Dear prospective MSTAR student,

Welcome to the MSTAR program at UCSF! We are a satellite program of the UCLA MSTAR training site, meaning that we enact our own research and clinical activities for students based in San Francisco, but coordinate the applications process and “big-picture” national activities with program leaders at UCLA.

**THE APPLICATION PROCESS:**

If you have not already done so, please review the following information:

UCLA (our parent site) MSTAR website: <https://www.uclahealth.org/geriatrics/mstar>.

We will start accepting applications on February 1, 2021. The application deadline is March 19, 2021.

The MSTAR program at UCSF is a mentored research experience and is open to students with an interest in aging research. In addition to the application submitted to UCLA, students who are interested in applying to the UCSF site **must also email to Elaine Chow the following:**

* Start/End Date
* Research Mentor
* Research project title

It is important to note that different MSTAR sites deal with the application process differently. For example, other sites often match students to mentors after they are accepted into the program.

**FINDING A MENTOR**

Due to the popularity and competitiveness of the UCSF program, it is highly encouraged that students seek out and start a relationship with a mentor ahead of time. It is also possible for students who have an established research mentor at UCSF to join the program *if their mentor is doing aging research*. If you have a mentor in mind who is not listed on the UCSF MSTAR mentor list, let us know and we will reach out to the prospective mentor to include him/her as a UCSF MSTAR mentor.

If you do not have UCSF mentor in mind, review the potential mentor list to find a research mentor who is doing work in an area of interest (see below). We recommend contacting the potential mentor directly to see if they have any potential projects for the summer.

In your application, we recommend that you discuss your interest and dedication to aging research and/or clinical care. If you have a project in mind, it would also be important to write about your mentor and potential project (one paragraph or so is fine and it is OK if all the particulars are not yet decided). You and a mentor can finalize the specifics of your project as the summer nears.

**THE MSTAR PROGRAM AT UCSF**

In addition to the mentored research experience, two other core elements run throughout the summer. First, we arrange a variety of clinical experiences in geriatrics and related fields for students. These vary from week to week, but typically occur on 1 to 2 half-days a week. Second, we offer a didactic program with small-group teaching and “meet-the-professor” sessions related to research and clinical care of older adults. These sessions occur on Tuesday mornings. In addition, students are required to attend the Division of Geriatrics Research Works-In-Progress conference, which occurs Wednesday mornings from 8:15 – 9:30 AM.

In the latter part of the summer, all MSTAR students at UCSF will present their research in a symposium. In addition, we strongly encourage all MSTAR students to submit their research to the annual meeting of the American Geriatrics Society, which occurs in May of each year (for example, if a student is with us the summer of 2019, they would go to the AGS meeting in May 2021). There is a special student symposium at the meeting, and it’s a great opportunity to present your research, meet other students from around the country, and get a flavor for the wider community of geriatrics and aging research.

**LOGISTIC CONSIDERATIONS**

* The MSTAR program is a **MINIMUM** of 8 weeks and a maximum of 12 weeks.
* To allow for maximum productivity over the summer, we ask that students complete web-based research compliance trainings before starting their MSTAR experience (these trainings are required for all people at UCSF who do research). This typically involves a few hours of completing a handful of web-based courses.
* The NIH NRSA Pre-doctoral stipend level is $1,978/month. The stipend check is scheduled to arrive late June/early July, so please be sure to plan your finances accordingly (i.e. if you start June 1st, don’t expect a check the first week you are here).

If needed, you may also contact Elaine Chow, the UCSF program administrator, at elaine.chow2@ucsf.edu. Thank you for your interest in MSTAR!

