearsing,” says Tofte.

“Most of the rehearsing and filming took place in the new building, a testament to its versatility,” adds Mohan. “We rehearsed and filmed evenings and nights, even one morning, working around our exam schedules. Trying to pull med students away from their study schedules is no easy task!”

“We had an unbelievable team who volunteered many hours to make sure each part of the show lived up to expectations,” says Tofte, citing generous

ADAM MASTOON (2)

support from Phil Gruppuso, associate dean for medical education, and members of his staff.

And the name? “Due to the immense amount of material we’re expected to learn,” says Mohan, “we refer to material that is particularly significant or test-worthy as ‘high yield.’ Bo Peng MD’15 coined the name ‘Low Yield’ to signify the immense volume of time we knew we’d end up devoting to the design and production of the show.”

The students think they’ve started something. “Though we’ll likely be on



Left: Brown Med Bhangra dancers (left to right) Shreyus Kulkarni MD’14, Rahul Banerjee ’10 MD’14, Christi Butler MD’14, and Isha Parulkar MD’15 kick off the show. Above: Joe Tofte and Suresh Mohan, both MD’14, sing a duet.

the wards this time next year, we have a group of inspired members of the Class of 2015 who have expressed interest in making sure the show happens,” says Tofte. “We’re hoping for participation from all four classes and faculty.”

“The opening of the new building seemed like the perfect opportunity to start a new tradition,” says Mohan.

—Sarah Baldwin-Beneich

Ask
THE EXPERT

Screen Test

A new way to detect a genetic anomaly.

Last fall, biotech company Sequenom began marketing MaterniT21, a prenatal screening test for trisomy 21, or Down syndrome. Professor Jacob Canick, PhD, and Associate Professor (Research) Glenn Palomaki, PhD, in the Division of Medical Screening and Special Testing in the Department of Pathology and Laboratory Medicine at Women & Infants Hospital, published their study of the test in the journal *Genetics in Medicine*. In 1988, Canick and Palomaki were involved in the development of prenatal triple marker screening, which is now used throughout the world.

How does the new DNA-based screening test for Down syndrome work and who might take advantage of it?

The test extracts the small fragments of maternal and fetal DNA that circulate in the mother’s blood. The DNA is analyzed, looking for a slight increase in the proportion of DNA fragments derived from chromosome 21, which signals Down syndrome. In our study, the test identified 98.6 percent (209/212) of the Down syndrome pregnancies, while only 0.2 percent of the normal pregnancies were mistakenly called positive. The mothers included in the study sample were all at high risk for having a child with Down syndrome—they were older than 38 years of age, had had abnormal ultrasound findings, or abnormal results for one of the maternal serum screening tests that are currently used.

The problem with current prenatal tests for Down syndrome is the false positive rate of 2 to 5 percent needed to identify about 90 percent of cases. After a positive screening result, pregnant women are offered either amniocentesis or chorionic villus sampling. These are diagnostic tests that will reliably identify any genetic anomalies in the fetus, but both are invasive procedures that carry about a 1 in 200 risk for fetal loss. With the new DNA-based test the number of these procedures is dramatically reduced because it would be unusual to have a woman originally at high risk who also has a positive DNA test have a normal pregnancy.

Right now, the DNA test is complex, resource intensive, and has not been validated as a primary screening test for every pregnant woman. But for women at high risk, it’s an effective tool that will prevent unnecessary procedures while maintaining high detection.

THE BEAT

INGENIOUS

Carry-On Germs

Project addresses “space” constraints.

In a future move to Mars, space settlers might be able to pack everything they need into test tubes, thanks to synthetic biology and a team of students, including two in the Program for Liberal Medical Education (PLME).

As part of the International Genetically Engineered Machine competition, or iGEM, a team of nine students from Brown and Stanford took on the challenge of designing a microbial platform that could be used to produce essential products in space.

Since 2004, iGEM has fostered undergraduate enthusiasm for synthetic biology, “the science of creating machines from biological parts,” according to the team’s website.

Synthetic biology: the science of creating machines from biological parts.

DATA POINT

High Impact

That’s a lotta dough.

A November 2011 report commissioned by the Association of American Medical Colleges found that the economic and employment impact of federal- and state-funded research at Alpert Medical School and its teaching hospitals surpassed \$411 million. This figure includes both direct impact—such as institutional spending, employee spending, and spending by visitors to the institutions—and indirect economic impact, which includes the re-spending of direct impact dollars in the local economy.

Undergraduates rarely get the opportunity to craft their own research, which is what makes iGEM unique, says team captain Julius Ho ’12 MD’16.

At iGEM’s Americas Regional Jam-

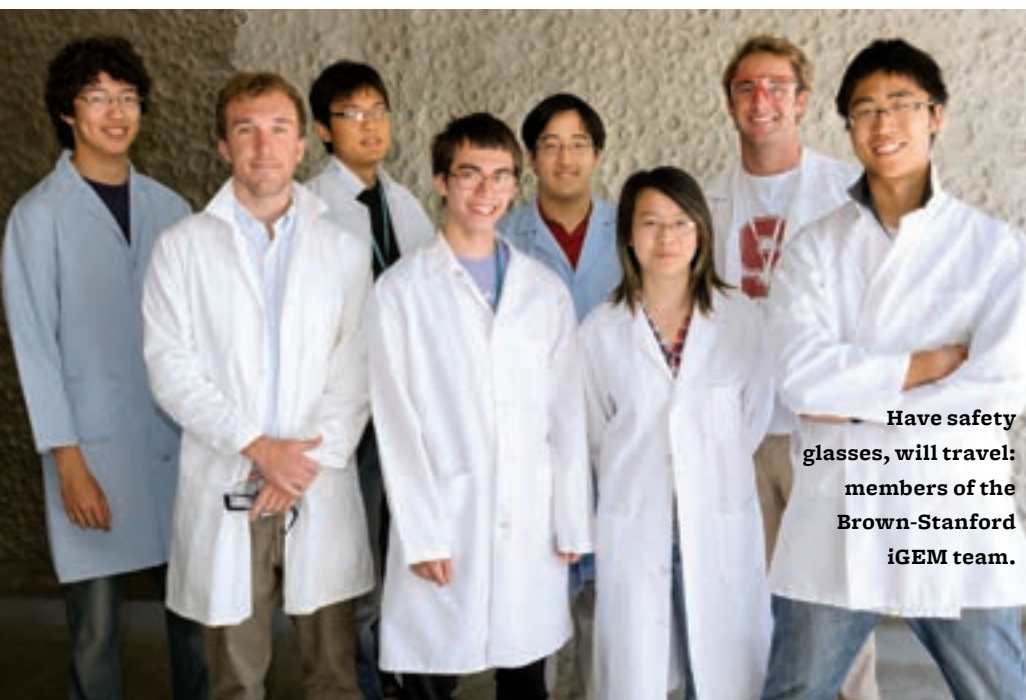
bore in Indianapolis last October, the Brown-Stanford team finished in the top four of 51 teams from all over the Americas and won best presentation. At the iGEM World Championships at MIT in November, they finished in the Sweet 16 and tied for Best New Application Area.

To address the need for shelter in space, the team engineered bacteria that could build “RegoBricks” from regolith—sand and dust that can be found on Mars. To feed the micro-masons and fuel other biological tools, the team designed the “PowerCell,” a universal energy source generated by cyanobacteria. These biological tools could then be used to transform raw materials into food, drugs, and other products.

Interdisciplinary research like theirs “wouldn’t have happened if there hadn’t been this mix of amazing students,” says Adjunct Professor of Molecular Biology, Cell Biology and Biochemistry Lynn Rothschild, the team’s faculty adviser.

—**Natalie Villacorta**
(adapted from the
Brown Daily Herald)

Have safety glasses, will travel: members of the Brown-Stanford iGEM team.





SOIREE

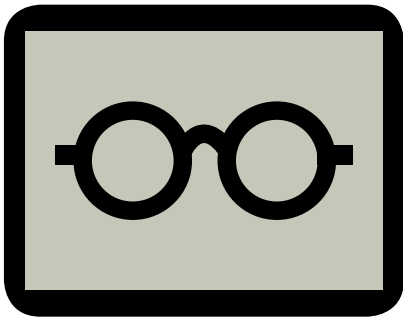
Come Right In Now that's dedication.

On October 21, 2011, while The Upstairs Quartet (above) played, second-years (left to right) Rachel Kahn, Jennifer Yong, Jenna Lester, and Bryant Faria welcomed 300 guests to the dedication of the new Alpert Medical School building, at 222 Richmond Street in Providence. Dressed in regalia and carrying the University mace, President Simmons led a procession of dignitaries to the stage, where Chancellor Tom



Tisch officially accepted the building on behalf of the Corporation of Brown University. Herbert Kaplan, chair and CEO of Warren Equities, Inc. and president of The Warren Alpert Foundation, received an honorary degree in recognition of the Foundation's landmark gift of \$100 million, which made the building possible.

In the citation accompanying his degree, the Board of Fellows noted that Kaplan, who is Warren Alpert's nephew, has "contributed in numerous ways to the improvement of the quality of national health care, through his support of hospitals, biomedical research and academic medical centers." —S.B.B.



IN TREATMENT

Relax, I'm Not Human.

Can therapy via computer ease social anxiety?

A small clinical trial suggests that people suffering from social anxiety disorder may be able to turn to a computer, instead of a therapist, for treatment.

Courtney Beard, associate professor (research) of psychiatry and human behavior, found that cognitive bias modification (CBM), a computer-delivered therapy, was effective in helping subjects gain more control over their attention and interpret situations more positively.

The pilot study distinguished itself from previous CBM trials by combining attention CBM with interpretation CBM—the two types of CBM that are used to treat social anxiety disorder. The study was also the first CBM trial to include measures of patient acceptability and credibility.

"The main purpose of this trial was to try and get a sense of this in the real world. So we did a few things differently than we did in previous trials," explains Beard.

Participants completed two CBM sessions a week for four weeks. In each session, the placebo group and the treatment group both completed a series of

computer tasks that lasted about 20 minutes. The treatment group was positively reinforced for correctly responding to a given situation.

The treatment group reported significantly reduced symptoms of social anxiety on the Liebowitz Social Anxiety Scale compared to the placebo. These results were confirmed by a blind behavioral measure in which subjects were asked to give an impromptu speech.

Although larger follow-up studies are needed to confirm the reliability of the results, Beard says that many people are excited about CBM's potential as a widely accessible and affordable form of treatment.

"I see [CBM] as sort of a first-step, very low-intensity treatment that could help a lot of people," she says.

The study was published online in the journal *Depression and Anxiety*.

—Kia Mosenthal '12

THE BEAT

ELEVATOR PITCH

Mission: Possible

New provost believes in what Brown's about.

As Brown's 11th provost, **Mark S. Schlissel** is the chief academic officer of the entire University, but he has a special affinity with the Division of Biology and Medicine. An immunologist with an MD and a PhD from Johns Hopkins, Schlissel is a dedicated researcher, teacher, and administrator. He has spent the past 12 years at the University of California, Berkeley, most recently as dean of biological sciences in the College of Letters and Science.

He took a moment to talk to *Brown Medicine* about his take on Brown's biomedical enterprise.

You came to Brown shortly after the successful close of a \$1.6 billion campaign supporting President Simmons's vision. What's next?

The Plan for Academic Enrichment has tremendously increased Brown's capacity, but maintaining momentum is critical—we can't stop just because the Boldly Brown campaign has ended.

How do you choose which academic endeavors to get behind?

To support everything is to support nothing. If our goal is to achieve excellence, we must think of the long term and be strategic, building on our strengths, on areas where there is already strong internal leadership. We must invest where there is a primary role for students, and, remembering Brown's mission, in areas of societal need. We must tap into the signature Brown ethos: making the world a better place.

Where do you see greatest potential?

There are several areas. For example, I noted when I came that there was a lot of emphasis on the Brown Institute for Brain Science. So I conducted an external review of this area by three renowned national experts. They confirmed that we have a small, spectacular group of brain scientists here. And meaningful

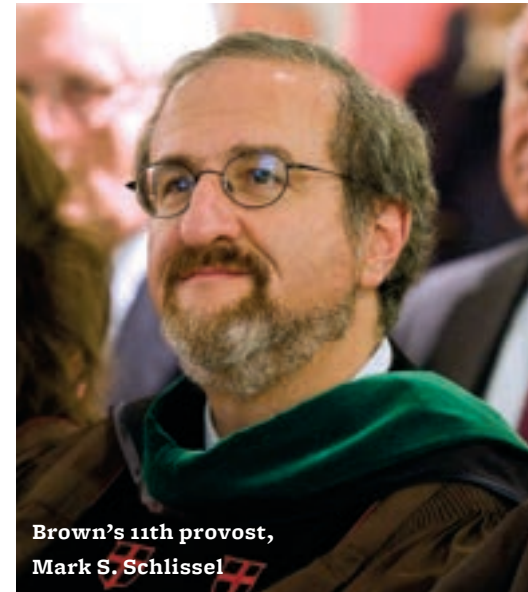
research in brain science, whether it's to cure paralysis, restore sight, or treat Alzheimer's, can be a true signature of Brown—something that can make a real difference in the world.

There is also a strong group of computational biologists here with the potential to be leaders in that emerging field. And of course, public health. As a medical doctor, I have tremendous respect for public health researchers and practitioners. They are our front line for epidemics—HIV/AIDS, avian flu, and so on. I see the emergence of a school in its own right as having the potential to make a huge impact on health care, both locally and nationally.

What is Brown's role in Rhode Island, especially in the realm of health care?

Brown can be the organizing principal for the future of health care in Rhode Island. Our affiliated hospitals deliver much of the state's patient care and are responsible for training a significant number of its physicians. A closer partnership between Brown and its teaching hospitals will be essential for the biomedical enterprise at Brown and the future health of Rhode Islanders.

What do you see as our challenges?



Brown's 11th provost,
Mark S. Schlissel

Alpert Medical School is clearly on the rise. The new facility at 222 Richmond is the finest medical education facility I have seen anywhere. For the School, the challenge will be to build on its growth and its strengths, and that entails getting its relationships with the hospitals right—faculty employment, research dollars, and overall synergy.

In a recent series of articles, the *Brown Daily Herald* expressed concern about “mission drift”—that is, a perceived shift away from Brown's focus on the undergraduate liberal arts experience. They cited, in part, the emphasis on research and on Brown's professional schools—medicine, engineering and, soon, public health.

One of our biggest challenges will be enhancing our reputation as a research institution while remaining true to our undergraduate mission. This scares some people, but I believe you don't have to sacrifice great undergraduate education to support important research. It's a false choice. If Brown is to remain a place where great students and faculty continue to come, we must provide great opportunities for research and scholarship, as well as a world class education.

