

AMA president visits Keck Medical Center

By Douglas Morino

Fresh from a meeting with President Barack Obama at the White House, American Medical Association President Robert Wah, MD, stopped by Keck Medical Center of USC to discuss the Affordable Care Act, regulatory hurdles facing physicians and historic legislation that could impact health care payments.

“The cost of health care in this country is rising in a way that we as a society are having trouble keeping up with,” said Wah, who became AMA president in June 2014 and is the first Asian-American to hold the post. “The path we are on is not sustainable.”

Stephanie Hall, MD, chief medical officer of Keck Medical Center of USC hosted the March 26 presentation. Wah, a reproductive endocrinologist and obstetrician-gynecologist, was joined at the Broad Conference Center by Pedram Salimpour, MD, president of the Los Angeles County Medical Association.

Wah met with Obama the day before his USC visit to discuss legislation that could directly affect physicians and patients. The Medicare Access and CHIP Reauthorization Act of 2015 will improve Medicare payments for physician services, expand availability of Medicare data, encourage care management for patients with chronic care needs and extend the Children’s Health Insurance Program for two more years.

“We’re talking to the executive and legislative branches about the regulatory tsunami facing physicians and their offices,” Wah said.

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USC graduate Tessa Stephenson Brand and her parents, Toni and Emmet Stephenson.

Stephenson family’s \$10 million gift will further cancer fight

By Les Dunseith

In Las Vegas, where good luck is everyone’s dream, a chance meeting in 2013 put two men — one a successful entrepreneur and philanthropist, the other a renowned physician and author — on a path that they hope will change medicine and save the lives of countless cancer patients.

The entrepreneur, Emmet Stephenson, was participating in a conference at the Bellagio for investors when he attended a talk by David B. Agus, MD, professor of medicine at the Keck School of Medicine of USC. “I was there as an investor. Just by pure luck, I met David,” Stephenson recalled.

The bond they began to forge that day would eventually lead Stephenson, along with his wife, Toni and daughter Tessa, to pledge \$10 million to further Agus’ pioneering efforts to change the way cancer is viewed and treated. Their gift will establish the Stephenson



The donation from the Stephenson family will develop personalized medicine to battle cancer and support the research of David Agus.

Family Personalized Medicine Center at the Center for Applied Molecular Medicine (CAMM) at the Keck School of Medicine.

Agus’ view that cancer treatments should be tailored to each individual has special meaning for the Stephenson family. Shortly before Emmet Stephenson met Agus, Toni Stephenson learned she had cancer.

Agus advised in developing her treatment regimen. His recommendation to try

an experimental medicine specific to her condition proved crucial. “She’s in clinical trial No. 1 for her kind of cancer using this particular drug,” Emmet Stephenson said, noting that his wife’s cancer has been in remission for about 18 months. “And it’s terrific.”

The couple’s daughter, Tessa Stephenson Brand ’02, is a graduate of the USC School of Cinematic Arts and founder of Tessa

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Michael Quick

Michael Quick is named new provost at USC

Neuroscientist Michael Quick, PhD, is USC’s new provost and senior vice president for academic affairs, effective April 1.

As provost, Quick will be the second-ranking officer under USC President C. L. Max Nikias, PhD, and the chief academic officer of the university. The deans of USC’s 19 schools will report to him; he also will oversee the divisions of Student Affairs, Libraries, Research Advancement, Information Technology Services, Student Religious Life, Academic Space Planning, Global Initiatives, Academic Planning and Budget, and the USC Stevens Center for Innovation.

In addition, he will chair the Keck School of Medicine of USC’s Operations Oversight Committee.

“I consider this to be the most significant appointment in my cabinet, as this role is vital to USC’s academic mission and will play a decisive role in the university’s continued ascent,” Nikias said.

Quick replaces Elizabeth Garrett, JD, who in September 2014 was named Cornell University’s 13th president-elect. Quick, professor of biological sciences in the USC Dornsife College of Letters, Arts and Sciences, was appointed USC’s interim provost on Dec. 1, 2014.