**UCSF Mentor List for the 2021 MSTAR Program**

**RESEARCH MENTORS IN THE UCSF DIVISION OF GERIATRICS**

[***http://geriatrics.ucsf.edu/***](http://geriatrics.ucsf.edu/)

Theresa Allison, MD, PhD

Anna Chodos, MD, MAS

Ken Covinsky, MD, MPH

Jessica Eng, MD, MS

Anne Fabiny, MD

Meredith Greene, MD, MAS

Krista Harrison, PhD

Ashwin Kotwal, MD, MPH

Sei Lee, MD, MAS

John Newman, MD, MPH

Edgar Pierluissi, MD

Stephanie Rogers, MD

Janice Schwartz, MD

Alexander Smith

Michael Steinman

Rebecca Sudore

Victoria Tang

Louise Walter

Brie Williams

Michi Yukawa

**Theresa A. Allison**

<http://profiles.ucsf.edu/theresa.allison>

Email: Theresa.Allison@ucsf.edu

Theresa A. Allison, MD, PhD (Musicology), is an Associate Professor of Medicine in the Division of Geriatrics, with a secondary appointment in Family and Community Medicine. Clinically, she cares for patients in the San Francisco VA nursing home and makes house calls through the VA Home Based Primary Care program. Dr. Allison’s research integrates medical humanities and health sciences methodology to examine the role of music in daily life for vulnerable older adults. Her current research uses mixed methods to investigate the role of music in dementia caregiving relationships in the home. This summer there are possibilities for research that involves chart review, qualitative data analysis, and/or in-home assessments with people who have dementia and their caregivers.

**Anna Chodos, MD**

<http://profiles.ucsf.edu/anna.chodos>

Email: Anna.Chodos@ucsf.edu

Implementation science, older adults, primary care, safety net, socioeconomically disadvantaged groups, consult geriatrics, advocacy, writing for advocacy, poverty in older adults, interdisciplinary research collaboration, dementia, elder abuse, community-based participatory research

 Dr. Anna Chodos is interested in understanding the unmet needs of older adults who are seen in primary care in the safety net and developing high-quality programs for older adults to address these needs. She is the medical director of the outpatient Geriatrics Consult Service at Zuckerberg San Francisco General and a primary care provider at the adult medicine primary care clinic at ZSFG.

**Ken Covinsky, MD, MPH**

<http://profiles.ucsf.edu/kenneth.covinsky>

Email: covinsky@medicine.ucsf.edu

Activities of Daily Living, Frail Elderly, Geriatric Assessment, Health Status

Dr. Covinsky is interested in the broad determinants of health outcomes in older persons. He uses epidemiologic datasets to examine predictors of health outcomes, and to develop models to distinguish between elders at high and low risk of health outcomes. He is particularly interested in functional status---both in terms of understanding the determinants of functional status outcomes, and the role of functional status in predicting other health outcomes.

 Much of his work uses the Health and Retirement Study (HRS), a large study of health outcomes in US persons over the age of 50. The HRS survey provides opportunities to address a wide range of research questions in the elderly. The HRS study can be accessed at <http://hrsonline.isr.umich.edu/>.

**Jessica Eng, MD, MS**

<http://profiles.ucsf.edu/jessica.eng>

Email: Jessica.Eng@ucsf.edu

Primary care panel management of complex adults, Interprofessional team care, and Home-based care.

Dr. Eng currently serves as the Medical Director of the San Francisco VA Medical Center's PACT Intensive Management program and the Associate Director of the San Francisco VA Quality Scholars program.  Dr. Eng's goal is to build clinical programs at UCSF and the San Francisco VA Medical Center that apply geriatric principles to adults with complex serious illnesses and improve quality of life and patient outcomes.

**Anne Fabiny, MD**

<https://profiles.ucsf.edu/anne.fabiny>

Email: Anne.Fabiny@ucsf.edu

Dr. Fabiny is a clinical administrator and program developer at the San Francisco VA Health Care System with an interest in both improving existing clinical programs for older veterans and developing new clinical programs to better meet the needs of frail, complex, older veterans.

She is currently working on two projects. One is to improve the clinical care of older veterans with dementia and serious mental illness in the SFVA Community Living Center. The second is to develop an intensive supportive housing site for formerly homeless, older veterans at the Colma housing site being built by Mercy Housing. This is a collaborative venture with the San Francisco VA Health Care System, Health Plan of San Mateo County, the Public Housing Authority of San Mateo County, non-profit social service agencies and the San Francisco VA HUD-VASH program.

