This fall marks the beginning of a new era at Stanford Medicine, as we debut the first in a series of new facilities that will change the way we serve the community. Our two new hospitals, as well as upcoming research laboratories at the School of Medicine, will provide wide-ranging benefits to patients, as well as to researchers, health care providers and trainees. The ultimate goal of the Stanford Medicine renewal initiative is to foster an environment that is conducive to 21st-century medical and translational research and to provide the most advanced precision treatments and technologies to our patients.

The new Lucile Packard Children’s Hospital Stanford, which will be unveiled in December, will be among the country’s most technologically advanced, family-friendly and environmentally sustainable hospitals for babies, children and pregnant women. Designed in collaboration with staff, faculty, patients and the Family Advisory Council, the new hospitals

COMMUNITY MATTERS

Investing in the next generation of medicine

ack Dwyer was training with his Hillsdale High School basketball team in San Mateo, running sprints back and forth along the court, when his heart began racing “really fast.”

“I stopped and took some deep breaths,” he said, then told his parents about it that night at home. His mother at first dismissed it as nerves. But Dwyer, an observant 17-year-old who until then had been healthy, said, “No, Mom, something’s wrong.”

It turned out to be supraventricular tachycardia, caused by abnormal electrical impulses in the heart. The treatment was surgery; though Dwyer hadn’t been nervous when his heart rate soared, he was when he contemplated the upcoming procedure at Lucile Packard Children’s Hospital Stanford.

But then he underwent a virtual reality experience that walked him through the process. Packard Children’s had sent him

SEE VIRTUAL REALITY ON PAGE 4

SEE COMMUNITY MATTERS ON PAGE 6
Chronic fatigue syndrome is arguably one of the most misunderstood conditions in medicine. Between 1 million and 4 million people suffer from the disabling disorder, yet it’s often not recognized by physicians as a real disease. Jose Montoya, MD, a professor of infectious disease, is a leading specialist in the field. He has been treating patients for more than a decade and has been studying the underlying mechanisms of the disease, which is also referred to as myalgic encephalomyelitis, or ME/CFS.

Recently, Montoya and Mark Davis, PhD, director of Stanford’s Institute for Immunity, Transplantation and Infection, published a study linking the disease to variations in 17 immune system proteins, suggesting that inflammation is a powerful driver of the condition. The findings could help in the diagnosis and treatment of this mysterious disorder. Montoya was interviewed by Stanford Medicine News about the latest research.

You have worked with many CFS patients over the years. How does the disease impact their lives?

It devastates their lives. It ruins their occupational, educational, social and productive activities. It turns upside down any hopes and happiness.

What did you and your colleagues find in the latest study?

About seven years ago, we decided to design a study to answer the question of what the disease is. We knew we had to get a study with a significant sample size. We consulted with statisticians, and with their recommendation we came up with a sample size of 200 patients and 400 healthy controls. We analyzed their blood samples and found that there were 17 cytokines that track the severity of the illness and the patient’s symptoms. Of these, 13 are pro-inflammatory. A cytokine is a small protein that the immune system uses to communicate with other cells. These cytokines can be protective, but they can also be harmful. That’s where the issue is—it’s a double-edged sword.

What are the implications of the study?

This is telling the world that we have finally a biological correlate for these patients’ symptoms. These patients are not crazy. Our findings validate their symptoms—that their illness is real and has a biological basis. Now we know that this is something real, ingrained in the biology of the body and the immune system, that explains why these patients are so sick, we could end up with a blood test, but equally or more exciting, we can find drugs to conquer the disease.

As someone who has worked in this field for so long, it must be very gratifying to have found some clear biological underpinnings for this mysterious illness.

I was ecstatic. It was a sunny morning in California. We have the routine of meeting weekly to review new results. When I saw that, that was like a eureka moment. It was clear to me that morning that we had something big in our hands. We were able to measure something in the blood, and it was tracking the symptoms.

How might the study impact treatment?

In a major way, possibly. People had suspected inflammation as the main driver of the disease, but the conventional tests had been normal. We now have other ways to measure inflammation that were not available five years ago, thanks to the efforts of Mark Davis and others. Now we can use those techniques to look for drugs and therapies that treat that inflammation.

Could this lead to the development of a diagnostic test, and if so, how long might that take?

That is something we are working on—a panel of tests that will tell that this patient unquestionably has the disease. Taking into account everything that goes on in the laboratory, I expect that to take one and a half to two years.