—S.B.B.

PETER GOLDBERG

NYC LAX

Game Changer

Not-for-profit supports lacrosse—and creates opportunity.

In the years between graduating from Cornell in 2007 and starting med school last fall, Sam Klein MD'15 helped give life to a truth as old as lacrosse itself: sport can be much more than a game. A post-bac who decided to leave investment banking for medicine, Klein has been involved with lacrosse for most of his life.

But it was in Harlem that Klein first saw the impact the sport could have, not only on a player's happiness, physique, and friendships, but also on the shape of his life. At the Frederick Douglass Academy (FDA), a community school serving mostly low-income students, Klein's brother, Jake, had been volunteering as a coach for the middle school team, which had been started in 2008 by the principal, Dr. Gregory Hodge, and Simon Cataldo. Klein joined his brother in 2010, becoming the second "Coach Klein."

Lacrosse was the first organized sport in FDA middle school's history. The team started with 11 players; the next

year it had 26. Klein says that although FDA was "tremendously supportive," he and the other four volunteer coaches realized they "needed to be realistic about the school's resources," particularly when their goal—"to create a competitive lacrosse program that included academic intervention and mentoring services"—was expansive.

To ensure availability of the sport's expensive equipment and travel, they decided to establish a not-for-profit. They reached out to a handful of peer NFPs for mentoring, and to several organizations—including the lacrosse program at Concord-Carlisle High School, in Massachusetts, from which several of the founders graduated—for financial support. In 2010, Harlem Lacrosse & Leadership (HLL) Corporation was born.

The program was designed with an emphasis on special education and at-risk youths, who "need our mentoring more than anybody else," says Klein. "Despite their formerly disruptive classroom behavior and accompanying scholastic struggles, we have always believed that these individuals are most deserving of help." To this end, in addition to providing coaching, travel to games, and equipment, HLL supports academic programming, such as daily lunchtime study halls.

The team now has more than 50

THE BEAT GOES ON

Visit "The Beat" at brownmedicinemagazine.org for exciting research news on obesity, marijuana use, and emergency medicine.

Findings

players and a rising number of games—and wins—each year. But it's the victories off the field that will reverberate. At a school where the graduation rate hovers around 70 percent, 25 of the team's 26 players, including 12 of the 13 in special ed, graduated on time in 2010. And in 2011, every one of the team's eighth graders went on to high school. The sport teaches teamwork, discipline, perseverance. "We leverage the lessons learned from the game and integrate them into the kids' lives," says Klein.


The sport, common in affluent suburbs but still something of a curiosity in Harlem, also pushes the kids to aim higher than they might have. "Kids started talking about Johns Hopkins, and Duke, and Syracuse," says Cataldo. "I had never heard my students talk about colleges like that."

Now in Providence, Klein is still involved in the life and future of the organization. Even with that responsibility—and intense academic demands—he looks forward to serving the Providence community through coaching. "Lacrosse is a beautiful game and an effective vehicle through which to strengthen character and to create opportunity," he says.

—Kylah Goodfellow Klinge

To watch a short documentary about Harlem Lacrosse & Leadership, go to <http://harlemlacrosse.org/site/HLL.html>.

COURTESY KLEIN



The second Coach Klein gives one of his players a few pointers.

THE BEAT

ANATOMY OF AN ACADEMY DIRECTOR

We've Got Your Back

A new system, instituted last fall, groups Alpert med students from all four years into three communities—the Red, Blue, and Green Academies. The system provides academic, career, and personal advising and creates a learning and wellness community for students throughout medical school. Students from different years teach and learn from each other while benefiting from a close relationship with the staff and faculty assigned to their academy. What does being an academy director entail?

According to Alex Morang (Blue, left), Emily Green (Red, center) and Kelly Kochis (Green, right), planning, coaching, nudging, and a lot of listening. Behold the tools of their trade. —S.B.B.



CRYSTAL BALL

“I see great success in your future.”

CHAMPAGNE

To celebrate great news, like acing the Boards or making a successful Match.

CANDY BOWL

Because everyone can use a little boost from time to time.



GUIDES TO THE MATCH AND RESIDENCY PROGRAMS

Essential reading for fourth-years.



YOGA MAT

A goal of the academy system is to promote student wellness, so Kelly, a certified children's yoga instructor, uses yoga to reduce stress and anxiety.

HOOPS
You know what they say about laughter.



TISSUES

Because everyone needs a shoulder to cry on sometime.



TOY ZEN GARDEN

Rake away your stress and say, "Ommm."

COFFEE MUG
Because the hours are long.



DREAM CLASS

Into the Wardrobe

A professor of medicine teaches an unlikely subject.

It's 3 p.m. on a Tuesday, and Timothy P. Flanigan, chief of the Division of Infectious Diseases and Dean's Professor of Medical Sciences, climbs the steps of Sayles Hall and enters room 105 carrying fresh bread and tea. Thirty undergrads greet him. Soon, an electric tea kettle is humming in the corner.

But this is not a class about infectious diseases.

Every Tuesday of fall semester, Flanigan leaves the world of medicine behind and passes through the wardrobe to teach *Beyond Narnia: The Political Theory and Writings of C.S. Lewis*. Lewis is the author of *The Chronicles of Narnia*, a series for children written some 50 years ago that includes *The Lion, the Witch, and the Wardrobe*.

Flanigan began teaching the course several years ago. On the first day of class, he said to his students, "The only thing stranger than me teaching this course is you taking this course." *Beyond Narnia* has been a favorite ever since. In fact, it has become so popular that Flanigan has to turn away dozens of students each year.

Flanigan grew up with the tales of Narnia, but it was not until reading Lewis's *Space Trilogy* as an adult that he became captivated by the Irishman's work and decided to teach the course. "I was not just so enamored by his writings, but thought that he has such a wonderful view of the human person and the adventure of life and the meaning of life," he says.

Flanigan recognized that, beyond knowledge, students are interested in truth and the purpose of life. He wanted to create a space where they could openly discuss these interests under the "guidance" of Lewis.

"It's been very clear that my job is not to teach [the course]," says Flanigan. "C.S. Lewis teaches himself so well, so clearly, that it's a mistake to lecture on it."

Instead, Flanigan takes a seat on the sidelines and lets the students become the teachers. Each week, the students take turns engaging their classmates through a game of Jeopardy! and discussing the assigned reading. And, in the fashion of the author, the class breaks halfway through for tea.

Although Lewis was a Christian writer, Flanigan says the course is not about Christianity. It is a course in which students from all backgrounds and beliefs talk about how Lewis articulates his ideas.

"It's very important to me that the class provide academic space to talk about the ideas of God, faith, Christianity, other religions, secularism, agnosticism, and atheism, where it does not become an issue of personal conviction but an issue of the power of these ideas," Flanigan says. "I hope students will go on and teach C.S. Lewis themselves."
—K.M.



Flanigan pours a cuppa for a student.

ADAM MASTOON (7); FRANK MULLIN

THE BEAT

PLAYING DOCTOR

Health Bear

Clinic teaches children—and their stuffed animals—about medicine.

To advance children's health, it seems fitting to first think small—teddy-bear small. Inspired by a similar project in Stuttgart, Germany, Alpert Medical School's Teddy Bear Clinic is rooted in the philosophy that children learn best from kid-friendly, fun, hands-on experiences. The idea resonated with Stephanie Le '10 MD'14 when she first heard about "Teddyklinik"—the German clinic—while taking elective medical courses there this past summer. "I decided to try and create a version of the event that would work in the Providence community," she says.

Le worked with Medical School faculty and administrators to plan and design the clinic. The focus, it was decided, would be to teach young children from Providence elementary schools about going to the doctor and about certain aspects of their health. "We saw a particular need for education in dental and nutritional health," says Le. An additional goal was to give medical students the chance to work with children from the local community, she says.

The clinic's first event was held in November at the John Hope Settlement House, an after-school center in Providence. Sixty-five children—the majority from elementary schools in South Providence—attended. Armed with teddy bears provided by Nayatt Elementary School in Barrington, RI, they were led through interactive stations on proper brushing, nutrition, immunizations, hearing, and heart health. The children weighed themselves and had their



Le with student at the height and weight station.

temperature taken, and their height measured—and then took their teddy bears through the same paces. At the last station, children painted how they feel about seeing the doctor. Approximately 15 medical students and members of the Rhode Island Dental Hygienists' Association, the Brown Vision Initiative, and

Neighborhood Health Plan of Rhode Island led the demonstrations.

The event—made possible by funding from the American Medical Association, the Patient Advocacy Coordinating Council, and a number of other groups—was, says Le, a huge success. "The elementary students were very eager to learn, and went through each station enthusiastically," she says. "The expressions on their faces when they were given stethoscopes to listen to their heartbeats were priceless."

Given pamphlets on dental care and health insurance, the kids also brought home their enthusiasm. "One child informed his grandmother that he had given his teddy bear medication and that he would like to help her with her medication."

There is strong support for holding a second Teddy Bear Clinic this spring, says Le, who hopes it will become an annual event. —K.G.K.

Over Heard

"The term 'lifespan' does not explicitly include the quality of life and has sometimes been misinterpreted to imply that our research aims to extend life without paying attention to preserving the quality of life. This is largely the consequence of the experimental subjects we use in our studies. How would you judge the quality of life of a fruit fly?"

—STEPHEN HELFAND, professor of biology and an expert on the molecular, cellular, and genetic mechanisms underlying the process of aging, on why he prefers the term "healthspan."

COURTESY LE

WHO KNEW

An Eye for Art

Ophthalmologist paints the beauty he sees in the city.

The only place you can see the artwork of William Tsiaras MD/PhD'10, clinical professor of surgery (ophthalmology), is his office. Yet many of Tsiaras's patients are unaware that the urban landscapes embellishing his waiting room are painted by the very doctor they are waiting to see.

Tsiaras began painting out of necessity. During his residency at the University of Pennsylvania, he and his wife set out to enliven the barren walls of their Philadelphia apartment. They bought posters of familiar paintings, but soon realized that the cost of frames would exceed the cost of their mass-printed Monets. Tsiaras bought flea-market frames, a sheet of masonite, a Jansen art textbook, and a set of acrylic paints. He painted his own renditions of well-known works—a few by Utrillo, a Constable—and signed his name.

Tsiaras did not return to painting until years later, when he opened his Rhode Island office. "When I came to Providence, I opened my office over by the hospital and I wanted to decorate it. So now I could afford the frames for those posters, but I said, 'Every doctor and his grandmother have those posters in their offices.' I wanted to do something different," he says.

This time Tsiaras did not turn to famous paintings for inspiration. His younger brother, a successful artist, advised him to paint something that had meaning for him. So he began to render his immediate surroundings in oils: city scenes from his daily commute between Barrington and Providence. "For me, urban landscapes are every bit as beautiful as natural landscapes. I've always

been attracted to the geometry," he says.

Tsiaras only paints a few months each year, during winter—the season when his basement workspace seems cozy rather than oppressive. Yet he is always immersed in art: in addition to chairing the Rhode Island School of Design Museum's board of directors, he

enjoys collecting and donating works of art with his wife, Nancy, and is involved in the greater Providence and New York City art communities.

His passion for painting notwithstanding, the ophthalmologist doesn't claim to be an artist. He has no formal training. He has never sold or shown any of his work. "I'm a naïve painter, and 'naïve' in capital letters," he says. But then again, so was Henri Rousseau. —**K.M.**

To see one of Tsiaras's paintings,
go to page 22.

"For me, **urban landscapes** are every bit as beautiful as **natural landscapes.**"

Tsiaras (and two of his paintings) in his Providence waiting room.



THE BEAT

COOL TOOL

Whet Your App-etite

Student makes the AMA's app contest finals.

Creating flashcards to aid memorization is a tried-and-true study method. But when you've got reams of information to learn and only so many hours and index cards, it makes sense to speed up the process.

Enter the Smart Flash Cards application, conceived by Benedict Landgren Mills '10 MD'14. Smart Flash Cards would enable users to turn any piece of medical information into a custom flashcard.



“Fetal circulation is much easier to remember as a picture than a description.”

Landgren Mills submitted the idea in the American Medical Association's (AMA) 2011 App Challenge. US physicians, residents, and medical students entered their app ideas for a chance to have the AMA bring it to life. Out of the hundreds of submitted ideas, 10, including Landgren Mills's, were selected as finalists.

The app would allow users to create their own flashcards for speed and efficacy in aiding memorization, and then share the cards with others to invite contributions and edits. “A friend of mine recommended existing smart-flashcard technology, which they used for language studies, but I didn't bother switching because for histology, biochemistry, and anatomy I find it very important to draw diagrams. Fetal circulation is much easier to remember as a picture than a description, for example,” Landgren Mills says.

He found existing programs to be either pre-made and proprietary or entirely text-oriented. “I wanted something that leveraged being able to draw (on an iPad, at least), take photos, and share customized decks. I loved the idea of somebody taking a photo of their cadaver's brachial plexus, drawing in an arrow, and asking, “Which fingers does this innervate?””

AMA members voted online to determine two winners, which were announced at the House of Delegates meeting in November 2011. While Landgren Mills's proposal was not selected, he says the AMA now owns his idea and he hopes they'll end up developing it into an available application. And though he was invited to the meeting in New Orleans, he declined. He had to study. —K.C.

DOCTORPRENEURS

Potent Potable

Social entrepreneurs bring clean water to an Indian slum.

For \$5,000 you could buy approximately 150 Grand Brita® Pitchers, which will filter water for two months before the cartridges need to be replaced. Or you could invest the \$5,000 with WaterWalla to create 50 jobs and give 20,000 people clean water for life.

WaterWalla is a socially responsible, not-for-profit venture started by five Brown and RISD students in April 2010 that aims to provide slum-dwellers with access to potable water. The NGO was born out of a collective desire to apply academic learning to a real-world problem.

“We sit in classes and we take exams and we get a grade on our transcripts and what's the point?” says WaterWalla's co-executive director, Anshu Vaish '12 MD'16. “Why not use [learning] in a way

UP DATE



Tip o' the Hat

Seeing Patients,

by Augustus

A. White II, MD,

PhD '57 DMS '97 hon., P'98 and David Chanoff (*Brown Medicine*, Spring 2011), received high commendation in the “Basis of Medicine” category of the 2011 British Medical Association medical book awards. —K.G.K.



Aamer Hassanally '12, Anshu Vaish '12 MD'16, and Austin Ha '12 MD'16 with a member of WaterWalla's direct sales force.

which is going to positively benefit somebody else's life?"

