‘Wow, beautiful’: Public glimpses new hospital

By Ruthann Richter

More than 10,000 people of all ages streamed through the new Stanford Hospital during a Sept. 14-15 open house that gave the community its first glimpse of the pristine new medical facility.

Visitors touring the hospital said they were thrilled to see it when they were healthy and grateful to know that it would be there should they need it.

“One of the things that’s been amazing is that as people come through, they are saying, ‘Wow. I think people feel they’re part of it — that it’s their hospital. That’s what we hoped to accomplish,’” David Eastwistle, president and CEO of Stanford Health Care, said as he greeted guests in the soaring, light-filled atrium.

The event featured tours of the 824,000-square-foot hospital, which is next to the current hospital on the Stanford campus. It also included a street fair that was particularly popular with children, who stuffed 1,500 teddy bears and dressed them in little hospital T-shirts. Some youngsters had their faces painted, played an oversized game of Operation, took part in a treasure hunt or petted Moogie, a serene black Labrador retriever who provides comfort to hospital patients.

Aidan Sharp, 12, of Menlo Park, said the seven-floor hospital was much bigger than he had expected. “It doesn’t seem like an emergency place. It’s so nice,” said Aidan, who came with his father, Christopher Sharp, MD, clinical professor of medicine at Stanford.

Lloyd Minor, MD, dean of the Stanford School of Medicine, said the new hospital will help fulfill the vision of Stanford Medicine, which is to predict, prevent and cure disease with precision.

“With access to Stanford School of Medicine’s break-through research and facilities, this hospital will set a new global standard, offering patients the most advanced care in a healing environment created to meet the needs of the whole person — socially, emotionally, spiritually and physically,” Minor said.

How Peter was cared for

During the tour, visitors walked down ivory-colored hallways, past hundreds of donated artworks, to follow the path of a fictitious patient, “Peter,” who was injured in a bicycle accident in Napa Valley. He was flown via helicopter to the hospital’s new, rooftop helistop. Caregivers shown on a video narrated Peter’s progress as he was rushed directly to the new emergency department.

That stop on the tour particularly impressed Brenda Ucol-Co, who brought her 11-year-old daughter, Clarissa, to the open house.

With the new 45,000-square-foot emergency department, the hospital will have 2 ½ times more space to treat trauma patients and those with urgent needs. Patients will receive care in 66 individual treatment bays, where they can recover in privacy and quiet. The adjoining parking garage can be engineered to be an extension of the emergency department in the event of a disaster, Andria Blomkin, MD, professor and chair of emergency medicine, noted in a videotaped interview at the entrance to the unit.

Onscreen, caregivers stabilized Peter in the emergency department, then wheeled him into one of the 20 new operating rooms, where he underwent surgery for a punctured lung. There, tour participants viewed the overhead imaging system, where CT and X-ray images will be displayed and magnified up to five times for detail not visible to the naked eye. These digital images can be shared in real time with clinicians elsewhere in the hospital. That will enable...
Achilles’ heel identified in several neurodegenerative diseases

New incubator to fuel life science innovation in Stanford Research Park

By Amy Adams

To bolster the long-term vision of a thriving biosci- ence community near its campus, Stanford University is working to shape part of Stanford Research Park into a leading life science district focused on fast-growing sectors such as bioengineering, gene therapies, diagnostics, medical technology and devices, surgical robotics and digital health. As a key component of this effort, Stanford is collaborating with Alexandria Real Estate Equities, Inc. to convert an existing 92,000-square-foot building at 3160 Porter Drive in Palo Alto into a life science incubator and small lab suites.

When the building was recently vacated, Stanford saw an opportunity to create a flexible and vibrant space that would enhance the connections between the exist- ing life science ecosystem of medical facilities, research- ers and companies in the surrounding area, while also encouraging progress toward an even more diverse life science community. The university held a competition for firms that specialize in this work and chose Alexandria, an experienced developer and operator of successful life science communities near academic campuses.