**Meredith Greene, MD**

<http://profiles.ucsf.edu/meredith.greene>

Email: Meredith.Greene@ucsf.edu

HIV, polypharmacy, patient-centered medical homes

Dr. Greene is interested in HIV, polypharmacy and geriatric conditions such as frailty in older HIV-infected adults. She is also part of a team of clinicians and researchers working to develop a Patient Centered Medical Home within the UCSF and SFGH HIV clinics for older adults. She is also interested in policy and systems issues to improve the care of vulnerable older adults, including those with HIV infection. Her current clinical work is through the UCSF Housecalls program providing medical care to homebound elderly.

**Krista Harrison, PhD**

<http://profiles.ucsf.edu/krista.harrison>

Email: Krista.Harrison@ucsf.edu

Krista Harrison, PhD, is a health services researcher focused on improving systems of palliative care for older adults with dementia and other serious illnesses who live in home- and community-based settings. Dr. Harrison is an Assistant Professor in the Division of Geriatrics within the UCSF School of Medicine, an Atlantic Fellow for Equity in Brain Health at the Global Brain Health Institute, and a Pepper Center Scholar.

Dr. Harrison completed her undergraduate degree in Biology and English at Williams College; a PhD in Bioethics, Health Policy & Management at Johns Hopkins Bloomberg School of Public Health; and a postdoctoral research fellowship in Geriatrics at UCSF. In addition, Dr. Harrison previously contributed to national program evaluations at Mathematica Policy Research and served as Director of Research and Education at Capital Caring, a large community-based non-profit hospice and palliative care provider serving the Washington DC metropolitan area.

Dr. Harrison’s goal is to build a research program that improves systems of care for vulnerable older adults with serious illness. Her work focuses on palliative care for older adults living at home with severe dementia and on improving the quality of home-based primary care and palliative care. Her expertise includes qualitative and quantitative research methods, implementation science, health policy ethics, and the translation of research to policy.

**Ashwin Kotwal, MD, MS**

<https://profiles.ucsf.edu/ashwin.kotwal>

Email: Ashwin.Kotwal@ucsf.edu

Social Relationships, Health, End-of-Life, Cancer Screening, Cognition

Dr. Kotwal is a geriatrics and palliative care physician who has an outpatient palliative care telehealth clinic at the VA. He has 2 main areas of research interest:

1. Social Relationships and Health: Dr. Kotwal and his research team investigate how social connections and social networks influence the health of older adults. Ongoing projects with students include the use of technology among older adults to improve social connections, the effect of COVID-19 on social isolation and health, and understanding how social connections can improve the health of older adults with dementia.

2. Cancer Screening in Older Adults: Dr. Kotwal has interests in the national patterns of cancer screening among older adults, including prostate cancer, breast cancer, and colon cancer screening.

Dr. Kotwal's research makes use of large national datasets including the Health and Retirement Study (https://hrs.isr.umich.edu/about) and the National Social life Health and Aging Project (https://www.norc.org/Research/Projects/Pages/national-social-life-health-and-aging-project.aspx)

**Sei Lee, MD, MAS**

<http://profiles.ucsf.edu/sei.lee>

Email: Sei.Lee@ucsf.edu

Mortality prediction, Prevention, Geriatric Diabetes, Alzheimer’s Prediction

Dr. Lee has 3 main areas of research interest:

1. Individualizing Prevention:

I’m interested in determining how long after a preventive intervention (such as cancer screening) the benefits are seen.  This “lagtime-to-benefit” is unknown for intensive blood pressure control, intensive glycemic control, cholesterol lowering therapy as well as most other common preventive interventions in the elderly.  I’m also interested in predicting which patients have an extended life expectancy (so they are likely to benefit from prevention) and which patients have a limited life expectancy (so they are unlikely to benefit from prevention)

1. Geriatric Diabetes:  I’m interested in how varying levels of glycemic control affects geriatric outcomes such as incontinence, falls and functional decline in the frail elderly.
2. Alzheimer’s Dementia:  I’m interested in how newly developed markers for preclinical Alzheimer’s can help us identify which patients should get treatments to prevent Alzheimer’s.

