

THE KECK SCHOOL OF MEDICINE
OF THE
UNIVERSITY OF SOUTHERN
CALIFORNIA

SUMMARY OF STRATEGIC INITIATIVES

FOR THE 21ST CENTURY

NOVEMBER 2000

Good health is taken for granted. When health is compromised, it cuts across social, cultural and economic differences and becomes the focus and priority of life. This priority is recognized in the **Mission of The Keck School of Medicine:**

To improve the quality of life for individuals and society by promoting health, preventing and curing disease, advancing biomedical research and educating tomorrow's physicians and scientists.

VISION

By 2010, the Keck School of Medicine of the University of Southern California will rank among the top private research medical schools. This will be achieved through groundbreaking discoveries in basic science and clinical research targeted to prevent and relieve human suffering and enrich the human mind and spirit. Excellence in the School's education mission will be attained by training the leaders of the next generation of academic clinicians and basic scientists. The delivery of advanced university-level patient care, measured by breakthroughs that fundamentally change the practice of medicine, will be the fruit of success in the School's patient care mission and will secure its reputation for excellence. Many see the 21st Century as the golden age of biomedical research. The Keck School will position USC for leadership at the dawn of this new era.

Keck School of Medicine in the 21st Century

Achieving our Vision requires anticipation of trends that will affect society in general and medical schools in particular. The 21st Century will likely be dominated by a global commitment to improve the quality of life for mankind. The mission of the University of Southern California—"the development of human beings in society through the cultivation and enrichment of the human mind and spirit"—is aligned with this objective and serves as a beacon and touchstone to guide the Keck School of Medicine. No areas of human endeavor are more important to quality of life than those that affect human health and well being. USC's rise to the top ranks of research universities will be bolstered by the success of the Keck School in understanding the pathogenesis, diagnosis, cure and prevention of human disease.

Biomedical research in this new millennium will advance quickly as new principles of molecular medicine and science are applied and coupled with rapid technological advances. Biology will lead science in the 21st Century—just as physics led science in the 20th Century. The sequencing of the human genome will kick start a revolution in biology as a quantitative discipline. Preeminent institutions will be those that contribute most to this revolution. The Keck School will be a place where major basic science discoveries are made—and applied—establishing benchmarks for health maintenance and disease prevention, where better modes of education are developed, and where medical students are better prepared for careers as researchers and leaders, with a zeal for life-long learning.

The Keck School of Medicine in the 21st Century will be characterized by creative leadership, discovery, innovation, imagination and partnerships. Success will be a magnet for the very best faculty and students, and will stimulate increased support from the private and public sectors.

BIOMEDICAL RESEARCH

The Keck School of Medicine provides a unique research setting that extends from the investigation of basic and fundamental processes to the solution of complex clinical problems in one of the most ethnically diverse and populous regions on earth. In the basic sciences we investigate biological questions at the molecular and cellular levels. In the clinical sciences we utilize basic science advances and cutting-edge technologies to discover the cause of disease and develop new diagnostic procedures, therapies and approaches to prevention. This bench-to-bedside process is translational research—for which medical schools are uniquely well-positioned.

One example of translational research as it applies to neuroscience is genetics. Neurologists can now correlate clinical observations with genetic defects. Scientists can then recreate and study these same defective genetic sequences in lower animals and apply the findings to humans.

The School's location in Southern California, with its wealth of biomedical research and development resources, makes it well-positioned to achieve its research mission. The area's vast and diverse population make it an ideal laboratory for the unique strengths of USC. As one of only two major university medical schools in the area, the School's potential for growth and impact is unlimited.

By 2010, the Keck School will be the hub of a Biotechnology Park at the Health Sciences Campus.

Keck School scientists will have as their focal points: neurosciences, genetics, cancer, and transplantation immunology. They will also emphasize research in metabolic diseases, cardiovascular diseases and children's and women's health.

To achieve preeminence in these prioritized areas we will:

- Become a world leader in **neurogenetics** through basic science and related disciplines and their application to the treatment of neurological diseases, especially neurodegenerative diseases afflicting the elderly. The School will draw from geriatric and gerontological resources at University Park and Rancho Los Amigos. The human brain is the great frontier in science and the Keck School will be a leader in its study.
- Enhance the Institute of Genetic Medicine—the focal point of **genetics** research encompassing informatics, in cooperation with computer scientists at University Park; molecular biology, including structural biology and signal transduction; applied gene therapy, combining basic science efforts in genetics, biochemistry and vector development with clinical activities.
- Increase the Keck School's international leadership in **cancer** research, therapy and prevention, expanding the role of the USC/Norris Cancer Center, particularly in the areas of translational research, epidemiology and prevention research.
- Build upon the School's clinical strengths in heart, liver and lung **transplantation**, and pioneer the application of the increased understanding of the immune system to improve transplantation efficiency, becoming a world center for immunobiology and transplantation research and organ and tissue transplant.