“Stanford has a legacy of translating life science re- search discoveries into cures, but the opportunities in this field are greater than ever before. We want to take advantage of this current momentum and further ac- celerate solutions,” said Stanford President Marc Tess- ier-Lavigne, PhD. “This new incubator will support entre-�

Neurodegenerative diseases

By Bruce Goldman

Many neurodegenerative diseases have a common feature that may make them amenable to the same treatment, the schools of Medicine, Engineering and Humanities & Sciences translate their research discoveries into new therapies and diagnostics.

“This space will be key to our shared vision of ensur- ing Stanford discoveries continue to benefit the world,” said Sanjiv Sam Gambhir, MD, PhD, Virginia and D.K. Ludwig Professor of Cancer Research and chair of the Department of Radiology. “Together with the Inno- vative Medicines Accelerator, the hope is the incubator can do even more to initiate commercialization of novel therapies for the greater good of humanity.”

Having an expanded life science-focused community close to campus will also complement existing efforts within the School of Medicine to translate basic science discoveries into new therapies. “The breadth and depth of innovative research emerging from Stanford Medicine is astonishing,” said Lloyd Minor, MD, dean of the Stanford School of Medicine. “The incubator will provide the opportunity with resources and access to experts to streamline and speed the translation of groundbreaking discoveries. Additionally, it is very exciting for our School of Medicine, two world-class hospitals, and the VA will help to realize the promise of bench-to-bedside research.”

As new technologies, devices, treatments and thera- pies move from ideas to labs to applications in the real world, it is important to have spaces that can adapt to support this development, and early-stage life science solutions have diverse needs. Such flexible spaces can be challenging to find in the Bay Area and companies of- ten end up renting warehouses and other rooms that they require. Spots close to the Stanford campus, and the venture capital groups nearby, are especially rare.

“Bioscience companies need the flexibility to move to- day to tomorrow and access to a range of different addresses,” said Jenifer Cochran, PhD, Shriram chair of bioengineering at Stanford. “This flexibility and proximity to campus will greatly benefit Stanford faculty and other entrepreneurs, and provide them with a supportive community and shared resources to facili- tate their new ventures.”

Bridging academia and industry

Since its origin in the 1950s, Stanford Research Park has drawn pioneering researchers and industry leaders, in part due to its close collaboration with the university nearby. The 700-acre research park is home to about 150 diverse companies focused on scientific discovery, technological innovation and commercializa- tion of groundbreaking research. It also includes exist- ing biotechnology companies and School of Medicine lab space focused on precision medicine.

Under this new agreement, Stanford has sold a 51- year ground lease for 3160 Porter Drive to Alexan- dria. Building upon the success of Alexandria’s unique space offerings for life science companies near aca- demic campuses, the company will bring its Alexandria LaunchLabs platform to Stanford Research Park to cre- ate an environment that invites discoveries. Alexan- dria LaunchLabs at Stanford Research Park will provide flexible, move-in-ready lab and office space, as well as strategic programming and access to seed capital. The facility will also include shared work and meeting spaces.

“As a university-affiliated research park, we recognize we have a unique mission — to bridge academia and industry in an effort to launch solutions that will have an enduring positive impact in our community and world,” said Tiffany Gregio, managing director of as- set management for Stanford Research Park. “Stanford Research Park and Palo Alto have always been at the forefront of new technological and scientific discover- ies and inventions. With a renewed focus on drawing life science entrepreneurs to the forefront of this effort, we will support them in their pursuits to deliver therapies and solutions to the public health challenges of the 21st century.”

Griego said Alexandria LaunchLabs at Stanford Re- search Park is expected to open in spring of 2021. new

for diseases characterized by such losses,” said Daria Mochly-Rosen, PhD, profes- sor of chemical and systems biology at Stanford.

A paper describing the researchers’ findings was published today in Nature Neuroscience. Mochly-Rosen is the senior investigator of the National Institute of Neurological Disorders and Stroke.”

In recent months in July and December and semi-monthly for the summer.

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Mild head trauma in adolescents and adults who participate in contact sports damages the barrier that protects the brain from bloodborne pathogens and toxins, according to researchers at the Stanford School of Medicine and Trinity College in Ireland.

