

# 125 moments and milestones

CEDARS-SINAI REPORT TO THE COMMUNITY 2015



CEDARS-SINAI®



## OUR MISSION

Cedars-Sinai Health System, a nonprofit, independent healthcare organization, is committed to:

- Leadership and excellence in delivering quality healthcare services.
- Expanding the horizons of medical knowledge through biomedical research.
- Educating and training physicians and other healthcare professionals.
- Striving to improve the health status of our community.

Quality patient care is our priority. Providing excellent clinical and service quality, offering compassionate care, and supporting research and medical education are essential to our mission.

This mission is founded in the ethical and cultural precepts of the Judaic tradition, which inspires devotion to the art and science of healing, and to the care we give our patients and staff.

# Leadership Message



“Value” in healthcare is not a new idea. But Cedars-Sinai is transforming patient care —at the bedside, in the clinic and in the community — in ways that give the word new meaning.

The transformation starts with the recognition that quality and efficiency are two sides of the same coin. At Cedars-Sinai, we are pioneering ways to increase efficiency for the patient’s benefit, which also enhances the quality of care.

One example is Choosing Wisely, an initiative led by the American Board of Internal Medicine and strongly supported by Consumer Reports aimed at educating patients and physicians about the health risks of unnecessary tests and procedures. This year, Cedars-Sinai became the nation’s first medical center to integrate Choosing Wisely into its electronic medical records system and we’ve already seen a decrease in the number of unnecessary tests and procedures, while our clinical quality and patient outcomes continue to be outstanding.

Our scientists and clinical researchers are also helping improve efficiency in healthcare. Many of our research innovations, such as the potential use of stem cells to cure disease or the replacement of damaged heart valves without open-heart surgery, may dramatically reduce risk to patients while also reducing the cost of care.

Throughout Cedars-Sinai, healthcare professionals and others work collaboratively to provide patient-centered, well-coordinated care across all settings — from our medical center and outpatient clinics to skilled nursing facilities, community centers and even patients’ homes. Our Medical Group has brought back house calls, helping patients with complex conditions avoid unnecessary trips to the hospital.

Our longstanding commitment to strengthening the health of the most vulnerable in the community also continues to grow. Last year, for example, Cedars-Sinai contributed more than \$480 million in unreimbursed care for the poor and for patients with Medi-Cal and Medicare, because the government pays far less than the actual cost of caring for those patients. And working with hundreds of community partner organizations, we provided free health screenings, immunizations, and innovative education programs to vulnerable children and adults.

We are fortunate to have the support and involvement of a diverse community as we set new standards for quality and innovation in patient care, biomedical research, health professions education and community service. Thank you for helping us achieve our mission as a leading nonprofit academic health system. Together, we are building a healthcare future based on true value to improve lives in our community and around the world.

VERA GUERIN  
Chair, Board of Directors

THOMAS M. PRISELAC  
President and CEO



# Patient Care

LEADING TRAUMA CARE | A PUSH TO DELIVER WHAT MOTHERS WANT | NEW FEATURES FOR MY CS-

Cedars-Sinai is known internationally for providing high-quality, patient-centered care and developing innovative approaches to healthcare delivery and treatment. Clinical programs range from primary care to specialized treatments for rare, complex and advanced illnesses. Cedars-Sinai is one of the largest nonprofit academic medical centers in the U.S., with 886 licensed beds, 2,100 physicians, 2,900 nurses and thousands of other healthcare professionals, staff and volunteers. In addition, Cedars-Sinai serves the community through a Medical Network committed to seamless coordination of patient care between primary and specialty physicians. With access to a vast system that includes the highly rated Cedars-Sinai Medical Group and Cedars-Sinai Health Associates, patients receive the best possible care from physicians affiliated with Cedars-Sinai.

**1 | LEADING TRAUMA CARE**

Cedars-Sinai is one of only four Level I trauma hospitals countywide and the only one not operated by the government. The Cedars-Sinai Trauma Program treated more than 1,750 patients with severe, potentially life-threatening or disabling injuries during FY 2014, including victims of motor vehicle crashes, falls, knife and gunshot wounds, and sports and recreational accidents. Services encompass every aspect from prevention to rehabilitation. Under the auspices of the Department of Surgery, the Trauma Program provides leadership in injury-prevention programs, research, education, community outreach and trauma-system planning.

**2 | A PUSH TO DELIVER WHAT MOTHERS WANT**

Cedars-Sinai is at the forefront of a push to pay closer attention to what women want during labor and delivery. Researchers at the medical center conducted a national survey of patient preferences that revealed a gap between women's birth plans and hospital outcomes. Priorities were avoiding interventions and medications, receiving immediate skin-to-skin contact with their baby, and having a calm, supportive environment. Cedars-Sinai is quickly translating these findings into efforts to promote both greater choice and safety. The medical center even integrates patients' doulas into the care team, as Cedars-Sinai research shows that a mother's anxiety and the risk of cesarean delivery are reduced when she has a trusted person at her side during childbirth.

**3 | NEW FEATURES FOR MY CS-LINK™**

Cedars-Sinai Medical Group added new capabilities to its patient web portal, My CS-Link™, and also unveiled a new design with a more contemporary look. Patients receiving outpatient care, those admitted to Cedars-Sinai and anyone treated in the emergency department can access the secure, 24/7 online tool. Among the inpatient records that can be viewed online are lab results and discharge summaries. My CS-Link enables patients to manage appointments, request prescription renewals, view test results, ask their physician a question and obtain other health-related information from any location with Internet access.

**4 | TOPS IN TRANSPLANTS**

The Cedars-Sinai Heart Institute has set a new standard for U.S. heart transplantation by completing 117 adult heart transplants and two adult heart-lung transplants in a single year. During each of the past four years, the institute and the Comprehensive Transplant Center performed more adult heart transplants than any other U.S. medical center, according to the United Network for Organ Sharing. Cedars-Sinai's leadership in heart transplantation also extends to state-of-the-art mechanical support to bridge the time between needing and receiving a new heart for patients who might otherwise not survive. The Cardiac Mechanical Assist Device Program supports some 62 outpatients and is the largest discharging center for Total Artificial Hearts in the world.



# Patient Care

HEALING AT HOME | NURSES SCREEN FOR DEPRESSION | HELP WITH INSURANCE OPTIONS | 'MOST

*Crispina Lota has her vitals checked by Gary Gutkin, MD, lead physician for the Healing at Home program.*

**5 | HEALING AT HOME**  
The Healing at Home program for Cedars-Sinai Medical Group's Medicare managed care patients provides a new alternative for those being released from the emergency department. Instead of being admitted to the hospital, the program gives patients the opportunity to be cared for at home, with close medical supervision, if they meet the criteria for certain illnesses, including community-acquired pneumonia and congestive heart failure. Patients receive daily physician visits and twice-a-day home health nursing care. Each care plan is personalized to maximize the patient's chances of recovering quickly, safely and in the comfort of their own home.

**6 | NURSES SCREEN FOR DEPRESSION**  
In an effort to identify and treat patients with undiagnosed depression, Cedars-Sinai nurses are screening each hospitalized patient for signs of the illness and for risk factors that could make recovery more difficult and lengthy. The new initiative is one of the broadest depression screenings of patients in any U.S. medical center. Multiple studies over several years have shown that addressing depression improves all aspects of patient health.

**7 | HELP WITH INSURANCE OPTIONS**  
Cedars-Sinai conducted a major campaign to educate patients and the general public about changes in the health insurance market under the Affordable Care Act and the new Covered California insurance marketplace. The information provided was particularly important for those without employer-provided health insurance who receive care from Cedars-Sinai or the medical center's physicians. The effort included user-friendly websites explaining the many plans and options available to those whose coverage changed during 2014.

**8 | 'MOST WIRED' HOSPITAL**

Cedars-Sinai once again made the list of the Most Wired U.S. hospitals in a survey conducted by *Hospitals & Health Networks*, a publication of the American Hospital Association. The survey evaluates hospitals based on four focus areas: business and administrative management, clinical integration, infrastructure, and clinical quality and safety.

**9 | EXPANDED MEDICAL TEAMS**

Growing demands for healthcare and nationwide shortages of primary care physicians have led to expanded roles for nurse practitioners (NPs) and physician assistants (PAs). NPs are advanced-practice, often specialized nurses who can prescribe medications, while PAs provide diagnostic and therapeutic care under a doctor's close supervision. At Cedars-Sinai Medical Group, NPs and PAs are crucial members of the healthcare team. They help manage illnesses, handle preoperative appointments and perform routine exams, keeping physicians informed through daily consultations and notes in the electronic medical record. A total of 164 NPs and 47 PAs work in the Cedars-Sinai Health System today.

**10 | SPIRITUAL CARE IS PATIENT CARE**

Studies show that patients and family members value what spiritual counselors bring to the healing process. Cedars-Sinai is one of nine Southern California medical institutions that received research grants from the Archstone Foundation to develop models for integrating chaplains into palliative care. An interfaith chaplain became part of the Supportive Care medical team to help relieve anxiety and stress in patients with advanced illnesses. The results were so positive that Cedars-Sinai chaplains have been integrated into medical teams in other areas, including the emergency department, the Samuel Oschin Cancer Center at the Samuel Oschin Comprehensive Cancer Institute and the clinic for patients with amyotrophic lateral sclerosis (ALS).

**11 | A BRIDGE TO LIFE**

Life can go on as usual for patients awaiting heart transplantation, thanks to technology offered by the Cedars-Sinai Heart Institute's expanding Cardiac Mechanical Circulatory Support Program. Eight ventricular assist devices, including the Total Artificial Heart, are available to support weakened hearts so patients can leave the hospital and resume their normal routine until a donor heart becomes available. An estimated 15,000 to 25,000 people in the U.S. are on the waiting list each year, but only about 2,300 hearts become available annually. Devices that provide a bridge to the transplant are becoming smaller, more patient friendly and increasingly durable. Forty-eight patients with end-stage heart failure benefited from state-of-the-art mechanical support in 2014.



# Patient Care

CONGENITAL HEART EXPERTISE | SEAMLESS CARE FOR THE WHOLE FAMILY | JOURNEY TO WELLNESS

*Born prematurely with a congenital heart defect, baby Bryce Jones came to Cedars-Sinai to undergo a groundbreaking minimally invasive procedure that reduced the need for multiple open-heart surgeries and improved blood flow to his lungs.*

**12 | CONGENITAL HEART EXPERTISE**  
Patients with congenital heart conditions require treatment and follow-up throughout their lives. Caregivers at the Guerin Family Congenital Heart Program understand these patients' needs and deliver optimal support for all ages — under one roof. Attributes making the program among the best in the nation include its 12-bed intensive care unit, which serves newborns, children and adults. This approach differs from most hospitals, where congenital heart patients are compartmentalized by age, which makes it more challenging to provide them with the best possible care. At Cedars-Sinai, every congenital heart patient, regardless of age, remains under the medical supervision of the same specialized team. This continuity in care leads to better outcomes.

**13 | SEAMLESS CARE FOR THE WHOLE FAMILY**  
“Patient-centered medical home” is a relatively new term for a practice that Cedars-Sinai has refined over several years. The patient’s primary care physician oversees a coordinated team that provides seamless continuity of care to all members of the family. Care is based on need, offering patients access to professionals that include clinical pharmacists, dietitians, social workers, nurse practitioners, physician assistants and physician specialists. Home or nursing home visits by care managers are provided when needed. In addition, secure access to a patient’s medications and medical history enhances the ability of Cedars-Sinai Medical Group practitioners, Urgent Care and emergency department staff to treat patients quickly, safely and effectively.