He was recruited to USC in 2002 from the University of Alabama at Birmingham as associate professor of biological sciences, and was subsequently promoted to professor and vice dean for research in USC Dornsife. From there, he was appointed executive vice dean for academic affairs in the College, before rising to executive vice provost, a position he held for four years. In 2014, he was additionally appointed vice president for academic affairs.

“In each of these roles, Professor Quick has proven to be an inspiring and tactical leader, demonstrating tremendous foresight, intellect, and resolve in advancing the university’s initiatives,” Nikias said.

Blumenthal lecture focuses on fixing problems in U.S. health care system

By Sharon Brock

U.S. health care is in dire need of repair, said David Blumenthal, MD, MPP, during a March 31 talk titled “Creating a High Performing Health System” in the Keck School of Medicine’s Dean’s Distinguished Lecturer Series.

A former national coordinator for health information technology in the Obama Administration, Blumenthal has been president since 2012 of the Commonwealth Fund, an organization that promotes a health care system that achieves better access, improved quality and greater efficiency by funding independent research and making grants to improve health care practice and policy.

“We have a broken health care system,” Blumenthal told the crowd in Mayer Auditorium. “The cost is enormous. The quality is not as good as it should be — thousands of patients

still die each year from medical error. And there are 55 million Americans who remain uninsured.”

Blumenthal said that billions of medical dollars are spent unnecessarily each year — overspending that puts patients at risk, drains resources and makes health care less accessible and less effective. The U.S. has the highest rate of health care expenditure in the world, he reported, with an average of \$9,077 per person being spent on health care annually. Second place Switzerland spends far less per person, roughly \$6,500.

Putting those numbers in perspective, Blumenthal calculated that the U.S. spent \$15.5 trillion more than Switzerland over 30 years (1980 to 2010) — money better spent in other ways.

“It’s called opportunity cost,” he explained. “With this \$15.5 trillion, we

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Dean’s Distinguished Lecturer Series featured health expert David Blumenthal.



David Blumenthal answers questions with Dean Carmen A. Puliafito.

LECTURE: Health expert

Continued from page 1

could have transformed our \$11.6 trillion federal debt into a \$3.9 surplus, sent 175 million students to a four-year college, increased spending on public health by 20,000 percent or bought everyone in the world four iPads. These are lost opportunities.”

Blumenthal, formerly the Samuel O. Thier Professor of Medicine at Harvard Medical School and chief health information and innovation officer at Partners HealthCare System in Boston, is also the author of more than 250 books and scholarly publications. His most recent is “Heart of Power: Health and Politics in the Oval Office.”

Choosing a health care plan is confusing for consumers, Blumenthal said.

“With these online marketplaces, it’s easier to buy a house than it is to buy health insurance,” he said. “With a house, you know what you want. But you don’t know if you’re going to get cancer or have a heart attack, or what emergencies you’ll have, so it’s difficult to decide if you want a plan that covers all of these things, as opposed to something basic.”

Blumenthal pointed to solutions by looking at health-system performance on two levels: microsystems and macrosystems.

Microsystems include the hospital staff, processes and practices that interact directly with patients. He called this level of performance the “sharp end.”

Macrosystems are organizations and environmental forces that support and influence microsystems, such as hospitals, health plans and government programs. This he called the “blunt end.”

The U.S. health system is deficient because policy makers have not created macrosystems that encourage best practices at the microsystem level, Blumenthal said. Doing so would have the effect of changing the behavior of large numbers of microsystems and raising performance as a whole.

Blumenthal remains hopeful about one often-criticized macrosystem: the Affordable Care Act.

“Good things are happening under the Affordable Care Act,” he said. “There has been a decline in the uninsured, reduced spending and improvements in the quality of care, but we still have a lot to do.”

By 2025, about 30 million people will be insured who would not be otherwise, Blumenthal said of the impact of the Affordable Care Act. He predicts that quality of care will improve, with a higher proportion of pay-for-value care.

Blumenthal ended his talk with some good news for the audience, particularly the many Keck School of Medicine students on hand: “For those of you who will be working in health care, job growth and wages will continue to rise,” he said. “You will survive no matter what the national economy throws at you.”