- Other major research priorities include:

Metabolic Diseases—Liver disease and insulin-resistance-associated disease research programs are among the strengths of the Keck School, including NIH-sponsored liver and alcohol centers. These centers provide important foundations for future development.

Cardiovascular Diseases—As the number-one cause of death among American men and women, this area of health care receives high levels of NIH research funding. We are several scientific appointments away from becoming recognized as a center of excellence in cardiovascular disease research.

Children's and Women's Health—The School has two major strengths in this important area—Women's and Children's Hospital and Childrens Hospital Los Angeles—and it will be a top priority for the School. We also are home to large federally-funded centers for research in environmental health issues in children. There are opportunities for intercampus activities in cancer, epidemiology, gene therapy and developmental biology. Bringing together common interests in the strategic plans of the School and CHLA could help identify common fundraising opportunities as well.

EDUCATION

Medical and graduate student education is a top priority for the Keck School of Medicine. We have the critically important responsibility of preparing future physicians and biomedical researchers. A medical school can achieve recognition for its research breakthroughs and advances in clinical care. However, it is most often measured by the excellence of its graduates. Our training programs must be designed to help our graduates meet the challenges that will confront them in the future. We are especially committed to enhancing the M.D./Ph.D. program with Caltech. Graduates of this program will be leaders of biomedical research in the 21st Century.

Medical education within a research university also offers opportunities to students that are not available at other academic institutions. Integrating research activities at the Keck School with educational opportunities elsewhere at USC provides a distinctive model of education.

We will build on the improvements in the quality of students since 1993: GPA and MCAT scores of entering students increased from 3.4 to 3.5 and 9.8 to 10.5 respectively; 100% of graduates obtained residencies at U.S. teaching hospitals.

To attract students of the highest quality to our M.D., Ph.D. and M.D./Ph.D. programs, we will:

- Complete the medical curriculum revision to emphasize molecular medicine; problem-solving; health policy, including legal, social and ethical issues; public health and preventive medicine; health administration and managed care; and student participation in research and innovative programs.
- Improve the M.D./Ph.D. program, including the program with Caltech, and provide greater mentoring and nurturing of these students.
- Enhance the technology infrastructure for medical and graduate students.
- Foster wider and deeper ties with University Park faculty through programs such as the Baccalaureate/M.D.

- Expand continuing medical education programs, increasing the use of teleconferencing and telemedicine.
- Enhance residency programs to attract the best students by providing more opportunities for medical research, while assuring that all residency programs remain accredited.
- Reward those who choose to teach; reward well those who teach well.
- Develop benchmarks for excellence in teaching by adopting national standards.
- Improve the Ph.D. program by attracting the best students in the country.

The success of these medical education initiatives will be a magnet for attracting the best faculty, students, residents and post-doctoral trainees.

HEALTH CARE SERVICES

Against the backdrop of a competitive environment—including managed care and the external pressures for consolidation in health care, especially in Southern California—we dedicated ourselves to becoming a medical school that contributes knowledge and breakthroughs in the diagnosis, treatment, cure and prevention of disease.

To improve our position among the top medical schools and to bring distinction to the University, the Keck School of Medicine must be a place where major discoveries are made and applied to the prevention, treatment and cure of disease. Implementation of our Strategic Plan is contingent on the success of the School's clinical mission, which ensures access to patients, who are essential for clinical research and medical education.

To ensure a clinical program that will meet the School's educational and research needs and contribute to improved rankings, while remaining competitive in the volatile Southern California health care marketplace, the following will be carried out over the next ten years:

- Build a world-class USC Health System with a hub composed of USC University Hospital (Tenet), USC/Norris, CHLA, and LAC+USC; and build outreach programs that will carry specialized services into local and regional areas.
- Expand the USC Health System into strategically placed satellite clinics in downtown Los Angeles, the San Gabriel Valley, Orange County and the Inland Empire.
- Build a practice organization characterized by flexibility, rapid decision making and responsiveness, to continue to successfully compete in the changing health care marketplace.
- Build a world-class center for tertiary and quaternary care by successfully attracting world-class faculty for our new technologically advanced facilities.
- Recruit department chairs with competitive financial packages in a marketplace in which prominent faculty and chairs lead large, well- funded programs.
- Launch a centralized marketing plan that aggressively and effectively takes on the competition based on market research and expanded service capabilities.
- Strengthen the Tenet partnership, while engaging other health care and hospital systems.
- Explore new organizational structures for our patient care organization to consolidate and centralize clinical services, centers of excellence and departmental programs so

that we become more attractive to patients and develop better ways to measure progress.

