Profiles of the Graduate Division, and the Schools of Dentistry, Medicine, Nursing and Pharmacy

Graduate Division Profile

The UCSF Graduate Division encompasses all graduate academic degree programs and all graduate students in the four schools. The Dean of Graduate Studies, Patricia Calarco, has the responsibility for the administration of graduate degree programs and is the institutional official responsible for the administration of Division affairs in accordance with academic policies established by the Academic Senate and the Graduate Council. The office of the Dean of Graduate Studies also has administrative responsibility for the appointment of postdoctoral scholars, the academic review of graduate programs, and dispute resolution involving graduate students and postdoctoral scholars.

The primary mission of the Graduate Division is to serve UCSF by supporting and improving its graduate programs while enhancing the educational experience of graduate students and postdoctoral scholars. The quality of graduate education is also enhanced by our goals of increased fund raising, increased local and national visibility of our graduate programs, and improved academic and private sector job opportunities for graduates and postdoctoral scholars.

The quality of UCSF graduate programs is inextricably linked to the reputation and endeavors of its research faculty. Thus, by specific efforts to improve the research enterprise we serve a broader function in improving the national visibility of the campus and enhancing our recruitment of top students. This is facilitated by intensive external program reviews, financial support of students and by centralizing much of the recruitment of disadvantaged students for the graduate programs. In the inter-disciplinary world of modern science, the Graduate Division also fosters the development of selected new graduate programs, and manages program growth in areas of state and national need, resulting in concomitant growth in faculty FTE.

Another important function in determining the success of our graduate and postdoctoral training programs involves careful monitoring of several measures, such as the fairness of access, the time to degree, the near and long–term placement of graduates. Other measures contributing to success include the climate a student encounters at UCSF, opportunities for teaching, and opportunities for academic enrichment, e.g., preparing for a qualifying exam, writing a dissertation or graduate, and improving job readiness skills.

The Graduate Division is the administrative home for admission, progression and advancement of graduate students, and, as well, has responsibility for the appointment of postdoctoral scholars and the development of campus policies affecting them. In support of its administrative functions, the Graduate Division strives to streamline the necessary procedures mandated by the University of California and the Western Association of School and Colleges, our accrediting body. Where possible, paper flow is minimized, information and forms are handled online, and web and email access are used for communication and monitoring of requirements.

The Dean of the Graduate Division shares overall responsibility for graduate academic matters and postdoctoral scholar appointments with the Graduate Council, a standing committee of the San Francisco Division of the Academic Senate. The Graduate Council helps to set polices and standards for admission to graduate status establishes policies related to graduate degrees, approves changes in degree requirements, and approves all graduate degree programs. The Graduate Division also pursues a number of joint goals with our Alumni Association, such as increasing job opportunities and broadening development efforts.

School of Dentistry Profile

The University of California, San Francisco (UCSF) School of Dentistry has a long and distinguished history as an institution dedicated to dental education. The School was established as the College of Dentistry by the Regents of the University of California on September 7, 1881 making it the first dental school west of the Mississippi Rover. The new dean of the School of Dentistry, John D. B. Featherstone, M.Sc., Ph.D., has been in the position since September 2008.

The School has four academic departments which house 19 academic divisions and programs. The School is organized into the departments of (1) Cell and Tissue Biology, (2) Oral and Maxillofacial Surgery, (3) Orofacial Sciences, and (4) Preventive and Restorative Dental Sciences. Each department participates in all aspects of university life, teaching, research and service.

