

School of Pharmacy Profile

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 medicines. 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 receives more federal funding for chemical research and development than any university in the US. Four of the School's 95 faculty members have been elected to the Institute of Medicine and one to the National Academy of Sciences.

Mission

The School of Pharmacy at the University of California, San Francisco is dedicated to maximizing human health and well-being by educating doctoral and postdoctoral students in pharmacy and in the pharmacy-related sciences, advancing scientific discovery, caring for patients, serving the public, and advocating on the public's behalf. The School takes seriously its specific responsibilities to:

- **Sustain a culture of understanding, inclusion, equity and respect** for the perspectives that all individuals bring to the teaching, learning, research, and patient care environments.
- **Recruit and encourage a faculty, staff, and a student body that reflect diversity** in gender, age, race, ethnicity, religion, sexual orientation, and socioeconomic status; and by their make-up demonstrate our commitment to individuals from historically underrepresented minority groups.
- **Draw upon the breadth of our School's diverse clinical community** to better reduce racial, ethnic and socioeconomic disparities in health.
- **Educate PharmD professional students** as compassionate, innovative, flexible leaders in the pharmaceutical care of individual patients and the community as a whole, clinicians who think independently while working collaboratively and who demonstrate a commitment to the lifelong learning required to remain experts in the safe and optimally effective use of drug products in patients

- **Educate PhD graduate students** to understand and apply concepts, work collaboratively, and think beyond the scope of their specific disciplines in order to become accomplished scientists who are experts and leaders in drug discovery and development
- **Recruit and develop effective, dedicated, scholarly teachers** who inspire their students to pursue lifelong learning in the health sciences and work in the service of human health
- **Conduct exceptional basic science, translational science, clinical science, health policy, and health services research**, which leads to important scientific understandings, innovative drug products, effective clinical practices, and public policies that illuminate knowledge about drug action and advance human health
- **Provide the public and health system with the specialized clinical pharmacy care and information it needs** to optimize the therapeutic use of drugs and reduce the risk of adverse drug events
- **Serve the community** through public service activities that anticipate and meet the pharmacy information needs of the public, so that individuals can make more informed decisions about their own health
- **Catalyze and clarify new perspectives** on pharmacy-related issues within academia, business, industry, health care, and government in order to advance the field of pharmacy for the benefit of the public
- **Teach health care providers** about new developments in pharmacy that affect health sciences education, patient care, and the health of our communities
- **Defend the health of the public** by sharing evidence-based opinions with policy-makers, health care providers, and health care system and industry leaders, and
- **Champion interdisciplinary approaches** to pharmacy questions in order to promote new scientific discoveries and to teach and care for the public more effectively and efficiently.
- **Collaborate with colleagues worldwide** to gain new insights and ultimately improve the health and well-being of the world we share.

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 will be completed in late summer 2007. It will emphasize the importance of fundamental science to the development of a much-needed new framework for drug discovery and development; the translation of the School's work to exceptional pharmacy care for patients, and the importance of working in new ways.

School Profile January 2007

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

Thomas L. James, PhD, Chair

The department of pharmaceutical chemistry focuses on molecules and is constantly learning more about them to help solve biological problems. These problems could 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

Antimicrobial drug management

Bioinformatics

Bioorganic chemistry

Chemical biology

Clinical pharmacy

Computational chemistry

Computer-based drug discovery

Consumer self care

Drug discovery and development sciences
Drug design and delivery
Drug information systems
Drug metabolism and transport
Health communications
Health policy
Health services research
International research and education partnerships
Education and training methodology
Gene delivery/therapy
Mass spectrometry
Medication therapy management
Microfluidics
Molecular targeting
Nanoscience
Nuclear magnetic resonance
Pharmaceutical economics, outcomes, and policy
Pharmaceutical technology
Pharmacogenomics and toxicogenomics
Pharmacokinetics/pharmacodynamics
Pharmacy administration and practice modeling
Poison control systems
Prescription drug access
Proteomics
Protein engineering
Psychopharmacology
Statistical genetics/genomics and evolutionary and comparative genetics
Structural biology
Synthetic biology
Systems biology
Tobacco cessation
Toxicology
Translational research

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 administered by the Office of Student & Curricular Affairs (OSACA) and accredited by the Accreditation Council for Pharmacy Education.

Graduate Programs: The School is closely involved with five graduate programs and either administers or jointly administers three of these. Faculty members look forward to participating in a new graduate program, the Integrated Program in Complex Biological Systems:

Doctor of Philosophy (PhD) degrees in:

- Biological and medical informatics (administer)
- Chemistry and chemical biology (co-administer)
- Pharmaceutical sciences and pharmacogenomics (administer)
- Biophysics
- Bioengineering

Postdoctoral Programs

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

Continuing Education Programs

Major Research Facilities and Services

Biomolecular Resource Center

Computer Graphics Laboratory

Confocal Microscopy Facility

Molecular Design Institute

Nuclear Magnetic Resonance Laboratory

National Bio-Organic, Biomedical Mass Spectrometry Resource

Small Molecule Discovery Center

The Sequence Analysis and Consulting Service

Major Instructional Facilities

Basic Science Instruction Center

Thomas A. Oliver Informatics Resource Center

Select Established Programs

California Poison Control System

Center for Consumer Self Care

Center for Pharmacogenomics

Corporate Scholars Program

Drug Information Analysis Service

Drug Products Service Laboratory

Drug Research Unit

Drug Studies Unit

Pharmaceutical Economics and Policy Studies

The San Francisco Cochrane Center

Numbers

Salaried faculty, staff, administrators, fellows, and residents

	Not International	International	Total
Faculty Salaried	90	5	95
Faculty Without Salary	638	6	644
Fellows	26	46	72
Residents	15	1	16
Staff	225	9	234
Academic appointees	32	44	76
Graduate Student Employees	158	4	162
Total	1,184	115	1,299

Students

<i>Doctor of Pharmacy Students</i>	488 total (currently enrolled)
Pharmaceutical care pathway	193
Pharmaceutical Health Policy and Management pathway	41
Pharmaceutical science pathway	10
Not yet assigned to a pathway (1 st & 2 nd Year students)	244

PhD Students

Biological and medical informatics	30
Chemistry and chemical biology	51
Pharmaceutical sciences and pharmacogenomics	51
Biophysics	60
Bioengineering	178

Alumni (living)

PharmD (includes BS)	4,849
MS	25
PhD	396

Funding

The UCSF School of Pharmacy has an operating budget in FY 2006 of almost US\$58 million, compared to almost US \$44 million in 2000. 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 2006 — Percent of Total Expenditures by Fund Source

California Poison Control System	\$ 9,001,421.00
California State General Funds	\$ 9,460,783.92
Federal Contract and Grants	\$ 17,386,636.74
Other Contracts and Grants	\$ 5,896,493.08
Indirect Cost Recovery Funds	\$ 762,735.35
Student Professional Fee Income / Continuing Education	\$ 5,873,622.34
Private Gifts	\$ 3,078,228.15
Faculty Professional Fees and School Services	\$ 6,480,507.18
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Total	\$ 57,940,427.76
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