- Refine our partnership with Los Angeles County including participation in the design of the LAC+USC Medical Center replacement facility—working to assure a state-of-the-art hospital. The Keck School will continue to assist the County, its century-old partner, with their responsibility to care for the indigent and underserved of Los Angeles. Clinical research and resident training will also continue to serve the School's missions.
- Recruit nationally recognized physician-scientists and educators as chairs of Pediatrics, Psychiatry and Anesthesiology.

ORGANIZATION AND DEVELOPMENT

The W. M. Keck Foundation gift has led to the establishment of a Board of Overseers to advise and guide the development of the Keck School and the role of the School in the community. The Board of Overseers is already providing active advice for the President and the Dean.

Strong, effective leadership and administration is crucial. To better support the overall institution goals, the Office of the Senior Vice President for Medical Care and the Dean's Office will continue in their restructured form which is much more efficient, cost effective and responsive. Continuous improvement through wise, strategically-planned resource distribution is the ultimate responsibility of the School leadership. The School also must substantially increase its philanthropic support in order to achieve its vision.

The successful implementation of the School's Strategic Plan requires enthusiastic support and action from the faculty and staff, and sufficient financial and human resources.

Infrastructure Requirements

- Complete a \$1 billion fundraising campaign over the next decade to achieve our goals.
- Recruit 135 new faculty, in addition to nationally recognized leaders as chairs in Pediatrics, Psychiatry, Anesthesiology and in Molecular Microbiology and Immunology.
- Plan and build 585,000 square feet of additional research space, in four buildings: a Neurogenetic Institute; a Heart and Transplantation Biology and Immunology Institute; a new Cancer Center research tower and a biosciences research center.
- Increase scholarship endowment to \$30 million for M.D./Ph.D., Ph.D. and M.D. programs.
- Develop a Biotechnology Park at the Health Sciences Campus.
- Improve the effectiveness of the Office of Technology Transfer.
- Expand and support collaborations among faculty in the IGM, Norris Cancer Center and the University Park Campus, as well as at other USC-affiliated hospitals and institutions.

Biotechnology Park

Beyond the facilities, research space and new faculty required over the next ten years, we envision the development of a Biotechnology Park adjacent to the Health Sciences Campus. Such a park is a logical extension for collaboration with faculty in the Neurogenetic Institute, the Heart and Transplantation Immunology and Biology Institute, the Institute for Genetic Medicine and the already successful USC/Norris Cancer Center, Doheny Eye Institute and USC University Hospital (Tenet) complex. By the end of the first decade of the 21st Century, a critical mass of basic and clinical scientists will be in place at the Keck School and will have attracted the support, cooperation and partnership of local, state and federal agencies, philanthropic organizations and biotechnology companies to initiate the creation of a Biotechnology Park with the Keck School of Medicine as its anchor institution.

Achieving our goals requires going beyond traditional organizational boundaries to utilize resources from throughout the University, regardless of affiliation or discipline.