Since the first DDS class graduated in 1882, the core mission of the School of Dentistry has been instruction in clinical dentistry, patient care, while maintaining a strong emphasis on public service. For example, following the 1906 San Francisco earthquake and fire the students and faculty from the School took volunteered to provide oral health care to the city's refugee population camped out in a tent city in nearby Golden Gate Park. The mission statement of the School, last affirmed in 2003, speaks to the core value of the profession, improving the health of the public, and is a follows:

> *The UCSF School of Dentistry seeks to improve public health through excellence in teaching, research, patient care, and public services in the dental and craniofacial sciences. We foster an inspired environment where individuals identify themselves as scholars and realize their scholarship through service as clinicians, educators, and scientists.*

The UCSF School of Dentistry has four specific goals approved by faculty and administration. These are assessed and evaluated on an annual basis and are as follows:

1) Continuous development and improvement of the UCSF Educational Program
2) Continuous growth and improvement of the UCSF Research Program
3) Service to the community
4) Maintenance of financial stability in the face of decreasing state support

The educational offerings include the four-year predoctoral dental education program, a sate-mandated international dentist program, and DDS/PhD and MS/PhD degree programs. Student class size in the predoctoral program is 88, with 24 international students joining them in both the third and fourth years. Admission is extremely competitive with more than 1200 applicants for the predoctoral program and 350 for the international dentist program. In 2006, the School established a concurrent DDS/MBA program with the University of San Francisco with 12 students currently enrolled.

The School of Dentistry operates 14 clinics at two sites in San Francisco, and has more than 120,000 patient visits per year. Comprehensive dental care services are provided, including complex oral and maxillofacial surgery, as well as care for special needs patients. Dental students study with both general dentist faculty, and specialist from all American Dental Association approved dental specialties. The dental students' clinical income amounts to approximately $13 million per year, and the UCSF dental students' clinical productivity is very high. In addition, the School of Dentistry maintains a community externship program in multiple sites around northern California for third and fourth year dental students that permits 45 days of clinical experience in various dental settings to care for underserved populations, particularly those in rural and inner city communities.

The School of Dentistry also contributes greatly to research and advancement in the field. The School is credited with many significant advancements and has been ranked first in federal funding support from the National Institutes of Health for the last 16 years.

UCSF dental graduates have demonstrated commitment to providing health care services; recent date indicated that 94% of School of Dentistry graduates over the last 20 years were in the clinical practice of dentistry, while 23% of them are practicing ADA-recognized specialties.

School of Medicine Profile

Consistently ranked among the nation's top medical schools, the UCSF School of Medicine earns its greatest distinction from its outstanding faculty - including at present two of UCSF's three Nobel laureates, 64 Institute of Medicine members, 49 American Academy of Arts and Sciences members, 31 National Academy of Sciences members, and 17 Howard Hughes Medical Institute investigators.

The school is comprised of 27 academic departments, 9 organized research units, and 8 interdisciplinary research centers at seven major sites throughout San Francisco and in Fresno.

The UCSF School of Medicine is one of five medical schools in the University of California system, but it is the only one that — along with schools of dentistry, nursing and pharmacy — occupies a campus dedicated exclusively to the science and teaching of health care.

U.S News & World Report ranks the school in the top 10 both for its research training and its primary care training – one of only three universities in the country to do so, and the only one in California. UCSF ranks fifth in the quality of its research training and sixth in its primary care training.

The medical school also ranks among the top 10 in all of its clinical specialties and its science specialty programs.

Mission

The UCSF School of Medicine strives to advance human health through a fourfold mission of education, research, patient care and public service.

History

Founded in 1864 as Toland Medical College, the school became part of the University of California in 1873. In 1898, the school moved to its present Parnassus Heights campus, on land donated by San Francisco mayor Adolph Sutro. The first UC hospital opened here in 1907, growing into Moffitt-Long Hospitals and Children's Hospital. These facilities, together with Mount Zion Hospital, now comprise the UCSF Medical Center. UCSF faculty have also treated patients and trained students at San Francisco General Hospital since the school's founding 144 years ago.

Facts & Figures 2008

Highlights

- Founded as Toland Medical College in 1864
- Affiliated with University of California in 1873
- Occupying seven major sites in San Francisco and Fresno with:
    - 27 academic departments
    - 9 organized research units
    - 8 interdisciplinary research centers
- Ranked by *US News & World Report** fifth overall in quality of research training and sixth nationally in quality of primary care training
- Consistently ranked among top US medical schools by NIH dollars awarded
- Ranked first for active patents in UC system
- Ranks among the top 10 in seven of eight medical school specialty programs, including first in AIDS medicine, second in women's health, and third in internal medicine*.