**John Newman, MD PhD**

<http://profiles.ucsf.edu/john.newman>

Email: Newman@ucsf.edu

Geriatrics, aging, acute care of elders, frailty, longevity, metabolism, dietary restriction

Dr. Newman's research aims to elucidate the mechanisms of pathways that broadly regulate health span and longevity in mammals, and translate these advances into therapies targeted at elders at high risk for frailty, cognitive decline, and functional dependence. He is specifically interested in mitochondrial and cellular metabolism, deacetylases and histone modifications; the assessment of metabolic health and behavioral function in mouse model systems; and the translational application of aging biology. The goals of his current research include systematically mapping changes in gene expression and histone modifications caused by BOHB in various mouse organs; testing the hypothesis that BOHB improves metabolic, cognitive, or neuromuscular health in middle-aged mice; and assessing longevity in mice consistently exposed to BOHB. This evidence will permit detailed mechanistic follow-on studies of links between BOHB -regulated genes and phenotypes in specific tissues, with identification of targets that are downstream of BOHB for drug discovery.

**Edgar Pierluissi, MD**

<http://profiles.ucsf.edu/edgar.pierluissi>

Email: epierluissi@medsfgh.ucsf.edu

Hospitalization-associated disability, delirium, acute care for elders

Dr. Pierluissi’s research focuses on improving care for hospitalized older adults, especially those with mild cognitive impairment and Alzheimer’s disease. Ongoing projects include promoting mobility in hospitalized older adults. Previous medical student projects have included and analysis of the effectiveness of an Acute Care for Elders Unit in a Public Hospital and Patient Expectations and Attitudes Towards Exercise in the Hospital.

**Stephanie Rogers, MD, MPH**

<https://profiles.ucsf.edu/stephanie.rogers>

Email: Stephanie.Rogers@ucsf.edu

Prevention of harms of hospitalization (delirium, functional decline),  Acute Care of the Elderly (ACE) units, telemedicine, medical technology,  transitions of care, ageism in medicine.

Dr. Rogers' academic interests include promoting the awareness of ageism in healthcare and need for specialized geriatric care in order to foster improvements in the healthcare system, implementation of geriatric inpatient programs to ensure safety in the hospital and to prevent hospital-related functional and cognitive decline, and the implementation and testing of medical technology particularly in transitions from hospital to home.  She current is leading the Delirium Reduction Campaign at UCSF and is working to implement an Orthopedic-Geriatric co-management service for hip fracture patients.

**Janice Schwartz, MD**

<https://profiles.ucsf.edu/janice.schwartz>

Email: Janice.Schwartz@ucsf.edu

I graduated from Tulane Medical School, am a board-certified internist and cardiologist with significant experience in clinical pharmacology and geriatric medicine. My research goal has been to elucidate age-related and sex-related differences in pharmacokinetics and pharmacodynamics in order to improve medication therapy for older people. I have studied models of aging from in vitro models of cardiac changes with aging to physiologic and pharmacokinetic investigations of healthy humans to population studies of community dwelling elderly, and most recently, frail elderly people.

My current work focuses on improving medication and vitamin use in the very oldest people, in optimizing outcomes in older people receiving polypharmacy, and the translation of new therapies and devices into clinical use to benefit the very oldest and frailest patients. My efforts include translating medical knowledge related to aging and cardiovascular health for the public.