Four of WaterWalla's five founding members are of Indian descent, which is why the team decided to launch their business venture in Dharavi, the world's second-largest slum, located in Mumbai, India.

Although countless problems plague the slums of India, the team realized that more complex issues, such as education or poverty, could not be addressed before supplying residents with one of Maslow's basic physiological needs: water. "[I]f you don't get access to clean water you can't do anything else," says Neil Parikh '11 MD'15, co-founder and current executive adviser of WaterWalla.

The team spent the summer of 2010 in India doing market research. They interviewed 50 families and partnered with Equinox, India's largest water-testing company, to test samples from Dharavi households. They found that children were dying from malaria, diarrhea, and other preventable water-borne diseases, which was explained by the samples: 44 percent were contaminated with fecal coliform and 33 percent with *E. coli*.

Simply distributing water filters to slum residents would do little to alleviate the problem in the long term. So instead they designed an innovative business model that generates revenue and combines education with technology to produce sustainable change.

That model took form as a storefront in Dharavi. The store, opened in August 2011, is run by an entrepreneur and a

business manager, both residents of the slum. The store sells subsidized water filtration technologies that range from an aqua tab that costs one rupee (around 2 cents) a day to much more expensive filters that do reverse osmosis and UV filtration. "If you really want to encourage people to use these devices you need to start treating them like consumers, not just as beneficiaries of a charity," says Parikh. In the store, slum residents choose which device they purchase,

giving them a sense of empowerment and maintaining their dignity.

The store also serves as an education center. "Even if [people] come to our store and they learn about the importance of clean water and then they buy a water filter somewhere else, we still accomplished our goal. At the end of the day, these people are drinking clean water, and that's what we started out to do," says Parikh.

To extend their educational mission beyond the store, WaterWalla partnered with a local women's group. Women are trained to go door to door teaching the slum community about clean water, and they receive a commission if they sell a filtration device. The women have become a "very effective mobile force out in the community," says Vaish.

In less than two years, WaterWalla has opened a self-sufficient store in Dharavi, expanded its team in the US and India, and generated employment for dozens of slum residents. In the next six months, they hope to build five more stores in Mumbai. And in the next two years, they want to have 50 stores.

The key to WaterWalla's success is

In Sanskrit, "walla" means "provider of," so WaterWalla is a "provider of water."

trust. "A lot of past organizations have failed because they didn't leverage the trust that already exists in the community," says Vaish. WaterWalla is built around the trust-relationship system that prevails in the slums. They employ people who live in Dharavi so that customers deal with a friend, not a stranger. "The faces of WaterWalla are not the 20 members on our team," says Vaish. "The faces of WaterWalla are the people living in the slums." —K.M.

Wheels of Change

In any language, they turn slowly.



I recently traveled to Santa Lucia, a remote town deep in south-central Honduras, with Shoulder to Shoulder (STS), an NGO dedicated to health care delivery and poverty reduction in this desperately poor part of Central America. Through a series of miscommunications as well as the usual delays in travel over rutted dirt roads, I arrived to find a group of 10 angry faces gathered around a table in the *comedor* (dining hall) of

STS's clinic, waiting for me. There was no time spent on the greetings, blessings, and inquiries about my health and the health of my family that usually begin one of these encounters. Instead, I was met with this from Professor Rene, the head of the committee: "Doctora, we have been waiting here for two hours, and we have one question for you: What is more important, the contract, or health?" At this opportune moment, the

power went out and I was left in the dark—literally—to explain myself.

I've lost count of the number of trips I've made to Honduras since I started volunteering for STS six years ago. As a medical volunteer I participated in two-week brigade trips, where I saw primary care patients—sometimes 50 women a day—in villages hours away by foot from the closest medical care. Now, as executive director, I supervise a staff of

JESSICA DEANE ROSNER

more than 100 employees in Honduras from here in Rhode Island. And when I travel to Honduras, I find myself in meeting after meeting, trying hard to implement the STS approach.

Shoulder to Shoulder is an NGO founded 20 years ago by a family doctor named Jeff Heck. From its inception the group has insisted on the active participation of the communities in which it works, forming local health committees with which we work “shoulder to shoulder” on the issues of poverty and health. This approach, while time and labor intensive, has always been the hallmark of STS’s work, and indeed of successful community development.

More recently, though, STS has focused on the implementation of a complex government contract to provide primary care to our region. In addition, we’ve built several new clinics—a move which, unexpectedly, has led us to focus less on community participation. In its drive to grow in order to serve more people, the organization adopted a more North American, top-down, results-driven approach. This has given us some wonderful new infrastructure but has also left us with less engagement on the part of the communities with which we work. As a result, we have had to work hard to change our approach and re-engage the communities. Add to this the backdrop of Central American politics, which have grown more divisive in recent years, throw in a political coup, and you can imagine the sinking feeling that overcame me at that dark moment in Santa Lucia.

On this trip, a particularly contentious issue was the type of patients our doctors could see in our two major clinical

sites. The Honduran government mandates that primary care visits occur in primary care centers (STS oversees nine of these) and that bigger clinical sites be restricted to emergencies and deliveries, a system that on the surface seems sound and resource appropriate. The only problem is, people in STS communities don’t like this plan. They are used to the STS doctors, trust them, and want to see them when and where they want—including in our large primary care centers.

to listen, not talk, following Jeff Heck’s adage to “come in with your mouth closed and your hands in your pockets.” I kept trying to make eye contact with everyone, even though we were operating by candlelight and cell phone screens. Gradually, the issue became clear. The committee was being bombarded with requests from community members for the STS doctors to treat primary care patients in the large clinic. The committee was feeling the pres-

Sitting in the dark *comedor* ... I forced myself to listen, not talk.

At times like this I try to remember my Honduran colleague Marvin’s words to me: “Emily, community development is *slow*.” Marvin and I both started working for STS six years ago, and he is my good friend and trusted colleague. Since becoming executive director, I have come to rely on his judgment and advice as I deal with a multitude of complex issues. His point in this case was especially valid. People like me come from the North, full of good intentions and accustomed to making things happen quickly in our jobs and lives at home. As a full-time family doctor and faculty member who runs marathons for fun, I am more guilty of this than most. Leaving that mentality behind is crucial when I come to Honduras—but it requires conscious effort on my part.

Sitting in the dark *comedor*, I reminded myself that the solution to this particular challenge could only come from the group, not from me. I forced myself

sure. It dawned on me that this was good news. The community was telling us what they wanted. In fact I had been handed a golden opportunity to win back some trust.

I wish I could report that at that point, I was able to say “OK, from this day forward we will see all patients in the clinic,” but this is Honduras, and it is never that easy. Instead, I promised to look into the issue and to advocate for what the community wanted. As I write this, I am still waiting to hear back from the Ministry of Health. But it’s only been three months, and that’s OK. Community development is slow. 🇻🇪

Emily Harrison is clinical assistant professor of family medicine at Alpert Medical School and a full-time family physician at Women’s Care, a joint family medicine/job-gyn practice in Pawtucket committed to the care of Latino families.

Elder Statesman

Through four and a half decades of teaching and treating, Charles McDonald has changed the face of dermatology in the region.

Dressed in a dark blue suit with blue suspenders, his hair silver and his tie paisley, Dr. Charles McDonald looks the part of the elder doctor-statesman. Now 80, McDonald has been the head of Brown's dermatology program since its inception in 1968—seven years before Brown was even granting MD degrees—and is the inaugural chair of the department, established in 1996. His unusual background as a clinical pharmacologist and oncologist as well as a dermatologist allowed him to pioneer the use of chemotherapeutic drugs in the treatment of skin diseases, and he has been doing this long enough that use of these therapies—once dismissed as unorthodox, even dangerous—has become common practice.

This Thursday morning, he is heading the Dermatology Clinical Conference that he established 40 years ago. Each month, dermatologists from around the region bring in patients whose conditions are particularly unusual or challenging; everyone spends a few minutes seeing each patient before settling into chairs in this room for a discussion and lecture. Seated in front of McDonald are residents, medical students, and dozens of dermatologists, many of whom he trained, and many who traveled upwards of an hour to be here. Behind him is a screen with a picture of a man whose entire body is covered in angry-looking red welts. On

the exam table, the man had seemed cheerful despite his deteriorating condition. "Patient #4," read a sticky note on the door. "58-year-old male."

Now, a resident does a formal presentation, offering a history and physical and a differential diagnosis, and McDonald explains what treatments he has tried so far. The man has T-cell lymphoma, which has been resistant to several first-line treatments, including one of McDonald's "favorites," methotrexate, a chemotherapeutic drug often used to treat breast and other cancers. A colleague visiting from the University of Pennsylvania weighs in. "Methotrexate is a very interesting drug," he says. "I used to be a hater of methotrexate because it suppresses the immune response. But now we're learning that ... it may enhance apoptosis of the malignant T-cells."

After the conference, several of McDonald's former trainees gather to discuss. "Some of the things that he taught us 30 years ago that were somewhat controversial now have been proven," says Elizabeth Welch, a dermatologist in private practice who graduated from Brown's residency program in 1981 and is now a clinical assistant professor of dermatology at the Medical School. Dermatologists used to be afraid of methotrexate. No one used it. "Now they do," she says. "But we were using it left and right 30 years ago!"



SCOTT KINGSLEY



**McDonald examines
a patient with cutaneous
T-cell lymphoma.**

ZOOM

BLANK SLATE

McDonald began studying these drugs as a clinical pharmacology/oncology fellow at Yale in the late 1960s. While there, he worked with Yale chief oncologist Paul Calabresi and a team of pharmacologists at Charles University in Prague to translate the use of chemotherapeutic drugs into dermatologic practice. When Calabresi was tapped in 1968 to become physician-in-chief at Roger Williams Medical Center and a founding member of Brown's medical faculty, he asked McDonald to come with him. McDonald approached the move with a certain amount of trepidation. He had trained as a dermatologist, but after his fellowship he had intended to continue working as a pharmacologist. Aside from that, he says, "I knew nothing about Providence, other than we used to go through here on our way to the Vineyard or the Cape. It was not," he says, tactfully, "an impressive place at that time. So I said, 'Paul, I'll give you three to four years, and then I'm outta there.'"

Once he arrived, however, McDonald realized he had the opportunity to build a program from the ground up. At the time, Roger Williams had no academic dermatologists, and the Medical School had no dermatology department. However, Brown had some of the world's foremost basic scientists in skin biology, and many of the dermatologists in private practice throughout the state were excited for the opportunity to get involved in academia—they had been traveling up to Boston to join the clinical faculty of the medical schools there. "I said, 'OK, I want to start a program in dermatology,'" says McDonald. "We had the basic sciences, we had the clinical



Dermatologists from Rhode Island and beyond attend McDonald's Dermatology Clinical Conferences.

and everything else. And as a result of that, we got the program off the ground."

Around this time, McDonald and Calabresi noticed that several of the patients in their study of a particular drug—triacetyl azauridine—were experiencing heart attacks and strokes. As a result of these cerebral-vascular problems, the drug "got a bad rap," says McDonald, although they were finding that it could be very useful in the treatment of psoriasis, systemic herpes virus infections, and other skin diseases. But soon they noticed that "these central nervous system problems—strokes, and so forth—were confined to the patients who had psoriasis, not in the patients who had viral diseases," said McDonald. "I started thinking, 'Maybe there's something else here.'" He and his colleagues took another look at their data and came to the conclusion that

it was psoriasis itself that was probably a cause or associated factor in the occurrence of vascular occlusive phenomena. Their result (their paper was published in 1973) "wasn't accepted very well at that time," says McDonald. "Because people knew that we were working with that agent, and they were saying, 'Oh, you're trying to say that this agent isn't causing it.' Now that's the accepted norm: psoriasis is more than just an ordinary skin disease. It has other associated problems."

CREATING A COMMUNITY

McDonald, who's planning his retirement for the middle of 2012, says he didn't always want to be a doctor, although his family had designs for him from early on. He grew up in Tampa, Florida, in the forties and fifties, one of seven cousins in a close extended family.



McDonald listens to a resident's presentation.

From the time he was young, his aunts—several of whom were nurses—had decided that young Charles would be the family's first doctor. And though this was the segregated South, his was a family that emphasized education. His grandfather founded the town's Parent-Teacher Association, and McDonald

a report warning that in the next several years the country would be flooded with an excess of 50,000 engineers, McDonald figured his family may have been right after all. He switched his major to biochemistry. After medical school, though he dabbled in internal medicine and ophthalmology and trained in pharmacol-

“We had the basic sciences, we had the clinical and everything else. And as a result of that, we got the program off the ground.”

recalls that “he would pack the elementary school auditorium on Sunday afternoons with people who were supporting the PTA. I just grew up with that kind of thing, and so all seven of us, when we got to college age, it wasn't, ‘Were we going to college?’ It was, ‘What college were we going to?’”

McDonald chose North Carolina Agricultural and Technical University, with plans to be an architectural engineer. But when the government released

ogy, McDonald settled on dermatology—a choice he has found very satisfying.

Half a century later, standing in front of the crowd he knows so well, McDonald is clearly at ease in his role as a teacher and mentor. (Indeed, in 2002 he received the Brown Medical Alumni Association's highest honor—the W.W. Keen Award, for outstanding teaching, mentoring, and contributions to the community locally and nationally.) Now the screen behind him shows a foot

with an ominous-looking gray patch on its underside. He has just listened respectfully to the resident's presentation. “And everyone agrees with that differential?” McDonald asks. His voice is quiet and soft, but even those in the back row can hear him: as soon as he begins to speak, the whole room falls silent.

“I don't buy the plasto,” comes a voice from the corner of the room. And the discussion is off and running, with dermatologists from all over the region bantering, weighing, arguing, and advising.

“This particular community—the private guys and the academic guys—we interact all the time,” says Welch, McDonald's former trainee. “Part of the attraction is, we come here once a month or twice a month and interact with him and present difficult patients to him.”

Seth Feder, another local dermatologist and former trainee of McDonald's, now a clinical assistant professor of dermatology at Alpert Medical School, agrees. “Most people who went through this program who are local do volunteer to participate. I think that's because of the environment that's been created.”

Welch nods. “It's very friendly.”

“Collegiality is very important,” says Feder. “You don't always see that in teaching institutions, unfortunately. That's always been a part of the program here.”

Tom Rosenfeld, another former classmate of Welch's and Feder's, stresses McDonald's kindness and generosity toward the community of dermatologists he's created. “He's a role model for the whole thing.”

Beth Schwartzapfel '01 is a freelance writer and a contributing editor of *Brown Alumni Magazine*.