Recent Accomplishments & Innovations

2008: The pioneering Pathways to Discovery program offers students in-depth training for careers of inquiry, discovery and innovation in five crucial areas.

2007: The Program in Medical Education for the Urban Underserved (PRIME-US) expands medical school enrollment to educate and inspire new physicians to address health disparities.

2006: UCSF Institute for Regeneration Medicine launched, comprising the existing Program in Developmental and Stem Cell Biology and the Program in Craniofacial and Mesenchymal Biology.

2004: The Institute for Human Genetics established.

2003: Genentech Hall opens the 43-acre Mission Bay campus, one of the most advanced health sciences centers in the world, now with three research buildings and a 160,000 sq. ft. community center.

2002: National Center of Excellence in Women's Health opens a dedicated 8-story Women's Health Center.

2001: New medical school curriculum and the Academy of Medical Educators are instituted. Both are now national models for medical education and for faculty development.

1999: Cancer Center designated by the National Cancer Institute as Comprehensive Cancer Center, the first in Northern California.

1997: Nobel Prize awarded for the discovery of prions.

Faculty & Staff

Faculty	
Full-Time	1,839
Part-Time	80
Volunteer	3,118
Staff	
Non-Faculty Academics	704
Staff employees	4,914
Scientific Society Memberships	
American Academy of Arts & Sciences	49
Howard Hughes Medical Investigators	17
Institute of Medicine	64
National Academy of Sciences	31

Research Indicators

NIH Dollars (in millions)	NIH Grants	$396
Active patents, US		828
Active patents, foreign		755
		1,008

Total Operating Budget **$1,372 million**

Tuition & Fees	1%
State Appropriations	7%
Extramural Grants & Contracts	39%
Practice Plan	27%
Gifts & Endowments	7%
Hospital Agreements	6%
SFGH Affiliation Contract	6%
Sales & Services	4%
Other	3%

Student Composition

School of Medicine Admissions		
Applications Received		6,233
Interviews Granted		529
Students Accepted		251
2007 Entering MD Students		**147**
Total MD Students PhD/MS. Students		594 680
Mean Undergraduate GPA MCAT Score (Average		3.73
Composite) Underrepresented Minorities Women		11.4
California Residents		35%
		59%
Tuition & Fees California Residents Out-of-State Residents		80%
		$23,438
		$35,683

GME & Postdocs

Residents	754
Clinical Fellows	442
Postdoctoral Scholars	1,100

CME Students

Live Course Students Grand Rounds Students	14,357 3,572	9,255
Home Study Students		

Facilities (at 9 sites)

Educational Space (shared) Research Space	58,855 ASF	937,800 ASF

Affiliated Hospitals & Training Sites

Licensed beds/annual ambulatory care visits

UCSF Medical Center (Parnassus, Children's & Mount Zion Hospitals) San Francisco General Hospital San Francisco VA Medical Center Langley Porter Psychiatric Institute Fresno Medical Education Program	706/695,640 686/506,000 124/382,619 67/30,000 Multiple sites

Alumni & Development

Total Alumni Alumni Association Membership Alumni Gifts (cash) Total Gifts (cash) Endowment (Market Value)	7,301 3,290 $2,243,47 6 $170,029,732 $1,063,166,321	

**Source: US News & World Report Best Graduate Schools 2009*

School of Nursing Profile

Updated December, 2006

Dean: Kathleen Dracup, RN, FNP, DNSc, FAAN

Founded in 1939 as the first autonomous School of Nursing in any state University. The School of Nursing has 5 of 7 specialties ranked among the top 2 by the US News and World Report, and ranks first in NIH funding nationwide. It is designated as a World Health Organization Collaborating Center in Nursing and is one of five John Hartford Centers for Geriatric Nursing Excellence. Its Master's curriculum is used as a model for national standards and has received the Pew Primary Care Award.