What has been the response to the study?

It’s been huge—more than I anticipated. We have been receiving hundreds of emails a week from patients, patient advocates, media and others. The one thing I was not expecting was the press coverage. It went truly wild. I don’t like the spotlight. But that gave me the hope that these reports might be seen by groups working on drugs that precisely treat the inflammation. We are starting to see that. We are getting emails from pharmaceutical companies that say they have compounds that may counteract that inflammation. That would be exciting because that could lead to the first-ever targeted treatment for this disease.

We knew scientifically that this was a significant leap forward, but the important thing is, can we find that drug? There are other inflammatory diseases that have treatments that are effective, like lupus and rheumatoid arthritis. So now that the study has established it’s inflammatory, we can look for those drugs that treat inflammation. I could die happy if I knew that was the door that was opened.
Interacting with nature can’t cure cancer or repair a faulty heart valve. But numerous studies have shown that time spent in a garden setting can reduce a patient’s levels of pain and stress—and subsequently boost the immune system to help the body heal. Studies also have found that greenery and gardens not only are good for patients but benefit caregivers as well.

The new Stanford Hospital will feature some of medicine’s most advanced technologies and innovative design, complemented by landscaping and amenities that promote healing and well-being. The 824,000-square-foot hospital, scheduled to open to patients in 2019, will feature 368 single-occupancy rooms, a greatly enlarged emergency department, state-of-the-art diagnostic and treatment rooms, and extensive gardens and green spaces that integrate seamlessly with the new building.

The hospital’s green spaces reflect an underlying philosophy of integrating modern medicine with features that address the diverse needs of patients and visitors, as well as physicians, nurses and staff members.

“The architectural and landscape designs of the new hospital are a careful balance between the indoor and outdoor environments,” said Grace Hsu, director of design management for Stanford Health Care. “The extension of the interior space through the use of similar architectural materials and furnishings creates a flow that brings the two components together. We are fortunate to take advantage of that opportunity here in our agreeable California climate.”

Rooms with a view
Every room and corridor in the patient units and public areas will have a view of the outdoors. Full-height glass exterior walls on the third level will blur the divide between interior and garden spaces. An exterior corridor linking the surgical pods will provide a brief reprieve of daylight between long procedures for physicians, nurses and staff.

A highlight is the 40,000-square-foot Goldman Gardens on the third floor of the new building. The rooftop garden will feature California native and drought-tolerant plants as well as mature trees dispersed among paved walking trails and benches. Located 50 feet above street level, the unique setting will offer inviting spots to sit and enjoy sweeping views of the nearby foothills.

The Goldman Gardens will serve as the back-drop to numerous cultural and wellness activities. The Garden Music Lounge, connected to the public galleries on the third floor and encircling the top level of the atrium, will offer diverse music performances and complement the current Bing Music Series at Stanford Health Care, which offers regular concerts by professional classical, jazz and popular musicians.

Healing amenities
The Wellness Center will consist of a resource lounge, an interfaith chapel and meditation space, a coffee bar, and guest service lounges, all organized around a central rotunda with work by Bay Area artist Brian Isobe. These spaces have been designed to be adaptable for various activities, with access to adjacent outdoor terraces. The chapel, for example, will be a quiet space for contemplation, reflection and celebration, available for organized activities such as religious services, yoga and meditation. The resource lounge will serve as a break room with access to the internet, a medical library and educational sessions, as well as laptops and notebooks that can be checked out for use in the hospital.

The new hospital will also feature a dog park with amenities for both humans and canines, including hardy plants, a water fountain, shaded seating and even a fire hydrant. “Canine and feline companions often contribute to human well-being,” Hsu said. “The dog park will allow families and visitors to enjoy time with their dogs and reduce some of the stress of being in a hospital.”

A wide, shady promenade will link the new building with Lucile Packard Children’s Hospital Stanford and the School of Medicine, providing easy access for pedestrians and cyclists as well as spots for reading, people-watching, picnics and family-friendly games. The walkway, a vibrant hub of activity, will be lined with retail vendors offering flowers, coffee, books and personal services as well as places to sit and relax. Artwork will be interspersed among the promenade’s landscaping, which will include the same species of trees, flowers and shrubs already grown throughout the campus, including Chinese elms, oaks and cedars.

An outdoor respite adjacent to the new emergency department, with medicinal plants and sculptures, will feature intimate seating for patients, visitors and staff to sit, linger and relax.