**Alex Smith, MD**

<http://profiles.ucsf.edu/alexander.smith>

Email: aksmith@ucsf.edu

Palliative care, Disability, Research in diverse communities

Dr. Smith is interested in improving palliative and end-of-life care for older adults.  His current projects focus on the epidemiology of symptoms and health services utilization in the last two years of life using a nationally representative survey linked to Medicare claims data, and developing a survey of quality of life for older adults with late life disability from diverse communities.

**Michael Steinman, MD**

<http://profiles.ucsf.edu/michael.steinman>

Email: mike.steinman@ucsf.edu

Polypharmacy, Multimorbidity, Prescription Drugs, Drug Industry

Dr. Steinman's research is focused on understanding and improving the quality of prescribing for elders with multiple chronic conditions.  His research program includes studies of risk factors for adverse drug reactions in ambulatory elders; reasons why physicians do not adher to guideline-recommended practices; assessing prescribing quality and defining best practices in patients with common combinations of diseases; measurement of physician adherence to clinical practice guidelines; and developing improved methods for assessing multimorbidity and the burdens of having multiple chronic conditions.  In addition, Dr. Steinman maintains an active research interest in the impact of pharmaceutical industry marketing on physician prescribing behavior.

**Rebecca Sudore, MD**

<http://profiles.ucsf.edu/rebecca.sudore>

Email: rebecca.sudore@ucsf.edu

Advance Care Planning, Decision Making, Health Literacy, Advance Directives

Dr. Sudore’s primary research focus is on improving advance care planning and medical decision making for vulnerable older adults with limited health literacy. She has designed and tested an informed consent process for patients with limited literacy and an advance directive that is both literacy and culturally appropriate. Her current work calls for a shift in advance care planning from DNR/DNI checklists to preparing patients and their loved ones for medical decision making. Her current research program is focused on designing and testing interactive, literacy-appropriate, web-based interventions to prepare patients and their surrogate decision makers to make difficult medical decisions.

**Victoria Tang, MD, MAS**

http://profiles.ucsf.edu/victoria.tang

Email: Victoria.tang@ucsf.edu

Advance care planning, Decision making, Geriatrics, Surgical care, Geriatric surgery, Hospitalization, Frailty, Functional status, Health services research, Pre-habilitation, Pre-operative care, Implementation science, Quality of life, Clinical epidemiology, Social Vulnerability

Victoria's research focuses on improving the surgical care of older adults. She is currently pursuing several projects that span different aspects of this topic. Victoria is currently studying the long term post-operative outcomes of frail, older adults who underwent the Surgery Wellness Program. In addition, she is extending her previous work in improving advanced directive documentation in the electronic health record, with a recently proposed grant that will improve the understanding of older adult engagement in advance care planning prior to major surgery. On the national level, she is actively engaged in translating research findings into interventions and policies to address the health and social needs of older adults in the surgical setting. As a core team member of the American College of Surgeons Coalition for Quality in Geriatric Surgery Project, Victoria is involved in establishing quality geriatric surgical care standards, quality metrics, and implementation methods for hospital systems throughout the nation.

**Louise Walter, MD**

<http://profiles.ucsf.edu/louise.walter>

Email: Louise.Walter@ucsf.edu

Mass Screening, Prostate Neoplasms, Prostate-Specific Antigen, Life Expectancy, Comorbidity

Title of Project: Use and Outcomes of Prostate-Specific Antigen (PSA) Screening in Older Men

The goal of this project is to quantify the real world downstream consequences of PSA screening and monitoring in older men and how these consequences differ according to life expectancy. For example, we do not know how to best individualize decisions about PSA monitoring in older men who have undergone curative treatment for prostate cancer and how outcomes of PSA monitoring in these men differ according to life expectancy. This study makes innovative use of VA and Medicare claims-based data and electronic health records to determine factors associated with PSA screening and monitoring and the downstream consequences following PSA testing in elderly men across a spectrum of advancing age and comorbid illness.  This is an ongoing study in which students may participate in a structured review of the literature, in analyses of existing data, and in potentially reviewing some medical charts to understand the real world burdens following PSA testing in older veterans.