The PhD program, the first doctoral degree offered by a School of Nursing west of the Mississippi, includes 120 doctorally prepared faculty of whom 48 actively support the doctoral program. In Fall of 2006, enrollment stood at 76 Master's Entry Program in Nursing (MEPN) students (i.e., prelicensure students), 367 master's students, 152 nursing PhD students, 33 sociology PhD students, for a total of 627 matriculated or degree-bound students. For the 2005-2006 academic year there were 10 NIH Individual Fellowship awardees, 10 postdoctoral fellows supported by a variety of sources, and a number of Special Studies and Post-Master's students, all non-degree bound. On average the School admits 76 Master's Entry Program in Nursing students, 150 master's students, 7 sociology PhD students, and 30 nursing PhD students. In addition to NIH support of pre and post doctoral students/fellows, the School provides financial support through other types of research training awards.

The School earns its greatest distinction from its outstanding faculty - 7 endowed chairs with an additional chair to be announced in June of 2007, 31 current and 15 emeriti faculty who are Fellows of the American Academy of Nursing, and 8 members of the Institute of Medicine. The latter achievement is unequaled by any other School of Nursing. The School is comprised of 4 academic departments, Community Health Systems, Family Health Care Nursing, Physiological Nursing and Social and Behavioral Sciences; and an organized, interdisciplinary research unit, the Institute for Health & Aging. The School of Nursing manages and/or practices in a number of clinical facilities that address the needs of the underserved in San Francisco - Valencia Health Services (primary care and pediatric services in the Hispanic community), Glide Memorial Methodist Church Primary Care, the Progress Foundation residential care facilities in San Francisco, The Mission Neighborhood Community Health Clinic, and the Young Women's Clinic at UCSF/Mt. Zion Medical Center.
The administrative structure of the School includes Associate Deans for Academic Programs, Academic Affairs, Research, International Programs, and Administration who report to the Dean. In addition, each of the five units identified above also report to the Dean. A Center for Symptom Management promotes cross departmental and multidisciplinary research focusing on interventions to prevent and alleviate symptoms; a Center for Research and Innovation in Patient Care focuses on patient safety, nurse staffing effectiveness, and strategic performance improvement through collaboration with partners. A number of other centers of research excellence investigate significant problems in acute and chronic care, and policy.

Office of Research
UCSF School of Nursing has an Office of Research that includes the Associate Dean, (Geraldine Padilla, PhD), Director, (Robert Slaughter, PhD); a Principal Statistician (Steven Paul, PhD); a Senior Statistician (Bruce Cooper, PhD); a Director of Strategic Research Development (Steven Glotzbach); an Analyst (Sharon Lee) with Contracts and Grants training, a Programmer Analyst II (to be hired), a Programmer Analyst I (Kenneth Killion), and a Computer Resource Specialist (Diane Heininger). The goal for Office of Research is to facilitate the nursing research enterprise by offering programs and resources to support faculty and staff in the development, submission, conduct and publication of research.

Space for the School of Nursing is distributed as follows. Research space, including research labs, offices, and service areas is at 20,484 ASF, Academic Office space is at 12,991 ASF. The total School of Nursing space is 65,007 ASF which includes classrooms, administrative, learning labs, and other such non research or academic office space.

A. Research Resources

An array of resources is in place or being developed: (1) Mentorship of faculty to assist them with the proposal preparation and post award scientific and administrative management processes. This includes grant writing working groups and presubmission grant peer reviews. (2) Templates to assist with proposal submission and post award implementation and management of research projects. (3) Archives of successful research and training grants for others to use as models. (4) Development of a Research Office Web page with research resources for use by School of Nursing faculty and staff. (5) Development of programs to orientation and assist research staff in grants management, data collection and management, protection of research subjects and other relevant activities. (6) Design and methods workshops for faculty development. (7) Editorial assistance for manuscript writing. (8) Tailored announcements of grant opportunities. (9) Regular reports of the research status of the School. (10) Development of research space and research core facilities. (11) Workshops for pre and postdoctoral NRSA submissions. (12) Visiting scholars and other regular scholarly exchanges between faculty, research staff and students.