**14 | JOURNEY TO WELLNESS**  
Cedars-Sinai’s Journey to Wellness helps bring optimism back into patients’ lives. The program at the Saul and Joyce Brandman Breast Center – A Project of Women’s Guild at the Samuel Oschin Comprehensive Cancer Institute provides a team of clinicians to address physical, emotional and psychological concerns that result from the diagnosis and treatment of breast cancer. The free program includes stress-reduction courses and access to alternative therapies such as acupuncture and guided meditation.



**15 | PRESERVING FERTILITY IN CANCER PATIENTS**

Younger adults with cancer face an added problem other patients do not: the effects of treatment on fertility. Chemotherapy can hamper conception, and conditions such as breast cancer can greatly damage the chances of building a family. The Cedars-Sinai Obstetrics and Gynecology Department is now actively helping cancer patients preserve fertility or discuss options with a specialist while fighting the disease. Techniques include freezing a patient's eggs or embryos before undergoing surgery, chemotherapy or radiation treatment. Fortunately, there is often time to safely start the fertility preservation process while waiting for such therapies to begin.

**16 | SMART CHART ALERTS FOR BETTER CARE**

Cedars-Sinai is putting dozens of independent treatment guidelines at doctors' fingertips to improve patient care by enabling more careful consideration of medical tests and procedures that may be unnecessary — and in some cases could even cause harm. The medical center is the first in the country to incorporate the Choosing Wisely guidelines from more than two dozen leading medical organizations into its electronic medical records system, covering dozens of medical conditions including respiratory viruses, asthma, osteoporosis, migraine headaches and allergies. Alerts pop up when doctors order tests, explaining if the tests or procedures are not recommended based on a patient's history or because they are unlikely to improve the condition.

**17 | SPORTS MEDICINE-ORTHOPEDICS PARTNERSHIP**

To better serve the increasing need for orthopedic and sports medicine, Cedars-Sinai has joined forces with two prominent physician groups in the field — the Kerlan-Jobe Orthopaedic Clinic and the Santa Monica Orthopaedic and Sports Medicine Group — to create the Institute for Sports Sciences. This collaboration, involving the renowned orthopedic physicians and staff of Cedars-Sinai and two groups highly regarded for their care of professional sports teams and elite athletes, provides the framework for clinical and research advances. It will also expand the community's access to high-quality orthopedics and sports medicine.

**18 | STEM CELL THERAPY FOR HEART DISORDERS**

The Regenerative Medicine Clinic at the Cedars-Sinai Heart Institute offers comprehensive treatment strategies for patients with heart and vascular disease who may qualify for investigative stem cell therapy, bringing the latest, most innovative treatments from the bench to the bedside. By harnessing the innate regenerative process of the heart, the clinic's techniques recruit nature's own healing process. With ongoing and groundbreaking cardiovascular stem cell trials, the clinic, part of the Board of Governors Heart Stem Cell Center, provides services that cover a broad range of cardiovascular disorders, including heart attack, heart failure, refractory angina and peripheral arterial disease.



# Patient Care

VOLUNTEERS AID HEALING | CHANCE AT NORMAL LIFE FOR CHILDREN | TRANSPLANT PROGRAMS SCORE HIGH

*Volunteer dogs and their owners in the Pets Offering Ongoing Care and Healing (POOCH) Program provide a wide range of services throughout Cedars-Sinai. With their unconditional love and acceptance, dogs offer heartwarming and supportive experiences to patients and their families.*

**19 | VOLUNTEERS AID HEALING**  
**Cedars-Sinai's 2,988 volunteers include people who have helped out at the medical center for more than half a century. While many volunteers work behind the scenes, doing tasks that free up nurses and others on the healthcare team to spend more time at the bedside, others interact directly with patients. They deliver flowers and magazines, perform music, bring pets in for visits and offer other types of support that contribute to the overall quality of the patient experience. Some have been patients themselves, overcoming health challenges such as cancer or a transplant to return to share their inspirational stories and help others through the healing process.**

**20 | CHANCE AT NORMAL LIFE FOR CHILDREN**  
The new Pediatric Bowel Management Program at Cedars-Sinai's Maxine Dunitz Children's Health Center is using innovative techniques to successfully manage fecal incontinence in children born with colorectal disorders. Congenital anorectal malformations causing these problems occur in nearly one in 5,000 live births. The Pediatric Bowel Management Program, the only one of its kind in California, employs a multidisciplinary team with specially trained nurses to help pediatric patients who are unable to anticipate or control their bowel activity.

**21 | TRANSPLANT PROGRAMS SCORE HIGH**  
In the latest national report on organ transplant outcomes, patients receiving a new liver at the Cedars-Sinai Comprehensive Transplant Center had the best one-year survival outcomes of all hospitals in the Los Angeles region, with 90 percent of liver transplant patients surviving beyond that important milestone. Patients receiving new kidneys at the medical center also did extremely well, with 97 percent surpassing the one-year benchmark.

**22 | INNOVATIVE SURGERY TREATS RARE BONE CANCERS**

Many bone cancers, including rare tumors called clear cell chondrosarcoma, do not respond to traditional radiation and chemotherapy. So surgeons in the Cedars-Sinai Orthopaedic Oncology Program have developed groundbreaking surgical techniques to give patients their best chance at quality of life and survival. In many cases, these surgical techniques use a prosthetic to replace damaged bone. By attaching a state-of-the-art cobalt-chrome and titanium prosthetic to surrounding bones and muscles, surgeons help patients regain the greatest range of movement and best stability possible.

**23 | 2014 LAB OF THE YEAR**

The Cedars-Sinai Department of Pathology and Laboratory Medicine was named the 2014 Lab of the Year by the magazine *Medical Laboratory Observer*. The award is based on a laboratory's ability to demonstrate contributions to quality patient care and recognizes standout leaders in customer service, teamwork, productivity, efficiency, creativity, quality control and lab inspection scores. The department is committed to the highest-quality patient care, teaching and research delivered by expert subspecialized pathologists and clinical scientists. This includes providing personalized genomic testing that guides optimal therapeutic approaches and prognosis.

**24 | CANCER PREVENTION A GROWING AREA**

The Cedars-Sinai Cancer Prevention and Control Program is expanding with the recruitment of a renowned epidemiologist. It is also taking a leap forward in revealing how cancer works and in developing new treatments for patients. The program focuses on the causes of cancer as well as on cancer genetics and survivorship. It works to deepen the understanding of what makes some people genetically predisposed to cancer and also to decrease the morbidity and mortality associated with all forms of the disease. Ultimately, the program aims to develop comprehensive cancer prevention strategies through the use of education, behavior modification and pharmacologic intervention.

**25 | REDUCING HOSPITAL STAYS**

Cedars-Sinai has made significant strides in improving the quality and safety of its medical care by reducing the time patients spend in the hospital. Recognizing that patients should stay only as long as necessary — which helps them avoid bedsores, healthcare-acquired infections and other conditions — physicians and nurses reexamined their own practices. As a result, they have become more efficient at coordinating diagnostic testing and evaluations, engaged in smarter treatment planning from preadmission to post-discharge, and did a better job of educating patients to prevent complications during recovery. These efforts and others have helped reduce lengths of stay by about 11 percent over a two-year period.



# Patient Care

OBSERVATION UNIT INCREASES EFFICIENCY | A WATCHFUL EYE ON PROSTATE CANCER | TIME OUT ON ACCIDENTAL IV REMOVAL

*Nurses staffing the new Medical Observation Unit help eliminate inefficiencies and delays. Their work can result in patients going home 40 to 50 percent sooner.*

**26 | OBSERVATION UNIT INCREASES EFFICIENCY**  
The recently opened Medical Observation Unit is helping Cedars-Sinai achieve faster, more efficient care by providing close observation of patients with medical conditions who are expected to be discharged within 24 to 48 hours. Common diagnoses include chest pain, dehydration or electrolyte disturbances, syncope, asthma and pneumonia. Other patients are considered on a case-by-case basis. The unit is staffed with a team of senior nurses plus a full-time nurse practitioner. They work directly with the attending physician of record to make sure patients are re-evaluated frequently and are progressing as expected.

**27 | A WATCHFUL EYE ON PROSTATE CANCER**  
Upon learning they have prostate cancer, many men simply want it gone, either through surgery or other treatments — even though such options can cost them bladder control or lead to erectile dysfunction. At the Cedars-Sinai Samuel Oschin Comprehensive Cancer Institute, urologic oncologists take a more holistic approach known as active surveillance to treat slow-growing prostate cancer. With watchful waiting and active management, men with prostate cancer are closely monitored through blood tests, physicals, periodic biopsies, prostate imaging, and molecular and genetic testing. If the disease progresses to the point where it may become life-threatening, the patient can choose to immediately undergo one of the many treatment options available.

**28 | TIME OUT ON ACCIDENTAL IV REMOVAL**  
A simple time-out process developed by Cedars-Sinai staff members has dramatically reduced accidental removals of patient IV lines and tubes during transport or repositioning. To prevent these accidents and near misses, the medical center implemented the Pause-Clear-Go system, reminding staff to ensure that lines and tubes are secured prior to moving any patient. As a result, surgical staff members have reported a decreased near-miss rate from 64 percent to 28 percent.

### 29 | **NEW CANCER CARE AFFILIATION**

The Angeles Clinic and Research Institute — one of the region's leading hematology-oncology practices — is now affiliated with Cedars-Sinai and the Samuel Oschin Comprehensive Cancer Institute. With two locations in West Los Angeles and Santa Monica, the Angeles Clinic and Research Institute is renowned for developing new cancer therapies, providing high-quality options in experimental and traditional treatments, and training the next generation of cancer specialists. This addition, along with Tower Hematology Oncology Medical Group two years ago, further strengthens Cedars-Sinai's oncology partnerships, which expand our ability to provide clinical care and research to address the needs of cancer patients in the Los Angeles area and beyond.

### 30 | **ON THE BEST HOSPITALS HONOR ROLL**

With 12 medical specialties rated among the finest in the nation, Cedars-Sinai has been named to the Honor Roll in the 2014-15 issue of *U.S. News & World Report* that lists best hospitals. Cedars-Sinai is among just 17 out of approximately 5,000 hospitals nationwide to earn the magazine's Honor Roll designation. To be named to the Honor Roll, a hospital must be rated among the nation's top 50 programs in at least six specialties.

### 31 | **SHORTER INTENSIVE CARE STAYS FOR PREEMIES**

Thanks to advances in medicine and coordinated care at Cedars-Sinai, premature babies are going home faster than ever. The amount of time they spend in Cedars-Sinai's Neonatal Intensive Care Unit, part of the Maxine Dunitz Children's Health Center, has declined dramatically over the past three years, with the average stay dropping from 21 days to 17 days. These advances include personalized nutrition therapy that helps even the smallest infants gain weight, nonsurgical procedures to heal heart defects and new medical protocols for mothers likely to deliver prematurely. Coordination has been improved by developing checklists known as "discharge bundles" that remind doctors, nurses, social workers and parents to take care of important items before discharge.

### 32 | **PATIENT ADVOCACY AWARDS**

Three major organizations advocating for patients with neuromuscular disorders have each named Cedars-Sinai a center of excellence: the ALS Association, which raises research funds for amyotrophic lateral sclerosis; the GBS/CIDP Foundation International, which works to improve quality of life for those with Guillain-Barré syndrome, chronic inflammatory demyelinating polyneuropathy and related conditions; and the Charcot-Marie-Tooth (CMT) Association, which supports research toward a cure for CMT. The designations reflect Cedars-Sinai's leading-edge research that gives patients access to the latest treatments through clinical trials. Cedars-Sinai also is designated as a center of excellence by the Hereditary Neuropathy Foundation, which supports those living with CMT.