NEW TECHNOLOGY

Emergency app offers safety information

By Douglas Morino

In an emergency, life-saving information will now appear in the first place you’re likely to look — your smart phone.

KeckAlert, a new mobile emergency information app, is available solely for the use of Keck Medicine of USC staff members. The app will allow users across the enterprise to access vital information in the case of a natural disaster, catastrophe or hospital emergency.

“This app is about saving lives,” said Robert C. Vance III, emergency management and business continuity officer. “It will allow us to communicate quickly in the event of an internal emergency or external disaster.”

The app gives staff members quick access to emergency procedures and detailed information on emergency preparedness — like what to do in the event of a major earthquake, bomb threat, fire, utility outage or an active shooter. Users will also be able to call various emergency phone numbers like the USC Public Safety Department directly from the app.

In the event of an emergency, notifications with important information will automatically appear on the screen of the user’s smart phone, along with an audible alert. The app does need cell service to work.

“This gives us a two-way communications



path in an emergency,” Vance said. “Users will ask ‘What’s going on?’ and we can say ‘This is what’s going on.’”

KeckAlert has other built-in features, like turning the user’s smart phone into a flashlight. The app was developed by Vance in collaboration with the Keck Medicine of USC IT Department.

A mobile app is among the quickest and most effective ways to relay important information to hospital staff, Vance said.

“We are all connected to our devices,” he said. “People can access information on various

topics quickly and efficiently though the app without going to a policy manual.”

All physicians and staff in the Keck Medicine of USC enterprise can download the app, including USC Verdugo Hills Hospital and USC Care employees. Phase One of the app’s release will be a Keck Hospital-based roll out. Additional windows are being built for Verdugo Hills Hospital and USC clinics.

“This app has been a long-time coming,” Vance said. “It will have long range implications for the entire medical enterprise.”

The app is will be available for iOS and Android operating systems. It can be downloaded from the Keck Medicine Internal App Store at hisapps.med.usc.edu/AppStore.

Surgery app tracks operating room results

By Douglas Morino

A web-based app that monitors and displays an array of surgical data in real time has been unveiled at Keck Hospital of USC.

The Perioperative QlikView App displays data for the 24 operating rooms in the Main OR. The app allows physicians and staff to view and analyze data related to the performance of their operating rooms and find ways to improve or root out inefficiencies.

“We are increasing the transparency of our data,” said Felipe Osorno, associate administrator, Performance Management. “The idea is that physicians will have access and be able to look at data to find opportunities for improvement.”

The app shows turnover times, room utilization, case lengths and on-time starts by surgeon, specialty and operating room.

“You can’t improve what you can’t

measure,” Osorno said. “Our surgeons are naturally competitive. As soon as we show the data, people want to see their own performance and how they compare to their peers.”

Operational data is displayed in graphs and charts on an electronic dashboard viewable in operating rooms and on handheld devices.

“It helps display visually how we’re doing,” Osorno said. “It gives us the ability to look at data by room, surgeon and specialty to understand how these groups are performing over time.”

The app, a joint project between Data Management, Performance Management and Perioperative Services, takes surgical information directly from the electronic medical record.

Development began during the summer, and the app was unveiled in January to operating room surgeons and staff.

Calendar of Events

Friday, April 10

9 a.m. – 5 p.m. Zilkha Neurogenetic Institute Symposium. “Building on Progress: New Developments in Genetics, Neuronal, Glial and Vascular Biology.” Herklotz Seminar Room, ZNI 112. Info: Julie Carl, (323) 442-3219, jcarl@usc.edu

Noon. Pharmacology & Pharmaceutical Sciences Seminar. “Building Atomically Precise Nanometer Scale Active Sites,” Christian E. Schafmeister, PhD, Temple University. John Stauffer Pharmaceutical Sciences Center, PSC 104. Info: Ruth Ballard, (323) 442-3400, ellisbal@usc.edu

Monday, April 13

Noon. KSOM Research Seminar. “MAO A: A Dual Role in Autism and Cancer,” Jean C. Shih, PhD, USC. Aresty Auditorium. Info: Mary Jane Chua, (323) 442-7732, maryjane.chua@med.usc.edu

Tuesday, April 14

11 a.m. Eli and Edythe Broad Center for

Regenerative Medicine and Stem Cell Research Seminar. “Closing the Loop: How a Linear DNA Sequence Becomes a 3-Dimensional Tissue, and How it May Become Malignant and Metastatic?” Mina J. Bissell, PhD, UC Berkeley. CIRM Center Auditorium.