B. Computer Resources

Computer staff develop and maintain the School's computing infrastructure and carry out the School's programming needs, including web page construction and maintenance, while statisticians provide analytical and design consultation. While the specific computer programming needs of the study will be met by grant supported personnel, UCSF provides a rich environment to support the data management activities as follows:

1. Information Technology Services:

The UCSF Information Technology Services (ITS) unit provides a campuswide high-speed network infrastructure, which allows investigators to access a wide variety of computing technologies. Because the UCSF campus is geographically diverse, ITS uses a high speed SONNET Ring backbone infrastructure to allow virtually instantaneous access to campus computing resources from any campus location, including a number of clinical facilities affiliated with UCSF. The computing capabilities of the campus are constantly growing and expanding. Computing resources are conveniently located throughout the campus.

2. Computer Resources Laboratory:

The UCSF School of Nursing houses a Computer Resources Laboratory. This facility functions as a computing classroom for various types of academic coursework, workshops and staff development activities, as well as an open laboratory for faculty and student computing needs. The lab houses 15 general use Dell 800 MHz Pentium III computer systems, a teacher's console, a projection system with a touch sensitive SmartBoard, and a voice-enhanced workstation specifically designed to accommodate users with special needs. All computers are networked to a high-speed fiber-optic backbone for Internet access. The laboratory is staffed by UCSF School of Nursing doctoral students, and maintained by Office of Research computer support staff. All computers in the laboratory are equipped with standard office and academic productivity software. Additional software includes SPSS, for general statistical analysis, AMOS for Structural Equation Modeling, and nQuery for statistical power analysis. Workshops and short courses on various academic computing topics are given frequently in the Computer Resources Laboratory, and grant staff will have access to them at no- or low-cost. In summer of 2005 Atlas-Ti software for analysis of qualitative data will be added and hardware will be updated.

3. Interactive Learning Center:

Located in the UCSF Library, the Interactive Learning Center (ILC) provides computer services (70 desktop computers, slide-makers, scanners, color and laser printers) and UCSF intranet and internet access for UCSF students and faculty in nursing, medicine, dentistry and pharmacy. In addition, it maintains a small facility that allows 24-hour student access to laptop network ports and 5 computer workstations. In addition, the ILC holds classes throughout the year on such topics as statistical software (SPSS, SAS), reference software (EndNote), Galen, Melvyl/MedLine, Internet, and Netscape Communicator, which are available to all grant staff.

C. Biostatistical Support

Drs. Steven Paul and Bruce Cooper provide statistical assistance to faculty and students in developing their research design, methods and analysis plans, as well as data management strategies. Additionally,

biostatisticians from the Department of Epidemiology and Biostatistics, from the Cancer Center, from the GCRC and PCRC are also available to faculty.

D. Research Project Development Support

Steven F. Glotzbach, PhD, is Director of Strategic Research Development. He assists faculty with the preparation and editing of research grants for submission to NIH and other Federal and State entities, Foundations, and other venues. He assumes the role of a Study Section reviewer in critiquing material before submission.

UCSF School of Pharmacy

The School of Pharmacy at the University of California, San Francisco is a changing, many-faceted academic, research, and clinical enterprise whose energies are focused on maximizing health and well-being through research, clinical care, graduate-level and post-graduate education, and public service as they relate to therapeutics. It is the top-ranked pharmacy school in the US, as measured independently by academic quality, and perception, funding and publications. The School receives more research funding from the National Institutes of Health than any other pharmacy school in the US. As a measure of the School's excellence in chemistry, UCSF's federal funding for chemical research and development is among the highest in the US. Four of the School's 89 faculty members have been elected to the Institute of Medicine and two to the National Academy of Sciences.