Conserving water
The gardens are the result of a close collaboration among San Francisco landscape designer Gary Strang, hospital project architect Rafael Viñoly and Fred Kent from the Project for Public Spaces, a nonprofit public space planning organization. Together they integrated nature throughout the hospital setting using shrubs, trees and grasses that thrive in California’s arid climate and provide natural habitats for local birds and insects. The low-water vegetation, such as Mexican lily, agave, mondo grass, flowering currant, magnolias and black pine, will be irrigated with recycled rainwater and condensate from the building’s air conditioning and medical equipment.

“Our decisions about what to plant and how to maintain the grounds resonate with our philosophy of how we take care of our patients,” Hsu said. “Every aspect of the new hospital is about health and healing.”

Learn more about the Stanford University Medical Center Renewal Project at sumcrenewal.org.
the VR kit, including goggles and a smartphone with an app, and he experimented with the VR trip several times at home. When it came time for the surgery, in a room filled with physicians and nurses in scrubs and a bunch of scary-looking machines, Dwyer was composed. “It definitely would have been super-overwhelming if I didn’t know that was coming,” he said.

For years, psychologists have talked fearful youth through frightening procedures, and nurses have offered stickers to appease preschoolers receiving shots. But they are finding that new technologies, including virtual reality and portable video systems, are far more effective in calming and distracting patients—easing their jobs while also reducing trauma for kids. The new Packard Children’s Hospital, scheduled to open in December, will incorporate many of these VR technologies to help soothe patients, as well as to educate them about their medical care.

**Calming scenery**
In the VR experience that Dwyer underwent, patients start by looking at a 3-D image of the entrance to Packard. They then move through the stages of their upcoming visit, viewing each station in the hospital, complete with equipment and the care team. They also hear teenage actors and physicians describe what will happen at each stage. At two points, the real-life video of the hospital switches to a tranquil, animated scene to help patients associate relaxation with the hospital; it also teaches them calming techniques.

One of those scenes is a nighttime valley, surrounded by mountains, under a sky filled with stars. With slight head movements, patients can shift dots of light around the scene; if they place a dot on the ground, it grows into a tree. They can spend as much time as they like in the scene, building a forest, changing the color of the sky and meditating on the serene landscape.

“At key moments, when they’re waiting, for example, and may start to feel nervous, they can bring up the memory of the forest-building,” said Lauren Schneider, PsyD, a clinical assistant professor of psychiatry and behavioral sciences who helped create the VR experience. Simply familiarizing themselves with the physical hospital reduces some patients’ anxiety, she added.

“**We can provide a cool experience in a setting that is not cool at all. It really helps us get the child through the procedure.**”

Pediatric electrophysiologist Anne Dubin, MD, professor of pediatrics, noted that while she can’t point to data proving that calm patients do better than nervous ones, “Having surgery can traumatize kids. Later in life, they may not be willing to undergo procedures they need. It colors their entire medical involvement and interactions.”

Dwyer’s VR experience was designed for teenagers. Younger children present other challenges to nurses and physicians. They squirm when an intravenous line has to be inserted, scream during vaccinations and pull off anesthesia masks. For these children, Packard doctors and nurses have turned to VR goggles as well as video screens.

When pediatric surgeon Stephanie Chao, MD, needed to remove fluid from a cyst on the neck of her 9-year-old patient without pain medication, she numbed his neck with ice, then gave him VR goggles. “Most kids, just seeing the needle, would start crying,” said Chao, an assistant professor of surgery. But her patient, engrossed in a 3-D animated underwater world of dolphins, shipwrecks and schools of fish, didn’t even flinch when she poked him—twice. “He was so immersed in the VR, he had absolutely no anxiety,” she said.

A team at Packard has been creating VR experiences precisely for situations like Chao’s. They built games that allow kids to play with only head movement, that aren’t likely to cause nausea, that lack violence and that are continuous, so the play doesn’t end right when a needle is about to enter a vein. In one of the games, patients zap burgers flying in space; in another, they steer penguins down a snowy slope.

“We can provide a cool experience in a setting that is not cool at all,” said Veronica Tuss, who as a child life specialist helps children cope with treatments in the hospital. “It really helps us get the child through the procedure.”