Noon. Diabetes & Obesity Research Institute Seminar. “Neighborhood Environments and Children’s Diet, Activity and Obesity,” Ashlesha Datar, PhD, USC. McKibben Lecture Hall. Info: Christina Ayala, (323) 442-2500, trujillc@usc.edu

Noon. KSOM Department of Radiation Oncology Lecture. “Henry L. Jaffe, MD, Annual Oration in Therapeutic Radiology: Increasing the Efficacy of Cancer Therapy by Targeting the HIF Pathway,” Amato J. Giaccia, PhD, Stanford University. Aresty Auditorium. Info: Alexandra Tran, (323) 865-3072, alexandra.tran@med.usc.edu

4 p.m. Oncology/Translational and Clinical Sciences Seminar. “Predicting the Effects

of Anti-Angiogenic Cancer Therapeutics: Insights from Computational Modeling,” Stacey D. Finley, PhD, USC. NTT-7409. Info: Terry Church, (323) 865-3520, tdchurch@med.usc.edu

5:30 p.m. Ophthalmology Grand Rounds. Dagny Zhu, MD, USC. HC4, Conference Room. Info: Tyaisha Christopher, (323) 409-5233, Tyaisha.Christopher@med.usc.edu

Wednesday, April 15

Noon. Zilkha Neurogenetic Institute Seminar. “The Anatomical Distribution of Genetic Risk in the Brain,” Joseph Dougherty, PhD, Washington University. Herklotz Seminar Room, ZNI 112. Info: Julie Carl, (323) 442-3219, jcarl@usc.edu

Noon – 1 p.m. Saban Research Institute of Children’s Hospital Los Angeles Seminar. “Research Seminar, Neural Stem Cells: Dynamic Origins of Adult Brain Plasticity,” Michael A. Bonaguidi, PhD, USC. Auditorium, Saban Building. Info: Harleen

Gill, (323) 361-8626, hgill@chla.usc.edu

Thursday, April 16

5:30 p.m. Norris Medical Library. “Free Movie Screening: Code Black,” Dr. Edward Newton, LAC+USC. Aresty Auditorium. Info & RSVP: Luis Franco, (323) 442-1483, lufanco@usc.edu

Friday, April 17

11:45 a.m. USC PSOC—Center for Applied Molecular Medicine Talk. “Computational Modeling of Anti-Angiogenic Cancer Therapeutics,” Stacey Finley, PhD, USC. Harkness Auditorium. Info: Yvonne Suarez, (323) 442-3849, yvannes@usc.edu, <http://www.uscpsoc.org>

Noon. Pharmacology & Pharmaceutical Sciences Seminar. “Chemical Probes of Transcription,” Angela N. Koehler, PhD, Broad Institute of MIT and Harvard. John Stauffer Pharmaceutical Sciences Center, PSC 104. Info: Ruth Ballard, (323) 442-3400, ellisbal@usc.edu

WAH: AMA president visits, tells of change in Medicare

Continued from page 1

The Senate is expected to vote on changes to Medicare in April, but not before a 21 percent cut in payments to physicians kicks in. The bill would prevent those cuts.

Wah urged physicians to contact lawmakers to lobby for the bill's passage.

"Send them emails, send them tweets, send them smoke signals — whatever you need to do to send them the message that this needs to get done," said Wah, who practices and teaches at the Walter Reed National Military Medical Center and the National Institutes of Health

in Bethesda, MD.

Wah also discussed strategic goals and recent AMA initiatives aimed at improving medical education, health outcomes for patients and professional practice satisfaction. He encouraged physicians to become involved with the AMA, the largest association of physicians and medical students in the United States.

"We serve as an amplifier for the voice of individual physicians," Wah said. "There are a lot of forces aligned against physicians. We need to work together to not get rolled."



