

**Educational Space Proposal: UCSF Culinary Medicine Center**  
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**Statement of the problem.**

Decades of research show that poor diet is a leading cause of death in the U.S. (1) and that improvements in nutrition (even without weight loss) can significantly reduce risk for chronic disease (2). Patients cite their physicians as a front line of trusted nutrition information, however physicians report that they lack the knowledge, skills and confidence to impart this information. Less than half of primary care providers counsel on nutrition (3), and only 14% of residents feel that they were adequately trained in nutritional counseling (4). Thus, there is a pressing need for new approaches to nutrition in medical education to prepare clinicians to address the global epidemic of chronic disease (5).

**Culinary Medicine: an evidenced-based approach to nutrition in medical education.**

Culinary medicine is a new interdisciplinary, experiential approach to nutrition in medical education. This method increases food literacy, which is the range of necessary knowledge, skills and self-efficacy required to feed oneself and one's family healthfully. Basic food literacy includes cooking, shopping, budgeting and label reading. Advanced food literacy is needed for patients to implement even basic lifestyle changes such as low sodium diets. Clinicians require even more training (e.g. evidenced-based diets and counseling skills) to convey this information effectively and reduce barriers to access (e.g. knowledge of food assistance programs, pantries and prices). Tulane University's Goldring Center was the premier program for culinary medicine, which is now offered at 28 medical schools across the nation (including UCLA and UC Irvine). Studies show significant improvements medical students' own health behaviors and attitudes following culinary medicine training (6). In patients with type 2 diabetes, HbA1C, blood pressure and total cholesterol were significantly improved following culinary education as compared to standard care (7).

**Preliminary work demonstrates opportunities and challenges at UCSF.**

In 2017-18, we implemented a culinary medicine pilot project with funding from the UCSF Academy of Medical Educators and the UC Healthy campus Network (Principal Investigators A. Garber and T. Fulton). The project was staged within the IDS113 course in partnership with the San Francisco non-profit culinary education program 18 Reasons. Following an introductory seminar, students broke into six small groups where they cooked with the 12 professional chefs and assistants. Students then ate what they cooked and spent the afternoon in case studies with interdisciplinary faculty and fellows (Nutrition, Biochemistry, Nursing, Pediatrics). Informal feedback indicated that culinary medicine was the favorite IDS113 session of the year. Formal evaluation with a validated pre-/post-test questionnaire in N=96 students showed significant improvements in: beliefs, intention to improve own dietary habits; self-efficacy, and intention to change clinical approach (8). These preliminary data indicate that we addressed known gaps in nutrition training and now have a tremendous opportunity to augment, sustain and translate these changes into improved health outcomes. On the other hand, we encountered significant physical barriers due to lack of appropriate classroom space. In fact, in ways we had not fully anticipated, the culinary medicine activity violated classroom policies. Assistant Vice Chancellor of Educational Technology Services raised understandable concerns about "health/safety violations if smoke alarms were activated, circuits were blown, or someone was injured wielding a knife." Clearly, current classroom space is not equipped to safely and effectively house culinary medicine activities, nor are our current policies and systems aligned with this approach to learning.

**The vision for a Culinary Medicine Center at UCSF.**

To continue as a leader in medical education, UCSF needs a teaching kitchen. Like other laboratory

space, it would be equipped with wet and dry workstations, ventilation, refrigeration, and designated areas for sharps and waste disposal. A space with 4 stoves over ovens, a cooking demonstration island, 3 hoods, 2 wash stations, 1 dishwasher area and one 3-compartment area could accommodate 4-6 small groups. However, the vision for culinary medicine extends far beyond a new laboratory space, to a larger Culinary Medicine Center for a variety of learners. First, established curricula (like Goldring, which can be licensed yearly) have expanded to all health professional students. This facilitates interdisciplinary learning and defrays costs across SOD, SOM, SON and SOP. Second, courses can be offered directly to patients and staff on a sliding scale or reduced cost, subsidized by a third population of learners, which is physicians and other health professionals seeking CME. One such CME program, offered at the Culinary Institute of America in Napa and co-hosted by the Harvard School of Public Health, fetches a \$1700 registration fee and is already sold out through 2019 with a full waiting list. Finally, “celebrity chef” and other events can be offered to the public. These events currently underwrite half of the patient education budget at Goldring, which is set in the context of a ripe food culture like that in our own Bay Area. Thus, the proposed Culinary Medicine Center would address the pressing learning needs of our students and create a diverse, inclusive, and equitable environment to foster learning and promote health among a wide range of learners.

### **Culinary medicine aligns with our UCSF objectives and the wider UC mission.**

A Culinary Medicine Center at UCSF would create synergy between teaching needs across the health sciences, the campus development mission and our role in creating a healthier food environment in California. The proposed Center would facilitate the vision for the redesign of the Parnassus Heights campus as a state-of-the-art, pedestrian-friendly hub to the community. The Center should ideally be positioned near the health professional schools and ambulatory care buildings, to maximize access by students, patients, faculty, staff and the public. Co-localization with a dining hall and commercial space, such as a grocery or food outlet, would provide both a gateway to increased food access for the UCSF community and neighbors. For example, the Goldring Center shares space with Whole Foods and co-hosts a farmers market, which accepts SNAP (food stamps). Increasing food access and food literacy is central to the UC Global Food Initiative’s mission to “make UC the healthiest place to work, learn and live” by improving food security, and promoting healthier food options, gardens and food literacy. This mission mirrors statewide efforts to improve the food environment through progressive public policies, such as banning vending machines and providing drinking water in schools. UCSF has been a leader and champion for these broader efforts. In 2015, the Healthy Beverage Initiative removed all sugar-sweetened beverages in cafeterias, vending, catering and retail at UCSF (Dr. Laura Schmidt). A Culinary Medicine Center at UCSF would continue in this tradition.

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