**Fun with anesthesia**
For 3- to 4-year-old children who need to undergo general anesthesia, the Packard team has created a game, Sevo the Dragon, to persuade them to breathe in the gas in their anesthesia mask. With a video screen showing the Barney-like dragon attached to their bed, the tots learn that Sevo needs to cook pizza using fiery dragon breath, and they need to help! They blow into their mask, the child life specialist or the anesthesiologist surreptitiously taps a button, and Sevo blows fire onto the pizza slice.

“As soon as they blow out, they have to take a huge breath in,” which causes them to inhale the anesthesia, said Tuss. Soon they’re asleep. Without a distraction like Sevo, younger children often pull the mask off their face, forcing the anesthesiologist to hold them down, “which is very scary for them.”

“Having a terrifying clinical experience can change behavior for weeks,” said pediatric anesthesiologist Tom Caruso, MD, also part of the Packard team developing the games. “We see sleep disturbances and regression in children’s behavior.”

The VR program that calmed Zack Dwyer’s nerves is part of a pilot study that Schneider and Dubin are conducting to see if it reduces anxiety for patients ages 8 to 25 undergoing cardiac catheterization surgery. If it does, Packard plans to produce VR experiences for young patients who require different cardiac treatments, and eventually, any stress-inducing procedure.

Dwyer, who was back on the basketball court 10 days after his surgery—the rapid heartbeat just a memory—said he would strongly recommend the VR experience to other teens. “It’s crazy to think you have to have heart surgery,” he said. “But I had something that made it seem like it was no big deal.”

[Image: Robert Nichols, BS, RRT/NPS, a cardiovascular neonatal-pediatric respiratory therapist, uses virtual reality to explore a heart model. He can expand the model to look inside and rotate his view 360 degrees.]

**VIRTUAL REALITY FROM PAGE 1**
It was the founding vision of Lucile Salter Packard to marry modern science and technology with a holistic approach to healing body, mind and spirit. That vision was clear when the hospital first opened in 1991, and it is unmistakably expanded in the design of the new Lucile Packard Children’s Hospital Stanford, which is scheduled to open in December. The new building combines Stanford Medicine’s advanced medical care and scientific research with a design that provides access to nature, including the integration of gardens and natural light as well as the depiction of nature through art.

“When my mother founded this hospital, she envisioned a place where children and families could receive truly healing care,” said Susan Packard Orr. “She saw the power that nature had to heal and uplift. I’m proud that we have carried her vision forward, with world-class sustainability and holistic elements throughout the new hospital. Everything we do at this hospital will have an eye to ensuring that generations to come will be healthier.”

The project’s architects began by considering the experience of patients as they arrive at the hospital. Visitors to the new building will enter a light-filled lobby with soaring two-story ceilings. A floor-to-ceiling glass wall leads to the Emerald Garden, an imaginative space that incorporates a sea-themed play area and an amphitheater for events.

Proximity to nature is evident throughout as families move around the building. Each patient care floor has separate patient and staff patios, and every patient room has a window with a planter box.

The hospital’s extensive art collection is designed to engage families, feed the curiosity of children and encourage exploration of the building’s setting within Northern California.

“You’re always trying to engage your child in something when you’re in the hospital,” said Diane Flynn, a member of the Family Advisory Council who provided feedback on some of the building’s design elements. “When my son had to fast before his surgeries, we would walk the halls to try to keep his mind off his hunger. We’d stop at the art on the walls and play ‘can you find’ games. Bringing in art and other elements of interactive play like this to the new hospital was crucial.”

The diverse collection features sculpture and painting, as well as digital interactive experiences to draw children in. It ranges from a 30-foot kinetic sculpture of the hospital’s “leaping Lucy” logo in the entry garden to 2-inch glass displays of hummingbirds, fish and other species outside the hospital’s sanctuary. Framed art hangs in each patient room, and on the first floor, a richly colored panoramic California ecosystem mural with interactive features teaches children about the state’s diverse wildlife.

Navigating any large building can be difficult, particularly for families with a sick child. Hospital visitors get help finding their way through a system designed around Northern California’s eco-regions, including its rocky shores, redwood forests and mountains. Stanford University ecologists and hospital patients helped select two animal “ambassadors” endemic to each floor’s eco-region. Sculptures of each ambassador are tucked into stone niches along the main entrance and are repeated near the elevators and in colorful signs on each floor.

Additional directional art includes mosaic tide pools embedded in the lobby’s Rocky Shore terrazzo floor as well as 100 aluminum-cast bird sculptures that appear to be flying up the main staircase. From the welcome desk, families can be directed to “follow the birds upstairs.”