# Patient Care

BLOOD DONATION NEEDS GROW | NEW OPTION FOR ARTHRITIC FINGERS | GREEN AND GOLD | PHY

*Close to 60,000 units of blood and blood components are required each year for patient treatment and care at Cedars-Sinai. One single donation can help save multiple lives.*

**33 | BLOOD DONATION NEEDS GROW**  
More blood donors are needed as Cedars-Sinai provides an increasing number of highly specialized, life-saving services such as transplants, cancer treatments and ventricular assist devices for patients with advanced heart failure. The Blood Donor Services program at Cedars-Sinai collected 31,779 units of blood and blood products in FY 2014 — more than in FY 2013 but still only half of the amount required. A new program called Blood Buddy helps by supporting patients with blood disorders who depend on monthly transfusions. It matches blood donors to recipients by certain unique characteristics, like antigens, that are specific to some of the most vulnerable patients.

**34 | NEW OPTION FOR ARTHRITIC FINGERS**  
Cedars-Sinai has pioneered a technique that uses knee meniscus from cadavers to reconstruct joints, offering patients with arthritic finger joints a new option to resolve the painful and debilitating condition. The meniscus — a resilient, spongy cushion that prevents joints from rubbing against one another — blends into the finger, avoiding infections or broken parts often associated with implants. The procedure represents a significant — and flexible — departure from the standard insertion of hard silicone implants.

**35 | GREEN AND GOLD**  
The Advanced Health Sciences Pavilion, the new home of the Cedars-Sinai Heart Institute, neurosciences programs, the Board of Governors Regenerative Medicine Institute, and the Sue and Bill Gross Surgery and Procedure Center, has been awarded Leadership in Energy and Environmental Design (LEED) Gold certification from the U.S. Green Building Council for its highly sustainable, energy-efficient design, construction and operation. The building, which opened in summer 2013, is one of only a handful of healthcare facilities nationwide to gain LEED Gold status. It was achieved by meeting or exceeding five strategic elements of sustainability, including energy and atmosphere, materials and resources, water efficiency, indoor environmental quality, and overall sustainability that minimizes the impact on ecosystems and natural resources.

**36 | PHYSICIAN GROUPS GET ELITE RANKING**

For the fifth year in a row, Cedars-Sinai Medical Group and Cedars-Sinai Health Associates have been awarded the highest possible designation for quality care by a leading national organization representing managed care physician groups. CAPG, formerly known as the California Association of Physician Groups, gave both Cedars-Sinai groups its “elite” ranking in all six criteria used in its 2014 Standards of Excellence. The annual survey rated 86 medical groups that represent 11.1 million patients nationwide.

**37 | STROKE PROGRAM EARNS RECOGNITION**

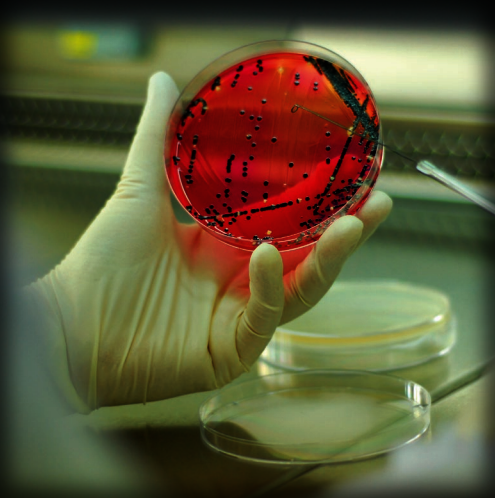
The Cedars-Sinai Stroke Program was honored with the American Heart Association/American Stroke Association’s Gold Plus Award and the Target Stroke Award at the 2014 International Stroke Conference in San Diego. The awards recognize the team’s more than 86 percent compliance in all stroke measures as well as a consistent door-to-needle time of less than 60 minutes. Door-to-needle time is measured from the time the patient arrives in the emergency department to when they receive intravenous tissue plasminogen activator (IV tPA), a medication that dissolves blood clots.

**38 | Rx FOR MEDICATION SAFETY**

A Cedars-Sinai pharmacist has developed a medication-transition program that is proving highly effective in protecting high-risk patients from medication mix-ups after they return home from the hospital. The program involves obtaining accurate medication lists from patients prior to hospital admission, providing comprehensive medication instructions at discharge, educating and engaging patients, and providing recommendations to physicians. Follow-up phone calls to patients are also part of the protocol. Independent validation by physician-reviewers confirmed that 16 percent of patients involved in the program would likely have been re-hospitalized without this crucial follow-up.

**39 | END-OF-LIFE ANSWERS**

The Cedars-Sinai Medical Network offers classes in advance care planning to prepare people for the difficult decisions that come with the end of life. Class participants discuss their own experiences with death and learn how to fill out advance healthcare directives and other essential documents that spell out priorities for end-of-life care. Participants also learn about the importance of assigning “healthcare agents” to carry out their wishes. The classes demystify the process and give patients step-by-step instructions for handling situations if their health takes a serious turn for the worse.



# Research

PERSONALIZED TREATMENTS FOR PROSTATE CANCER | A NEW MODEL TO STUDY ALS | BREATH OF

**A**s a global leader in medical research and care, Cedars-Sinai generates lifesaving discoveries that benefit patients suffering from heart disease, brain disorders, cancer and innumerable other conditions. Cedars-Sinai also pioneers research that improves the quality, safety and efficiency of healthcare delivery. The more than 1,200 research projects currently underway encompass basic, translational, clinical and health services research. Scientific leaps forward include using cardiac stem cells to repair damaged hearts, developing a vaccine to fight the most aggressive malignant brain tumors and developing more effective anticancer drugs aimed at specific molecular targets.



#### 40 | **PERSONALIZED TREATMENTS FOR PROSTATE CANCER**

Many patients diagnosed with prostate cancer have slow-growing forms of the disease that are not life-threatening. However, more than 30,000 American men will die from aggressive prostate cancer this year alone. This sharp contrast between low-risk and aggressive forms presents a challenge for physicians as they diagnose each patient, determine their prognosis and decide on the best individualized treatment. In a study, investigators at the Cedars-Sinai Samuel Oschin Comprehensive Cancer Institute found biomarkers — physiological indicators that someone is likely to develop a disease — in aggressive prostate cancer cells. These biomarkers may help physicians more precisely target each individual's prostate cancer with personalized therapies.

#### 41 | **A NEW MODEL TO STUDY ALS**

Scientists increasingly use “disease in a dish” models to study genetic, molecular and cellular defects. A team of investigators at Cedars-Sinai went further in a study of amyotrophic lateral sclerosis (ALS), a fatal disorder that attacks muscle-controlling nerve cells in the brain and spinal cord. After using an innovative technique to create neurons derived from skin scrapings of ALS patients, they inserted molecules made of small stretches of genetic material into the neurons, blocking the damaging effects of a defective gene and potentially unlocking a new therapeutic strategy. The study is believed to be one of the first in which a specific form of ALS was replicated in a petri dish, analyzed and “treated” in a laboratory setting.

#### 42 | **BREATH OF HOPE FOR PULMONARY FIBROSIS**

Researchers in separate clinical trials have found that two new pharmaceuticals slow the progression of idiopathic pulmonary fibrosis, a fatal lung disease with no effective treatment or cure except a high-risk lung transplant. A multicenter study found that one of the investigational drugs, pirfenidone — which was approved by the Food and Drug Administration — significantly slowed the loss of lung function and reduced the risk of death.

#### 43 | **CHANGE OF HEART ... CELLS**

Researchers at the Cedars-Sinai Heart Institute and the Board of Governors Heart Stem Cell Center have identified a heart-specific form of a protein, BIN1, responsible for sculpting tiny folds on the surface of heart muscle cells. The study provides the first direct evidence of a previously theoretical “slow diffusion zone” that protects against irregular heartbeats by maintaining an ideal concentration of electrochemical molecules. The findings elucidate how heart cells are organized and give insight into the way heart cells change when the heart starts to fail. The discovery could lead to new therapeutic options — including possibly restoring or replacing BIN1 in failing hearts.



# Research

MILK MADE BETTER IN THE NICU | STEM CELL SCAFFOLD REBUILDS DAMAGED EYES | IN THE EYE OF

*Charles F. Simmons Jr., MD, chair of the Department of Pediatrics, director of the Division of Neonatology, and the Ruth and Harry Roman Chair in Neonatology analyzes a mother's breast milk to determine whether her premature infant is receiving the correct amounts of nutrients he needs to thrive.*

**44 | MILK MADE BETTER IN THE NICU**  
**A study at the Neonatal Intensive Care Unit at Cedars-Sinai's Maxine Dunitz Children's Health Center examines the nutrient levels in individual mothers' breast milk to ensure premature infants are getting the nutrition they need to thrive. Focusing on preemies weighing less than 3.3 pounds, researchers are using a device that thoroughly analyzes each nutrient in a mother's milk and reveals a precise breakdown of its composition of proteins, fat and carbohydrates. The analysis indicates which specific supplements should be added to the milk to spur a baby's weight gain and neurological growth and help infants leave the NICU sooner.**

**45 | STEM CELL SCAFFOLD REBUILDS DAMAGED EYES**  
Investigators at the Cedars-Sinai Board of Governors Regenerative Medicine Institute have made progress in combating eye disease by identifying abnormalities at the molecular level and making repairs using stem cells. In a novel, minute-long procedure, researchers prepare human amniotic membrane for use as a foundation to support the growth of stem cells. The stem cell scaffold is later grafted onto the cornea. This research may help physicians repair eye damage and restore vision in patients with diabetes-induced blindness and other corneal diseases.

**46 | IN THE EYE OF THE (BRAIN)STORM**  
Cedars-Sinai scientists discovered several years ago that beta-amyloid plaques associated with Alzheimer's disease occur in the brain but develop first in the retina. They found that they could intravenously inject curcumin, a component of the spice turmeric, to "stain" existing plaque and then use a noninvasive imaging system to detect plaque in the retina. Preliminary results from a large Phase II clinical trial show the technique can differentiate between Alzheimer's and its absence with 100 percent sensitivity and 80.6 percent specificity, meaning that all people with the disease tested positive and most people without the disease tested negative. The optical imaging examination may potentially detect Alzheimer's-related changes 15 to 20 years before a diagnosis would typically be made based on symptoms.

**47 | BREAST CANCER'S TROJAN HORSE**

An experimental nanoscale drug that can sneak into cancer cells to break them down from the inside has a new component: a protein that stimulates the immune system to attack HER2-positive breast cancer cells. These cells often are vulnerable for a while to the drug Herceptin but later develop resistance, and the drug can injure normal organs. But Herceptin naturally seeks out HER2 gene proteins, so the researchers created a “fusion gene” consisting of parts of Herceptin — for targeting — and interleukin-2, an immune-stimulating protein. The team developing the drug studied experimentally implanted human breast cancer cells. Mice receiving the drug lived significantly longer than untreated mice and those receiving only certain inert components of the drug.

**48 | PANCREATIC PROGRAM PUSHES RESEARCH FRONTIERS**

The multidisciplinary Cedars-Sinai Pancreatic Diseases Program is enlisting teams of scientists and clinicians in a collaborative drive to understand, prevent, diagnose and treat pancreatic disorders. Among the research topics that the teams are exploring are why gastric bypass surgery — a treatment for severe obesity — also resolves adult-onset, or Type 2, diabetes; the role of alcohol abuse in pancreatitis; and how to achieve early diagnosis of pancreatic cancer, which has a very high fatality rate.

**49 | ELECTRIC HEART ORCHESTRA**

Cedars-Sinai Heart Institute researchers have found that six proteins — five more than previously thought — are responsible for cell-to-cell communication regulating heart function, and play a role in limiting the size of heart attacks and strokes. The smallest of these proteins directs the largest in performing its role of coordinating billions of heart cells during each heartbeat. Together, the proteins synchronize the beating heart, the investigators determined. The study advances understanding of cell-to-cell communication at the root of healthy heart function.