BIG SHOT

WILLIAM TSIARAS,
MD PMD/PHD'10

Paint What You Know

A physician explains why he puts brush to canvas.

My brother said, “You ought to [paint] something that means something to you.” So I thought about that. I sometimes spent 15 hours a day in the hospital—I really didn’t have a lot of things I came in contact with. But my ride to work in the morning from Barrington to Providence and my ride back at night was miraculous in terms of light, looking at the city of Providence, looking at light and shadows. And I’ve always loved urban landscapes. I’d stop at stoplights and things just caught my eye. And I said, “This is what I want to paint. I want to paint my surroundings.” 

William Tsiaras is clinical professor of surgery (ophthalmology).

All-Nighters

The consequences—some not yet examined—of resident work-hour restrictions.

I never pulled an all-nighter until my residency days. Oh, there might have been an occasional stint in medical school, but that happened infrequently and, mostly, lacked the intensity that I later came to associate with those events. During my pediatric residency I pulled a lot of all-nighters. In fact, they came with a breath-taking regularity. It felt like getting slapped repeatedly in the face by big, cold surf and occasionally being crushed by enormous white water. It is an experience that can best be conceptualized via the wave form: *Whap, whap, whap!* That cumulative assault took its toll. I perceived myself as invulnerable at the outset of my residency, but I felt as if I had been hit by a Mack truck at its conclusion, in 1983. I worked 36 hours straight on too-numerous-to-count occasions. I even remember a month in the NICU when I averaged 120 hours per week—remarkable if you stop to consider that there are only 168 hours in a week!

Much concern has been raised in recent decades that such prolonged working hours and the attendant lack of sleep can have deleterious effects on patient care. This concept is well established, with one study even documenting that working without sleep produces impairments equivalent to intoxication beyond the legal limit to operate a motor vehicle. One of my residency colleagues was involved in an automobile accident after a prolonged on-call experience. When her husband, the father of her young firstborn, contacted the residency program to complain, his input was not only unwelcome, it appeared to be temporally related to that resident's dismissal from the program. My fellow residents and I often snickered about one of our colleagues, a little older than the rest of us, because he often called in sick. Soon after we finished residency, he died!

Personally, I did not perceive any diminution of my technical skills after 36 hours without sleep; I could put an IV into a rock because I just wanted to get out of the hospital and go home. My ability to feel compassion for patients and their families, however, went out the window. I just didn't care. Another residency colleague created a mock Denver Developmental Screening Test (DDST) for pediatric residents. In the Personal-Social domain, "My, what a cute baby" at the beginning of internship became "Oh [blank], another [blanking] hit," by the end of the year. Such thinking and feeling—or lack of feeling—can take a toll on one's moral compass.

Another factor, not often examined, is the effect of such working conditions (the physical and emotional stress, and

the time commitment) on one's social development. The overwhelming majority of residents are young adults traversing similar crucial personal-social developmental trajectories: establishing a primary relationship, or not, or starting a family, or not. There are casualties of these circumstances. Another milestone on my residency colleague's DDST for pediatric residents lists "Breaks up with significant other" as a "normal" developmental milestone "achieved," it is noted in the mock screen's only footnote, 70 to 80 percent of the time by the end of internship.

I don't mean to imply that my residency war stories are more memorable or traumatic than anyone else's. Maybe that is the point: these stories are common. The public often perceives that the long hours that residents in medical fields have to endure represent some sort of ritual, a kind of hazing process that is part of becoming a physician. We in the business know that is not true. The reasons for the long hours are economic: the public demands that our hospital wards, nurseries, EDs, and ICUs be staffed robustly 24 hours a day, 365 days a year. Residency schedules are created to meet that demand.

Perhaps asking young people to work hard, to sacrifice something of themselves in the pursuit of a career that has the potential to bring generous rewards in terms of both remuneration and satisfaction is not unreasonable. Society asks much more of those who, at a similar age, join the military, and those persons, on average, are more likely to come from less privileged backgrounds. In most cases, too, those young persons' future prospects, at least those linked to

their service, are not as likely to be auspicious. In the 19th-century utopian novel *Looking Backward*, by Edward Bellamy, the economic well being of society rests on the bedrock of service work to society by young people, when they are most healthy and strong, performing the many menial jobs that keep society going. In that sense residency training can be viewed as a kind of "national service," one that is vital but should be acknowledged as such.


The first effort to regulate the hours residents work went into effect in 2003, two decades after I completed my residency. Much has been written about the effect of these work-hour limitations on both patient care and residency education, and those effects are still being debated. Now there are new, even more

latest, more stringent restrictions may help alleviate exhaustion and burnout, but how will they be lived by residents?

The new guidelines—with restrictions on the number of consecutive hours residents may work and mandating a maximum number of hours worked weekly, as well as the provision for "strategic napping"—may reduce exhaustion and compassion fatigue, and that is all to the good. But organizing the hospital staffing the public expects will necessitate that residents actually work more, not fewer, nights and weekends. Whether that sort of arrangement is better or worse for some of the less tangible though equally important effects of work schedule on residents' lives is an open question. If a resident meets a potential partner, will success, however that is

The latest restrictions may **help alleviate exhaustion and burnout**, but how will they be lived by the residents?

stringent guidelines being implemented at residency programs across the country. That young doctors in training must work hard and work long hours is indisputable. There are probably even educational benefits to be derived from such an experience; the intensity of the training, its immersive qualities, likely serve to concentrate the mind. But what is the best way to organize that experience? I applaud the residency work-hour restrictions, even if they were promulgated more in the interest of patient safety than resident well being. The

measured, be more likely when that resident works a month of nights than it might have been with the exhaustion attendant upon every third or fourth night call? It is an open question. Resident work hour restrictions are most welcome in principle; we'll have to see how they play out in practice. Maybe it is not such a bad thing that "all-nighters" be relegated to the dustbin of history. 

Randy Rockney is professor of pediatrics and family medicine and director of the clerkship in pediatrics.

RESIDENT EXPERT

BY NOAH ROSENBERG, MD RES



Can't Get No Satisfaction

Give the patient good care, not just good service.

“Doctor, I want a brain scan.”

“Excellent choice, ma’am! May I suggest a nice cervical spine scan with that? It’s very popular among our customers and it’s on special today.”

When I think about “patient satisfaction” that’s the kind of dialog I imagine. I cringe. The term makes me feel like a waiter or a vending machine. I didn’t get into medicine to practice great customer service. I wanted to save lives and ease suffering—stamp out disease.

Like it or not, a focus on patient satisfaction is here to stay, with Medicare billing tied to patient satisfaction scores and hospitals competing for a share of shrinking reimbursements. Rather than hang up the stethoscope and move to investment banking, there are reasons to accept and even welcome this new focus. For me, it requires a subtle reorientation from patient satisfaction to patient experience.


The relationship between doctor and patient is fundamentally different from that of waiter to diner or salesperson to customer. As a doctor I keep the patient’s welfare in mind, not only his or her wants. I advise, frequently deny, counsel, and negotiate, acting as translator for a highly technical and yet intimate subject—your health. The patient is not always right. I cannot guarantee satisfaction. CT scans, antibiotics, and opioids, although often requested, are not always in the patient’s best interest.

If medicine were just another profit industry, I would simply fill the request. Why not? I improve my patient satisfaction score, likely limit my liability, and even get paid more. But everything has a risk, like radiation from a scan, resistance to antibiotics, and addiction caused by opioids. Because more health care does not mean better health, and because we are beholden to moral and professional

standards rather than shareholders, I do not sell medicines and diagnostics. I strive to provide appropriate and excellent care even when that care fails to satisfy.

We should, however, focus more on the patient *experience*. As I interact with patients in the ED, first in my mind is the differential diagnosis: Is this headache caused by a migraine or leaking brain aneurysm? I ask and probe, focused on sorting out the two. Meanwhile, the patient’s priorities may be quite different—getting a work note, pain control, sympathy, or reassurance. Perhaps she came in because a friend was recently diagnosed with a brain tumor and her previously benign headache suddenly feels sinister. The patient’s experience is fear. She requests a CT scan.

I decide that the headache is a migraine. I have tricks to help alleviate the pain but no other acute treatment or diagnostics are required to provide good care. If I stop there and deny the CT scan, I will have given great care for the headache but ignored the reason for the visit. The patient’s motivation for the visit is fear, and fear is best treated with reassurance and sympathy, not a CT scan. Counseled with skill, she may leave with her request unsatisfied but better informed and happier with the encounter than a wordless CT scanner could have done.

The end result is a satisfied patient, but because of attention to the patient’s perspective, of being a doctor not a vendor—good medicine, happy patient. 

Noah Rosenberg attended Oregon Health & Science University School of Medicine. He is in his fourth year of Alpert Medical School’s emergency medicine residency program and a member of the program’s creative writing group.

FROM THE COLLECTIONS

BY DENNIS C. LANDIS, PHD



Of Quinine and Cacao

How New World plants transformed Old World medicine.

This engraving of cacao, by German artist Maria Sibylla Merian (1647-1717), reveals her fascination with insects, including the metamorphosis of caterpillars into butterflies.

COURTESY JOHN CARTER BROWN LIBRARY AT BROWN UNIVERSITY

While it is well known that the introduction of native American foods radically improved the early modern European diet, somewhat less well known is the vast array of New World plants—including some surprises, such as cacao (source plant for chocolate) and tobacco—that revolutionized European medicine. Europeans who lived among the indigenous Americans, many of them missionaries, studied traditional medical applications and described them in print for a European audience. Artists and

naturalists were drawn (or sent) to further study, illustrate, and disseminate the vast botanical treasure trove of the Americas. As a result, the Old World practice of medicine, largely inherited from the ancient Greeks and Romans, was forever transformed. Much of this New World pharmacopeia is still being plumbed for its curative powers in the laboratories and clinics of today.

Last fall, the John Carter Brown Library hosted the exhibition *Drugs from the Colonies*, which celebrated the

print and manuscript culture that ignited and fed this pharmacological revolution. On view from the Library's collections were 67 books and manuscripts that document the European reception of medicinal knowledge and plants from the Americas, many of which are spectacularly illustrated (and still available for viewing online at www.jcbl.org).

Diseases as well as medicines were part of the Columbian Exchange. At the end of the 15th century, European science confronted the medical riddle of syphilis, seemingly unknown before the return of Columbus's ships from the Caribbean. Treatment efforts seized on *guaiacum*, a plant found in South America, and its therapeutic properties were promoted in print across Europe from the 16th century on. Most prominently celebrated in 17th-century print sources—and apparent from the numerous instances exhibited—would be the investigation of *cinchona* by Spanish physicians in Lima in the 1630s. Jesuits brought the bark of the plant to Rome around 1631 to treat malaria. Through their agency it came to be called Jesuits' bark or Peruvian bark. The rival name was introduced when the Condesa de Chinchón, wife of the Peruvian Viceroy, was herself cured of malaria in 1638. Physicians required some time to research the dosage and eliminate unhelpful species. The vital agent quinine would not be isolated until 1820, but that will have to be the subject of another exhibition, or perhaps a conversation over a restorative gin and tonic. 🍷

Dennis C. Landis, PhD, is curator of European books in the John Carter Brown Library.

FROM THE COLLECTIONS

BY DENNIS C. LANDIS, PHD



Of Quinine and Cacao

How New World plants transformed Old World medicine.

This engraving of cacao, by German artist Maria Sibylla Merian (1647-1717), reveals her fascination with insects, including the metamorphosis of caterpillars into butterflies.

COURTESY JOHN CARTER BROWN LIBRARY AT BROWN UNIVERSITY

While it is well known that the introduction of native American foods radically improved the early modern European diet, somewhat less well known is the vast array of New World plants—including some surprises, such as cacao (source plant for chocolate) and tobacco—that revolutionized European medicine. Europeans who lived among the indigenous Americans, many of them missionaries, studied traditional medical applications and described them in print for a European audience. Artists and

naturalists were drawn (or sent) to further study, illustrate, and disseminate the vast botanical treasure trove of the Americas. As a result, the Old World practice of medicine, largely inherited from the ancient Greeks and Romans, was forever transformed. Much of this New World pharmacopeia is still being plumbed for its curative powers in the laboratories and clinics of today.

Last fall, the John Carter Brown Library hosted the exhibition *Drugs from the Colonies*, which celebrated the

print and manuscript culture that ignited and fed this pharmacological revolution. On view from the Library's collections were 67 books and manuscripts that document the European reception of medicinal knowledge and plants from the Americas, many of which are spectacularly illustrated (and still available for viewing online at www.jcbl.org).

Diseases as well as medicines were part of the Columbian Exchange. At the end of the 15th century, European science confronted the medical riddle of syphilis, seemingly unknown before the return of Columbus's ships from the Caribbean. Treatment efforts seized on *guaiacum*, a plant found in South America, and its therapeutic properties were promoted in print across Europe from the 16th century on. Most prominently celebrated in 17th-century print sources—and apparent from the numerous instances exhibited—would be the investigation of *cinchona* by Spanish physicians in Lima in the 1630s. Jesuits brought the bark of the plant to Rome around 1631 to treat malaria. Through their agency it came to be called Jesuits' bark or Peruvian bark. The rival name was introduced when the Condesa de Chinchón, wife of the Peruvian Viceroy, was herself cured of malaria in 1638. Physicians required some time to research the dosage and eliminate unhelpful species. The vital agent quinine would not be isolated until 1820, but that will have to be the subject of another exhibition, or perhaps a conversation over a restorative gin and tonic. 🍷

Dennis C. Landis, PhD, is curator of European books in the John Carter Brown Library.



TEAM-BASED TRAINING



CITY * NEW
CONNECTED!
NEW CHAPTER

INNOVATION *

momentous * lab

COMMUNITY
INTERPROFESSIONAL



A Vision for the Future

A leader in academic medicine says Alpert Medical School is ready to play a role in transforming health care in this country.

In October, I had the privilege of attending the dedication ceremony of the Alpert Medical School's new education building. I met many people important to the Brown community on my visit, including President Simmons, Dean Wing, the leaders of Brown's affiliated teaching hospitals, and Governor Chafee, along with proud faculty, staff, students, and alumni. It was a special pleasure to see an honorary doctorate awarded to Herbert Kaplan, president of The Warren Alpert Foundation. I was honored to have shared in such a momentous day—when Rhode Island's only medical school celebrated the first space dedicated exclusively to medical education in its nearly 40-year history. Since returning from Providence, I have been reflecting on my visit and my hopes for the Brown medical community as it begins this exciting new chapter.