If the results of their small pilot study hold up, the brain imaging technique employed by the researchers could be used by teams and athletes who’ve taken a blow to the head and determine when they’re safe to return to contact sports.

The research was published online Sept. 5 in the Journal of Neurotrauma, scientists scanned the brains of adolescent and adult rugby players with a special type of magnetic resonance imaging. They found damage to the protective barrier that separates the brain from bloodborne pathogens and toxins in roughly half of adolescent rugby players after a full season — even those who did not report a concussion. Professional mixed martial arts fighters showed similar damage after a fight.

“The repetitive repeated head trauma and neurodegenerative disease continues to fuel public interest and debate about traumatic brain injuries,” said co-senior author David Camarillo, MD, PhD, professor of bioengineering at Stanford and co-senior author of the study.

**Barrier breakdown**

Most traumatic brain injuries are mild. That may sound like an oxymoron, but mild traumatic brain injuries only temporarily affect normal brain function. The repetitive head trauma that occurs in contact sports, however, is based on a temporary change in awareness and responsiveness, short-term amnesia, headache or general difficulty thinking clearly. But it can be difficult to reliably spot these symptoms during contact sports.

Researchers at Stanford and Trinity College teamed up to find a more objective way to pinpoint mild head trauma. They realized many more athletes had previously studied brains from patients afflicted with chronic traumatic encephalopathy, a neurodegenerative disease. Brains from these patients had a damaged blood-brain barrier — a barrier that allows oxygen and nutrients to pass into the brain while blocking large molecules. It operates a lot like a tea bag, which lets water through but holds leaves in place.

The researchers studied five adult rugby and five mixed martial arts fighters, who wore the mouth guards during fights and had their brains scanned before and after fights.

Post-fight MRI scans showed increased blood-brain barrier breakdown, just as the researchers observed in rugby players. And the researchers found that certain measurements from the mouth guard correlated with the level of blood-brain barrier disruption seen by MRI.

“This suggests there might be some combination of numbers of blows and severity of blows that might explain blood-brain barrier injury,” Camarillo said.

“The study shows that mTBI can happen without severe injuries,” said study co-author Gerald Grant, MD, PhD, professor of neuropathology at Trinity College Dublin, Ireland.

**A productive partnership**

Enter Camarillo, whose lab has developed a mouth guard that tracks speed, acceleration and force at nearly 10,000 measurements per second. That level of speed and precision was vital for the next step: contact sports researcher Camarillo and concussion expert at Stanford’s Children’s Health, whose lab studies the blood-brain barrier. “People have the sense that rugby must be safer because it’s a much more contact sport,” Camarillo said.

Based on these initial findings, the researchers hypothesized that impact forces were damaging the blood-brain barrier. But they needed a way to precisely measure those forces. And they wanted to test those forces during and after a match. The current paradigm is that the longstanding inflammatory response is the primary cause of cellular damage to the brain after a blow to the head. This study was designed to test that hypothesis.

**Barrier breakdown**

To record the forces of injury, the researchers designed a small device that is inserted into the mouth and must shift its shape accordingly to accommodate the players’ teeth, muscle movements and mouth guard during fights and had their brains scanned before and after fights.

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Not every hit that looked bad — such as when a fighter was knocked out during the first two minutes — damaged the blood-brain barrier, emphasizing the value of the mouth guard measurements to record the forces of injury.

The findings, Camarillo said, are further evidence that the longstanding model of concussion is likely too simplistic. The current paradigm is that the brain slams into the skull, recoils and slams again on the opposite side. According to this model, most brain damage should occur along the outer surface of the brain. But recent evidence — including the present study — suggests that head trauma’s effects are felt much deeper in the brain.

The researchers plan to conduct a similar study in a larger cohort. They’re also interested in determining whether mouth guards and other protective gear that athletes observe heal on their own and, if so, how long that takes.

While the findings are still at an early stage, the imaging technique used in this study — perhaps in conjunction with bio markers — could one day be used to figure out how much damage an athlete has sustained, and when he or she can return to play, according to Grant.