From left: Pedram Salimpour of the L.A. County Medical Association, Chief Medical Officer Stephanie Hall, AMA President Robert Wah and Marin County urologist Peter Bretan, a 2014 AMA award recipient.

PA Program makes US News & World Report Top 20

By Alison Trinidad

The Keck School of Medicine of USC Primary Care Physician Assistant Program has risen 50 spots since 2011 and is now ranked 20th in *U.S. News & World Report's* 2015 "Best Graduate Schools" rankings.

"This honor demonstrates the commitment that our program has received from USC, the Keck School of Medicine and the Department of Family Medicine, as well as the commitment our faculty, staff and students have to the profession and the communities we serve through our mission," said Program Director Kevin Lohenry, PhD, PA-C.

U.S. News surveyed 192 accredited PA programs for the 2015-16 ranking. PA programs are ranked based on a survey of academics at peer institutions. Also ranked at 20th are Yale, Northeastern, Rosalind Franklin and Midwestern universities.

The Primary Care Physician Assistant Program at USC focuses on recruiting, educating and graduating a diverse group of students in primary care medicine. A national leader in interprofessional education, the Keck School program has trained future interprofessional leaders in practicing team-based medicine in underserved communities.

The 33-month master's program is one of few in the United States that places an emphasis on medical Spanish, with most students reporting a doubling of their confidence in communicating with patients in Spanish by the time they graduate.

Health Pavilion to be a centerpiece of Festival of Books

By Douglas Morino

Considered the largest public literary celebration in the country, the *L.A. Times* Festival of Books will sweep through the University Park Campus April 18 and 19.

A centerpiece of the festival will again be the Keck Medicine of USC Health and Wellness Pavilion, which will double in size to host several health-related screenings, including those for skin cancer, sleep apnea, glucose, BMI, blood pressure and oral health.

"The Health and Wellness Pavilion showcases so much USC has to offer – we're not just a university, we're also a medical enterprise," said Adam Rosen, assistant vice president, office of cultural relations and university events.

Held at USC since 2011, the two-day event is in its 20th year. The festival is a marquee event for USC and Los Angeles, drawing an estimated 150,000 literary fans last year.

"It's the only event like this in the country that brings out the literacy community and is focused on art, books and literature," Rosen said. "The festival is a wonderful opportunity to showcase our campus and our commitment to arts and literature."

The free festival will feature hundreds of lectures, readings, signings and performances by authors, poets, musicians and journalists. There will be a host of vendors spread across campus.

Noted authors this year include T.C. Boyle, Malcom Gladwell, Aimee Bender and Janet Fitch. Panels include Pulitzer Prize-winning *L.A. Times* food critic Jonathan Gold interviewing renowned chef Roy Choi and *L.A. Times* journalist Lorrain Ali interviewing musician Billy Idol. There will be live music performances, poetry readings and an array of gourmet food trucks.

"The program is better this year than it has ever been before," Rosen said.

Parking will be \$10 in USC parking lots. Parking will also be available at the L.A. Coliseum lots.

Health and Wellness Pavilion events

Saturday, April 18

10 a.m. – 6 p.m.

Free health screenings offered throughout the day, including:

- Body Mass Index (BMI)
- Glucose check
- Blood pressure check
- Med checks
- "Talk to a Doctor" sessions
- Vision screenings courtesy of the USC Eye Institute
- Dental screenings and oral hygiene instruction courtesy of the USC Herman Ostrow School of Dentistry
- Melanoma screenings (until 4 p.m.) courtesy of the USC Department of Dermatology

10 a.m. – noon

"Q & A About Your Vision" with Rohit Varma, MD, director of the USC Eye Institute

10 a.m. – 2 p.m.

"Try To Puzzle the Sleep Specialist: All Questions Welcomed" with Ras Dasgupta, MD, Keck Medicine of USC Sleep Center

2 p.m. – 6 p.m.

"New Approaches to Treating Apnea, including the New Inspire Device" with Eric J. Kezirian, MD, Keck Medicine of USC Sleep Center

Sunday, April 19:

10 a.m. – 6 p.m.

