

City of Hope is a research, treatment and education center dedicated to the prevention, treatment and cure of cancer, diabetes and other life-threatening diseases. Our mission is to shorten the time from initial research idea to new treatment to quickly bring cures to patients.

Since its founding in 1913, City of Hope has achieved numerous scientific breakthroughs and pioneered many lifesaving procedures that have benefited patients worldwide.

Here are the latest facts.

INSTITUTIONAL DISTINCTIONS

- City of Hope is one of 40 comprehensive cancer centers, the highest designation bestowed by the National Cancer Institute (NCI) and a recognition of excellence in cancer treatment, research, prevention and education.
- City of Hope is a founding member of the National Comprehensive Cancer Network, an alliance of the 21 leading cancer centers that defines and sets standards for cancer care nationally.
- City of Hope maintains the No. 1 hematology, prostate cancer and sarcoma programs in California and ranks No. 2 in the state for its breast cancer and musculoskeletal programs, based on the number of patients treated. (Source: Office of Statewide Health Planning and Development)
- City of Hope is designated an islet cell transplant center by the Juvenile Diabetes Research Foundation (JDRF). JDRF centers are programs at select institutions — focused on islet transplantation, diabetes complications and immunology — that enable scientists and clinicians to collaborate and turn new ideas into treatments for diabetes.
- City of Hope was awarded more than \$76 million in research grants and received more than \$202 million in revenues from patented technologies in FY2010.

RESEARCH AND TREATMENT MILESTONES

- Numerous breakthrough cancer drugs, including Herceptin, Rituxan, Avastin and Erbitux, are based on technology pioneered by City of Hope and are saving lives worldwide.
- Millions of people with diabetes worldwide benefit from synthetic human insulin developed through research conducted at City of Hope.
- City of Hope surgeons performed more robotic urologic procedures for prostate cancer than any other institution in the nation.
- A pioneer in bone marrow transplantation, City of Hope has performed more than 10,000 bone marrow and stem cell transplants and operates one of the largest, most successful programs of its kind in the world. In addition, patients who underwent unrelated donor bone marrow and stem cell transplants at City of Hope have significantly better outcomes than expected under national standards, according to data from the National Marrow Donor Program.

INNOVATIVE RESEARCH, TREATMENT AND EDUCATION

Improving early detection of prostate cancer

City of Hope investigators are working to determine whether expressed prostate secretions (EPS) can be examined to rule out prostate cancer in patients. These studies use molecular biology to identify if cancer cells are present in EPS. Researchers hope to develop a non-invasive tool that may eventually eliminate the need for invasive prostate cancer testing such as a biopsy.

RESEARCH QUANTIFIED

One of 40
NCI-designated
comprehensive
cancer centers

40



Performed more than 10,000 bone
marrow and stem cell transplants

10,000



Awarded more than \$76 million in
research grants

76

21 Founding member of the
National Comprehensive
Cancer Network's top 21 cancer
centers that defines and sets
standards for cancer care

Currently conducts more than 300
clinical studies

300

Cancer and “super foods”

City of Hope scientists have found that blueberries have the ability to control tumor growth, decrease metastasis and induce cell death in triple-negative breast cancer cells. Scientists led by Shiuan Chen, Ph.D., observed that blueberries help fight these cancers by suppressing pathways critical to tumor development and migration. The research team is planning human clinical trials to test blueberries’ effect on breast cancer, in addition to research on the anticancer properties of other fruits, including pomegranates, and vegetables.

New method of targeting AIDS virus

City of Hope scientists have developed a new method of targeting the AIDS virus that may provide a powerful one-two punch against HIV infection. Researchers developed a small piece of genetic material — called an RNA aptamer — that both interferes with HIV’s ability to infect cells and acts as a delivery vehicle for another anti-HIV molecule.

Current antiviral therapies can slow the progression of HIV infection and stave off disease, but often have toxic side effects. Moreover, HIV can develop resistance to the drugs. City of Hope researchers have been working on alternative ways of disrupting the HIV life cycle and stopping the virus in its tracks. Their development could improve HIV-positive patients’ chances of overcoming the infection.