“I think we’re ignoring many of these kids who are experiencing these injuries throughout the season but aren’t aware of them, or they have no symptoms,” Grant said. “Maybe this study can help us figure out how to better classify some of these kids and figure out if they are truly safe to go back and play.”

Camarillo and Grant are members of Stanford Bio-X, the Stanford Maternal & Child Health Research Institute and the Wu Tsai Neurosciences Institute at Stanford.

Other Stanford co-authors of the study are postdoctoral scholar Yzu Liu, PhD, and former postdoctoral scholar Chiara Giordano, PhD. Researchers at the Ben-Gurion University of the Negev in Israel also contributed to the study.

This study was supported by Science Foundation Ireland, the Saint James Hospita, the Seamus e, the National Institute of Neurological Disorders and Stroke and the Ellen Mayston Bates bequest to the Children’s Hospital of Stanford’s Department of Bioengineering also supported the work.
By Mandy Erickson

By the time the man arrives at Stanford Hospital's emergency bay doors, paramedics have already called in vital information: He is unable to move his right arm and his speech is garbled, suggesting a stroke. His blood glucose is normal, ruling out hypoglycemia as the culprit.

As soon as the ambulance rear doors open, at 3:47 p.m., a clerk leans inside to record the man's name, then runs back to the registration desk to enter his information into the system. A few yards beyond the ambulance bay a crowd of physicians, nurses and a pharmacist are waiting.

The paramedics lift the man (a composite Stanford stroke patient created for the scenario described here) onto a hospital gurney. With the press of a button, the gurney records the patient's weight (let's call him David Williams), and the crowd wheels him into the computed tomography room.

They quickly transfer him onto the CT bed, positioning his head inside the doughnut-shaped scanner. One of the paramedics, meanwhile, calls out his medical information: “Right-side facial droop, aphasia. Age 82. Last OK was 2:30.”

While the scanner takes detailed X-ray images, the medical team stands behind a glass partition, eavesdropping on computer screens. They are watching for telltale signs of bleeding in the brain, which would appear in the form of white, shapeless masses.

Once the scan is complete, as cross-sectional images of Williams' head flow onto the screens, nurses insert an intravenous line into his arm and draw his blood. Out in the hall, a pharmacist searches for Williams’ medical information in Stanford's records.

The physicians need to decide, quickly, if tissue plasminogen activator would help. The medication will dissolve a stroke-causing blood clot, but it will worsen and may provoke cerebral bleeding. If tPA is warranted, they must give it immediately, in the scanner room: Minutes saved in stroke treatment can make the difference between walking and not walking, living alone and relying on caregivers.

The pharmacist finds that Williams is not taking any medication and does not have a medical condition that could lead to bleeding. The neurologist orders tPA, the pharmacist hands a nurse the correct dose in an IV bag, and the nurse sets the pump to deliver the medication.

A quality assurance nurse checks his watch: 4:02 p.m. Fifteen minutes have passed from the moment the ambulance bay doors opened until the tPA entered Williams’ vein.

“During a stroke, 1.9 million neurons die every minute,” said Nirali Vora, MD, an associate professor of neurology and a stroke specialist. “When we are able to administer tPA quickly, that translates into saved neurons, saved independence and saved health care costs.”

Seven years ago at Stanford Hospital, the average door-to-needle time — starting when a stroke patient arrives at the emergency department and ending when they receive tPA — was 66 minutes, typical for a U.S. hospital. Today, at Stanford, it’s 26 minutes, with an all-time record of nine. Shaving so much time from a process, in a department already primed for quick action, required months of research, years of changing work habits and a good dose of diplomacy.

Developing new stroke protocols

The rapid stroke protocol at the bustling emergency department got its start at Stanford’s Clinical Excellence Research Center. CERC’s office lies in the oak-studded hills for their ideas. Virginia Mason Medical Center in Seattle and Allina Health in Minneapolis took on the second proposal, avoiding long hospitalizations. Kaiser Permanente’s Northern California hospitals adopted the third proposal, reducing door-to-needle times, as did St. Joseph’s Health Care in Hamilton, Canada.