**50 | PATH TO WELLNESS THROUGH THE HOME**

Ordinary life is filled with risk for frail, older adults returning home from the hospital. One misstep such as a fall or medication error could send them back to the hospital — and trigger a steady decline. These vulnerable patients are the focus of a study by Cedars-Sinai nurses, using a method not often associated with breakthrough science: the house call. Nurses with specialized training in transitional care visit patients at home multiple times over a two-month period after they leave the hospital to make sure they have the medical and support services they need. The Path to Wellness study aims to improve older patients' safety, wellbeing and quality of life while reducing costly, preventable hospital readmissions.



# Research

A NEW HOME FOR PROTEIN STUDIES | UNDERSTANDING DEEP BRAIN STIMULATION | PROGRESS IN C

*A projection of the data acquired from the proteomic analysis of a fraction of a single drop of blood*

**51 | A NEW HOME FOR PROTEIN STUDIES**  
Cedars-Sinai's new Advanced Clinical Biosystems Research Institute leads research into proteomics — the study of the structure and function of proteins — to develop clinical tests determining whether certain proteins found in patients' blood can help physicians diagnose disease and prescribe the most effective treatments. Previous research has shown that the presence of certain proteins or amino acids can indicate whether patients have experienced a heart attack or have heart disease. In collaboration with the Barbra Streisand Women's Heart Center at the Cedars-Sinai Heart Institute, the investigators also hope to provide insights into the mechanisms underlying gender differences in heart disease.

**52 | UNDERSTANDING DEEP BRAIN STIMULATION**  
In a large follow-up study of patients with the most common form of hereditary dystonia — a movement disorder that can cause crippling muscle contractions — experts in deep brain stimulation reported promising success rates and lasting benefits. They also created 3-D computerized models to map the brain region involved in dystonia, identifying an anatomical target for further investigation.

**53 | PROGRESS IN CARDIO-ONCOLOGY**  
Experts in women's heart disease and cancer are pursuing an active research agenda in the Cardio-Oncology Program, launched in 2012 by the Barbra Streisand Women's Heart Center at the Cedars-Sinai Heart Institute in partnership with the Saul and Joyce Brandman Breast Center — A Project of Women's Guild at the Samuel Oschin Comprehensive Cancer Institute. The growing complement of studies aims to develop preventive strategies for survivors of breast cancer who are at increased risk of developing premature heart disease.

54 | **STROKE DRUG TEST**

Cedars-Sinai stroke experts are leading a multicenter Phase II study of a new experimental drug, 3K3A-APC, that will be used in conjunction with the clot-busting drug tissue plasminogen activator, or TPA, to treat strokes caused by blocked or narrowed arteries. TPA may restore blood flow and reverse the effects of a stroke if administered within three hours after symptoms begin, but increases the risk of internal bleeding in some patients. In rodent studies, 3K3A-APC, used in combination with TPA, had a protective effect on the lining of blood vessels, eliminating hemorrhaging, reducing brain damage and improving mobility after stroke. The study is supported by an \$8 million grant from the National Institute of Neurological Disorders and Stroke.

55 | **BARBERS CUTTING IN ON HYPERTENSION**

An \$8.5 million grant will enable investigators to enlist barbers in the fight against high blood pressure, a chronic condition that can cause strokes, heart attacks and organ failure, and which is particularly devastating to African-American men. Studies suggest that if barbers offer blood pressure checks during haircuts and encourage patrons with hypertension to follow up with physicians, hundreds of lives can be saved by effective preventive treatment. The grant from the National Heart, Lung, and Blood Institute will fund a new, randomized, controlled clinical trial to test the effectiveness of barber shop hypertension programs and will include 500 African-American males with uncontrolled hypertension who are longtime patrons of 20 Los Angeles-area barber shops.

56 | **NEW CAMERA LIGHTS UP BRAIN TUMORS**

Survival statistics improve when neurosurgeons can remove all of a brain tumor, but it is impossible to visualize with the naked eye or previous imaging systems where the tumor stops and brain tissue starts. Investigators in the Department of Neurosurgery, working with a biotechnology company, have developed a relatively inexpensive method to “light up” cancers during surgery with a special camera developed at Cedars-Sinai and a targeted imaging agent based on a synthetic version of a small protein found in deathstalker scorpion venom. The agent attaches to tumor cells and, when stimulated by a laser, emits a glow that can be captured by the camera.

57 | **HORMONE THERAPY MAY AID BONE GRAFTS**

Cedars-Sinai researchers led a multicenter study that indicated hormone therapy may aid healing after bone-graft surgery and prevent formation of scar tissue. Nearly 100,000 head and face bone-grafting procedures are conducted every year in the U.S. to treat conditions such as birth defects, trauma and bone loss caused by disease. The study found that parathyroid hormone therapy, an FDA-approved treatment for osteoporosis, enhanced experimental bone-graft integration in the skull bones.



# Research

EMERGENCY REDESIGN | NURSING RESEARCH IMPROVES CARE | IMMUNITY, VACCINES AND BRAIN TUMORS

*Surgical residents, along with experienced surgeons, are testing the operating room of the future in an ongoing experiment aimed at breaking down barriers in trauma care through open communication and better use of technology.*

**58 | EMERGENCY REDESIGN**  
Cedars-Sinai surgeons and investigators have partnered with the U.S. military to design the “operating room of the future” in order to enable emergency medical teams to respond more effectively to patients with life-threatening injuries. Under the project, called “OR 360,” research teams have reconfigured the OR with movable walls and equipment for more flexible use, identified ways to eliminate disruptions during surgery, and developed an iPhone app that provides diagnostic information about a patient’s vital signs before they get to the emergency room. The initiative, drawing on practices from surgery, psychology, aviation and other disciplines, addresses potential breakdowns in the coordination of trauma care during the so-called “golden hour,” when prompt medical attention can mean the difference between life and death.

**59 | NURSING RESEARCH IMPROVES CARE**  
Nurses have more contact with patients than any other health profession. Critical observations of patients and care delivery combined with the basic nursing model ignite the desire in bedside nurses and nurse-scientists alike to explore care and improve patient outcomes. More than 100 research projects underway at Cedars-Sinai are led by nurses who bring their experiences in hands-on work with patients to scientific studies and, ultimately, to improvements in care. For example, nurses are exploring such research areas as preventing heart-failure hospitalizations, the benefits and risks of vitamin D supplementation, and improving response times in the emergency department.

**60 | IMMUNITY, VACCINES AND BRAIN TUMORS**  
Two new vaccines involving dendritic cells — powerful immune system cells — have shown promise in new studies targeting highly aggressive brain tumors called glioblastoma multiforme (GBM). Testing one dendritic cell vaccine, investigators identified fragments of a protein found in high levels in GBMs. When cultured with dendritic cells, the cells were “trained” to recognize the antigen as a target and stimulate an immune response. In a Phase I trial of another dendritic cell vaccine, eight of 16 patients survived longer than five years after diagnosis — compared to a median 15-month survival rate when tumor-removal surgery is followed by radiation and chemotherapy. The vaccine is now in a Phase II trial.

**61 | HIV AND BRAIN FUNCTION TESTS FOR SPANISH SPEAKERS**

HIV-associated neuro-cognitive disorder, which encompasses a spectrum of issues ranging from mild memory problems to severe dementia, often eludes diagnosis in underserved populations. A Cedars-Sinai clinical neuropsychologist is working to increase accessibility of standard neuropsychological tests that measure brain functions such as the ability to solve problems, reason, concentrate and remember. Tests that effectively assess memory in monolingual Spanish speakers and other minority groups are limited. Preliminary results from a study of Spanish-speaking, HIV-positive adults show that a 15-minute computerized version of a standard test may hold promise for evaluating memory cross-culturally. This finding could make screening for neurocognitive disorders more widely accessible and affordable for HIV patients.

**62 | A LAUNCHPAD FOR DISCOVERIES**

Cedars-Sinai's Technology Transfer Office maps out the fastest routes for bringing medical advances to patients globally. The office manages an intellectual property portfolio of about 230 technologies — including potential new treatments for cancer, heart disease and inflammatory bowel disease. In FY 2014, the U.S. Patent and Trademark Office issued 14 new patents for technology at Cedars-Sinai. In addition, 67 new inventions were disclosed to the Technology Transfer Office, and 14 new license agreements were signed to further develop discoveries. Royalty income earned totaled \$15.4 million. These funds are reinvested into medical research at Cedars-Sinai to generate a new cycle of discoveries for the technology transfer pipeline.

**63 | WOMB TO DELIVERY ROOM**

Two studies by Cedars-Sinai researchers focusing on how women and their babies are affected by their environments, from the womb to the delivery room, received a significant boost from new federal grants totaling \$4 million. The first, funded by the National Institutes of Health, attempts to explain why pregnancies resulting from fertility treatments have an increased risk of complications, including low birth weight, birth defects and infant mortality. A second study, funded by the Agency for Health Care Research and Quality, examines the effect a hospital's environment has on childbirth outcomes.

**64 | BLOOD TESTS TO GAUGE LUNG CANCER TREATMENTS**

Cedars-Sinai physicians and scientists are collaborating to learn whether blood tests can provide early indications that lung cancer — the leading cause of cancer deaths — is either resisting or responding to chemotherapy. Such tests potentially could spare patients from enduring months of rigorous therapy that may prove ineffective and also help oncologists develop more beneficial remedies. Several planned clinical trials at Cedars-Sinai's Samuel Oschin Comprehensive Cancer Institute will help determine whether small vesicles secreted by tumor cells into the bloodstream reveal how lung cancer is reacting to chemotherapy and other treatments.



# Research

MRI IN REAL TIME | CANCER VACCINE STUDIES | RESEARCH FOR HER WINS NATIONAL AWARD | EM

*Cedars-Sinai's Biomedical Imaging Research Institute houses all of the state-of-the-art imaging equipment needed to follow a clinical trial from start to finish.*

**65 | MRI IN REAL TIME**  
Scientists at the Biomedical Imaging Research Institute and the Barbra Streisand Women's Heart Center at the Cedars-Sinai Heart Institute are collaborating to improve the effectiveness of magnetic resonance imaging (MRI) in detecting ischemic heart disease, which affects the small arteries around the heart and may not be revealed by an angiogram. Women with ischemic heart disease generally have major arteries that are clear of plaque, but the smaller coronary blood vessels cease to constrict and dilate properly, leading to decreased blood flow and oxygen to the heart. Researchers are testing a novel, real-time, radiation-free methodology that dramatically improves MRI images of cardiac structure and blood flow to potentially give clinicians a precise and timely diagnostic tool.

**66 | CANCER VACCINE STUDIES**  
Researchers at the Cedars-Sinai Samuel Oschin Comprehensive Cancer Institute are combining targeted therapies with a vaccine-based approach in hopes of revolutionizing cancer treatment. Investigators eradicated solid tumors in animal models using a novel combination of two targeted agents to stimulate an immune response, ultimately allowing solid tumors to act as their own cancer-fighting vaccine. A novel Phase III, vaccine-based clinical trial that couples targeted therapies with vaccines to improve survival outcomes and overall quality of life in patients with kidney cancer has also been launched.

**67 | RESEARCH FOR HER™ WINS NATIONAL AWARD**  
Research for Her™, a new Cedars-Sinai initiative aimed at increasing women's representation in medical research, received the 2013 Award for Excellence from the Health Improvement Institute. By voluntarily joining the Research for Her registry, thousands of women — with and without cancer — are providing information that helps investigators better understand cancers that predominantly affect women. Historically, relatively few women have participated in clinical research and, as a result, the medical community has often ignored biological differences between men and women. The registry will also help identify subjects who may be eligible for large-scale epidemiological studies, cancer screening studies, focus groups and clinical therapeutic trials.