APPENDIX

1. Strategic Initiative in Education — Outcomes

- Received the maximum seven-year accreditation from the LCME.
- Increased time spent in both primary care clinics and in the venues available for primary care training for medical students.
- Developed a joint Baccalaureate/M.D. Program in 1993 with the College of Letters, Arts and Sciences; increased in applications from 191 in 1994 to 428 in 1998; SAT scores and GPA of entering students rose from 1,385 to 1,480 and 3.78 to 3.90 respectively.
- Steadily increased the number of applicants for the M.D./Ph.D. program from 142 in 1993 to 239 in 1998; MCAT scores and GPAs remained fairly constant, ranging from 32-34 and 3.5-3.7 respectively.
- Developed an M.D./Ph.D. program in partnership with Caltech.
- Increased the number of medical school applicants from 4,470 in 1993 to 5,928 in 1998.
- Increased GPA and MCAT scores of entering students from 3.47 to 3.52 and 9.94 to 10.53 respectively.
- Dramatically increased the number of applicants who accepted the School's offer of acceptance from 30% to 50%, evidence of the School's increasing popularity and attractiveness.
- Increased the number of students who pass USMLE, Step 1 and Step 2. Step 1 passing rate increased from 87% in 1993 to 94% in 1998; also increased the Step 2 passing rate from 87% to 94%.
- Increased the number of students who got their first choice for a residency position from 42% in 1992 to 53% in 1998.
- Began curriculum in humanities, ethics, art and the law in 1985 and reorganized in 1996 with a comprehensive three-year course that addresses the economic, legal, social and ethical issues physicians will face in the 21st Century.
- Initiated a White Coat Ceremony for entering medical students in 1996.
- Introduced Glaxo-Wellcome Pathways Career Advising Program in 1988.
- Started the Medical Scholars Program in 1995; weekly student-led tutorial sessions to facilitate first-year students' transition to medical school.
- Sponsored a research associate program for University Park undergraduates.
- Offered faculty development workshops, fellowships in teaching/learning, leadership management and a new Master's Degree program on weekends, in an executive model, in 1998.
- Directed 51 accredited graduate medical education programs. In 1998, GME programs had 870 physicians enrolled. Of these, 330 were enrolled in primary care programs (family medicine, internal medicine, pediatrics, and obstetrics and gynecology); after a 10% reduction in the total number of postgraduate physicians between 1995 and 1996, the number of funded and filled positions has been stable.

2. Strategic Initiative in Biomedical Research — Outcomes

- Ranked 23rd in the AAMC rankings based on sponsored research dollars.

- Completed construction of 88,425 net square feet of space at USC/Norris, including approximately 55,000 square feet of research space with the Topping Tower opening in 1996.
- Completed renovation of 27,290 net square feet opening in 1997.
- A proposal to build and endow a Neurogenetic Institute was funded by the W. M. Keck Foundation.
- Achieved world wide recognition of the Epidemiology program and Institute for Health Promotion and Disease Prevention Research.
- Recruited department chairs in Anesthesiology, Cardiothoracic Surgery, Cell & Neurobiology, Family Medicine, Medicine, Ophthalmology, Pediatrics, Preventive Medicine and a director of the USC/Norris Comprehensive Cancer Center since 1992.
- Increased the number of faculty in basic science departments by almost 6% over the last five years, with small growth in tenure or tenure track faculty (4 new tenured positions).
- Grew the number of faculty in clinical departments 9% overall, but with a reduction of tenured faculty (44 fewer tenured positions).
- Was awarded the Southern California Environmental Health Sciences Center, which brings together USC, Caltech and UCLA to study multi-ethnic populations in California and the Pacific Rim.
- Recruited a chair for the new Department of Cell and Neurobiology in 1994 with laboratories and Mary D. Allen Professorship provided by the Doheny Eye Institute.
- Appointed a director of the new Neurogenetic Institute.
- Three faculty elected to the Institute of Medicine.
- Increased total sponsored research funding from \$72 million in FY92/93 to \$99 million in FY97/98.
- Increased median support per funded investigator by 66% over the last five years (\$115,850 per project in FY92/93 to \$193,586 in FY97/98).

3. Strategic Initiative in Health Care Services — Outcomes

- Increased admissions to USC University Hospital from 2,062 in 1992 to 7,619 in 1998 (a 370% increase).
- Realized annual growth rates at USCUIH of 17% during 1996-1998, despite considerable adverse pressures; USCUIH now ranks first in financial performance among Tenet's Southern California hospitals.
- Increased clinical revenues from USC physician services from \$67 million in 1992 to \$105 million in 1999 (57% increase).
- Sharply increased incoming calls to the new centralized Access Center (1-800-USC-CARE); 800 calls were managed during the first month of operation in October 1995; in December 1998, more than 36,000 calls were managed. Center now manages more than 400,000 calls per year; physicians, patients, managed care plans and other business partners may reach doctors and administrative personnel via one common phone number, 1-800-USC-CARE, 24 hours a day.
- Faculty, residents and fellows cared for almost one million clinical visits last year at LAC+USC Medical Center and DHS Northeast Cluster Comprehensive Health Centers.
- Strengthened partnerships with CHLA, LAC+USC Medical Center, USC/Norris and USCUIH through faculty commitments to clinical care, clinical research and teaching conducted at these hospitals.
- Tenet has invested more than \$220 million in facilities, equipment and faculty programs on the Health Sciences Campus since 1991.
- CHLA has invested approximately \$30 million annually (or \$150 million) in research and education programs.
- Doheny has invested \$55 million since 1974 in vision research facilities/laboratories/programs.
- Los Angeles County Department of Health Services has invested \$356 million through the CPSA (1993-1998).
- USC physicians have provided more than \$60 million in tithes (1993-1998).
- USC Care Medical Group, Inc. has been the vehicle responsible for contracting and for coordination of approximately 30-35% of the business for physician practices.
- "Doctors of USC" marketing program initiated in 1996; logo now a registered trademark.
- "Doctors of USC" campaign received one of two AAMC awards in 1998, being recognized as a marketing campaign that successfully integrates separate physician and hospital entities at an academic medical center.
- USC Care patient web site developed.
- Integration of the billing system.