Easing side effects of bone marrow transplantation

Patients undergoing bone marrow transplantation (BMT) face more than just the challenges of their disease; they also must withstand the rigors of treatment. But City of Hope researchers are pursuing a high-tech form of highly targeted radiation therapy that may ease side effects and allow more patients to benefit from BMT.

BMT aims to replace diseased cells in a patient’s bone marrow with healthy blood stem cells. But physicians first must use high-dose chemotherapy — with or without radiation therapy — to destroy the patient’s diseased marrow. When used, radiation therapy usually comes in the form of total body irradiation, or TBI, which can cause significant side effects.

City of Hope researchers were the first to explore total marrow irradiation, or TMI, as a replacement for TBI for transplant patients. TMI uses an advanced method of delivering radiation called TomoTherapy, which allows physicians to focus radiation beams on

diseased bone marrow and avoid exposure to healthy tissues. Researchers hope this will lessen side effects while allowing for higher doses of therapeutic radiation.

Training genetic counselors worldwide

City of Hope’s Division of Clinical Cancer Genetics is a national leader in understanding the genetic roots that contribute to cancer risk, as well as identifying medical and lifestyle changes to mitigate those risks. Genetic profiling may indicate a patient’s disease risk, but counseling enables patients to make educated decisions to lower those potential risks. City of Hope provides training, through a grant from the National Cancer Institute, to community hospitals around the world to establish genetic counseling programs in their area. To date, more than 225 clinicians from 47 states and seven countries outside the U.S. have completed the training program.

Survivorship and support

Life after cancer treatment can present both physical and emotional challenges. City of Hope’s Center for Cancer Survivorship provides long-term follow-up to create a bridge between cancer treatment and ongoing care.

The center provides specialized follow-up care and patient education in a clinical research setting. Current programs include pediatric, prostate and breast cancer survivorship.

UNPARALLELED RESOURCES

- City of Hope has a unique model for rapidly translating innovations from the research lab to the clinical setting with its Center for Biomedicine & Genetics (CBG), which allows physicians and scientists the freedom to test and refine the most promising new therapeutics. Recognized as one of the nation’s premier academic biologic manufacturing facilities, the CBG provides the isolation, environmental control and security needed for the manufacture of products for human use.
- City of Hope established a consortium among leading academic institutions known as the Southern California Islet Consortium to further the study of islet cell transplantation as a possible cure for type 1 diabetes. In this innovative procedure, insulin-producing beta cells are taken from a donor pancreas and transferred into a person with diabetes. Once transplanted, the donor islets begin to make and release insulin.

EXPANSION EFFORTS

- Opened in 2010, the Arnold and Mabel Beckman Center for Cancer Immunotherapeutics & Tumor Immunology provides a self-contained and integrated research environment where novel immunotherapeutic approaches to cancer treatment are conceived, developed and refined.
- A \$20 million gift from the Leslie and Susan Gonda (Goldschmied) Foundation enabled a four-story addition to the 41,000-square-foot Leslie & Susan Gonda (Goldschmied) Diabetes & Genetic Research Center. The expansion houses programs that integrate research into diabetes, metabolic disease and other related conditions.
- The 3,000-square-foot Sheri & Les Biller Patient and Family Resource Center is a uniquely comprehensive model that integrates and expands a wide range of patient support services, including health education, psychological services, healing arts programs and end-of-life and bereavement care programs, to allow health professionals to provide immediate, individualized care.

HOW CITY OF HOPE ADDS UP

- City of Hope is ranked as one of “America’s Best Hospitals” in cancer by *U.S. News & World Report*.
- City of Hope received full accreditation by the Joint Commission, the nation’s most widely recognized health care accrediting body.
- City of Hope received two grants totaling \$32.5 million from the California Institute for Regenerative Medicine for research into tumor targeting stem cells to deliver cancer killing agents specifically to brain tumors and research into an AIDS-related lymphoma therapy that may provide patients with permanent immunity to HIV.
- The National Heart, Lung, and Blood Institute (NHLBI), part of the National Institutes of Health, awarded City of Hope an \$8.6 million contract to facilitate stem cell research from laboratory to clinical study. The five-year contract is the first from the NHLBI to focus on development and manufacturing of stem cell therapies.
- *Forbes*, *The Chronicle of Philanthropy* and *The Nonprofit Times* featured City of Hope in their annual surveys of the nation’s top nonprofit organizations.