**Brie Williams, MD, MS**

<http://profiles.ucsf.edu/brie.williams>

Email: brie.williams@ucsf.edu

Prisoners, Prisons, Geriatric Assessment, Activities of Daily Living, Terminally Ill

Dr. Williams works with collaborators from the criminal justice, correctional health and legal fields to apply the principles of geriatrics and palliative medicine to transform the care of older adults in the criminal justice system. Her current research focuses on understanding the nature, prevalence, and healthcare utilization consequences of multi-morbidity, distressing symptoms, and functional and cognitive impairments in older jail inmates

**Michi Yukawa, MD, MPH**

http://profiles.ucsf.edu/michi.yukawa

Email: Michi.Yukawa@va.gov

Dr. Michi Yukawa is an Associate Clinical Professor in the Division of Geriatrics and a Medical Director of Community Living Center (CLC) San Francisco VAMC.

Dr. Yukawa is a graduate of Brown University School of Medicine, and she completed Internal Medicine residency at Miriam Hospital, one of the teaching hospital for Brown University. In addition, Dr. Yukawa holds a Masters in Public Health from the Harvard School of Public Health. She practiced primary care medicine in Boston before she participated in a Geriatric Medicine Fellowship at University of Washington. Dr.Yukawa was a member of the faculty in the Division of Gerontology and Geriatric Medicine at the University of Washington from 2000-2010. Dr. Yukawa joined the Division of Geriatrics of UCSF in October 2010 as an Associate Professor. She is interested in teaching and improving the care of older adults particularly around nutrition and prevention of malnutrition and weight loss.

Clinical
Dr. Yukawa is committed to serving as the Medical Director for the Community Living Center (CLC) at the San Francisco VAMC and to working with others to provide compassionate and comprehensive care to the veterans. She also supervises geriatric medicine fellows in Geriatric Medicine outpatient clinic at the VAMC, and she attends on inpatient medicine service at the San Francisco VAMC. Her role includes leadership of the CLC in the Geriatrics and Extended Care Service Line and participation in the academic activities of the Division of Geriatrics.

Research
Dr. Yukawa’s research interests include improving nutrition, preventing weight loss and improving perioperative care of older adults. She conducted several clinical trials while she was at University of Washington and she hopes to collaborate with others to pursue her research interests at UCSF. Her educational interests revolve around chronic illness management of geriatric patients in various settings: outpatient, inpatient and skilled nursing facility. She leads the geriatric section of Life Cycle course to educate second year medical students about geriatric syndromes and management of older adults. In addition, she directs the fourth year medical student elective in geriatric medicine. She hopes to collaborate with educators within the Division of Geriatrics and other department to develop innovative methods to teach medical students, residents and geriatric fellows about management of geriatric patients.

**RESEARCH MENTORS IN OTHER UCSF DIVISIONS AND DEPARTMENTS**

Katrina Abuabara, MD

Tamara Alliston, MD
Julie Anderson

Jalayne Arias

Scott Bauer

Deborah Barnes, PhD, MPH

Willa Brenowitz

Abigail Buchwater

Daniel Butler

Beth Cohen

Lisa Ellerby

Sarah Hooper, JD

Alison Huang, MD, MAS

Lauren Hunt

James Iannuzzi

Jennifer Lai, MD

Courtney Lyles

Anil Makam

Tien Peng, MD

Urmimala Sarkar, MD

Anne Suskind, MD MS

Melisa Wong, MD, MAS

Kristine Yaffe, MD

Kai Zhou, PhD

**Katrina Abuabara, MD, MA, MSCE**

<http://profiles.ucsf.edu/katrina.abuabara>

https://abuabara.ucsf.edu/

Email: katrina.abuabara@ucsf.edu

Dermatology, skin barrier, aging, inflammatory skin disease

Dr. Abuabara is a dermatologist and epidemiologist whose research team studies how environmental and sociocultural factors impact health across the lifespan. They focus on inflammatory skin diseases like eczema and psoriasis with variable disease courses, and on the role of skin barrier decline in the aging process. In particular, they are studying how age-related changes in cutaneous physiology affect immune function, sleep, cognition, and cardiovascular health, and are examining the therapeutic potential of skin barrier repair with safe, low-cost, and widely available emollients.