**68 | EMOTIONAL STRESS CAUSES CHANGE OF HEART**

Researchers at the Barbra Streisand Women’s Heart Center at the Cedars-Sinai Heart Institute have found that emotional stressors — such as those provoking anger — may cause changes in the parts of the nervous system that control heart rate, triggering a type of coronary artery disease, microvascular coronary dysfunction (MCD), that occurs more frequently in women. In women with MCD, emotional stress increased sympathetic nerve stimulation, associated with the quickened heart rate of the fight-or-flight mechanism, and decreased parasympathetic nerve activity, which relaxes and slows heart rate. These results suggest that the autonomic nervous system may be a pathway involved in MCD in women.

**69 | HOW FEVER FIGHTS INFECTIONS**

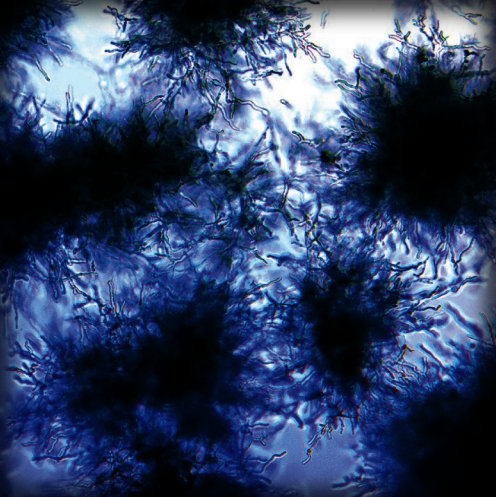
While fever is known to be an important defense mechanism, the processes by which it combats infections are not completely understood. Aided by novel microscopic imaging and other techniques, scientists from the Division of Immunology Research in the Department of Biomedical Sciences at Cedars-Sinai will genetically engineer bacteria to report temperature changes in a petri dish as white blood cells “consume” microbes. The researchers hope to learn how microbes respond to the threat of higher temperatures. The results may lead to new therapies to combat infections.

**70 | STUDIES TARGET OVARIAN TUMOR INFRASTRUCTURE**

The Cedars-Sinai Samuel Oschin Comprehensive Cancer Institute is studying the complex infrastructure of malignant tumors, with a focus on ovarian cancer, which kills more than 14,000 women in the U.S. each year, according to the National Cancer Institute. When abundant and dense, the infrastructure, or stroma, of malignant tumors is associated with a poor prognosis. Leveraging Cedars-Sinai’s extensive ovarian cancer tissue bank, the scientists are searching for a distinctive genetic pattern in the stroma that is associated with lower survival rates. They hope their research may one day help clinicians therapeutically target gene networks to save or prolong patients’ lives.

**71 | COMPUTER-GUIDED SPINAL SURGERY**

Surgeons in the Cedars-Sinai Spine Center have demonstrated major advancements in spinal reconstruction and the treatment of complex tumors and degenerative spine problems through the use of computer-guided spinal navigation. The physician-scientists found that the three-dimensional, computer-guided method produced better results than traditional two-dimensional X-rays, enabling surgeons to more precisely and accurately place reconstruction screws in the narrow bony corridors of the spine. This allowed surgeons to avoid nerves, blood vessels and other critical structures, reducing complications, postoperative pain and the need for follow-up surgeries.



# Research

IMMUNITY-BOOSTING FUNGI | REAL-TIME NEURON RECORDING | STEM CELL TREATMENTS FOR BONE FRACTURES

*The fungus *S. fibuligera* is one of many fungi in the gut that perform a protective function.*

**72 | IMMUNITY-BOOSTING FUNGI**  
**The Cedars-Sinai F. Widjaja Foundation Inflammatory Bowel and Immunobiology Research Institute is studying how protective fungi in the intestines can influence immunity and potentially reduce inflammatory bowel disease (IBD). The digestive tract is home to a large number of micro-organisms. In fact, microbes outnumber human cells in the body. Some are necessary to aid in digesting food, producing necessary vitamins and suppressing the growth of harmful microbes. Others are harmful to the body, contributing to IBD illnesses such as Crohn's disease and ulcerative colitis, which affect an estimated 1.4 million Americans.**

**73 | REAL-TIME NEURON RECORDING**  
Using electrodes implanted deeply inside the brain to record the real-time firing of individual neurons, investigators are discovering clues about the function of certain structures involved in processing thoughts, memories and emotions. They found that a specific type of neuron in the amygdala performed differently in people who suffer from autism spectrum disorder — a range of brain development conditions that affect social interactions, communication skills and behaviors — than in those who do not. They also learned that at least some of the brain cells' activity in recognizing emotions may represent judgments based on the viewer's preconceptions rather than the true emotion being expressed.

**74 | STEM CELL TREATMENTS FOR BONE FRACTURES**  
A team of investigators at the Board of Governors Regenerative Medicine Institute has been awarded a \$5.18 million grant from the California Institute for Regenerative Medicine, the state's stem cell research agency, to advance stem cell technologies in segmental bone defects, a complex medical problem caused by the loss of bone tissue. Bones provide major structure and support to the body but can be weakened or broken due to cancer or trauma. The study will use stem cells and collagen to build a "scaffold" between the edges of fractured bones and then deliver a bone-forming gene to the site that is activated by ultrasound pulses to help regrow missing bone tissue.

**75 | MS AND DEPRESSION**

The right hippocampus — a brain structure involved in the processing of emotions — is smaller in women with multiple sclerosis and symptoms of depressive affect, as revealed in a study led by Cedars-Sinai investigators. The left hippocampus remained unchanged, and other types of depression — such as vegetative depression, which can bring about extreme fatigue — did not correlate with hippocampal size reduction. This supports earlier studies suggesting that the hippocampus may contribute to the high rate of depression in MS patients. It also shows that a computerized imaging technique can readily detect thickness changes in the hippocampus, which previously required a labor-intensive analysis of MRI images.

**76 | OVARIAN CANCER SURVIVAL PREDICTOR**

Investigators in the Cedars-Sinai Women’s Cancer Program have identified a series of genes that may benefit women diagnosed with ovarian cancer and ultimately reflect improved survival outcomes. The research found that a 10-gene biomarker panel may identify aggressiveness of a patient’s disease, help predict survival outcomes and result in novel therapeutic strategies tailored to patients with the most adverse survival outcomes. A study suggests that, when elevated levels of these specific genes are found in an ovarian tumor, doctors may better predict which treatments will be most effective.

**77 | NEW ERA OF PERSONALIZED MEDICINE**

A Cedars-Sinai expert in the identification and treatment of very rare diseases — working with the National Institutes of Health’s Undiagnosed Diseases Program — used three innovative tools to detect a previously unknown gene mutation, test experimental therapies, and initiate personalized drug treatment for a boy with a lifelong history of uncontrollable seizures that caused significant impact on his cognitive and social development. This personalized medical approach exemplifies the power of current research tools and shows the strong potential of these technologies for future patients.

**78 | ETHNIC SURVIVAL DIFFERENCES AFTER TRANSPLANTATION**

While overall survival among heart transplant patients has improved since the 1980s, African-Americans persistently suffer higher mortality rates than their Caucasian counterparts. A nurse-scientist in the Cedars-Sinai Clinical Scholars program set out to discover why. She developed a genetic risk score to elucidate contributors to the disparity, thereby potentially providing targets for individualized transplant care for all patients.



# Community Ou

HEALTHY PREGNANCIES FOR WOMEN OF COLOR | RESIDENTS STRENGTHEN L.A. SAFETY NET | TWO

Cedars-Sinai's role as a nonprofit academic medical center encompasses a breadth of community benefit activities that reflect a longstanding commitment to helping those in greatest need. Cedars-Sinai spent \$732.7 million in FY 2014 on programs and services that increase access to medical care for individuals and families who live in poverty, are uninsured or underinsured, and that enable people of all ages to lead healthier lives. Community benefit includes the unreimbursed cost of caring for Medi-Cal and Medicare patients; hundreds of free community education and medical screening/immunization programs that address major health issues such as heart disease, diabetes and obesity; research focused on advancing population health and improving healthcare delivery; and training that helps alleviate the nation's shortage of healthcare professionals.

# treach

DECADES OF MENTORING HIGH SCHOOLERS | GRANTS FOR MENTAL HEALTH | HEALTHY HABITS AGAINST OBESITY | SCHOLARSHIPS FOR LOW-

## 79 | **HEALTHY PREGNANCIES FOR WOMEN OF COLOR**

Cedars-Sinai partners with the March of Dimes to improve maternal and child health among low-income Latinas and African-Americans in areas such as Boyle Heights, Downtown L.A., Mid-City and West Hollywood. The medical center is the official sponsor of the March of Dimes L.A. Divisions' Becoming a Mom/Comenzando bien curriculum, a bilingual educational program focused on prenatal care, nutrition, stress, things to avoid during pregnancy, labor and birth, and postpartum and newborn care. The March of Dimes trains staff in clinics and doctors' offices to offer this training, provided for some 8,000 pregnant women each year. The program has resulted in statistically significant improvements in women identifying preterm labor signs and common postpartum symptoms.

## 80 | **RESIDENTS STRENGTHEN L.A. SAFETY NET**

By providing health services at federally qualified health centers around Los Angeles as part of their training, Cedars-Sinai medical residents help bolster the city's healthcare safety net. Residents from Cedars-Sinai's internal medicine program and many specialty programs perform rotations at clinics in underserved areas from Downtown L.A. to Venice — including Saban Community Clinic, Clínica Oscar Romero and Venice Family Clinic. They also see patients at county medical facilities and at the U.S. Department of Veterans Affairs West Los Angeles Medical Center, among other sites in the community.

## 81 | **TWO DECADES OF MENTORING HIGH SCHOOLERS**

Juniors and seniors from Fairfax High School work in paid jobs at Cedars-Sinai, receive mentoring from employees and get a glimpse of possible future careers through job-shadowing experiences such as visiting an operating room where a kidney transplant surgery is in progress. All this happens through Cedars-Sinai's Youth Employment Development (YED) Program, which celebrated its 20th anniversary in 2014 and has helped more than 500 students prepare for college and careers. The majority of YED alumni pursue higher education in a healthcare-related field. Two-thirds go on to careers in healthcare and many become employees at Cedars-Sinai.

## 82 | **GRANTS FOR MENTAL HEALTH**

One of the most significant outcomes of more than \$2 million in mental health grants Cedars-Sinai awarded to nonprofit organizations across Los Angeles in 2013 and 2014 is that people who could not afford to wait — or to pay — for therapy are now receiving immediate attention. The two-year grants have helped organizations serving disadvantaged residents to significantly expand their reach and effectiveness. Results range from being able to aid more women dealing with domestic violence or suffering from postpartum depression in the case of Amanecer Community Counseling Services, to intensifying mental health outreach in the case of Korean American Family Services. Other outcomes include shortened waiting lists and increased treatment options.