THE IMPORTANCE OF THE NEW BUILDING

Beyond serving as a physical manifestation of Brown's excellence in medical education, the new school building demonstrates the University's engagement in the city. As I said in my President's Address at the 2011 AAMC Annual Meeting [available on the AAMC Web site, www.aamc.org], institutions in academic medicine must make and meet locally defined commitments to fulfilling their respective mission statements, and they should demonstrate real outcomes from those commitments. Sometimes, I fear we judge excellence too simplistically and buy into the prestige afforded us by "top-10 lists" or rankings. Real commitment to meeting the needs of the communities outside our front doors, however, is an example of the new excellence I believe academic medicine must embrace in its purest form. Alpert Medical School is acting on this new excellence by reaching beyond College Hill and relocating to Providence's newly forming Knowledge District.

THE MEDICAL SCHOOL'S NEW FOUNDATION FOR EXCELLENCE

Even more important than the physical structure of the building, however, are

the teaching and learning that will happen there. Now the Brown medical community has a space in which to carry out its mission “to understand and improve the health of individuals and populations and the environments in which they live.”

Some of the transformations academic medicine as a whole must make include many things Alpert Medical School is already doing. To provide truly patient-centered care, for example, future physicians will need to engage in an unprecedented level of interprofessional collaboration with other allied health

professionals, which profession has “control,” but whether the clinical team works together to provide the highest quality of patient care.

Another shift academic medicine must make, and which Alpert Medical School is helping pioneer, is implementing a competency-based curriculum that is tightly linked to assessment across the entire continuum of medical education. In the fall of 2005, Alpert Medical School unveiled a new curriculum that included a two-year “Doctoring” course that places an emphasis on professionalism. I was encouraged to

AAMC is in the final stages of creating the next version of the MCAT® exam, expected to be ready in 2015. In addition to testing future physicians’ knowledge of biology and chemistry, the new MCAT exam will include a section on the behavioral and social sciences to provide a solid foundation about the behavioral and socio-cultural determinants of health. The new exam also will test examinees’ ability to analyze and reason through passages in ethics, philosophy, and a wide range of humanities disciplines to ensure that students possess the necessary critical thinking skills to be successful in medical school. In addition to the new MCAT exam, we will soon offer a restructured AMCAS® application and a new format for letters of recommendation that focus on the pre-professional attributes most important in future physicians. It is our hope that all of these changes will bring us closer to a truly holistic admissions approach that identifies the kinds of physicians we all want.

Another change under way is that academic medicine is evolving as technology progresses. No longer are medical students or physicians confined to class time or office hours, but rather they are connected 24/7. Alpert Medical School is embracing this shift toward training students using simulation, while enabling them to gain proficiency in using electronic medical records. Students are even shifting from textbooks to tablet computers, which are taking the place of anatomy lab manuals. In the new building, the state-of-the-art George S. Champlin Library gives today’s connected students access to resources at any hour. Rather than having

Our institutions should see themselves as the “innovation labs” where real change to the health care delivery system can occur, independent of consensus on Capitol Hill.

professionals. Alpert Medical School is well on its way in this area and has incorporated team-based training into many third-year clerkships, like pediatrics and internal medicine. These experiences give students exposure to providing team-based care alongside their future colleagues from nursing, physical therapy, and pharmacy. The AAMC recently partnered with osteopathic medicine, nursing, pharmacy, dentistry, and public health to develop a set of core competencies that should be the focus of interprofessional education in all our schools. This coalition is moving forward on multiple fronts, and institutions like Alpert Medical School are demonstrating that the real issue is not

hear that Brown’s Nine Abilities—which “encompass a broad range of expectations for future physicians, ranging from traditional clinical skills to the more elusive aspects of the art of medicine”—are woven throughout the four years of education, and are assessed as students progress in their training.

The AAMC also believes in a broader view of the key personal traits our future physicians should possess. Public opinion research commissioned by the Association shows that Americans trust academic medicine’s ability to graduate physicians with a high degree of medical knowledge, but they are much less confident in the bedside manner of the physicians we train. To help address this, the

The real issue is not which profession has “control,” but whether the clinical team works together to provide the highest quality of patient care.

printed volumes, this e-library boasts a librarian and hubs to which students can connect their computers. I hope they use these hubs to log onto the AAMC’s own MedEdPORTAL®, a free, peer-reviewed, online publication service and repository for medical and oral health teaching materials that is ensuring future physicians have ready access to learning materials.

Finally, the new building will allow Alpert Medical School to meet impor-


tant national priorities. The goal of increasing its class size by 20 percent will help address the nation’s physician workforce needs. The AAMC Center for Workforce Studies estimates that the United States is on track to experience a physician shortage of over 90,000 by the year 2020—and this number will grow to over 130,000 by 2025. This shortage will come at a time when Americans need care most. The US Census Bureau projects that, in just two decades, nearly one in five Americans will be aged 65 or older. These older Americans are also expected to live longer due to advances in care and to use more health services, especially as they qualify for Medicare. Finally, barring any changes to the health care reform law as a result of legislative or judicial action, an additional 32 million Americans will qualify for health insurance by 2013. For all of these reasons, it is especially important that Alpert Medical School is increasing its capacity to train the physicians we all will rely upon for decades to come.

THE LEADERSHIP IMPERATIVE FOR ACADEMIC MEDICINE

Just as Alpert Medical School’s new address is significant, so too is its place in the nation’s health care system. Unlike any other community, academic medi-

cine sits at the nexus of medical education, patient care, and biomedical research. This unique position puts institutions like Alpert Medical School in the best possible position to lead the transformation required to meet the health needs of a growing and aging population. It is my hope that Alpert Medical School and academic medicine at large embrace this imperative to lead. Our institutions should see themselves as the “innovation labs” where real change to the health care delivery system can occur, independent of consensus on Capitol Hill. After all, no other sector has the capacity to change health care delivery while simultaneously leveraging the research enterprise to study what works best—and to train the next generation of health professionals in these newly innovated best practices.

IN CLOSING

It has been gratifying to watch the new building of the Warren Alpert Medical School of Brown University take shape, especially as the School’s dedicated leadership, faculty, and staff work to shape the next generation of physicians when the nation needs them most. Now, perhaps more than ever before, Alpert Medical School is positioned to build on its legacy of excellence. Thank you for allowing me to take part in such an important occasion, and I look forward to hearing of your continued success! 

Darrell Kirch is president and CEO of the Association of American Medical Colleges, a not-for-profit association representing US and Canadian medical schools, teaching hospitals, and academic and scientific societies.



Kirch was the keynote speaker at the October 2011 Medical School building dedication ceremony.



LOOK INSIDE

First-years, like Joanne Wang, use the arts as a tool for self-examination. How they interpret and relate to the works reflects how they'll do the same with patients.

Think Diff



**An integrated humanities curriculum
teaches medical students new ways of seeing.**

BY KRIS CAMBRA

PHOTOGRAPHY BY DAVID DELPOIO

“The humanities and arts provide insight into the human condition, suffering, personhood, our responsibility to each other, and offer a historical perspective on medical practice. Attention to literature and the arts helps to develop and nurture skills of observation, analysis, empathy, and self-reflection—skills that are essential for humane medical care.”

—FROM NEW YORK UNIVERSITY SCHOOL OF MEDICINE’S MEDICAL HUMANITIES MISSION STATEMENT

erent.

““I

always felt that the most important part of my medical education was the year I took off to write,” says Assistant Professor of Emergency Medicine Jay Baruch.

Doctoring, he says, is as much about story as it is about medicine. A medical history is really a story that begins elsewhere, before the patient arrives in the emergency department or the exam room. Baruch, an attending physician at Rhode Island Hospital’s ED, says, “I spend 80 percent of my time listening to stories, in an environment that is antithetical to narrative—it’s pressured, there’s no privacy, you’re hearing several stories at once, you don’t know what to believe, what not to believe—and you have to respond, and my medical training is about *responding*, but you

don’t know how to respond properly unless you actually know the story.”

Concerned that the typical medical curriculum does not do enough to prepare students for the challenges of modern practice, Baruch helped launch Integrated Clinical Arts, a medical humanities framework that is part of the required first-year curriculum. The purpose is not to give science types some fluffy exposure to the arts, nor is it to make the students more sensitive, humanistic people (though that may be a collateral benefit, Baruch says). The goal is to help the students become doctors who think creatively, who approach problems with an understanding of their own beliefs and biases, and who will avoid making assumptions that can lead to medical errors.

While Baruch does not believe exposure to the humanities can make better people—after all, he says candidly, “there are some humanities people who are jerks”—he does believe the humanities can make better physicians.



IS THAT YOUR FINAL ANSWER?

After his emergency medicine residency, Baruch completed the fellowship in medical ethics at Harvard Medical School's Division of Social Medicine. A published writer (his book of fiction, *Fourteen Stories: Doctors, Patients, and Other Strangers*, was published in 2007), Baruch is director of the medical ethics curriculum at Brown. For the past few years, he's been driving a growing movement in medical humanities here.

The world of medical practice has changed drastically. Socio-economic factors shake up society and change the problems that patients face beyond their health. Technology has changed the doctor's armament and created once unimaginable ethical dilemmas. Yet the way that medical education is delivered has changed very little for almost a century.

"What it takes to be a good medical student is not always what is necessary to be a good physician," Baruch says. "The challenge in medicine is dealing with messiness and nuance. Responding to [emergency] codes is easy, it's algorithmic. The challenges are those cases, and there seems to be a growing number of them, where you look at a patient and think, 'Why are you here?'—where there are more questions than answers."

That type of case does not respond well to the reductionist thinking that is inherent in medical school, where emphasis is on finding the answer. The one, correct answer.

Baruch developed the Integrated Clinical Arts curriculum with Alpert medical student Kevin Liou '10 MD'14. (Liou is completing the scholarly concentration in Medical Humanities and Bioethics, which Baruch co-directs.) The curriculum series began in September 2011 with a visit to the Rhode Island School of Design Museum, where curators led students in a study of pre-selected works of art. All first-years were required to attend. In December, the students took part in hands-on, interdisciplinary workshops that utilized art, narrative, theater, comics, and music to foster creativity and spark innovative ways of thinking about medical issues. While students were required to participate in at least one workshop, they could choose which workshop to attend.

"We had six different sessions, including a figure sculpture workshop taught by a Brown-trained plastic surgeon ... and an acting workshop led by [Professor of Theatre Arts and Performance Studies] Lowry Marshall. The actors did some improv exercises with the medical students, teaching them how to



DO YOU SEE WHAT I SEE?

Students like first-years Faith Birnbaum and Nathan Sison (opposite page) and Tendo Kironde (above) learn to share ideas and listen to conflicting points of view in the workshops. Second-year students (below) were trained to act as teaching fellows during a figure sculpture exercise in the anatomy lab with a live model.

While Baruch does not believe the humanities can make better people, he does believe the humanities can make better physicians.





It's about "creativity, use of imagination, taking students out of their comfort zones..."



A LIBERAL MEDICAL EDUCATION

Emily Li (top) concentrates on her sculpture. Jay Baruch (above) says he's been able to do things at Brown that would be unlikely elsewhere, because "our students are that different. They aren't just smart, they are talented in so many areas, largely because of the PLME." Baruch (opposite page) leads a writing workshop.

think on their feet and respond to novel situations, and most importantly, how to empathize and connect with another person, because that's what doctoring is all about," Liou explains.

Liou led a session that examined the connection between comics and medicine. "I used comics to get students to think about the diagnostic process. How are words and images pieced together to create a story? How do we make sense of seemingly disjointed bits of information from the patient's history, x-rays, and labs?" he says. "In comics, we look at the details in the individual panels, but we also have to consider the big picture. How does each panel influence the meaning of the larger story?"

Comic artists also use the gutter—the space between the panels—as a storytelling device. What happened in the story that the reader did not see? The reader is left to fill in the gaps, much like a doctor listening to a patient's history.


CENTRAL CASTING

Apianist, Liou had a personal appreciation for the power of the arts to unlock different parts of a person. The Program in Liberal Medical Education was a perfect fit for him, but no concentration existed that would meld his interest in the connection between medicine and the humanities. So, in true Brown fashion, he created his own. His path crossed Jay Baruch's at the end of his senior year, when Liou was a student in an innovative course called "No Innocent Eye: Knowledge and Interpretation in Art and Medicine" that Baruch co-taught with Rhode Island School of Design professor Kelli Auerbach.

"No Innocent Eye" put RISD students and Alpert medical students in the same classroom. The premise was to bring these two groups who have very different ways of thinking together to contemplate topics that are relevant to both—like pain and suffering, and depictions of the body. The RISD students took the medical students to the studio and did live figure drawing; the med students took the RISD students to the anatomy lab to look at cadavers.

"We wanted to get them out of this singular mode of thinking. That is, 1) do I have the right answer? and 2) that a right answer exists. We said: "Think analytically, challenge traditions, ask questions, and be able to speak out," Baruch says.

He and Liou stayed in touch as Liou the undergraduate became a medical student. Though Baruch's view is that medical humanities is not something that should be "dripped in" to the



“What it takes to be a good medical student is not always what is necessary to be a good physician.”

regular medical curriculum, he knew realistically that it would be difficult to get discrete blocks of time in the formal curriculum. But suddenly, the stars seemed to align to make it possible.

Baruch started feeling buy-in for his medical humanities initiatives around the time Brian Zink, MD, Frances Weeden Gibson-Edward A. Iannuccilli, MD, Professor of Emergency Medicine, was appointed inaugural chair of his department in 2006. Zink (see *Brown Medicine*, Fall 2011) recognized the academic strength of Baruch's work, and encouraged him to pursue it. Meanwhile, the Medical School had introduced its Scholarly Concentrations Program, which allows students to undertake independent, rigorous academic work in a dozen different areas. A concentration in Medical Humanities had gotten off the ground under the direction of Michael Steinberg, director of Brown's Cogut Center for the Humanities, and Christine Montross MD'06 RES'10, a writer who had penned a memoir about her experience in the anatomy lab at Brown (see *Brown Medicine*, Fall 2007). Baruch was already directing a scholarly concentration in bioethics. (This year, the three combined their efforts into one concentration: Medical Humanities and Bioethics.)

One of the most exciting parts of this work, Baruch says, is that it involves cross-disciplinary relationships and collaborations that bridge Alpert Medical School and the University. He applied for and received a Brown Creative Arts Council grant, which provided money for the Creative Physician Series. The Council's Richard Fishman, professor of visual arts, has been an early supporter of the curriculum. The Creative Physician Series has brought to campus outside physician- and non-physician-artists whose work intersects with medicine. Last year, Baruch was a Faculty Fellow at the Cogut Center,

which gave him time to work more on the medical humanities program. He taught two courses at the University, "Pragmatic Medical Humanities" and "Pain, Medicine and Society," co-taught with Steinberg and Montross.