**Tamara Alliston, PhD**
<https://profiles.ucsf.edu/tamara.alliston>
https://allistonlab.ucsf.edu/
Email: tamara.alliston@ucsf.edu
Skeletal mechanobiology, aging, TGF-beta signaling, bioengineering

Dr. Alliston studies the crosstalk between biochemical and physical cues in the skeleton. My laboratory combines tools and approaches from molecular and cell biology as well as from materials science and engineering. We apply our expertise in the study of TGFβ signaling to investigate the interaction between physical and biochemical signals in the control of skeletal cell differentiation and the role of these pathways in skeletal development and diseases such as osteoarthritis and osteoporosis, which disproportionately affect the aging population.

**Julie Andersen**
jandersen@buckinstitute.org
<https://www.buckinstitute.org/lab/andersen-lab/>

Due to their postmitotic state, the potential for neurons to undergo senescence has historically received little attention. However, the study of senescence within the central nervous system (CNS) including within neurons has recently begun to emerge as a new etiological framework for better understanding neurodegenerative diseases such as Alzheimer’s disease (AD) and Parkinson’s disease (PD). The Current research in the Andersen laboratory is towards understanding the role of disease-related stressors such as Aß in inducing neuronal senescence and the mechanisms involved underlying disease progression towards identification of novel therapeutic targets and treatments for the disorder including the use of senolytics. These include selectively removal senescent cells or immune therapy and at what stage of the disorder these would be most effective using as models both in vitro human cell cultures and in vivo mouse disease models.

**Jalayne Arias, JD, MA**
Jalayne.arias@ucsf.edu
<https://memory.ucsf.edu/people/jalayne-arias-jd>

Jalayne J. Arias, JD, MA is an Assistant Professor at the University of California San Francisco (UCSF) in the Memory and Aging Center, Department of Neurology. She brings her unique training in law and clinical ethics to evaluate the legal and ethical consequences of neurodegenerative illnesses. She currently has multiple funded projects using empirical legal research methods and qualitative research to explore the discrimination risks based on Alzheimer's disease predictive markers; financial, legal, and social decision-making in young-onset dementias, insurance coverage for genetic testing; and genetic data sharing policies.

**Scott Bauer, MD, MSc**
scott.bauer@ucsf.edu
Aging, benign urology, frailty, sarcopenia, mitochondria, overactive bladder, benign prostatic hyperplasia

Dr. Bauer is a general internist, translational epidemiologist, and clinician investigator with a primary care practice based at the San Francisco VA. His research is focused on identifying age-related risk factors and mechanisms of benign urologic conditions, such as lower urinary tract symptoms (LUTS), in older adults. A growing body of work argues that the existing sex-specific and bladder or prostate-focused paradigms for benign urologic conditions are insufficient and failing older adults. Dr. Bauer's goal is to build an epidemiologic backbone for understanding age-related LUTS risk factors using high-quality existing data by leveraging geriatric principles and mechanistic insights from geroscience. Currently, he is exploring whether age-related changes in skeletal muscle at the system (strength and physical function), organ (muscle mass and volume), and cellular (mitochondrial bioenergetics) level are associated with the presence and progression of LUTS similarly in both women and men, independent of chronological age and other confounding factors. To accomplish this, he is using data from the “Study of Muscle Mobility and Aging” (SOMMA), a prospective cohort of 875 adults, age 70-90, who will be followed for 4 years and undergo repeated assessments of urinary symptoms, muscle health, physical performance, and biomarkers of aging.