Mission

The School of Pharmacy at the University of California, San Francisco is dedicated to improving human health worldwide and advancing scientific discovery. The School:

- Conducts exceptional *pharmaceutical research*, including basic science, translational science, clinical science, health policy, and health services research.
- Delivers world-class *education* to our Doctor of Pharmacy, graduate, postdoctoral students, and others.
    - We educate PharmD students to be leaders and effective team members in health care and to be lifelong experts in the safe and effective use of medicines.
    - We educate graduate students to be outstanding researchers across the spectrum from the basic to the health sciences.
    - We provide strong postdoctoral training.
- Develops and delivers outstanding and innovative *pharmaceutical care*.
- Serves the *community* by sharing our expertise with the public, industry leaders, and policy makers.

We achieve these goals within a culture of understanding, inclusion, equity, and respect. We recruit and support faculty members, staff, and students who are diverse in gender, age, race, ethnicity, religion, sexual orientation, and socioeconomic status. We have a particular commitment to historically excluded populations who are currently underrepresented.

The missions of the UCSF School of Pharmacy departments of biopharmaceutical sciences, clinical pharmacy, and pharmaceutical chemistry fall under the broader umbrella of the School's mission statement. The School supports the larger missions of the University of California, San Francisco and the University of California.

Plans

The School operates under a faculty-vetted strategic plan that both realizes the School's mission and focuses energies toward common goals. The first School strategic plan was developed in 1999. An energetic new plan now guides the School. Entitled *Pressing Ahead in New Directions: Strategic Course 2007-2012*, the plan outlines a framework for how the School will:

1. Create a new framework for drug discovery and development.
2. Ensure that more patients get the best results from their drugs.
3. Shape the future of pharmacy science, policy, education, and patient care by working in fresh and collaborative ways.

The School's plan supports the current UCSF campus strategic plan, entitled *Advancing Health Worldwide*.

Select School Accomplishments

- **Top-ranked pharmacy school in the United States.** The UCSF School of Pharmacy is a national leader, as measured by academic quality and perception, funding, and publications.
- **Recipient of more National Institutes of Health (NIH) research funding than any other pharmacy school in the United States, every year since 1979**. The success of the School's NIH funding among its peers reflects on its exceptional science faculty.
- **Among the top university recipients of federal chemical research and development (R and D) funding.** The success of the School's chemical R and D funding is a direct reflection of the quality of its chemistry science.
- **Four elected members of the Institute of Medicine, and two elected members of the National Academy of Sciences.** The School is well represented in prestigious national professional organizations, despite the fact that only 62 percent its faculty positions are funded by the State of California.
- **First to train pharmacists as drug therapy specialists and not simply drug dispensers.** This philosophical and academic shift positioned pharmacists as "clinical pharmacists" who, as active members of the health care team, began to work side by side with physicians and nurses to provide direct care to patients and consultation to patients' families.
- **Innovators today of a three-pathway Doctor of Pharmacy (PharmD) curriculum**. In order for pharmacists to meet today's changing health care needs, pharmacy school curricula must be farsighted and continually refreshed.
- **Leader in establishing how to critically evaluate and make the best use of health care information and scientific research**. The best practices by physicians and other health care providers are based upon applying accurate, unbiased information.
- **First to develop computer-based molecular docking software program, called DOCK, that calculates and displays in three dimensions how potential drugs might attach to target molecules.** Computer-based approaches speed drug development by more efficiently "sorting out" or "screening" from millions, and billions, of chemicals those compounds that have the best potential for drug development.
- **First to establish a physiological basis for describing drug distribution in the body by introducing the concept of drug "clearance."** Accurate calculations of how rapidly a drug is cleared from the body are key to understanding how much drug is active in the body at a given time and hence the most effective dose for a patient.
- **Described, through the application of sophisticated nuclear magnetic resonance (NMR) techniques, important protein structures in AIDS and fatal neurodegenerative diseases, such as mad cow disease.** The power of NMR and other techniques to "see" the architecture of molecules involved in disease makes it easier to determine how to rationally design drugs that bind to, or incapacitate, those molecules.
- **Revealed a deeper understanding of the principles of how proteins adopt their structures.** The ability to predict protein shape will speed the pace of scientific discovery and drug development.