"There's a sense of this not just being a medical school phenomenon, of being bigger. I went from getting no support to people saying 'Maybe we should start a master's program,'" Baruch says.

He attributes the support, in part, to a "perfect storm of high-level people [at the Medical School] who have a side of them that is very humanities-based." That group includes Associate Dean for Medical Education Phil Gruppuso, whose undergraduate degree is in fine arts and who is widely known for playing keyboard in a jazz band, and Brian Zink, whose artistic life is less widely known yet who is a "fantastic" poet, according to Baruch. As a med student, Zink won the prestigious William Carlos Williams Poetry Competition. Fred Schiffman, Sigal Family Professor of Humanistic Medicine, has begun working with Baruch and supporting the effort. Gruppuso gave the green light for the humanities curriculum, and Richard Dollase, EdD, director of the Office of Medical Education, and Luba Dumenco, MD, who oversees the first-year curriculum, found time in the schedule and helped make it all happen.

METACOGNITION

Baruch says he is not trying to use the medical humanities for virtue building ("I don't feel reading the story or the poem is going to make you a better person"), because the literature shows students resist that. He does, however, feel that the medical humanities could make better doctors. It's about "creativity,



**“We try to get them
to think about how
they are thinking.”**

use of imagination, taking students out of their comfort zones—because that’s what medicine is—and knowing what you bring to the encounter. It’s about finding a meaningful way to respond that is not scripted. Maybe people will become better, be more empathic, more sensitive, but that’s not the primary motive.”

Baruch explains how the approach they are taking at Brown is different from that at other med schools. At the RISD

museum workshop, for example, the objective was to build critical thinking skills. Typically, the emphasis is on observation skills. Here, the students were guided to slow down their thinking, to go step by step through observation, deduction, and speculation. Often, Baruch says, students will jump to speculation and bring their own values into it. They should first observe elements, deduce why they are there, and then speculate about larger issues.



MOVE ME

Ivy Chang (opposite), a second-year teaching fellow, demonstrates an improvisation exercise. One student is a talk show host while another is a guest from another planet (who doesn't speak English). They must attend to body language, facial expressions, and tone to understand what the other person is saying. Above, a student forms the armature for her sculpture. Curtis Perry '79 MD'83 (below), a plastic surgeon and sculptor, leads a critique of each student's final product, discussing the different approaches that students took. Kevin Liou is on the right.



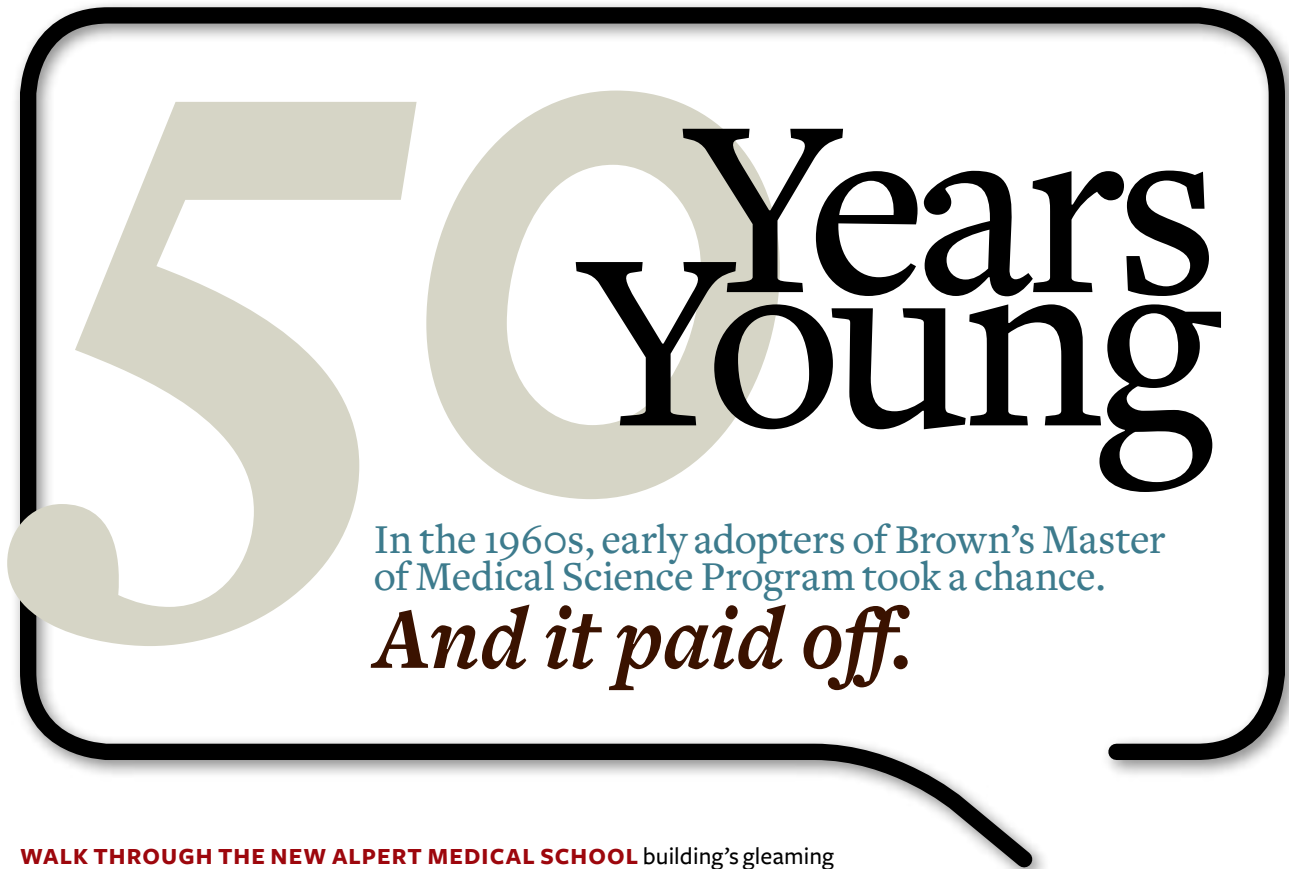
“That’s important, with the emphasis now on ‘how doctors think,’” Baruch says. “Many of the medical mistakes and errors that happen are not made by dumb doctors. They are made by smart doctors who fall victim to certain thinking traps. I was able to connect what we did at the museum to some of the clinical situations that we review in our M&Ms [morbidity and mortality review sessions]. You basically jumped the gun and you assumed that because so-and-so was found here, he was drunk, or you had a patient with ‘just’ a shoulder injury and when she comes back a few days later, she’s in severe condition because she was a victim of domestic violence and that story was never gotten. We try to get them to think about how they are thinking.”

For the most part, the medical students have reacted positively to the curriculum. Liou has issued evaluations at the end of each experience as part of his work for his scholarly concentration product. Medical humanities, he has come to learn, is a difficult thing to assess objectively—to, in essence, “prove that it works.”

“The traditional methods of objective analysis can’t really measure the skills we’re trying to foster,” Liou says. “So, we have to be a bit more creative when it comes to evaluating the impact of this new curriculum.” His initial analysis of the evaluations found that 85 percent of students were satisfied with the humanities curriculum, though some felt it should be optional, not mandatory. Liou will continue refining and tweaking the experience, and he hopes to develop a new cohort of second-years who will act as teaching fellows next year and help sustain the curriculum.

Interestingly, some of the students said they wished they had been given more context for the sessions, told “what they were supposed to get out of it.” Some found it hard to let go of the pursuit for the right answer, saying at the end of the museum session, “But we still don’t know what the painting was about.”

Liou says they had purposely not told them much, preferring instead to let students make the clinical connections themselves. “We think it’s more powerful if we don’t preach to them. Plus, I’m not an expert on this stuff. In each of these sessions, my classmates have helped me see things I never would have realized before. That’s been the most rewarding part of this project—bringing together different disciplines and perspectives. That’s how new discoveries are made.”



WALK THROUGH THE NEW ALPERT MEDICAL SCHOOL building’s gleaming anatomy labs and high-tech lecture halls. See the clusters of happy students and faculty in the corridors and the academies. Notice how the lights of 222 Richmond make the night sky glow. Then remember this: establishing a school of medicine at Brown was not always a foregone conclusion. For some years, doubt and downright opposition abounded.

But vision and perseverance (aided by a post-war physician shortage and concomitant growth in research and medicine) eventually prevailed: in 1962, Brown’s Board of Fellows approved the creation of a program in medical education, enabling Rhode Island, in the words of Congressman John E. Fogarty, a key early supporter, “to cease to be one of nine states which do not have [a medical school] today.”

For the program to take off, a few brave souls were needed. *Brown Medicine* asked members of the first “med-sci” classes—who proudly call themselves “guinea pigs” and “pioneers”—to take a moment, take stock, and tell us what those early years were like.

To learn everything you always wanted to know about the history of medical education at Brown—and the history of medicine and science in general—check out the newly launched timeline at <http://brown.edu/academics/medical/about-us/history>.

Why did you do it?

“**I was motivated** by the opportunity, at the tender age of 17, to be assured of a place in a good medical school; the tougher odds for admission compared to regular Brown admission presented a challenge. Of course, I didn’t think about the fact that in 1965, when I signed up for the program, no one had yet graduated and been accepted in an MD program! Luckily, that did not turn out to be a problem.”

“The program’s initial focus on producing medical scientists with an extensive background in the sciences. I was interested in a career in medical research, and this approach seemed sensible—avoiding duplication of courses between undergraduate and medical school, and allowing for more exposure to higher level science courses. I didn’t quite realize what being a guinea pig for this program would mean. It wasn’t always smooth sailing. The load of science courses was difficult and led a lot of initial program members to drop out. In the later courses with relevance to clinical issues (pathology and microbiology, for example) there was little attempt to teach the subjects as relevant to clinical medicine. Nevertheless, because we were such a small group, the educational experience was unique.”

“An enthusiastic teacher turned me on to biology in high school. A classmate of my oldest brother was enrolled in the MMS program and gave it wholehearted praise. (An interview with physiology professor Peter Stewart didn’t hurt. I still remember him asking me about UFOs!)”

“I always knew I would be a doctor. I was never afraid of a challenge—at least at that time of my life—and I loved the idea that I could take the hardest courses, like physical chemistry and engineering, [and] as many humanities courses as I could fit in. I also loved the fact that I would be part of Pembroke as well as Brown.”

“The potential to combine and continue with other interests (music and computers) and medicine. The draft for the Vietnam War was another strong incentive.”

Who were your mentors?

“The blue ribbon goes to Donald L. Kimmel, who taught us embryology and genetics and was a good friend to us. He welcomed us into his home, infused us with enthusiasm for biology, and always showed concern for us as people-in-the-making.”

“Dr. Mary Arnold, pediatric endocrinology. She was contagiously enthusiastic about pediatrics, endocrinology, and our training.”

“Frederick Barnes was exceptionally kind and supportive. John Fain was an excellent research mentor. Milton Hamolsky was the epitome of a thoughtful, smart, and caring physician. George ‘the silver fox’ Erikson was an outstanding teacher. (Erikson took me aside one day and told me that I should find a nice husband, devote myself to raising a family, and forget about a career in medicine. Sorry, George, you were wrong—I managed to have a wonderful family as well as practice medicine full time until I recently retired at age 65.)”

“Fred Barnes. Whether through frequent encounters on the College Green as he biked slowly along on his 3-speed, or taking one of his eclectic Modes of Thought courses, or enjoying an occasional dinner at his house just off campus, it seemed that all the early MMS students came to know and appreciate that gentleman scholar.”

“Milton Hamolsky was the biggest influence in my medical career. He was a saintly person. He had such respect for his patients. After interviewing one in front of us students, he would thank the patient so graciously for how important they were to our education. It was beautiful to watch.”

“I transferred into the MMS Program in my sophomore year largely due to the influence of Professor Frederick Barnes ... I had the privilege of visiting him up to the year of his death, as he remained interested in the [MMS] Program and its graduates to the very end.”

“Henry Randall, then the director of surgical research at Rhode Island Hospital, provided the resources for the experimental application of a mathematical model of fluid

“We got constant requests for feedback on the curriculum. We felt we and the faculty were a team.”

spaces for my master’s thesis. [He] proved remarkably accepting of this fledgling investigator, respectful of the linkage that Brown was promoting between the campus and the hospitals, and a strong advocate for the continuation of the medical school.”

“Chairman of Surgery Henry Randall became the mentor for improved training in surgery with the creation of the Brown surgery residency program, expanding training sites to the Providence VA and The Miriam Hospital despite the vigorous objections of the surgeons at Rhode Island Hospital.”

“I had several, but the two that stand out are John Fain—the youngest person to become a full professor at the time and who inspired my interest in the powerful effects of insulin TO THIS DAY. Mary Arnold has been my role model, and it is in no small measure my memory of her teaching and her clinics to which I owe my becoming a pediatric endocrinologist while raising two wonderful children. She taught me that I COULD have it all.”

What were the *highlights*?

“The second patient that I saw in the final year, in Introduction to Clinical Medicine: I was to do a history and physical and come up with a diagnosis without access to lab work, imaging studies, or path reports. The older gentleman had a diffuse nodular rash on physical exam. I managed to nail a diagnosis of lymphoma. That was a huge high, and I became convinced that I could do the differential diagnosis thing, and that one day, I might even get good at it.”

“The series of evening psych classes with Drs. George Vaillant and Fred Barnes and members of the Trinity Repertory Company. What a wonderful way to study abnormal psychology, years before standardized patients were being used.”

“It was thrilling (and something of a relief) when the first-ever med-sci graduates actually got into good schools to complete their MDs.”

“The psychiatry curriculum was taught by two of the most well-known psychiatrists in the country, both from Harvard. Dr. Leston Havens was wonderful at taking a history. He really adapted to each patient’s needs. He interviewed a different patient each week, and became a different person each time.”

“The opportunity to take graduate courses in Religious Studies from a world-famous guest professor; being in one of the earliest Modes of Thought seminar programs with Dr. Morgan; and learning how to make electronic music in our new Moog lab with Shep Shapiro. Where else could you do this while a full-time medical student?”

“When they offered the Charter 12 the opportunity to continue on at Brown for the final two years of clinical training.”

“The March 1972 faculty meeting where the university faculty voted to begin offering the MD degree (by a 3 to 1 margin, if memory serves).”

“The unique circumstances of the MMS program had both positive and negative features vis à vis the college experience at Brown. The small class (about 20 started out and 7 graduated) did become a prominent feature of my ‘social network,’ with friendships that continue to the present. But the hovering faculty and the special seminars that seemed laudable at the time were actually mechanisms that separated us further from the usual undergrad immersion. Being a commuting student was separation enough, but I felt like I was in professional school from freshman year on, a distinction that probably limited further my engagement in college life.”