But simply telling the staff at Stanford Hospital’s emergency department to follow the Finns wouldn’t bring lasting changes. “You have to understand how at-

By Nirali Vora, MD, at Stanford Hospital’s Clinical Excellence Research Center in June 2016.

After taking on stroke care oversight in the hospital’s emergency department, Nirali Vora, left, closely observed emergency department stroke protocol to find ways to speed treatment further. As quality director for Stanford Health Care, Eric Barlow, right, says he’s “the grumpy guy in the basement” asking why door-to-needle treatment for stroke patients in the ED took so long.

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Stroke
continued from page 4

A patient’s perspective

Malinda Mitchell, retired CEO of Stanford Health Care, was speaking with her mother, Rosina Might, in her kitchen when Mitch’s face started to droop. Mitch, a former nurse, suspected a stroke and called 911. She was speaking with her mother, Rosina Might, in her kitchen when Mitch’s face started to droop. She quickly grabbed her mother’s arm and led her to the dining room, where she called 911. The emergency medical technician and paramedics arrived within minutes and began administering the drug tPA, which is used to treat strokes. Mitch was taken to the hospital, where she was treated and discharged after a few hours.

In the months following her stroke, Mitch continued to improve. She started physical therapy and worked with a speech therapist to recover her speech and mobility. She also began to work with a nutritionist to improve her diet and overall health. Today, Mitch is a stroke survivor and advocates for stroke awareness and prevention. She speaks at events and gives interviews to share her experience and raise awareness.

“Stroke is a serious condition, and prompt treatment is crucial,” Mitch said. “I’m lucky to be alive, and I’m grateful for the care I received.”
Getting a close look at the prostate is critical for detecting cancer, but its rather intimate positioning (just in front of the rectum) makes it difficult to image.

Now, Sanjiv “Sam” Gambhir, MD, PhD, professor and chair of radiology, thinks he has a solution: a new device dubbed a molecular imaging device or TUSPA.

“Camera captures molecular detail to detect prostate cancer”

**By Hanae Armitage**

In a proof of principle study, Gambhir and a team of scientists across Stanford, including biologists, engineers and doctors, have demonstrated the value of the technology and results was published Aug. 28 in Science Translational Medicine.

“I am really excited about this because there are so many patients who are looking for alternative options,” said Mark Reiner, MD, director of radiology at Stanford and a co-author of the study.

Science Translational Medicine is a relatively new journal that publishes findings that have been validated in the lab and that can be translated into medical treatments.

In a paper in the journal, Gambhir and his team described how they used a molecular imaging device that can detect cancer cells.

The technology is based on a device used to image the blood vessels in the eye, called a fundus camera.

Gambhir and his team used a fundus camera to look at the prostate, which is located in the pelvis.

“In principle, it’s like looking at a tiny part of the world using a tiny part of a camera,” said Gambhir.

The device is not yet approved for use by the Food and Drug Administration, but it has been used in clinical trials to detect prostate cancer.

The device has been tested in about 20 patients, and in the pilot study, the scientists used a device in 20 individuals who had been diagnosed with prostate cancer.

The technology uses ultrasound to detect cancer cells, and it has been shown to be effective in detecting early-stage prostate cancer.

The technology has also been shown to be effective in detecting early-stage breast cancer.

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High-grade gliomas form synapses with healthy neurons, connecting electrical signals to the cancerous tissue, the study found. The tumors also contain cell-to-cell electrical connections known as gap junctions. Together, the two types of connections allow electrical signals from healthy nerve cells to be conducted into the tumor cells and mediated their electrical coupling. Further experiments measuring changes in calcium levels showed that the two types of cells are electrically coupled via gap junctions.

The live calcium imaging made it strikingly clear that this cancer is electrically active tissue,” said Vescikates, the lead author. “It was starting to see that in cancer tissue.”

Other Stanford co-authors of the paper are staff scientist Wade Morishita, PhD; postdoctoral scholars Anna Goragnol, PhD, Marlene Arzt, MD, and Kathryn Babula, MD; graduate students Shari Goldfuss, medical student Lydia Tam; staff scientist Cedric Espenel, PhD; research assistants Anitha Ponnamwar, Lijun Ni and Pamela Wies; Hanne Vogel, MD, professor of pathology and of pediatrics; and Robert Malenka, MD, PhD, professor of psychiatry and behavioral sciences.