Free health screenings offered throughout the day, including:

- Vision screenings courtesy of the USC Eye Institute
- Dental screenings and oral hygiene instruction courtesy of the USC Herman Ostrow School of Dentistry
- Melanoma screenings (until 4 p.m.) courtesy of the USC Department of Dermatology
- USC CHLA Center of Childhood Communication, highlighting clinical services, research projects and summer literacy program

10 a.m. – 2 p.m.

Interactive health activities courtesy of Mrs. T.H. Chan Division of Occupational Science and Occupational Therapy, including Lifestyle Redesign weight and stress management, a sensory integration station featuring productive play for kids and a low-vision station focused on adaptive reading tools

2 p.m. – 5 p.m.

Health screenings, including:

- Body Mass Index (BMI)
- Glucose check
- Blood pressure check
- Med checks
- "Talk to a Doctor" sessions

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HSC Newsmakers

A roundup of news items related to Keck Medicine of USC, which may include philanthropic donations, research grants, publication in academic journals and mentions in the news media:



Phil Channing

Lieberman takes office as 25th president of national association

JAY R. LIEBERMAN, MD, IS THE new president of the American Association of Hip and Knee Surgeons (AAHKS). He is professor and chair of the Department of Orthopaedic Surgery and director of the Institute of Orthopaedics at the Keck School of Medicine of USC and an internationally renowned total joint replacement surgeon who has a special interest in the treatment of osteonecrosis (bone death) of the hip and knee. Lieberman assumed leadership of the organization March 25 as it prepares to mark its 25th Anniversary this November. “I am honored to be the leader of this association during its 25th Anniversary, and I plan to continue our mission as delineated by my predecessors to enhance the profession of hip and knee surgery in order to benefit our patients,” Lieberman said.

Discovery could lead to biological treatment for birth defect

RESEARCHERS AT USC have discovered which stem cells are responsible for the growth of craniofacial bones in mice — a finding that could have a profound impact on the understanding and treatment of craniosynostosis, a birth defect that can lead to an array of physical and intellectual disabilities in humans. In an article in the April 2015 issue of *Nature Cell Biology*, Yang Chai, DDS, PhD, a member of the USC Stem Cell Executive Committee and holder of the George and Mary Lou Boone Chair of Craniofacial Biology at the Herman Ostrow School of Dentistry of USC, describes how he and postdoctoral fellow Hu Zhao, DDS, PhD, identified a population of Gli1+ stem cells within the mesenchyme of tissue between the bones of the skull, known as cranial sutures. Chai’s research team noted that if Gli1+ cells were eliminated from the sutures, the craniofacial bones experienced growth arrest and weakening, leading them to conclude these cells are indispensable in healthy skull development. The findings could significantly impact the treatment of craniosynostosis, a birth defect affecting one in 2,500 births. In an infant with craniosynostosis, the skull bones fuse together before the brain has fully developed, which can cause problems that include hearing and vision defects, as well as developmental disorders. — **John Hobbs**



Chai



Douglas Morino

Singapore symposium held at USC

STEPHEN B. GRUBER, MD, director of USC Norris Comprehensive Cancer Center, recently hosted physicians and researchers from the National University Singapore’s Cancer Science Institute. The first Bi-National Cancer Symposium, USC-Singapore, was held March 26. The delegation from Singapore included Khay-Guan Yeho, MMed, deputy chief executive of the National University Health System and dean of the NUS Yong Loo Lin School of Medicine, and Soo-Chin Lee, MMed, association director (research) of the National University Cancer Institute, Singapore. Topics included bioimaging and companion diagnostics, nanotechnology and genomics, cancer prevention and control, and experimental therapeutics. — **Douglas Morino**

‘There are over 400 kinds of cancer and over 7 billion people. That’s a lot of possible combinations for personalized medicine. The thing that we hope will come from this donation is that other people will step up and help us.’

— **Emmet Stephenson**

GIFT: Seeking personalized medicine

Continued from page 1

Lyn Events, a Brentwood wedding and event planning company.

