

April 30, 2025

Dear Drs., Mitrovic, Beatty, Cocohoba, Clinard,

Re: Proposal for a PharmD/MS in Clinical and Epidemiological Research in Dual Degree Program

We are writing to express Graduate Division's support for the proposed PharmD/MS in Clinical and Epidemiological Research Dual Degree Program. The program leadership makes the case for how this program is strategically aligned with the growing demand for clinician-scientists capable of navigating the interface between advanced patient care and rigorous, data-driven research.

Potential Strengths of the Program

The primary aim of the PharmD/MS in Clinical and Epidemiological Research Dual Degree Program is to train future clinician-scientists equipped with both advanced patient care skills and meticulous training in clinical and epidemiological research methods. By combining robust clinical training with advanced methodological instruction in biostatistics, implementation science, health outcomes research, and pharmacoepidemiology, program leaders propose to offer a transformative educational model. Specifically, the program seeks to integrate the strengths of UCSF's PharmD and MS curricula to prepare graduates who can critically evaluate and apply research to improve healthcare outcomes, influence policy, and lead innovations in drug discovery, development, and implementation. Moreover, the dual degree is designed to train future leaders who can integrate pharmaceutical sciences, clinical pharmacy practice, and epidemiological research methods to improve public health outcomes. By combining this coursework with hands-on clinical practice and mentored research, the program intends to produce professionals who are well-positioned for impactful careers in academia, government, industry, and health systems.

Historically, dual PharmD/MS programs have emerged as a response to the expanding role of pharmacists in healthcare. While earlier models paired the PharmD with an MBA or MPH to enhance administrative and community health competencies, program leadership assert that this proposed PharmD/MS is the first to offer Clinical Research in Epidemiology in the US where they will merge pharmacy education with the analytical rigor of epidemiological research. The School of Pharmacy's (SOP) addresses this longstanding gap by proposing to deliver a deeply integrated curriculum that not only emphasizes patient-centered care but also trains students to generate and apply high-quality evidence in clinical and regulatory contexts. Program leaders also assert that the inclusion of training in decentralized clinical trials, real-world data analytics, and data science reflects the most current trends in clinical research.

UCSF and SOP is uniquely positioned to lead this initiative, given its long-standing reputation for excellence in pharmacy education, its unparalleled record of NIH funding, and its multidisciplinary strengths across SOP and SOM. The program's design leverages existing infrastructure and faculty expertise while introducing innovative components such as integrated research experiences and longitudinal clinical rotations.

The recruitment and diversity strategies outlined in the proposal are also commendable. The proposal highlights several pipeline programs aimed at supporting diversity and preparing underrepresented students for entry into the PharmD/MS Dual Degree Program. These include the Pharmacy Post-Baccalaureate Program, which enhances academic readiness for pharmacy school applicants from disadvantaged backgrounds; the Pharm Tech to PharmD Pathway, which assists pharmacy technicians in transitioning to pharmacist careers; and the UC Merced–UCSF BS to PharmD Program, which fosters early engagement with students from a medically underserved region.

Additional outreach efforts include participation in the Summer Undergraduate Research Program (SURP), the AI4ALL initiative for high school students interested in data science and health, and targeted recruitment at minority-serving institutions and diversity-focused national conferences such as SACNAS, ABRCMS, oSTEM, and WiSTEM. These programs collectively aim to build a diverse applicant pool and expand access to pharmacy and research careers. By leveraging UCSF’s pipeline programs, prioritizing holistic admissions, and actively engaging with underrepresented communities and institutions—including HBCUs and Hispanic-Serving Institutions—the program promises to broaden access to a new generation of students who reflect the rich diversity of our society and patient populations.

Potential Challenges to Keep in Mind

Nonetheless, we recognize that this dual degree will not be without potential challenges. The integration of two academically demanding programs within a four-year timeframe requires careful coordination, student support, and sustained faculty engagement. The program’s success depends on the availability of sufficient resources, including faculty resources and administrative support from other programs, institutes and centers at UCSF (e.g., Departments of Clinical Pharmacy and Pharmaceutical Chemistry, BTS, QBI, DEB, IHG, CTSI, CZ Biohub Network, UCSF-Stanford CERSI, PGRN, CEB, BCHSI, Hellen Diller, UCSF Health, CDI2). Ensuring sufficient availability of high-quality research mentors and projects for each student may strain faculty and administrative bandwidth, particularly if the program expands in size. However, the scalability plan of 5 students in Summer 2027 and the growth of up to 20 students per cohort after year 2 of enrollment seems feasible. Finally, students may require structured support and explicit guidance on effectively articulating their integrated skill sets and competitive edge as they navigate dual-career pathways (e.g., academia, industry, or clinical practice), particularly in contexts where some job markets or licensing pathways do not fully value these interdisciplinary competencies.

Despite these potential challenges, the proposal offers a keen opportunity to help redefine clinician-scientist education within the pharmacy profession. We look forward to this program becoming a national model that other academic research institutions will soon emulate. The PharmD/MS dual degree program aligns with UCSF’s mission and goals of excellence in education, research, and public service.

Sincerely,

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