# Community Outreach

HEALTHY HABITS AGAINST OBESITY | SCHOLARSHIPS FOR LOW-INCOME STUDENTS | FUNDS FOR FIRST RESPONDERS

*Angelo Gutierrez, a second-grade student at Arlington Heights Elementary, has fun learning about healthy food choices.*

**83 | HEALTHY HABITS AGAINST OBESITY**  
**Johnnie Cochran Middle School and Queen Anne Elementary School recently joined the Healthy Habits program, which brings education about good nutrition and physical activity to elementary and middle school students, as well as parents and teachers, in vulnerable Los Angeles communities. In FY 2014, Healthy Habits reached 4,262 students and 834 adults, with workshops in 147 classrooms. The program offered education at more than 40 community sites, including 16 elementary schools, nine preschools and two middle schools. Recent additions to the program include teacher trainings, a summer Exercise in the Park program for parents and support for school-wide events, such as a jog-a-thon and nutrition fair.**

**84 | SCHOLARSHIPS FOR LOW-INCOME STUDENTS**  
The largest of several grants awarded by Cedars-Sinai to improve community health and safety went to Charles R. Drew University of Medicine and Science. The \$1.5 million grant for scholarships and to bolster admissions and fundraising efforts supported the university in inspiring and educating low-income students to become healthcare professionals. Charles R. Drew University, located in South Los Angeles, was founded in 1966 in response to the lack of adequate medical facilities in the area. The university is dedicated to training healthcare professionals who want to work in poor and struggling communities.

**85 | FUNDS FOR FIRST RESPONDERS**  
Part of the public-safety grants awarded by Cedars-Sinai in FY 2014 went directly to help first responders charged with protecting the city of Los Angeles and its inhabitants. In addition to \$50,000 for the Los Angeles Fire Department Foundation to buy 3,200 new wildfire-specific helmets, area firefighting agencies received funds for evacuation stair chairs to help firefighters rescue trapped people, medical devices, CPR training and two off-road vehicles to improve access to hillside areas. Area law-enforcement agencies received funding for chemical, biological, radiation and nuclear detection equipment to safeguard from terrorist attacks; teen alcohol-safety education; and nearly 50 new computer monitors.

**86 | A PARTNERSHIP AGAINST HUNGER**

Cedars-Sinai donates nutritious food to the SOVA Community Food and Resource Program of Jewish Family Services of Los Angeles (JFS/SOVA), helping seniors, homeless individuals, people with disabilities, working families and others facing the constant threat of hunger. With multiple kitchens and 450 menu items, a surplus of food is unavoidable, so the medical center makes periodic donations to JFS/SOVA's nearby West Hollywood food pantry. Sometimes this food goes home with an individual or family, or becomes part of a homeless person's next meal, within an hour of reaching the pantry. SOVA stands for sustenance, opportunity, volunteerism and advocacy.

**87 | RESULTS BEFORE THE RESULTS ARE IN**

Cedars-Sinai partnered with community organizations to conduct a study involving 1,600 new mothers from low-income neighborhoods. Researchers shared information with study participants about preventing illness, protecting their children's health and improving outcomes of future pregnancies. The Community Child Health Network study, which involved medical institutions in five regions nationwide, identified sources of stress including poverty, hunger and domestic violence, and examined how chronic stress influences health outcomes. Cedars-Sinai researchers found that some young mothers who appear healthy are actually at risk for diabetes and heart disease, and that the first year after birth is a critical period for preventing obesity.

**88 | TEENS HELPING TEENS**

When young people reach out to TEEN LINE, they connect with a peer who has been specially trained to listen, ask questions and help callers work through difficult situations. Located at Cedars-Sinai, TEEN LINE was launched more than three decades ago to provide support for teens struggling with issues including abuse, drugs and alcohol, depression, homelessness, gangs, suicide and pregnancy. TEEN LINE receives about 10,000 phone calls, texts and emails a year — plus 200,000 visits to its website.

**89 | SENIORS FLOCK TO FREE HEALTH SCREENINGS**

Cedars-Sinai sent a team of 40 healthcare professionals to provide free health screenings and information for more than 500 seniors during the annual West Hollywood Senior Health Fair at Plummer Park Community Center. Those performing tests to identify signs of heart disease and diabetes included six Russian-speaking nurses. They were in high demand at an event that attracts a significant number of low-income Russian immigrants who do not speak English.



# Community Outreach

SALUD Y BIENESTAR | PATIENTS HELP EACH OTHER HEAL | ART THERAPY ENGAGES STUDENTS | TW

*Julie Christen Johnson, RN, (right) takes Eufrosina Munoz's blood pressure during the Telemundo Health and Wellness Expo.*

**90 | SALUD Y BIENESTAR**  
**In its fourth year participating in the annual Telemundo Health and Wellness Expo at the Los Angeles Convention Center, Cedars-Sinai added an emergency triage area where nurses and doctors calmly addressed one potential medical crisis after another. Thousands of low-income Latino residents attended the fair, and a number who received free health screenings from Cedars-Sinai's team of 410 healthcare professionals discovered they had dangerously high blood pressure or blood sugar levels. Some were urged to go to the nearest emergency room, and transportation was arranged as needed. Cedars-Sinai provided more than 8,900 screenings during the 10th annual health fair presented by Telemundo 52 KVEA and the California Endowment.**

**91 | PATIENTS HELP EACH OTHER HEAL**  
A new patient support group formed by the Rehabilitation Department works to improve quality of life for brain-injury survivors. The department also established an Arms Reach Support Group for patients who have been through occupational therapy for hemiparesis (weakness or the inability to move one side of the body), and a Think Tank Support Group for those striving to overcome cognitive deficits after a neurological injury or diagnosis. These and many other patient support groups are part of the comprehensive approach to quality care for a wide range of illnesses, including cancer, heart disease and diabetes. They give patients opportunities to offer each other empathy, reassurance and information as the healing process continues.

**92 | ART THERAPY ENGAGES STUDENTS**  
Through the Share and Care art therapy program, Cedars-Sinai's Psychological Trauma Center gives children an outlet for feelings they may not be able to otherwise express. A program counselor is leading an art project at a local high school to help boost students' confidence and strengthen connections among students. Since 1981, the Psychological Trauma Center has helped children who have witnessed or experienced gang violence, bullying, domestic abuse, suicide, homelessness, drug abuse, natural disasters and other tragedies. Contacts with children, parents and teachers totaled nearly 30,000 in FY 2014, with programs in 20 elementary schools, five middle schools and three high schools.



**93 | TWO MEALS A DAY, WITH A SIDE OF TLC**

For more than three decades, Cedars-Sinai has provided kitchen space and staff for the local Meals on Wheels program, helping make nutritious meals for homebound seniors living on modest fixed incomes as well as for others in need. Food Services staff members assemble about 60 meals each weekday with food from the medical center’s kosher kitchen. Volunteers arrive at Cedars-Sinai in the morning to pick up packages containing lunch and dinner and deliver them to participants, many of whom thrive on the human connection as well as the meals.

**94 | MORE COMPASSIONATE END-OF-LIFE CARE**

Cedars-Sinai headed a region-wide advance care planning initiative, uniting several major healthcare providers around a common call for more compassionate end-of-life care. Physicians, chaplains and others vowed to promote greater dignity for the terminally ill by urging patients and members of the public to spell out their medical wishes through advance directives. Clergy members from many faiths were rallied to bring the message of advance care planning to their congregations.

**95 | MAYOR KICKS OFF YOUTH SUMMER JOB PROGRAM**

Mayor Eric Garcetti kicked off the Hire L.A. Youth Summer Employment Program in Harvey Morse Auditorium at Cedars-Sinai, which has been a strong supporter of the program for eight years. The auditorium was filled with city and medical center leaders as well as area employers who provide jobs for low-income youths. Last summer, 30 youths worked 120 hours in paid office jobs throughout Cedars-Sinai as part of the program. For most it was their first job. The medical center’s Youth Employment Development (YED) program coordinates with the city to bring young people between the ages of 14 and 24 to Cedars-Sinai for summer jobs. Employees provide mentoring, and some of the youths end up being hired year-round.

**96 | BRAINWORKS MAKES SCIENCE COOL**

The 140 seventh- and eighth-grade students attending this year’s Brainworks convention were challenged to use 3-D imaging and a microscope to poke into a phantom skull filled with blue gelatin in search of a piece of tomato, which stood in for a tumor. They also learned how a new, experimental device makes brain tumors glow using the poison of the deathstalker scorpion. And some of them started dreaming about a career in medicine. Through hands-on experience and personal interaction with role models in the healthcare profession, the daylong annual event reaches out to underrepresented youths to cultivate an interest in medicine and brain science, and encourages young people to pursue medical careers.



# Community Outreach

COACH TURNS 20 | ALS AND NEUROLOGICAL CONFERENCES | BRAIN AWARENESS WEEK | WELLNE

*A COACH for Kids' mobile medical unit staffer entertains young patients with a stethoscope.*

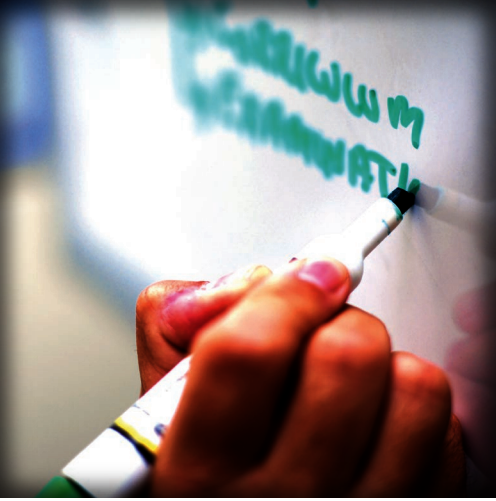
**97 | COACH TURNS 20**  
For two decades, families in some of Los Angeles' poorest neighborhoods have depended on COACH for Kids and Their Families®, a program of the Cedars-Sinai Maxine Dunitz Children's Health Center, for no-cost health and social services as well as preventive education. Two COACH mobile medical units regularly visit schools, homeless shelters and community centers in Downtown/Skid Row, Pico-Union/Central Los Angeles, South Los Angeles, Inglewood, Lennox, Crenshaw/Mid-City and Hollywood/West Hollywood. Since 1994, the program has logged nearly 600,000 patient and educational visits, providing medical and social services, immunizations, dental screenings, case management, nutrition and health education programs.

**98 | ALS AND NEUROLOGICAL CONFERENCES**  
Cedars-Sinai offers a variety of events to provide the latest information about neurological conditions and care. The medical center's Amyotrophic Lateral Sclerosis (ALS) Program holds twice-yearly conferences about research advancements regarding this deadly, degenerative disease. Cedars-Sinai and the CMT Association presented a one-day conference for patients and families affected by Charcot-Marie-Tooth disease, the most common inherited neurological disorder, which damages nerves that control muscles. In addition, Cedars-Sinai experts in movement disorders conducted a free seminar on essential tremor, explaining treatment options for this condition that causes trembling of the hands, head, voice, legs or trunk.

**99 | BRAIN AWARENESS WEEK**  
The Department of Neurosurgery's Brain Awareness Week brought high school students, parents and teachers to Cedars-Sinai for a free educational program "Introduction to the World of Stem Cells." Investigators from the Department of Neurosurgery, the Heart Institute and the Board of Governors Regenerative Medicine Institute all shared insights on current studies and recent discoveries. Students were encouraged to enter an essay contest on the subject. The contest aimed to stimulate young people's interest in, and understanding of, the theories and applications driving stem cell research. Students competed for an e-tablet and other education-oriented prizes — as well as encouragement toward a possible future in the medical sciences.

100 | **WELLNESS  
PROGRAM WITH LAPD**

Police officers routinely deal with stressful situations that can take a toll on their overall health and wellbeing. To help them, top commanders of the Los Angeles Police Department (LAPD) are partnering with Cedars-Sinai for a wellness program known as BlueLIFE — a reference to the iconic blue uniforms of the LAPD. The program involves members of the Command Officers Association who pursue an individualized health and wellness program following initial health screenings by a Cedars-Sinai nurse. BlueLIFE is being funded by the members of the association for the next two years. The program will then be evaluated based on a number of factors, including its effectiveness in reducing medical claims.