“When my mom was diagnosed with late-stage lymphoma, my dad put together a team of four doctors, including Dr. Agus, to act as an advisory board for my mom’s treatments,” she said. “He felt four minds were better than one, and these four people are all geniuses. We are happy to say that this team helped her.”

The Stephenson family’s unconventional way of dealing with Toni Stephenson’s cancer is exactly the sort of fresh thinking that Agus advocates.

“Diseases were categorized by body part in the 1800s, and we’ve categorized cancers by body part since then. Prostate. Breast. Lung. Whatever tissue they start in,” Agus explained. “I think what we’re learning now is that it’s not the tissue — it’s the pathway. It’s the context.”

“Personalized medicine is really about bringing new technologies to bear to bring a whole new classification system for cancers.”

The idea of using technology to improve medical care makes a lot of sense to the Stephensons, who created Internet publishing firm Domain.com Inc., founded tech company StarTek and run Stephenson Ventures, a portfolio management and private equity firm.

Like her parents, Brand is dedicated to philanthropy and to making sure that her donations are meaningful. She is donating half of the \$10 million because she believes that Agus’ ideas are worthy of her support.

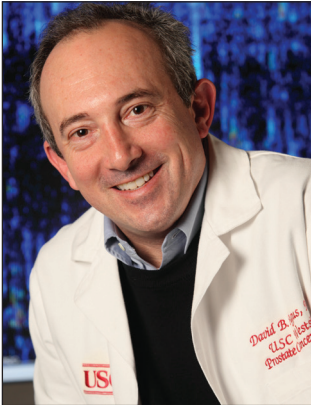
“Dr. Agus is forward-thinking. He is thinking 100 years into the future. He plans to change the face of health care rather than solve a single problem,” she said. “He thinks bigger than most people, and he is the type of person we want to support.”

One focus of Agus and at CAMM is at the cellular level — the area immediately surrounding a malignancy known as the microenvironment.

“The microenvironment is certainly key,” said Agus, professor of medicine and engineering at the Keck School of Medicine and the USC Viterbi School of Engineering, and an author of two best-selling books on health. He also is a contributor to CBS News programs.

“If you drop a match in New York after it rains, nothing happens. If you drop a match in Los Angeles during wildfire season, it goes up in flames. So you need a receptive environment for cancer to happen.”

The Stephenson family gift is already being put to good use with the appointment of two new leaders:



Phil Channing

David B. Agus, MD

Laboratory Director Shannon Mumenthaler and Director of Analytics Dan Ruderman.

Mumenthaler, who has a bachelor’s in genetics from UC Davis and a PhD in cellular and molecular pathology from UCLA, is leading a team that will use advanced imaging approaches to dissect the complexities of the tumor microenvironment. The goal is to disrupt specific environmental factors to prevent disease progression and improve patient outcome.

Ruderman has a doctorate in theoretical physics from UC Berkeley and has done postdoctoral research at USC, Cambridge University and the Salk Institute. His team will generate and analyze large data sets to dissect the genomic complexities within and across cancer patients and dynamically track changes in mutations and cell signaling over short- and long-term scales to help guide clinical decision-making.

The work at CAMM benefits directly from the advanced technology in use

at USC. “We’re very lucky in that we came to USC a few years ago, and they have one of the great supercomputing facilities in the country,” Agus said. “And our team is made up of physicists, mathematicians, engineers, biologists — all different disciplines who each look at data in a different fashion. Our goal is to create models for what’s happening to the cancer and what will happen. And those mathematical models can hopefully tell us which treatments to do — or not to do.”

The more information that a doctor has available, the better the decisions that will be made. But it is an immense undertaking.

“There are over 400 kinds of cancer and over 7 billion people. That’s a lot of possible combinations for personalized medicine,” said Emmet Stephenson, who isn’t inclined to shirk from a challenge.

“The thing that we hope will come from this donation is that other people will step up and help us,” he added. “It’s going to take a lot of resources, and it’s going to take a lot of smart people.”

One of those smart people is David Agus, who also knows that fortune was in his favor that day in Las Vegas when he first met Emmet Stephenson.

“We’re really privileged to work with them,” Agus said of the Stephenson family. “They are special people who want to help us build something that could change how we approach cancer.”

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