On each ascending floor, four signature sculptures between the existing hospital and the
The Stanford Letter Project
Research at Stanford shows that most doctors are reluctant to talk to their patients about what matters most to them in advance life care planning. The Stanford Letter Project, developed by V.J. Periyakoil, MD, a clinical associate professor, will help participants write a simple letter to their doctors about their values, life goals and advance care planning.

Date: Monday, Oct. 30, 1 to 2:30 p.m.
Location: Stanford Cancer Center South Bay, 2589 Samaritan Drive, Room 3300A, San Jose
To register, call 669-233-2807.

Advances for Advanced Breast Cancer
Presented by the Cancer Supportive Care Program

Date: Wednesday, Nov. 8, 6:30 to 8 p.m.
Location: Stanford Health Library, Hoover Pavilion, Suite 201, Palo Alto
To register, call 650-725-9456.

Preparing for Multiples

Date: Saturday, Dec. 2, noon to 4:30 p.m.
Location: Lucile Packard Children’s Hospital Stanford, 725 Welch Road, Palo Alto
Fee: $60. Register online at classes.stanfordchildrens.org.

Teen Transitions
This new class offers interactive learning and discussion with teens and parents, focusing on relationships with peers, family and others. Topics covered include connection and conflict resolution, respect for self and others, healthy decisions, and family support. Emphasis is on encouraging open communication and respect both within and outside the family.

Date: Saturday, Jan. 20, 3 to 5 p.m.
Location: Lucile Packard Children’s Hospital Stanford, 725 Welch Road, Palo Alto
Fee: Free. Register online at classes.stanfordchildrens.org.
In 1959, the year Stanford University School of Medicine relocated from San Francisco to its $30 million complex on the university campus, the average cost of a new home was $12,000, a gallon of gas was 25 cents, Alaska became the 49th state, Doris Day ruled the radio waves and Barbie hit toy stores.

Designed by Edward Durrell Stone, the complex integrated outdoor and interior landscapes, with pierced grills, walls of glass bricks and a network of courtyards. But the buildings that compose the complex have not kept up with the accelerating demands of today’s medicine, and while the recent addition of structural steel frames to the exterior of the Edwards building makes it seismically safe, the buildings remain functionally deficient.

“Our labs were designed in the year Sputnik went up [in space] and built during the Eisenhower administration,” said Robert Jackler, MD, professor and chair of otolaryngology–head and neck surgery. “Needless to say, our needs have changed. Our labs are scattered and out of date. The long-term sustainability of our research mission clearly requires additional space. It’s time to decant the building. The complex is at the end of its usefulness.”

The Biomedical Innovation Building (BMI) is the first step in a sequence of new buildings that eventually will replace the outdated Stone complex, which includes the Grant, Alway, Lane and Edwards buildings. The BMI is designed to encourage interdisciplinary studies and quickly move biomedical research into clinical practice.

The 215,500-square-foot structure will be located on open space along Pasteur Drive, just steps from the medical school’s research buildings and the new Stanford Hospital. With four floors above ground and one below, the BMI will be a significant step toward replacing outdated research space and easing the crunch, even for those who may not move into the new building. It will house laboratories and support space for nearly 1,000 faculty, students and staff in specialties ranging from orthopedic surgery to pediatrics, immunology and genomics.

“The BMI will bring together world-leading research teams in a modern and technologically advanced facility,” said Lloyd Minor, MD, dean of the School of Medicine. “More than that, the BMI will foster scientific collaboration and encourage the formal and informal interactions that are necessary for innovation and precision health.”

The building, which is planned for completion by 2019, will bring together multidisciplinary teams of engineers, basic scientists and physician-researchers from nine departments and initiatives, including the Sean N. Parker Center for Allergy and Asthma Research; the Stanford Initiative to Cure Hearing Loss; the Cardiovascular Institute; the Stanford Human Systems Immunology Center; and the Institute for Immunity, Transplantation and Infection.

The building’s central concept is to foster collaboration and interaction through open lab configurations and spaces for occupants to gather, confer and mingle. Each floor will include adaptable conference rooms, small huddle booths and open lounge areas. An 80-seat meeting room and a large outdoor terrace will be accessible for scientific symposia and receptions.

Niraj Dangoria, associate dean for facilities and planning, said the building integrates lessons learned from the design of the medical school’s previous research facilities. Dispersed throughout the floor plan are areas for formal and informal interactions, a feature especially important for encouraging collaboration among the scientists and physicians.