# Education

RESIDENCIES AND FELLOWSHIPS | NATION'S MOST HIGHLY TRAINED NURSES | PhD GRADS IN BIOME

Our academic medical center's world-renowned faculty and extensive training programs prepare the next generation of healthcare professionals to provide innovative, high-quality care and to advance medicine through biomedical research. Education at Cedars-Sinai encompasses highly competitive medical residency and fellowship programs in a wide range of specialty and subspecialty areas, as well as graduate research education programs that combine scientific and translational medicine curricula with mentoring by researchers and clinicians. We also provide advanced research training for postdoctoral scientists, programs that enable nurses to develop specialized skills and advance in their careers, and training for allied health professionals such as clinical laboratory scientists. Learning takes place in the most advanced facilities in the world with state-of-the-art simulation and training equipment and the latest medical technology.

**101 | RESIDENCIES AND FELLOWSHIPS**

Through Cedars-Sinai's highly competitive medical residency and fellowship programs, physicians in training gain clinical experience with a diverse patient population ranging from the hospital to clinics to the community. Some 500 medical residents and fellows are enrolled in programs covering 86 specialty and subspecialty areas. Residency programs include anesthesiology, dentistry, general surgery, internal medicine, neurology, neurosurgery, obstetrics and gynecology, orthopedic surgery, pathology and laboratory medicine, pediatrics, pharmacy, radiology, thoracic surgery and urology. Cedars-Sinai's renowned physician-scientists teach the most innovative, advanced treatment methods using the latest medical technology.

**102 | NATION'S MOST HIGHLY TRAINED NURSES**

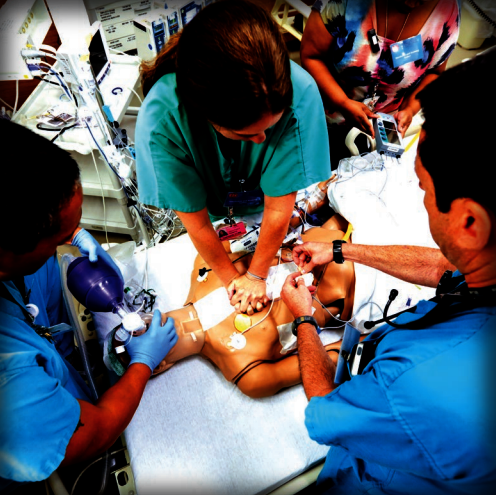
Since its founding in 2002, the Geri and Richard Brawerman Nursing Institute at Cedars-Sinai has helped more than 2,500 nurses advance their careers through its extensive educational programs. The institute currently offers specialty training internships in critical care, oncology, neonatal care and obstetrics, perioperative and post-anesthesia care, cardiology, orthopedics and transplantation care, and other specialties as practice requires. More than 82 percent of Cedars-Sinai's direct care nurses have a specialty certification, while 86 percent have earned a bachelor's or master's degree, making Cedars-Sinai nurses among the nation's most highly trained. Through a 12-month residency program, Cedars-Sinai helps train 100 to 125 new nursing school graduates each year.

**103 | PhD GRADS IN BIOMEDICAL SCIENCE**

Newly minted PhDs from the Cedars-Sinai Graduate Program in Biomedical Science and Translational Medicine were exhorted to take risks, defy dogma and relentlessly pursue excellence. The commencement ceremony, attended by nearly 100 faculty members and more than 150 other guests, was the second in the program's history. Six students graduated, and more than 30 are currently enrolled. Mentored by Cedars-Sinai scientists and physicians, the students are trained to translate scientific discoveries into understanding disease causes and therapies. Research studies completed by the 2014 graduates carry the potential to impact inflammatory bowel disease, amyotrophic lateral sclerosis (ALS), heart disease, cancer and bacterial infections.

**104 | GLOBAL TRAINING FOR TOTAL ARTIFICIAL HEART**

Cedars-Sinai leads the nation in heart transplantation, and has become the place for physicians and surgeons to get trained in mechanical circulatory support (MCS) implantation and use. MCS devices like the Total Artificial Heart are designed to be a temporary bridge to transplantation and can even inhibit organ deterioration while patients await a donor heart. Cedars-Sinai implants more Total Artificial Hearts than any other center in the world. During 2014, the Cardiac Mechanical Assist Device Program trained 26 physicians from Japan, Korea and Panama and more than 10 other centers in the U.S., and also conducted community teaching that reached more than 1,000 individuals.



# Education

TEAM TRAINING IN SIMULATION CENTER | ELEVEN NEW RESIDENTS ON SURGERY ROTATION | PROFESSIONAL DEVELOPMENT

*Providing the latest in medical education involves ensuring that clinical teams know how to work together. The Women's Guild Simulation Center for Advanced Clinical Skills uses mannequins and simulation-based team training for teaching and practice purposes.*

**105 | TEAM TRAINING IN SIMULATION CENTER** Artificial “patients” that can blink, breathe and bleed — and that have removable organs and skin that can be cut with a scalpel — are among the computer-controlled mannequins, known as “patient simulators,” in the Women’s Guild Simulation Center for Advanced Clinical Skills. The simulation center replicates the reality of the surgical environment and allows teams and individuals to practice, innovate and work with the latest technology. The facility includes two fully functioning operating rooms, an intensive care unit (ICU), an obstetrics/gynecology room, a trauma bay and a neonatal ICU. Technicians use computers to create and control an infinite range of medical scenarios for teaching and practice purposes. The center has clocked in roughly 10,000 individual visits since its opening in October 2013.

**106 | ELEVEN NEW RESIDENTS ON SURGERY ROTATION**

Each year, the National Resident Matching Program places applicants for postgraduate medical training positions into residency programs at the country’s teaching hospitals. The Cedars-Sinai Department of Surgery attracted top applicants in general surgery, orthopedic surgery, urology and podiatry. These students are among the brightest to join the medical center, with the highest average scores on the U.S. Medical Licensing Examination, along with superior letters of recommendation, research and extracurricular talents.

**107 | PROFESSIONAL DEVELOPMENT**

Among the many ways Cedars-Sinai builds organizational strength is by supporting professional development. In FY 2014, the Office of Faculty Development expanded programs to support academic and professional success and promote diversity. The Learning to Lean In Discussion Group for underrepresented faculty was launched with conversations on topics such as mentorship and negotiation skills. New faculty were welcomed at a forum for networking and resource sharing. Five faculty members were selected to attend national professional development seminars sponsored by the American Association of Medical Colleges, including events for early-career women faculty, mid-career women faculty and minority faculty.

**108 | RIGOROUS TRAINING FOR POSTDOC SCIENTISTS**

Approximately 100 postdoctoral scientists and junior investigators conduct research at Cedars-Sinai, where they receive advanced training with a faculty mentor for up to five years. The Cedars-Sinai Postdoctoral Scientist Program supports graduates from a wide range of disciplines, optimizing their career prospects and educating them about the critical importance of creative thinking, rigorous scientific method and ethical conduct. The program also sponsors the Malaniak Awards for Excellence in Postdoctoral Research and holds various annual events. At the 2014 Research Day event, more than 130 postdocs presented their work in disciplines from gene therapy to gastroenterology, making this fifth annual event the largest ever.

**109 | NEW CLASS OF CLINICAL SCHOLARS**

The Cedars-Sinai Clinical Scholars Program, which enables aspiring clinical scientists to receive training and mentoring while pursuing research projects, welcomed a new class of nine students representing locales as far away as Taiwan and Nigeria. The two-year program opens with a year of instruction, followed by research studies under a mentor's tutelage, supported by grants of up to \$30,000. The annual grants — the Eigler-Whiting-Mann Award and the Cedars-Sinai CTSI Clinical Scholar Grant — help scientists generate pilot data to support applications for research awards from the National Institutes of Health and other funding agencies. The 2014 study topics included cardiovascular disorders, organ transplants, cancer and inflammatory bowel disease.

**110 | WOMEN'S HEART DISEASE: EDUCATION WITHOUT BORDERS**

The Barbra Streisand Women's Heart Center at the Cedars-Sinai Heart Institute is committed to spreading the word about the often unique signs and characteristics of women's heart disease as well as about the growing body of scientific data reinforcing gender differences and disparities. A critical part of that effort is to provide training in clinical care and research to medical students, residents, fellows and visiting faculty from around the world. Through the new Linda Joy Pollin Women's Health Program, the center recently hosted visiting cardiologists from Israel and the Netherlands. In addition, two cardiac rehabilitation specialists from Thailand met with faculty and observed best practices at the center.

**111 | VOLUNTEERS LEARN THE ART OF CARING**

The Transforming Care at the Bedside (TCAB) program enables volunteers interested in a healthcare career to gain exposure to the hospital environment and experience interacting with patients and families. Volunteers provide supportive comfort through duties that include: communicating patient concerns to staff, providing amenities, checking for safety measures, helping make beds, walking with patients, and assisting with discharge. Some 200 volunteers are enrolled in TCAB at any given time, and 20 have gone on to join the Geri and Richard Brawerman Nursing Institute at Cedars-Sinai since 2012.



# Philanthropy

TRAINING FOR SUCCESS | REGENERATING DISCOVERIES | A HELPING HAND | FORGING FAMILY | EM

Donors support every facet of Cedars-Sinai's mission — from clinical care and medical research to education and community outreach. Many of their gifts honor longstanding family traditions, while others come from new supporters. But they all reflect a passion for making a difference in people's lives — a desire and determination to invest in the health of Los Angeles and beyond, and a commitment to the wellbeing of generations to come. Philanthropy's role in supporting research and education is essential to the medical center's mission. Donors are a vital, valued part of the Cedars-Sinai family.



**112 | TRAINING FOR SUCCESS**

A five-year, \$10 million pledge from Women's Guild is supporting the new Women's Guild Simulation Center for Advanced Clinical Skills, bringing together diverse medical professionals to hone the teamwork essential to lifesaving care. In the Simulation Center — which was inaugurated in October 2013 — surgeons, physicians, nurses and other staff master complex procedures in operating and exam rooms outfitted with the latest medical technology. Their “patients” are technologically sophisticated mannequins that blink, bleed, hyperventilate, call out for help and even give birth. Through its funding of the Simulation Center, Women's Guild is helping advance breakthrough medicine that improves outcomes and extends lives.

**113 | REGENERATING DISCOVERIES**

The Cedars-Sinai Board of Governors is reshaping the medical landscape with a \$30 million pledge to fund the Board of Governors Regenerative Medicine Institute. Joining researchers and clinicians under one roof to accelerate the translation of laboratory discoveries into effective stem cell and regenerative therapies, the institute is ushering in a new era in medicine by using a patient's own cells to repair damaged, aged or diseased tissue. Institute experts are transforming medicine's approach to combating disorders such as Alzheimer's disease, amyotrophic lateral sclerosis (ALS), macular degeneration and inflammatory bowel disease. The Board of Governors' naming gift further strengthens the group's distinguished tradition of philanthropy at Cedars-Sinai.

**114 | A HELPING HAND**

Since its inception, the Helping Hand of Los Angeles has raised nearly \$23 million to support Cedars-Sinai's Department of Obstetrics and Gynecology. This year, the group's annual Mother's Day Luncheon generated additional funds to further the department's research and increase awareness of women's and babies' healthcare issues. During the event, the Helping Hand recognized Jessica Alba as one of its 2014 Mothers of the Year for her role in launching The Honest Company, a mission-driven line of personal care products committed to giving children the best start possible. Mother-daughter duo Sheril Freedman and Dana Walden were also honored at the event. Led by President Ellen Brooks, the Helping Hand's more than 1,800 members are building on a nearly 90-year history of impactful philanthropy at Cedars-Sinai.