School Profile November 2008

The individuals who make up the School community and the diverse programs in operation within the School are all geared toward carrying out the School's mission.

Dean
Mary Anne Koda-Kimble, PharmD

Departments
Biopharmaceutical Sciences: Kathleen M. Giacomini, PhD, Chair
The department of biopharmaceutical sciences sets the stage for the discovery and development of new drugs to challenge disease. Faculty members explore a breadth of studies in the pharmaceutical sciences, while emphasizing work in pharmacokinetics, pharmacodynamics, biopharmaceutics, drug delivery, systems biology, and the computational sciences. Much work focuses on pharmacogenomics and bioinformatics. Faculty members are deeply invested in translational science.

Clinical Pharmacy: B. Joseph Guglielmo, PharmD, Chair
The department of clinical pharmacy promotes the rational use of drugs that are effective, safe, and cost effective. Service and research activities are broad. The department faculty can be found providing direct pharmaceutical care to patients; studying effective ways to control the overuse or misuse of drugs; exploring the effectiveness of electronic prescribing or dispensing devices; evaluating the clinical, social, and clinical outcomes of drug therapy; analyzing the physiological disposition of drugs; and advising legislators on the cost of drug benefits for the elderly. Faculty members in this department work to translate science into clinical care, prevention, and policy.

Pharmaceutical Chemistry: James Wells, PhD, Chair
The department of pharmaceutical chemistry focuses on molecules and is constantly learning more about molecules to help solve biological problems. These problems may be disease related — ranging from asthma to AIDS — or pertain to a better understanding of normal biological processes. The department uses chemistry and highly sophisticated physical techniques, such as nuclear magnetic resonance, mass spectrometry, computational drug design, and robotic synthetic chemistry, in its work. Recent work focuses on emerging sciences such as nanoscience and synthetic biology.

Select Areas of Foci and Expertise

Science Specialties
- Bioengineering
- Bioinformatics
- Bioorganic chemistry
- Biomaterials
- Chemical biology
- Computational chemistry and biology
- Drug delivery systems
- Drug discovery and design
- Drug metabolism and transport
- Gene delivery and therapy
- Mass spectrometry
- Molecular targeting
- Nuclear magnetic resonance
- Personalized medicines
- Pharmaceutical technology
- Pharmacokinetics and pharmacodynamics
- Pharmacogenomics and toxicogenomics
- Protein engineering
- Proteomics
- Structural biology
- Systems biology
- Systems pharmacology
- Synthetic biology
- Toxicology

Clinical Specialties
- Anticoagulation
- Cardiology
- Complimentary and alternative medicine
- Critical care
- Diabetes
- Drug testing and doping control in sports
- Endocrinology
- Family practice / primary care
- Gastroenterology
- General medicine
- Geriatrics
- Hematology and oncology
- HIV/AIDS
- Infectious diseases
- Investigational drugs
- Neurology
- Pain management
- Pediatrics
- Pharmacokinetics
- Psychopharmacology
- Respiratory medicine
- Surgery
- Solid organ transplant
- Tobacco control and cessation
- Toxicology / poison control
- Women's health

Pharmacy Practice
- Compounding
- Consumer self care
- Disparities in health care
- Drug safety
- Food and drug law and regulations
- Health communications
- Managed care
- Models of effective pharmacy practice
- Patient compliance
- Pharmacogenomics
- Pharmacy administration
- Pharmacy informatics
- Pharmacy law and ethics
- Prescription drug policies
- Pharmacoepidemiology and general epidemiology
- Systems design and organizational change

Clinical Pharmacy Education
- Models of pharmacy education -- didactic and experiential
- Cultural competence

Health Policy and Outcomes
- Disparities in health care
- Evidence-based health care
- Food and drug law and regulations
- Health economics
- Drug safety
- Publication bias
- Tobacco policy

