University of California, San Diego

IN DECEMBER 1959, a committee appointed by President Clark Kerr of the University of California reported that the establishment of a new medical school in or near San Diego was feasible and that community cooperation was assured. Those responsible for rebuilding the San Diego County General Hospital invited the Regents of the University to participate in planning the new hospital with a view toward its playing a major role in the proposed new medical school. In October 1962, the Regents decided that preclinical facilities and a University Hospital would be located on the newly developing La Jolla Campus of the University of California, San Diego, and that a significant portion of clinical instruction should take place at the county hospital. Subsequently, the Veterans Administration began to plan for a new hospital to be developed as an integral part of the La Jolla medical campus complex.

In July 1966, full operation of the county hospital was assumed by the University through an operating agreement with the County of San Diego, and the hospital is now officially designated as "University Hospital of San Diego County."

Meanwhile, in September of 1966, ground was broken for the first building for the school. It was scheduled for completion late in 1968. The building was designed to house the basic sciences facilities, the biomedical library and the administrative offices. Present plans call for the completion of a second building in early 1971 to house the clinical sciences facilities, and of a Veterans Administration hospital later the same year. The Campus Clinical Center should be ready in 1973-74. Thus the physical core of the School of Medicine is being established close to the new facilities of Revelle, John Muir and other UCSD colleges.

Reprint requests to: Dean's Office, University of California, San Diego, School of Medicine, La Jolla 92037.

Organization

The new School of Medicine and the general campus of the University are developing simultaneously, thereby providing unique opportunities for integration of the teaching and research of the two. The medical school academic master plan provides for assignment of some faculty positions to general campus departments for persons whose scientific interests relate to medicine and human biology. The faculty members occupy space in the School of Medicine, accept teaching responsibility within the medical curriculum, and create special courses or contribute to interdisciplinary teaching to emphasize aspects of their discipline most useful to medical students.

Nine medical school departments are being developed: Community Medicine, Medicine, Neurosciences (which includes a Division of Clinical Neurology), Obstetrics-Gynecology, Pathology, Pediatrics, Psychiatry, Radiology, and Surgery. Each of these departments has teaching responsibilities which extend over the four medical school years and through postgraduate training. An internship and residency training program is now under way at University Hospital.

The School of Medicine is surrounded by abundant learning resources representing all disciplines of a general university campus. Extensive interactions are being fostered between teaching and research activities of medical school departments and undergraduate and graduate programs of the general campus. Additional sources of strength are the San Diego County Medical Society, the Salk Institute for Biological Studies, the Scripps Clinic and Research Foundation, the Western Behavioral Sciences Institute, and the research programs of the San Diego Zoo. The University's Scripps Institution of Oceanography (SIO) is especially important. Among ships sent to all parts

of the world is Research Vessel *Alpha Helix,* designed expressly for the conduct of biomedical research in locations where challenging physiological problems of human, animal and plant life can best be studied.

The Basic Science Building, the Clinical Science Building, the Campus Clinical Center and the Veterans Administration Hospital will make up a closely integrated complex on the La Jolla campus. The Basic Science Building will house faculty of campus participating departments and certain divisions of medical school departments. The medical school departments will be located chiefly in the Clinical Science Building and in the hospitals. The Biomedical Library, included within the initial basic science construction project, will serve the faculty of the entire UCSD campus and the School of Medicine. The projected size for fall 1968 is 60,000 volumes and more than 3,000 periodicals.

Three hospitals will be utilized by the medical school. The University Hospital of San Diego County, located 13 miles south of the main campus, will provide students with a broad spectrum of health care problems. The UCSD Clinical Center in La Jolla will provide a patient group selected for research and teaching interest, and the Veterans Administration Hospital will further extend the range of clinical facilities for the school.

The Office of Learning Resources (OLR) of the UCSD School of Medicine has responsibility for effective teaching, including the devising and introduction of newer methods. Unlike the library, which is concerned with handling of knowledge in book or journal form, OLR produces, gathers, disseminates and stores non-printed informational materials. Components for presenting tactile, auditory and visual information are catalogued and available to faculty and students.

OLR also administers instructional areas of the medical school. As lecture halls and laboratories are to be electronically equipped and interconnected with computer facilities, it will be possible to introduce innovations and evaluative research in computer-based instruction and other techniques for more effective learning.

Curriculum

The main objective of the school's curriculum is to develop critical, objective and humane physicians who are equipped for changing conditions and continuing self-education. Each student is expected to acquire an understanding of basic medical sciences adequate to appreciate and utilize the vast new scientific resources available to modern medicine. Beyond this, students will be encouraged to concentrate on special areas of interest leading toward their special role in a diversified medical community. Each student will have access to the best facilities and counseling to exercise and strengthen his individual capabilities.

Curricular form and content, therefore, are to be adapted to the particular needs of each student. Advisers will examine each student's interests at entrance, help to refine his developing interests during the medical school years and provide a critical examination of alternative career objectives. The adviser will explore with the student the requisite courses of study, the best locales for these studies, and the influence of probable future social developments on his career objectives. A small-group tutorial system will be maintained throughout the four-year curriculum, designed specifically to encourage these explorations and definitions.

The curriculum is divided into two major parts: The core curriculum, and the elective programs. The core curriculum embodies those aspects of medical education deemed essential to every medical student regardless of background or ultimate career direction. It includes courses in biomathematics; cell biology and biochemistry; organ physiology and pharmacology; basic neurology; pathology and microbiology; gross anatomy, social and behavioral sciences; an introduction to clinical medicine in the first two years; clinical clerkships in the third year; and primarily elective training in the fourth year. At faculty option, students with advanced training in a core area may take additional advanced work in this or another area, may utilize available time to overcome deficits in preparation, or begin independent study.