“Monje is a member of Stanford Bio-X, the Stanford Institute for Stem Cell Biology and Regenerative Medicine, the Stanford Maternal & Child Health Research Institute, and the Wu Tsai Neurosciences Institute at Stanford.”

Scientists from Massachusetts General Hospital, Harvard Medical School, the Massachusetts Institute of Technology, Johns Hopkins University, the University of Michigan and the University of California-San Francisco also contributed to the research.

CARETTE ET AL.

Cold

mune surveillance brought about by previous exposure or a vaccine.

In a study published online Sept. 16 in Nature Microbiology, Carette and his associates found a way to stop a broad range of enteroviruses, including rhinoviruses, from replicating inside human cells in culture, as well as in mice. They accomplished this feat by genetically deactivating a single protein in mammalian cells that all enteroviruses appear to need in order to replicate. The researchers used a technique called CRISPR, in which affected cells are characterized by major differences compared with their healthy counterparts. They showed that by knocking out the gene expressing this protein, they were able to stop the replication of all 21 enteroviral serotypes and prevent the formation of infectious virions.

Other Stanford co-authors of the paper are staff scientist Marlene Arzt, MD, and doctoral student Shawn Gillespie; medical student Lydia Tam; staff scientist Cedric Espenel, PhD; research assistants Anitha Ponnamwar, Lijun Ni and Pamela Wies; Hanne Vogel, MD, professor of pathology and of pediatrics; and Robert Malenka, MD, PhD, professor of psychiatry and behavioral sciences.

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Other Stanford co-authors of the paper are staff scientist Marlene Arzt, MD, and doctoral student Shawn Gillespie; medical student Lydia Tam; staff scientist Cedric Espenel, PhD; research assistants Anitha Ponnamwar, Lijun Ni and Pamela Wies; Hanne Vogel, MD, professor of pathology and of pediatrics; and Robert Malenka, MD, PhD, professor of psychiatry and behavioral sciences.

“Monje is a member of Stanford Bio-X, the Stanford Institute for Stem Cell Biology and Regenerative Medicine, the Stanford Maternal & Child Health Research Institute, and the Wu Tsai Neurosciences Institute at Stanford.”

Scientists from Massachusetts General Hospital, Harvard Medical School, the Massachusetts Institute of Technology, Johns Hopkins University, the University of Michigan and the University of California-San Francisco also contributed to the research.

CARETTE ET AL.

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CARETTE ET AL.
**Full circle: Former Packard Children’s patient returns as resident**

By Kate DeTrempe

When Ryan Lion, MD, began his pediatrics residency at Lucile Packard Children’s Hospital Stanford earlier this summer, he already knew some of the doctors and nurses he would be working with. Ten years before, they had saved his life.

In 2009, during the final semester of Lion’s senior year at Saint Francis High School in Mountain View, California, he suddenly fell very ill. He had felt totally normal, and then in one specific moment everything changed, Lion recalled. “I felt feverish, had chills. The next morning, I woke up with a rash on my arm and had weakness and pain in my joints. I could barely walk.”

Ryan’s local emergency department completed a series of blood tests that were sent to Packard Children’s for further evaluation.

“Hanging on by a thread”

David Cornfield, MD, chief of the Stanford Children’s Health Pulmonary, Asthma and Sleep Medicine Center and former chief of critical care medicine, was on service in the pediatric intensive care unit, or PICU, that afternoon. He reviewed Lion’s lab results and recognized evidence of disseminated intravascular coagulation, a dangerous condition affecting the body’s ability to clot and stop bleeding. He called for Lion’s immediate transfer to the PICU at Packard Children’s.

“My impression of Ryan upon arrival was profoundly septic shock. He was extremely ill,” said Cornfield, the Anne T. and Robert M. Bass Professor in Pediatric Pulmonary Medicine. “At that moment, I felt he was hanging on by a thread.”