“EVERYTHING! We were a pampered lot, treated to lectures by famous faculty, and dinners and seminars. Coming from a small New England town, where being an Indian girl and wanting to be a woman doctor in the 1960s was considered

Early Decision

When the person who influenced you to become a doctor becomes your patient.

BY DANIEL SMALL '71 MMS'73 MD'75

weird. Are you kidding? To be taken seriously for these ambitions at this formative stage of my life was gratifying, encouraging, and ultimately rewarding.”

“Our evening seminar program, where physicians and professors spent an evening with us each month and told us about their interests, their hobbies, their personal life, learning the importance of being well rounded, humanistic, and always searching for knowledge.”

What's your favorite memory?

“I will never forget the physiology labs, where Dr. Roy Hudson taught us the secret to remembering atropine poisoning (‘Remember my name: Mr. Roy D. Hudson. Mad as a hatter, Red as a beet, Dry as bone, Hot as an oven’). That helped me diagnose three boys who showed up in the Rhode Island Hospital ER in 1972 with jimson weed poisoning when I was an intern.”

“Behavioral medicine, taught by Dr. Vaillant and the Trinity Rep Theater. Delving into dysfunctional families by watching ‘The Glass Menagerie’ was and continues to be memorable and highly effective.”

“Being a part of the show our class put on, complete with musical numbers and of course lots of spoofs of faculty members. I had to put on a thick French-Swiss accent to be Dr. Galletti, and I couldn’t look him in the eye from the stage.”

AN ELDERLY PATIENT WITH SJÖGREN SYNDROME has been seeing me regularly for many years. Her boyfriend, with whom she has lived for years, had been in vigorous health at age 88, kayaking in the bays and creeks of Southwest Florida where we live. He suddenly developed swelling in his hands, and saw several physicians without symptomatic improvement before his girlfriend recommended that he see me. I made the diagnosis of relapsing symmetrical synovitis and edema, a relatively rare rheumatic illness that is treatable with prednisone. What seemed like a pretty normal encounter in the daily practice of rheumatology turned poignant when he and I realized that our paths had crossed once before.

I made a decision at age 11 to become a physician, after helping maintain the airway of a man having a stroke on a golf course. From that time on I eagerly sought out information about a career in medicine. I realized that I needed to learn about anatomy, so I decided to put together a chicken skeleton. I called the Museum of Natural History in New York City, and the director gave me some advice and asked me to send him a picture of the skeleton after I put it together. After he received my picture, he invited me to spend a day with him at the museum and he took me around to meet various department heads. He showed them the picture of my chicken skeleton and had them show me the work they were doing at the museum.

When I was 15 I worked as a volunteer at North Shore Hospital on Long Island and found out about a new group that was forming there. As a sophomore in high school I was asked to join the first Medical Explorer’s Club. Each month a physician came to show us something interesting and talk to us about a particular area of medicine, telling us about what he or she had to do to become a specialist in his or her field. A thoracic surgeon, for example, showed us a film of the repair of an esophageal injury caused by a poorly trained sword swallower, and brought with him a professional sword swallower to demonstrate the proper technique. He discussed his training and the requirements for board certification in his field. These meetings were very exciting, and the club gave me information about the path to becoming a physician that most high school students would not have been exposed to.

I found out about the six-year medical science program at Brown University and applied early decision to Brown in the fall of 1966. After my interview, the admissions director told me I was accepted. I asked him if that included acceptance in the medical program. He replied, “We’ve never done that before.” I told him that the main reason I was interested in going to Brown was for the medical program, so he brought me over to see Dr. Fred Barnes for an interview.

“We formed a small fraternity. We weren’t competitive—we worked with each other.”

The next day I learned that I was accepted at both Brown and the Program in Medicine. Thus I knew I was going to be a physician when I was a senior in high school.

Back then, the Brown program culminated in a master of medical science degree and most of the medical students did the clinical years at Harvard, where they would receive their MD degrees. Eleven fellow students and I asked the administration if we could stay on to be the “guinea pigs” for the clerkship programs rather than moving on to another medical school. It was a great experience to be one of the first Brown students to go through the clinical clerkships, as hospital faculty showed intense interest in us.

I finished my course work at Brown in 1974, and felt confident in my education, but Brown did not grant MD degrees until 1975. Dr. Stanley Aronson, our dean, had a dinner with us that fall and presented each of the “Charter 12” with a memento to commemorate the completion of our education. I found out that there was a law on the books in the state of Rhode Island from the 1930s, passed to accommodate Italian physicians fleeing fascism, that allowed physicians to practice medicine in Rhode Island if they had three-and-a-half years of medical school education and were employed or supervised by a hospital. I approached Dr. Paul Calabresi, who was chief of medicine at Roger Williams General Hospital, and asked him if we could arrange a medicine internship. He agreed, and in July 1974 Brent Davis, John Horneff, and I became the first Brown medical students to do postgraduate training in Rhode Island. Subsequently, I took advantage of the last year that was available to “short track” for internal medicine board certification, and spent postgraduate years three and four in my rheumatology fellowship. As a result, I started practice in rheumatology at age 28, and have been board certified in both internal medicine and rheumatology.

SMALL WORLD

WE NEED TO REMEMBER how important our interactions with young people may be in guiding them in their future careers, as not only they, but we, may benefit some day from that interaction. The Medical Explorer’s Club gave me insight into training requirements, and allowed me to choose a path that helped me speed up the process of completing my training.

It turns out that my 88-year-old patient with relapsing symmetrical synovitis and edema had been the head of social services at North Shore Hospital, and had come up with the idea for the Medical Explorer’s Club. Forty-six years after the development of the club—the first in the nation—he was diagnosed with a rare rheumatic illness by a physician whom he had helped guide to the career of medicine.

Another of my patients volunteers at Mote Marine Laboratory and has started one of the world’s finest collections of marine mammal pathology. As we learned more about each other through the years, we discovered that I had met her when I was 11, while touring the Museum of Natural History. She was the head of the ornithology department and had seen me with my pictures of my chicken skeleton.

“Some of my warmest memories were of the small, intimate classes we had during the fifth and sixth years and the summers spent on campus. It was wonderful to have that kind of *esprit de corps* rather than the typical med-school competition. I have several enduring friendships from that group.”

“As a member of the Charter 12, I was in the first class who took the chance, with Dean Stanley Aronson, of Brown actually progressing to a full medical school. I also recall fondly sitting in the living room of Dr. and Mrs. David Greer in the first clerkship in ‘Community Medicine’ learning about the medical community in Fall River.”

What was your pioneering moment?

“I might have been the first to read organic chemistry texts in German for chem lab at the same time as I was studying German literature. Trying to recapture that Renaissance flavor in a world hell bent on narrow specialization was certainly a different path.”

“First senior show, including our class song. Wish I still had the words. We gave Dean Aronson the first Aronson Chair of Neuropathology (an old toilet seat spray-painted gold to which we affixed the Brown seal and a mirror underneath). I remember Aram Arabian getting his degree from then-President Hornig, who said loudly enough to be heard over the PA system, ‘You’re the first.’ Also I re-

member a sense of pride in the kelly green striping on the doctoral hood—it was the first time that a piece of Brown academic regalia had been so designed.”

“Our early classes in the med-sci program were the beginnings of significant numbers of women in medicine. I can’t emphasize enough that women were a minority in the profession in the 1960s. When I enrolled, there were 32 of us: 24 men and 8 women. When I graduated there were eight: four men and four women.”

“We knew this was a small new experiment, and we were part of it.”

“I ... remember the excitement of the excavation to begin construction on the new med-sci building across from Hillel House. The hole was so huge—rumors abounded that a swimming pool was being installed for the exclusive use of the med-sci students. This illustrated how well some folks felt we were being treated by Brown, as expensive guinea pigs!”

“In 1965, I was the first Indian-American (woman or man) in medicine at Brown ... As much as we took a risk coming to Brown, I would say in my case in particular—a woman AND a minority—Brown took a risk on me, for which I am forever grateful.”

What did you do for *fun?*

“... I will confess openly to one episode of inebriation shared with my cadaver-mates to celebrate completion of our final exam in Professor Erikson’s human morphology course.”

“What I remember most about my leisure time was sharing it with Ed Collins (Class of ’75) and his wife, Moby. We learned to enjoy our free time in the midst of temporary poverty. We spent hours together canoeing, hiking, cross-country skiing, fishing, playing bad-

minton, and talking into the night. I miss Ed.”

“Going to Dunkin Donuts and Store 24 on Thayer Street for junk food.”

“Girlfriends.”

“I remember working until about 11:30 each evening, and then relaxing with the old movies on channel 56.... *Casablanca*, *The Philadelphia Story*, *The Big Sleep*, *The Maltese Falcon*, etc.”

“Block Island, Cuttyhunk, Martha’s Vineyard, Nantucket, sailing on Narragansett Bay, exploring Cape Cod. These were the days when you could catch a ferry to an island, tool around on a bike, and sleep on the beaches—all for next to nothing, and with no restrictions. During the academic year, my favorite past-time was walking and exploring the East Side—from the Portuguese community (where you could buy unforgettable sweet bread) to the wooded land along the Seekonk from the boathouse north to Butler Hospital and the Cemetery.”

“I’m going to have to plead the Fifth on the ‘fun’ question, as I went to Brown in the ’60s! My favorite escapes, Providence being what it was back then, were Boston and the Haffenreffer Estate.”

“Walking to Fox Point was ‘far.’ Going to Burger King in Cranston was a treat. Not a lot of fine dining in Providence in those days. We also ate out at Smith’s on Federal Hill and at a bar called Custy’s in Quonset Point.”

“We were often invited to the homes of Brown faculty; my first experience with Korean bulgogi was at the home of the Drs. Cha. Dr. Fain would have groups over to his home in Barrington for boating and ice cream. And of course we attended Campus Dance—I went as part of Fain’s Fat Factory.”

“During the summers we lived, worked, and partied together. As a result of the small classes and the year-round program, we became very close. My closest lifelong friendships were my classmates in the med-sci program.”

MOMENTUM

We Can't Thank You Enough

Recognizing the generosity of donors.

It's a dilemma that would flummox even Emily Post: How do you properly thank the people who made a \$45 million building renovation possible, opened new vistas in medical education, and provided the catalyst for an economic revival? Well, you might start by throwing a party so your supporters can see what their generosity has wrought.

That's just what Alpert Medical School did on October 15, when a "Celebration of Thanks" was held in the new building at 222 Richmond Street. Donors were invited to take tours of the facility, led by current medical students who described what learning in the new space is like. Dean Edward J. Wing began the evening's speaking program, underscoring how significant it is for this medical school to finally have its own home.



Above: President Simmons (center) with Preston Calvert '76 MD'79 and Margaret Guerin-Calvert '76.

Right: Dean Wing with (left to right) Donald Migliori '88, Anna, daughter of Mark Migliori '84 MD'87 and Sara Migliori, and Michael Migliori '79 MD'82, P'11, '12, '14.

Second-year Shreyus Kulkarni, a native of Maryland, spoke on behalf of the student body. "The new building has completely changed the look, the feel, the energy, and the attitude of the Medical School," he said. "I want

As far as gratitude goes, it was a good start. The real appreciation, however, will be shown in the dividends these gifts will pay out. More Brown-trained physicians to head off the coming shortage of doctors, new companies drawn to

"The building has completely **changed the look, the feel, the energy, and the attitude** of the **Medical School.**"

to express my heartfelt thanks to all of you for making this building come to fruition."

Nearly 200 people attended the event, where they enjoyed dinner and the music of a string quartet provided by Providence's own Community MusicWorks. President Ruth J. Simmons posed for photos with donors whose gifts had named spaces within the building.

the Knowledge District that will bring jobs to the city, a stronger academic medical center providing world class care to the region—these are the ways Alpert Medical School will truly say thank you.

—**Kris Cambra**

See more photos from the *Celebration of Thanks* at www.flickr.com/alpertmedicalschool.



SCOTT KINGSLEY; ADAM MASTOON

ALUMNI ALBUM

CHECKING IN WITH BROWN MEDICAL ALUMNI



WAYBACK MACHINE:
Dwight Coleman MD'93 and
Marcia Eley-Bradford MD'92.

CLASSNOTES

1975

Art Horwich '73 (see *Brown Medicine*, Winter 2009) shared the 2011 Lasker Award with Franz-Ulrich Hartl for basic medical research. They discovered a cel-

lular machine that controls how newly manufactured proteins fold into their biologically active structures. The Lasker Awards—considered among the most respected science prizes in the world—honor visionaries whose insight and perseverance have led to dramatic advances that will prevent disease and

GOT NEWS?

Career news, weddings, births, reunions...it's all good. Go to med.brown.edu/alumni and click on "Updates and Class Notes."

ALUMNIALBUM

prolong life. Horwich is Sterling Professor of Genetics and professor of pediatrics at Yale School of Medicine.

1978

Alan Muney '75, P'04 was named chief medical officer at Cigna Corporation. Alan joined Cigna in 2010 as senior vice president in charge of the company's health management and network contracting operations. Before working at Cigna, Alan was executive director of The Blackstone Group.

1981

Joel Scheraga '76 AM'79 writes that on June 2, 2011 the US Environmental Protection Agency (EPA) released its first-ever Policy Statement on Climate Change Adaptation. Joel chaired the work group that developed the statement. Signed by EPA administrator Lisa P. Jackson, the statement commits the EPA to addressing the impact climate change may have on its programs, policies, rules, and operations through adaptation planning.

1982

Jay S. Loeffler was elected into the honorary membership organization of The Institute of Medicine of the National Academies. Jay was one of 65 distinguished professionals. He is a professor at Harvard Medical School and chair of

radiation oncology at Massachusetts General Hospital.

1983

Edward Chu '80 MMS'83 is chief of Hematology/Oncology at University of Pittsburgh. He was recently named chair of the scientific advisory board of Saladax Biomedical, Inc., a privately held company that develops diagnostic assays.

David Rutstein (see *Brown Medicine*, Spring 2010) is the vice president for medical affairs at United Family Healthcare (UFH) and one of the highest ranking physicians in the only private health

care system in China. UFH is operated by Chindex International, an American health care company that provides health care services in China and medical capital equipment and products. Based in Beijing, David oversees medical operations and staffs at UFH's private hospitals and clinics throughout China.

Prior to joining UFH last year, David retired from the US government, where he held the rank of Rear Admiral in the US Public Health Service and served as Deputy Surgeon General of the United States. He is the former chief medical officer of the US Public Health Service.