Medication Outcomes
- Evidence-based use of medications
- Medication compliance models
- Pharmacy practice and care
- Medication therapy management
- Safe and effective use of medications
- Applied pharmacoeconomics

Academic Programs

Professional Program: The PharmD (Doctor of Pharmacy) degree at the UCSF School of Pharmacy is a full-time, four-year professional program. All students take a required core curriculum and select an emphasis in one of three pathways: Pharmaceutical Care, Pharmaceutical Health Policy and Management, or Pharmaceutical Sciences. The School supports and cultivates students' active involvement in the profession through community service and leadership at the campus, local, state, and national levels. The program is accredited by the Accreditation Council for Pharmacy Education.

Graduate Programs: The School is closely involved with the administration and teaching of five specific graduate programs, and faculty members participate in many other programs.

Doctor of Philosophy (PhD) Programs
- Biological and medical informatics
- Chemistry and chemical biology
- Pharmaceutical sciences and pharmacogenomics
- Biophysics
- Bioengineering

Postdoctoral Programs
- Postdoctoral Professional Residencies in pharmacy specialty areas
- Postdoctoral Fellowships
- Visiting Professorships

UCSF School of Pharmacy faculty is also involved in a variety of Continuing Education Programs.

Research Programs, Facilities and Services:

The expertise of the School's faculty is reflected in its research programs, facilities, and services:

- Biomolecular Resource Center
- California Poison Control System
- Center for Consumer Self Care
- Center for Drug Development Science
- Center for Pharmacogenomics
- Computer Graphics Laboratory
- Drug Product Services Laboratory
- Drug Research Unit
- Drug Studies Unit
- Mass Spectrometry Facility
- Medication Outcomes Center
- Molecular Design Institute
- Nuclear Magnetic Resonance Laboratory
- Partners in D
- Peptide and DNA Synthesis / Sequence Analysis & Consulting Service
- Program for Pharmaceutical Economics and Policy Studies
- Small Molecule Discovery Center
- The San Francisco Cochrane Center

Numbers

UCSF School of Pharmacy salaried faculty, staff, administrators, fellows, and residents

	Not International	**International**	**Total**
Faculty Salaried	100	2	102
Faculty Without Salary	684	1	685
Fellows	43	59	102
Residents	15	1	16
Staff	263	2	265
Academic appointees	56	35	91
Total	1,161	100	1,261

Students

Doctor of Pharmacy Students	486 total (currently enrolled)
Pharmaceutical care pathway	190
Pharmaceutical Health Policy and Management pathway	24
Pharmaceutical science pathway	23
Not yet assigned to a pathway (1st & 2nd Year students)	249
PhD Students	
Biological and medical informatics	31
Chemistry and chemical biology	51
Pharmaceutical sciences and pharmacogenomics	48
Biophysics	60
Bioengineering (UCSF Home Campus)	62

Alumni (living)

PharmD (includes BS)	5,465
MS	25
PhD	636

Funding

The UCSF School of Pharmacy has an operating budget in FY 2008 of more than US$66 million. As with the University of California in general, the UCSF School of Pharmacy is state-assisted, not fully state-funded. In addition to state general funds, funding sources include federal contracts and grants, private contracts and grants, state and University contracts and grants, industry-sponsored clinical trials, private gifts, and interest from endowments, student professional fee income, indirect cost recovery funds, and revenue from faculty professional fees and School services.

FY 2008 — Percent of Total Expenditures by Fund Source

California Poison Control System	$	9,879,464.25
California State General Funds	$	10,025,345.45
Federal Contract and Grants	$	22,159,505.80
Other Contracts and Grants	$	7,600,832.99
Indirect Cost Recovery Funds	$	1,457,945.60
Student Professional Fee Income / Continuing Education	$	6,092,149.56
Private Gifts	$	2,342,320.66
Faculty Professional Fees and School Services	$	8,834,429.84
Total	$	68,391,994.15