Cornfield and his team worked quickly to place intravenous catheters, deliver fluids and administer antibiotics and a medication to strengthen Lion’s blood vessels. Lion spent the next week in the hospital being treated for organ damage caused by the infection.

Ultimately, he went on to graduate from high school a few months after his illness. He attended college, graduate school and medical school before matching for his pediatrics residency program in March 2019 at Stanford.

10 years later: Delivering care

“I was always interested in medicine, and being hospitalized reaffirmed my plans to pursue it,” Lion said. “But never did I imagine in that moment that I would be a physician at the very same institution that cared for me, part of the same care team, now on the other side of delivering care.”

In the second month of Lion’s residency this summer, he spent a week working alongside Cornfield in the PICU.

“It was an awesome, full-circle moment knowing he was the one who cared for me in that very unit,” Lion said.

“Walking into Ryan’s room and making the observations I did when we could still inter- vene is a moment I remember well. And even through the lens of now 10 years later, that memory really underscores the importance of the sorts of things we do every day,” Cornfield said. “Seeing Ryan today is a profound reminder of the deep trust people place in us as providers, and of the power of healing that has very significant long-term impact in the lives of very real people that lasts well beyond our interactions at the bedside.”

Lion also feels supported by the nurses he has worked with as a resident, some of whom helped care for him when he was a patient.

Agnes Dado, RN, has been a critical care nurse at Packard Children’s for nearly two decades and worked in the PICU during Ryan’s hospitalization. “We see our children come and go throughout the years. It can be difficult and yet rewarding at the same time,” Dado said. “Seeing Ryan where he is today is extremely rewarding.”

A unique perspective

For Lion, the experience of being hospitalized not only solidified his decision to pursue medicine when he entered college later that year, but it inspired an interest in global health and a desire to care for underserved communities.

“Here I was at this premier institution receiving this incredible care,” Lion said of his time as a patient at Packard Children’s. “I felt a need to go forward and ensure all people, both here and abroad, have access to the health care they require in their time of need.”

Ryan said that having been a patient in the same hospital where he is now providing care gives him a unique perspective.

“Knowing firsthand the stress than an ICU admission puts on patients and their families, it has been very humbling for me to be on this side of patient care,” Lion said. “I carry that experience with me during all of my patient encounters.”

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**OF NOTE**

NEAL AMIN, MD, PhD, resident in psychiatry and behavioral sciences, received the National Institute of Mental Health’s outstanding resident award, which recognizes psychiatric residents who show great potential for succeeding in research and academia.

JESSICA BENTZLEY, MD, received the Association for Academic Psychiatry’s resident psychiatric educator award, which honors residents who show promise as educators and scholars in academic psychiatry.

IRA GLICK, MD, professor emeritus of psychiatry and behavioral sciences, received the Payne Whitney Clinic Award for Extraordinary Public Service from the Weill Cornell College of Medicine. He also received the Jackson E. Spears Community Service Award from the Columbia College of Physicians and Surgeons.

STEVEN GOODMAN, MD, PhD, professor of medicine, received the 2019 Abraham Lilenfeld Award from the American College of Epidemiology in recognition of his work in expanding knowledge of scientific and statistical inference and his contributions to epidemiology.

HEATHER WAKELEE, MD, professor of oncology, was named president-elect of the International Association for the Study of Lung Cancer and assumed the role in September. Her two-year term as president will begin in 2021.

MARIUS WERNING, MD, PhD, was promoted to professor of pathology, effective July 1. His research focuses on investigating cellular reprogramming and advancing stem cell-based therapies for genetic diseases.

NOLAN WILLIAMS, MD, assistant professor of psychiatry and behavioral sciences, received the Klerman Prize for Exceptional Clinical Research from the Brain & Behavior Research Foundation in recognition of his work in neurotransmission techniques, mechanistic understanding of rapid-acting antidepressants and the identification of biomarkers in treatment-resistant conditions.

SERENA YEUNG, PhD, was appointed assistant professor of biomedical data science, effective July 1. Her research interests include computer vision, machine learning and deep learning, with a focus on human-activity and video understanding in applications related to health care.