1985

Nadine Cartwright-Lowe '82 would like her classmates to know that Veronica Lowe '10 married Patrick Hanley '09 on June 18 in Las Cruces, NM. The two met in Perkins their freshman year.

1989

Timothy Hunter P'12 recently joined University Hospital in Augusta, GA, as the director of cardiothoracic surgery. He was previously clinical assistant professor of surgery at Northeastern Ohio Universities College of Medicine and director of cardiothoracic surgery, Humility of Mary Health Partners at St. Elizabeth Hospital in Youngstown, OH.

1990

William Ankenbrandt '87 and William Cartwright (Northeastern Illinois Univ. '90, DePaul Law School JD'94) celebrated

David retired as **Rear Admiral** in the US Public Health Service and **Deputy Surgeon General**.

their 25th anniversary in March in Morocco. They attended the bar mitzvah of **Yeva Johnson** MD'90's son, Myer, in San Francisco, where they swapped iPhone photos with **Jason Deutsch** MD'90 and family. While in the Bay Area, they met with the board of Riecken Community Libraries, which has built more than 60 libraries in Honduras and Guatemala.

1996

Marina Catalozzi '92 and **Robert Grossberg** '92 MD'96 welcomed Luca Isaac Rocco on July 13, 2009. He joined big sister Francesca Emilia, who is now 6 years old. They are living in New York City. Contact Marina and Robert at grossalozzi@yahoo.com.

Jonathan Kurtis '89 PhD'96 was presented the Lifespan Excellence in Research Award by Judge Bruce M. Selya. The award recognizes research excel-

FOLLOW US!



<http://www.facebook.com/BrownMedicine>



<http://twitter.com/brownmedicine>

Such Great Heights

A surgeon on top of the world.

Louis Mariorenzi '77 MD'80 finds a certain symmetry between mountain climbing and orthopedic surgery: both require commitment, preparation, mental and physical rehearsal, focus, and discipline. And he's plenty qualified to make the comparison: he is not only an orthopedic surgeon but an accomplished climber, as well.

His highest achievement came last May, when he scaled Mount Everest.

Everest, of course, was not Mariorenzi's first climb. In 1994, a mountaineering course tempted the avid summer hiker to apply those skills and, in 2003, Mariorenzi made his first summit: Cotopaxi, in Ecuador. He has since scaled other peaks on almost every continent: Aconcagua (South America), Denali (North



Louis Mariorenzi '77 MD'80 atop Everest.

America), Mont Blanc (Europe), Mount Vinson (Antarctica), and Kilimanjaro (Africa). six sherpas) made the 10-day, 30- to 40-mile trek to base camp. There, says Mariorenzi, "we started to acclimatize, sharpen our skills, do some ropes work."

They rotated climbs to interim camps, at 21,500 and 23,500 feet, with climbs back down to base camp to prepare them for the summit's less oxygen-rich environment. "It's hard to stay strong at that altitude," he says. With frigid temperatures, cuts and bruises don't

heal, and hypoxia is a real threat.

After acclimatizing, reaching the 29,000-foot summit and returning to base camp took seven days; the trek out required three. The entire climbing season, says Mariorenzi, is only

three weeks in May; if the weather doesn't cooperate, a long-anticipated goal must be deferred.

While climbing Everest, Mariorenzi carried a 40-pound equipment-filled backpack; sherpas did the heavy lifting. Mariorenzi recalls that as he drew closer to the summit, "I didn't want [the experience] to end. I wanted to savor the anticipation of reaching it.

"It's like reading a book that you don't want to finish because it's so good."

—Nancy Kirsch

If the weather doesn't cooperate, a long-anticipated goal must be deferred.

America), Mont Blanc (Europe), Mount Vinson (Antarctica), and Kilimanjaro (Africa).

"Now that I've done five of the Seven Summits [the highest peaks of the seven continents], I will finish the last two—Mount Elbrus, in Russia, and Carstensz Pyramid, in Western Papua," says Mariorenzi.

More physically grueling than his other mountain climbs, the Everest trip kept him from home for 10 weeks. After flying into Katmandu, the group (six climbers and

ALUMNIALBUM

EYE
ON ALUMNI



Mr. President:
David Carlisle MD'81.

Equal Access Above All

A school of and for South Central LA.

David Carlisle MD'81 is a visionary and a doer all in one. In July 2011, the internist was appointed president of Charles R. Drew University of Medicine and Science. Located in the Watts-Willowbrook section of South Los Angeles, the university was established shortly after the Watts Rebellion of 1965. It is the only dually designated Historically Black Graduate Institution and Hispanic-Serving Health Professions School in the US, and the only Historically Black Graduate Institution west of the Mississippi.

Carlisle, most recently director of California's Office of Statewide Health Planning and Development, is charged with implementing the university's targeted vision for its underserved community. They'll know

they've achieved that ambition, he says, "when disparities and lack of access to health care no longer define the limit of one's health and goals of one's life." He considers passage of the Affordable Care Act one of the country's single biggest steps toward reducing health care disparities.

Charles Drew University, too, is doing its part to make that vision a reality, graduating hundreds of physicians, nurses, and allied paraprofessionals (many of them bilingual) each year. Carlisle cites data that indicate a national shortage of health professionals across the spectrum—especially as health care reform will create more, rather than less, demand for access to medical care. Those shortages, he explains, only perpetuate the disparity of access to high-quality, affordable health care between the residents of South Central Los Angeles and, say, Beverly Hills or another upscale Los Angeles neighborhood.

Growth is key, says Carlisle, noting that in 2016, the institution will celebrate its 50th anniversary. While Charles Drew University has been successful in attracting federal research grants, its new president includes on its "wish list" its first \$100 million philanthropic gift. "If we can expand as an institution, we can address more disparities," Carlisle says.

In the meantime, the soft-spoken physician derives great satisfaction from interacting with students. They are motivated to succeed, he finds, and pleased to study at an institution committed to serving the underserved. "For a school that may not have much national

Physician shortages perpetuate **the disparity of access to health care.**

prominence, we have been successful at matriculating students from across the country," Carlisle explains. "One student came from Tufts University and a Harvard graduate enrolled in our medical school. We are expanding our footprint."
—N.K.

COURTESY CARLISLE

lence at the level of the independent investigator. Kurtis received the award for his research focusing on schistosomiasis. He is the assistant director for Transfusion Medicine & Coagulation at Rhode Island Hospital and the director of the Lifespan Center for International Health Research. He is also an associate professor of pathology and laboratory medicine at Alpert Medical School.

Kurtis is currently leading a project

Kurtis is leading a project to **identify vaccine candidates for pediatric malaria** and schistosomiasis.

funded by the NIH to identify vaccine candidates for pediatric malaria and schistosomiasis in East Africa and the Philippines.

1999

Garey Noritz '95 is now medical director of the Complex Care Program at Nationwide Children's Hospital and associate professor at The Ohio State University. He and wife Tracey "love Columbus" and have two daughters, Abigail and Ella. He would be glad to hear from classmates. Email him at Garey.Noritz@NationwideChildrens.org.

2000

Gretchen E. Green MMS'96, an attending radiologist at Greensboro Radiology (Greensboro, NC), has joined the Board of Directors of the National Women's History Museum. Gretchen has been actively involved in advocacy for women physicians and patients since 1992 through research on the history of

medicine and involvement with the American Medical Association's Women Physicians Congress. Her research on the history of women in medicine and history of obstetrical anesthesia has won numerous awards.

2003

Barrett Bready '99, CEO of NABsys, Inc., has been named Rhode Island's Innovator of the Year. Barrett was honored

for NABsys's use of solid-state systems to power DNA sequencing and analysis.

2007

Sarah (Johnson) Atunah-Jay '00 lives in St. Paul, MN, with her husband, Daniel, and her children—Nere, 5, and Sumaaho, 2. Sarah is an academic general pediatrics fellow at the University of Minnesota.

2008

Liza Aguiar '04 RES and **Bradley DeNardo** RES were married on September 4, 2011. "Brad and I got married at Glen Manor House in Portsmouth, RI, surrounded by close friends and family. It was a beautiful day and we had so much fun," writes Liza.

2010

Clifford W. Meyers '04 married Linda Chernak ScM'08 on June 19 in Rochester, NY.

2011


Tina Charest '07 RES and **Albert Lin** '07 RES were married on May 14, 2011. The wedding took place in Tina's parents' backyard in Fall River, MA. A number of MD'11 classmates were in attendance.

"**Bharati Kalasapudi** and **Ajar Kochar** were married during a festive, several-days-long wedding celebration in India. A beautiful ceremony took place in Vizag on June 3, followed by a fun-filled reception in Delhi on June 6," writes **Charu Gupta** '07. Brown alums in attendance included **Diana Moke**.

Heidi Wilder '06 married Kevin Knoll on June 4, 2011, at her family's farm in Ohio. Alumni in attendance included bridesmaid **Alicja Kreczko**. Heidi is a resident in the Brown Family Medicine program and Kevin is a teacher in the Providence public school system.

RESIDENTS

2008

Matthew Siegel has joined the Department of Psychiatry at Spring Harbor Hospital in South Portland, ME. He completed his residency in Pediatrics, General Psychiatry and Child Psychiatry (Triple Board Program). Matthew divides his time between Spring Harbor Hospital, where he is the medical director for the Developmental Disorders Program, and Maine Medical Center, where he offers outpatient consultation and runs specialty clinics for children. He recently authored a study published online in the *Journal of Autism and Developmental Disorders* that is the first systematic review of all commonly prescribed psychotropic medications for children with autism. 

OBITUARIES

ALUMNI

ALBERT D. BAFFONI JR., MD

Albert Baffoni Jr. '76 MD'79, died peacefully on October 22, 2011, at the age of 57.

He was board certified in general surgery and critical care medicine. He worked at Montefiore Hospital in Pittsburgh as a surgical intensivist and directed the surgical ICU. He also worked at West Penn Hospital in Pittsburgh as the chief of the Department of General

surgical program at New England Medical Center.

After completing his residency, DeLuca returned to his native Rhode Island to serve his community for 36 years as chief of pediatric surgery at Rhode Island Hospital's Potter Building and Hasbro Children's Hospital. In addition to his work as a surgeon, he was a professor emeritus at Alpert Medical School and served as president of the Providence Medical Society.

dealt with patients—his compassion—that I wanted to emulate.”

He served as president of the Providence Medical Society and was a member of the AMA, APSA, ASA, BAPS, New England Surgical Society, and an honorary member of the Italian Society of Pediatric Surgery.

DeLuca was instrumental in the establishment of the Pediatric Trauma Unit and Intensive Care Unit, the Neonatal Intensive Care Unit, and Brown University's Pediatric Surgical Fellowship Program at Hasbro Children's Hospital. He will always be remembered for his overall contribution of improving the surgical and intensive care of Rhode Island's infants and children. “Dr. DeLuca kept a vigil over infants and children requiring surgical care in southeastern New England,” says Vice Chair of the Department of Surgery and Professor of Surgery and Pediatrics Thomas F. Tracy Jr. “He represented the highest ideals of clinician, teacher, investigator, and leader in academic pediatric surgery.” DeLuca was awarded a private audience with His Holiness Pope John Paul II due to his well known commitment and work in neonatal surgical care.

He is survived by his wife of 52 years, Joyce C. (Wireback) DeLuca, five children, BetheAnne DeLuca-Verley MD'90 RES'94, Francine DeLuca Soldi '84, Michele DeLuca-Verley, Denise DeLuca Madden, and Thomas DeLuca, and 10 grandchildren.

Donations in his memory can be made to Hasbro Children's Hospital, PO Box H, Providence, RI 02901, or to the Alzheimer's Disease Association, RI Chapter, 245 Waterman St., Suite 306, Providence, RI 02906 or www.alz.org/ri.

“It was not just his surgical expertise that impressed me, but it was the way he dealt with patients—his compassion—that I wanted to emulate.”

Surgery and at McGee Women's Hospital in Pittsburgh in the Surgery Department until he retired.

Baffoni was in active duty in the Army Medical Corps for nine years, honorably discharged as a major.

He is survived by his three children.

Donations in Baffoni's memory may be made to the Our Lady of Grace Memorial Fund, 4 Lafayette St., Johnston, RI 02919.

“Dr. DeLuca was instrumental in the development of my career—when I was a medical student and later, when I was a young attending,” says Professor of Surgery (Urology) and Pediatrics Anthony Caldamone '72 MMS'75 MD'75, P'06. “It was not just his surgical expertise that impressed me, but it was the way he




Frank G. DeLuca, MD

FACULTY

FRANK G. DELUCA, MD

Frank DeLuca '50, P'84, MD'90 RES'94 died September 11, 2011. He was 84.

DeLuca graduated from Brown and went on to earn his MD from the University of Bologna Medical School. He was an alumnus of the Tufts University surgical residency and the pediatric



“I think it’s important to give back, to say thank you for everything Brown offers us, from great programs to this new building. Participation shows you are invested and involved.”

— Courtney Mannino '11 MD'15

Actions Speak Louder

Courtney Mannino knows personally how much the Brown Medical Annual Fund does for Alpert medical students. Her gift might not be the biggest, but it’s from the heart.

Your gift – at any level – speaks volumes about your belief in Alpert Medical School. Join Courtney in giving to the Brown Medical Annual Fund this year. Your gift will bring us one step closer to our record-breaking goal of 1,760 donors by June 30, 2012.

Visit www.gifts.brown.edu for more information and to make your gift.

Questions? Contact Bethany Solomon, director of the Brown Medical Annual Fund, by email at Bethany_Solomon@brown.edu or phone at 401-863-1635.



BROWN
Alpert Medical School



Brown Medicine
Box G-ADV
Providence, RI 02912



Picture yourself here, just like Gabrielle DuVernois '11 MD'15, Alexis Mancini '10 MD'14, Neil Parikh '11 MD'15, and Isha Parulkar MD'15.

WALK A MILE IN THEIR WHITE COATS

Would you like to see what it's like to study medicine in a state-of-the-art building?

You're invited to participate in a day in the life of an Alpert medical student. You'll learn in small group sessions taught by world-class faculty. You'll spend time with current medical students and enjoy all the new building has to offer. You'll experience the fun and excitement of medical school, but none of the hard work!

March 31, 2012
Alpert Medical School
222 Richmond Street
Providence

For more information and to register, visit
brown.edu/go/minimed
You may also contact
Carlen Adler, ALUMNI & PARENT PROGRAM COORDINATOR
The Warren Alpert Medical School of Brown University
Box G-ADV
Providence, RI 02912
Tel: 401.863.6030
Fax: 401.709.5836