4. Strategic Initiative in Organization — Outcomes

- Centralized School leadership in Dean and Senior Vice President of Medical Care.
- Increased communications and interactions between Dean and the University President, Provost, other university administrative officers and Board of Trustees.
- Revised the organizational structure of Dean's Office, consolidating from a tier of 11 to 4 Associate Deans reporting directly to the Dean.
- Dean delineated the responsibilities of a clinical care organization (reporting to him as Senior Vice President) as separate from the academic organization.
- Trans-departmental Issues Task Force charged to evaluate various issues that cross departments and institutes; reported to Dean in 1995.
- Achieved a balanced budget for FY98.
- Surplus funds in 1998 prioritized for education (medical students).
- Budget limitations precluded merit pool for faculty salary increases from 1991-2000.
- Developed a School Web Site and Dean's Web Page.
- Created e-mail listserves for each department used to send information and announcements to faculty members.
- Revised School governance document.

5. Strategic Initiatives in Development and Fundraising — Outcomes

- Increased total giving (including current use funds) to the School from \$27.6 million in 1993 to \$46.3 million in 1998.
- School currently has 25 endowed chairs, with 13 established since 1993; also 11 endowed professorships, two established since 1993.
- Cancer Center direct mail program surpassed \$1 million in FY98, up from \$400,000 in FY93.
- Increased alumni giving participation rate from 14% in 1993 to 33.5% in 1998, the highest of all Schools at USC.
- "USC Health" reaches 95,000, and "Cancer Center Report" reaches 35,000 households.
- University recognized the role of the Keck School of Medicine — with the W. M. Keck Foundation providing the lead gift of \$110 million for a \$1 billion campaign over the next decade.

The Role and Mission of the University of Southern California

Our first priority as faculty and staff is the education of our students, from freshmen to postdoctorals, through a broad array of academic, professional, extracurricular and athletic programs of the first rank. The integration of liberal and professional learning is one of USC's special strengths. We strive constantly for excellence in teaching knowledge and skills to our students, while at the same time helping them to acquire wisdom and insight, love of truth and beauty, moral discernment, understanding of self, and respect and appreciation for others.

Research of the highest quality by our faculty and students is fundamental to our mission.

USC is one of a very small number of premier academic institutions in which research and teaching are inextricably intertwined, and on which the nation depends for a steady stream of new knowledge, art and technology. Our faculty are not simply teachers of the works of others, but active contributors to what is taught, thought and practiced throughout the world.

USC is pluralistic, welcoming outstanding men and women of every race, creed and background. We are a global institution in a global center, attracting more international

students over the years than any other American university. And we are private, unfettered by political control, strongly committed to academic freedom, and proud of our entrepreneurial heritage.

An extraordinary closeness and willingness to help one another are evident among USC students, alumni, faculty, and staff; indeed, for those within its compass the Trojan Family is a genuinely supportive community. Alumni, trustees, volunteers and friends of USC are essential to this family tradition, providing generous financial support, participating in university governance, and assisting students at every turn.

In our surrounding neighborhoods and around the globe, USC provides public leadership and public service in such diverse fields as health care, economic development, social welfare, scientific research, public policy and the arts. We also serve the public interest by being the largest private employer in the city of Los Angeles, as well as the city's largest export industry in the private sector.

USC has played a major role in the development of Southern California for more than a century, and plays an increasingly important role in the development of the nation and the world. We expect to continue to play these roles for many centuries to come. Thus our planning, commitments and fiscal policies are directed toward building quality and excellence in the long term.

Adopted by the USC Board of Trustees, February 3, 1993

THE MISSION OF THE KECK SCHOOL OF MEDICINE
OF THE UNIVERSITY OF SOUTHERN CALIFORNIA
To improve the quality of life for individuals and society
by promoting health, preventing and curing disease,
advancing biomedical research, and educating tomorrow's
physicians and scientists.