Instruction in clinical medicine will begin early, with students being introduced to patients with diseases that illustrate subjects covered in the basic science courses. Students also begin to acquire the necessary clinical techniques during "Introduction to Clinical Medicine." Training in differential diagnosis and clinical medicine is condensed into the third year.

Core courses in clinical medicine include the major clinical specialties taught in hospital settings and out-patient situations, and may include extended care programs. A specific selection of subspecialties is determined by the student after consultation with his faculty advisers. Strong emphasis is

placed on methods for collating information to be used in clinical problem-solving.

Students also study the roles of medicine and physicians in society. Relevant course material is presented by medical school faculty, by instructors from other segments of the university, and by invited speakers.

The elective programs offer each student a set of choices suited to his unique background, ability and career objectives. Each student is expected to select a "Concentration Area" which combines those didactic and research experiences at UCSD or elsewhere which best suit his needs.

Purposes of the elective programs are to encourage and assist students to achieve their individual objectives as members of the medical profession; to provide concentrated preliminary training for careers in subdivisions of the medical profession, including academic research and teaching, health systems planning, public health, international medicine, or one of the many clinical specialties; to effect a match between career orientation, diversity of background and previous training.

The curriculum provides substantial elective opportunities, including experience in the process of investigation. Elective programs occupy approximately one-fourth of the total time in the first two years and two of the three quarters in the fourth year. Students are also expected to utilize at least two of the three summers toward completion of their elective major. The School of Medicine makes every effort to assist in placing students and obtaining financial support for summer work related to elective Concentration Areas. Work may be accomplished within the School of Medicine, on the general UCSD campus, or off-campus — wherever it may be done most effectively. A faculty committee on electives supervises individual programs.

Concentration Areas are conceived to be broad but definable topics relevant to career objectives. In some ways, the concept resembles a "major" in college but is considerably more flexible. A Concentration Area may include a number of formal courses or very little course work, and may commence in the first or second year. There may be emphasis on investigative experience first in apprenticeship and, ultimately, independent research. Work in a Concentration Area is expected to culminate in a written report ordinarily expected by the end of the fourth year as a requirement for graduation. This dissertation may be based upon laboratory or clinical investigation. It will be judged for scientific and scholarly merit, will be formally reviewed, and may be submitted for publication. Among the Concentration Areas at present under development, the following may be identified: Marine and Aerospace Biomedicine, the Neurosciences, Bioengineering for Medical Students, Developmental Biology, Health Systems and Administration, Microbiology and Infectious Diseases, Immunobiology and Transplantation, Genetics (including molecular and Medical Genetics), Experimental Surgery, Pathobiology, Cardiovascular Medicine, and Endocrinology and Metabolism. Additional programs, including particularly the clinical specialties, are also being developed.

UCSD School of Medicine plans to utilize comprehensive end-of-year examinations, graded only "pass" or "fail." The National Board Examinations will be required and should provide some external evaluation of the new programs.

The Charter Class

A Charter Class of outstanding students entered UCSD's School of Medicine in September, 1968. The 48 entrants were selected from well over a thousand applicants on the basis of scholastic ability, recommendations by their teachers, and at least three interviews with UCSD faculty members. The students are coming from 13 California colleges and 15 colleges outside California.

As undergraduates, members of the Charter Class accumulated a mean grade point average of 3.4 on a 4 point scale. The cumulative mean Medical College Admissions Test score was greater than the 80th percentile.

Several in the Charter Class have published the results of original work, and others have taken advanced training at one or another of the nation's scientific research institutions — Argonne National Laboratory, Scripps Institution of Oceanography, the Hopkins Marine Station, Woods Hole, and graduate departments in several universities. In addition to their scientific achievements, these young people show a striking assortment of talents and interests, especially in music, with well over half the class having advanced competence on a musical instrument.

Faculty

Under the leadership of Clifford Grobstein, Dean of the School of Medicine and Vice Chancellor for Medicine and the Biological Sciences, the

faculty of the UCSD School of Medicine has been expanded rapidly. At present, the full-time faculty in the participating and medical school departments numbers 70. Department chairmen have been appointed in the departments of Community Medicine, Medicine, Neurosciences, Pathology, Pediatrics, Radiology, and Surgery. Appointments in Psychiatry, and Obstetrics/Gynecology are expected shortly.

In addition to the full-time members, 16 distinguished scientists have joined the faculty as professors in residence. For the most part, they occupy positions at renowned institutions in the San Diego area. In numbers, the faculty has doubled in the past year and shortly will double again.

The combination of an outstanding faculty, magnificent facilities and an able and highly selected charter class augurs well for the launching of this newest of California's medical schools.

CLIFFORD GROBSTEIN, PH.D., Dean

CHOOSING THE SITE FOR BREAST BIOPSY

"I think it's always a good idea when you do an excisional biopsy [of the breast] to place it so that it's easiest to do a radical [mastectomy] after you've done the biopsy, even though you think it's a fibroadenoma or something similar. You can really put yourself into a difficult situation if you don't think ahead to the possibility of finding a carcinoma. So that ordinarily we try to make our biopsy central in the breast, central to the lesion—in other words, between the lesion and the nipple—so that we can get around that area with an en bloc excision later more practically."

—JEROME A. URBAN, M.D., New York City
Audio-Digest Surgery, Vol. 15, No. 17