“The new building will help build stronger institutes and departments because of the enhanced interconnectivity and new facilities,” said Jackler, who worked with the architects to help refine the plans. “The co-location of researchers will increase scientific synergy. Not only will we take steps to address the research space crisis in the medical school, we will have modern laboratory space with better connectivity of shared interests and technologies.”

Each floor will house shared laboratory space arranged in color-coded zones for traditional research activities as well as for “dry” research that leverages Stanford’s strengths in computational science and big data. Oversized windows will ensure lots of natural light and offer expansive views of the medical center. The contemporary design will integrate the highest standards of sustainability and environmental concerns and reflect best practices for laboratory design safety and space allocation.

“We are planning to accommodate the needs of researchers for many years to come, so the building’s infrastructure needs to be flexible and adaptable,” Dangoria said. “Technologies are changing, and finding contiguous space to grow continues to be a challenge. Faculty, fellows and students require spaces that encourage collaborative, multidisciplinary efforts, so we approached the design to inspire ways for different disciplines to work together on basic, translational and clinical studies.”

### Biomedical Innovation Building
- Four above-ground floors
- 215,500 square feet
- 1,000 occupants
- 8 disciplines
- 24 laboratory bench bays per floor
- 80-seat meeting room
- 12 conference rooms
In September, Hari Suresh of Fremont embarked on his freshman year at UC Davis after a long and painful journey. He had not only fought through years of illness and chronic pain but also struggled to get the education he needed for college. Fortunately, he and his family found help through an advocacy program at Lucile Packard Children’s Hospital Stanford, which he credits, along with his persistence, for allowing him to realize his goal.

Suresh first came to Packard Children’s during middle school in 2008 and was diagnosed with juvenile arthritis, causing painful joint inflammation. In his junior year of high school, when most of his friends were gearing up to apply to college, he was diagnosed with Crohn’s colitis, chronic inflammation in the walls of the digestive tract and large intestine. Patients may experience unpredictable, painful flare-ups, as well as heavy cramping and frequent diarrhea. Those symptoms, coupled with pain from his arthritis, made it impossible for him to go to school.

As Suresh’s gastroenterologist, William Berquist, MD, recalled, “His symptoms were significant, his body had difficulty maintaining good nutritional status and he was dealing with sleep issues.”

Suresh missed two years of school, was unable to graduate with his class, and lost connection to friends and high school life. He wondered whether his life would ever be “normal” again.

“School had always been a huge part of my life, and to have that removed for that period was very distressing,” said Suresh, who was a straight-A student. “It was difficult to be cut off from my peers over that time. I felt isolated.”

During that time, he found support in the Pediatric Pain Management Clinic at Packard Children’s, where he spent a month in the intensive pain program. For seven to eight hours a day, he received physical and occupational therapies and learned pain management techniques that increased his endurance. He also met other young people in the program with chronic illnesses and similar experiences.

“For the first time in a long time, I felt a sense of camaraderie with my peers,” he said, “like I was just ‘one of the guys.’”

Children with chronic pain and illness may frequently miss school; have trouble with focus, performance and learning; and experience a sense of having been left behind, said Jeanne Kane, MA, program supervisor for Packard Children’s HEAL program (Hospital Educational Advocacy Liaisons). The program supports families of medically fragile children so that youngsters can experience success in learning despite limitations imposed by their medical condition.

Suresh’s schoolwork had suffered from his frequent absences during hospital stays, fatigue and stress, as well as from memory issues associated with his medications. Kane met with officials at his school to advocate for educational accommodations. Suresh was given more days to complete homework and exams, allowed to use word processing in class, and granted more time—two extra years—to finish high school.

“I felt excited to go to school again,” he said. “It allowed me to expand my horizons again to being more than just my illness and trying to get my school work done.”

Rashmi Bhandari, PhD, pain psychologist in the Pediatric Pain Management Clinic, also worked with Suresh’s parents. “Parents are wired to protect their kids, especially when they are sick; they want to do everything for them,” she said. “We re-teach parents to encourage their child to function as independently as possible in a supportive environment.”

With Kane’s help, Suresh applied to colleges that would provide support for his health issues. He was happy to be accepted to UC Davis—a celebrated victory for everyone in his life. Though he will have to adapt to managing his medical care in college, “I am most looking forward to being a college student, not feeling different, not being a patient—getting the chance to live my life,” he said. ""