**115 | FORGING FAMILY**

Soraya Melamed and her family have expanded on their longstanding commitment to Cedars-Sinai with a generous gift to the Blood and Marrow Transplant Program. The Melameds are an integral part of Cedars-Sinai's Circle of Friends, the grateful-patient program that enables patients and their families to honor the physicians, nurses or caregivers who have made a difference in their lives. For Soraya, giving back to Cedars-Sinai is natural. “From the time we enter, we're greeted with warmth by the valets and volunteers; by the smiling faces at reception; by the gentle hands of the lab staff; and by the lovely nurses,” she said. “It shows us that family isn't only about people you're related to by blood.”



# Philanthropy

EMPOWERING INNOVATIVE CARE | A GENEROUS SPIRIT | SPECTACULAR SUPPORT | HEALTHY HEART

*Simone and Kerry Vickar's establishment of the Distinguished Chair in Regenerative Medicine is an investment in pioneering research with the potential to treat and cure even the most devastating diseases.*

**116 | EMPOWERING INNOVATIVE CARE**  
**Kerry and Simone Vickar made a significant contribution to the future of stem cell science by establishing the Kerry and Simone Vickar Family Foundation Distinguished Chair in Regenerative Medicine. The chair was awarded to Clive Svendsen, PhD, director of Cedars-Sinai's Board of Governors Regenerative Medicine Institute and one of the world's most innovative stem cell scientists. Kerry and Simone's support is an investment in pioneering medicine with the potential to treat and cure even the most devastating diseases, from Alzheimer's, Parkinson's and ALS to diabetes, lymphoma and macular degeneration. Their partnership expands Cedars-Sinai's influential role in this fast-moving field, paving the way for meaningful advances that can improve — and save — lives.**

**117 | A GENEROUS SPIRIT**  
The generosity and vision of the late Connie Austin will be forever honored through the Constance A. Austin Fellow in Women's Heart Health at the Barbra Streisand Women's Heart Center. Designed for young physicians interested in advancing their knowledge of heart disease, the fellowship offers emerging professionals a tremendous opportunity for growth. The recipient of the fellowship for 2013 was Janet Wei, MD, who also received the Sports Spectacular Endowed Fellowship Award and the American Heart Association Women in Cardiology Excellence in Training Award. "Connie Austin's spirit has inspired me, and I'm grateful to have been the recipient of her generosity," Dr. Wei said.

**118 | SPECTACULAR SUPPORT**  
This year, dedicated Cedars-Sinai support group Sports Spectacular pledged \$10 million to establish the Sports Spectacular Diabetes and Obesity Wellness and Research Center to fund leading-edge medical research and encourage healthy eating and exercise. The center is known for developing ways to predict, prevent, treat and cure diabetes and obesity. Research made possible by the gift could lead to critical breakthroughs for the more than 34 percent of adults and 17 percent of children in the United States who are obese, according to the Centers for Disease Control and Prevention. "Sports Spectacular is excited to continue its partnership with Cedars-Sinai to help eradicate diabetes and obesity in the U.S.," said Beth Moskowitz, the group's executive director.

**119 | HEALTHY HEARTS**

Irene Pollin, a widely respected public health advocate who founded the nation’s first organization dedicated to preventing heart disease in women, donated \$10 million to the Barbra Streisand Women’s Heart Center at the Cedars-Sinai Heart Institute. The new Linda Joy Pollin Women’s Heart Health Program, named for Irene’s late daughter, will further the research and educational work of C. Noel Bairey Merz, MD, director of the center and the Women’s Guild Chair in Women’s Health. “I have longed to find a place to establish a heart disease prevention program geared toward women,” Irene said. “I could not think of a better way to reach out to our sisters than partnering with Cedars-Sinai. Heart disease knows no boundaries — and neither will we.”

**120 | LEADING THE PACK**

Marking a decade of running strong, the annual Run for Her® 5K Run and Friendship Walk celebrated its 10th anniversary of supporting ovarian cancer research and awareness. Launched in 2005 by the Sargent family — who lost their mother, Nancy, to the disease — Run for Her is now one of the country’s largest ovarian cancer run/walks. Through the affiliated Sleepwalkers Around the World™, people from around the globe may participate online to support Run for Her’s vital mission. Since its inception, Run for Her has helped catapult Cedars-Sinai’s Women’s Cancer Program to the forefront of gynecologic cancer research and care in the United States. The program is now a recognized leader in early detection, diagnosis, treatment and prevention.

**121 | EDUCATIONAL EXCELLENCE**

S. Jay Hazan, MD, furthered his passion for supporting medical education by establishing the S. Jay Hazan, MD, Fellow Award at Cedars-Sinai. With his gift, Hazan is opening new pathways for deserving but economically disadvantaged medical students to learn from Cedars-Sinai’s world-class faculty. This endowed fund — created through a charitable gift annuity — is a testament to his belief in education’s transformative power. He tells his colleagues, “Think back to when you or a loved one needed medical attention. They were treated by somebody who studied for years and probably received funding to complete a fellowship. That person helped your family. You’ve already received the benefit of your money at work!”

**122 | SHAPING THE FUTURE**

Motivated to fund the next generation of renowned scientists, Corrine and Lenny Sands offered their generous support to Cedars-Sinai’s Graduate Program in Biomedical Science and Translational Medicine. The program combines scientific and translational curricula with mentoring and supervision by faculty who are leaders in basic and clinical research. It also offers broad exposure to clinical medicine and the opportunity to conduct important new research in state-of-the-art laboratories. Corrine and Lenny’s gift strengthens these robust offerings and will enhance the program’s ongoing development, helping fuel the translation of scientific discoveries into the application of therapies, treatments and cures to directly advance patient care.



# Philanthropy

BUILDING TAKES LEADING | BRIDGING THE GAP | A PARTNER FOR GOOD | TRAINING FOR SUCCESS

*Vice President of Facilities Planning, Design and Construction Larry Colvin personally donated to support Cedars-Sinai's ability to meet growing community needs.*

**123 | BUILDING TAKES LEADING**  
With a gift to the Build With Us campaign in support of Cedars-Sinai's Advanced Health Sciences Pavilion, Vice President of Facilities Planning, Design and Construction Larry Colvin reinforced his commitment to building a strong foundation for success. He did more than just oversee construction on the pavilion — he personally donated to support Cedars-Sinai's ability to meet growing community needs. "The pavilion is a model for 21st century healthcare, bringing outpatient care and translational research together under one roof," Colvin said. His leadership played a critical role in making that vision a reality.

**124 | BRIDGING THE GAP**  
Ronald Perelman and the Ronald O. Perelman Heart Institute at New York-Presbyterian/Weill Cornell Medical Center have joined forces with Barbra Streisand and the Barbra Streisand Women's Heart Center at the Cedars-Sinai Heart Institute to tackle gender inequality in heart disease treatment and research. Together, they established the Women's Heart Alliance to empower women in the battle against heart disease. To kick off its activities, the Women's Heart Alliance launched Fight the Ladykiller, a campaign for awareness and action that will encourage women to talk to their healthcare providers and get checked for signs of cardiac disease. The campaign will also support the medical community in proactively addressing the screening, diagnostic and therapeutic differences in women's cardiac health.

**125 | A PARTNER FOR GOOD**  
Pacific Sales and Samsung forged an invaluable partnership through their support of Cedars-Sinai and Run for Her®, one of the nation's most prominent ovarian cancer run/walks. Pacific Sales has been a presenting sponsor since 2009, and this year teamed with Samsung on a multilayered initiative aimed at raising awareness of ovarian cancer and boosting financial investment in Cedars-Sinai's lifesaving research. From national advertising to in-store promotions, and matching gifts to employee recruitment, both companies gave their all to ensure that this year's Run for Her was a success — stepping up the pace of progress in combating this insidious and deadly disease.

### **MILESTONE GIFTS TO CEDARS-SINAI**

(July 1, 2013 – June 30, 2014)

**Anonymous (2)**

**Estate of Valerie M. and Richard B. Aronsohn, MD**

**Riza Aziz**

**Cedars-Sinai Board of Governors**

**Erika J. Glazer Family Foundation**

**The Leona M. and Harry B. Helmsley Charitable Trust**

**Margie & Robert E. Petersen Foundation**

**David and Janet Polak Foundation**

**S & A Agate Foundation, Inc.**

**Sports Spectacular**

**Kerry and Simone Vickar Family Foundation**

**Women's Guild**

### **2014 FUNDRAISING HIGHLIGHTS**

**Attracting new support for lifesaving initiatives in clinical care, research and education:  
3,018 new donors**

**Grateful patients give back:  
77 percent of donors**

**Record-breaking fundraising year in Cedars-Sinai's history:  
more than \$100 million raised**

**Donors near and far:  
representing all 50 states and 18 countries**

**Every gift counts:  
82 percent of donors gave less than \$250**

### **CHANGING LIVES**

Visit us online at **[cedars-sinai.edu/giving](http://cedars-sinai.edu/giving)** to learn how you can partner with Cedars-Sinai to improve patients' lives.



# Cedars-Sinai by the Numbers

JULY 1, 2013 - JUNE 30, 2014



**886**  
**LICENSED BEDS**  
(as of November 2014)



**1,283**  
**RESEARCH PROJECTS**  
**\$39,849,000**  
**RESEARCH FUNDING**  
from NIH and other federal sources



**234,271**  
**PATIENT DAYS**  
(approximately 642 per day)



**10,791**  
**FULL-TIME EMPLOYEES**



**662,055**  
**OUTPATIENT VISITS**  
(approximately 1,814 per day)



**2,125**  
**PHYSICIANS ON**  
**MEDICAL STAFF**



**45,344**  
**ADMISSIONS**



**560**  
**MEDICAL RESIDENTS**  
**AND FELLOWS TRAINED**



**85,082**  
**EMERGENCY VISITS**



**2,988**  
**VOLUNTEERS**  
**223,764**  
**VOLUNTEER HOURS**



**180,916**  
**PATIENTS CARED FOR**  
**BY CEDARS-SINAI**  
**MEDICAL NETWORK**



**\$732,746,000**  
**CONTRIBUTION FOR**  
**COMMUNITY BENEFIT**

## FINANCIAL SNAPSHOT

### INCOME AND EXPENSES

Revenues from patient care and other sources	\$2,774,502,000
Expenses	\$2,457,372,000
Operating income	\$ 317,130,000
Investment income	\$ 155,734,000
<b>Net income to reinvest in Cedars-Sinai's mission</b>	<b>\$ 472,864,000</b>

### USES OF NET INCOME

Long-term debt to be repaid	\$1,089,830,000
Capital expenditures for facilities, renovation, technology and other	\$ 188,388,000
This year's payment on long-term debt	\$ 44,505,000

### COMMUNITY BENEFIT CONTRIBUTION

Unreimbursed cost of direct medical care for the poor and underserved (Excludes the unreimbursed cost of caring for Medicare patients)	\$ 113,409,000
Charity care (\$43,028,000)	
Unreimbursed cost of caring for Medi-Cal patients (\$70,381,000)	
Unreimbursed cost of direct medical care for Medicare patients	\$ 368,415,000
Unreimbursed cost to care for patients under specialty government programs (Including veterans, Los Angeles Police Department officers and others)	\$ 5,181,000
Community benefit programs, and education and training for physicians and other health professionals (Includes hundreds of free community education and medical screening/immunization programs offered at the medical center, in local schools, homeless shelters and community centers)	\$ 99,745,000
Research programs (Includes translational and clinical research and studies on healthcare delivery)	
Total cost of research	\$ 145,996,000
Research funding from grants (\$81,674,000)	
Research net of funding from grants (\$64,322,000)	
<b>Total quantifiable community benefits, including the unreimbursed cost of caring for Medicare patients</b>	<b>\$ 732,746,000</b>

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