**Deborah Barnes, PhD, MPH**

<http://profiles.ucsf.edu/deborah.barnes>

Email: deborah.barnes@ucsf.edu

Dementia, Cognition Disorders, Risk Factors, Prevention, Epidemiology

Dr. Barnes is an Associate Professor in the Departments of Psychiatry and Epidemiology & Biostatistics at UCSF, a Research Health Science Specialist at the San Francisco VA Medical Center, and a Senior Investigator with Tides**well** at UCSF. She is also a consultant with the Clinical and Translational Sciences Institutes and is affiliated with the UCSF Osher Center for Integrative Medicine. Dr. Barnes' research focuses on development of risk prediction models for cognitive impairment and dementia in older adults; identification of factors that may increase or decrease dementia risk and evaluation of potential strategies to prevent, delay onset or ameliorate symptoms of cognitive impairment and dementia. She is particularly interested in the potential protective effects of physical and mental activity and is PI of several randomized, controlled trials in this area. Her research also explores the complex association between depression and dementia.

**Willa Brenowitz, PhD, MPH**
<https://profiles.ucsf.edu/willa.brenowitz>
Email: Willa.Brenowitz@ucsf.edu
Key words: epidemiologic methods, aging, Alzheimer’s disease and dementia, sensory impairment

I received my PhD in epidemiology and MPH in health services from the University of Washington School of Public Health and am an Assistant Professor in the UCSF Departments of Psychiatry and Behavioral Sciences and Epidemiology and Biostatistics. Broadly my research interest is in identifying risk factors for Alzheimer’s disease (AD) and related dementias. My overarching research approach relates to understanding AD as a complex and mutli-etiological process that is difficult to disentangle from other comorbidities. My current research focuses on examining the link between sensory impairments (e.g. hearing and vision loss) and dementia in older adults. I am also interested in using novel statistical and epidemiologic approaches to study AD and other chronic diseases in aging including Mendelian randomization or genetic instrumental variable analysis.

**Abigail Buchwalter, PhD**
<https://physiology.ucsf.edu/content/abigail-buchwalter-phd>
Abigail.Buchwalter@ucsf.edu
Cell biology, aging, genome organization

Dr. Buchwalter is a cell biologist whose laboratory seeks to understand how the packaging of the genome within the nucleus influences cell function, and how aging disrupts this exquisite organization. The lab focuses on the assaults of aging on two nuclear structures: the nuclear lamina and the nucleolus. The nuclear lamina is a protein structure found at the border of the nucleus that scaffolds heterochromatin and influences gene expression. Mutations to the lamina cause cardiovascular disease and accelerated aging. The Buchwalter lab seeks to understand the structure and function of the lamina in healthy, diseased, and aged states. The nucleolus is a phase-separated organelle that forms within the nucleus around actively transcribing ribosomal DNA (rDNA) repeats and produces ribosomes. The rDNA repeats are not mapped within the human reference genome and thus represent a “black box” about which comparatively little is known. However, rDNA function is intimately linked to aging, and recent work has uncovered a direct and predictable correlation between rDNA methylation and age. The Buchwalter lab is working to define the mechanisms and consequences of age-linked changes to rDNA and nucleolar function.

**Daniel Butler, MD**
<https://profiles.ucsf.edu/daniel.butler>
Daniel.Butler@ucsf.edu
Themes: Geriatric Dermatology, Itch of the Elderly, Atopic Dermatitis of the Elderly, Demographics of Skin Conditions in Aging Adults

The field of Geriatric Dermatology is a new and growing field within the field of dermatology. UCSF Department of Dermatology is a leading center for Geriatric Dermatology with several dermatologists with clinical and research interest in this population. I am the co-found and chair of the national American Academy of Dermatology Geriatric Dermatology Expert Resource Group.

In order to best understand the needs of cutaneous disease in aging adults, we are interested in studying trends and nuances in presentation. This is particularly relevant in pruritic or itching patients which is an abundant patient population. We are also interested in implementable programs to help dermatologists and dermatology surgeons in caring for aging adults.
Themes: Geriatric Dermatology, Itch of the Elderly, Atopic Dermatitis of the Elderly, Demographics of Skin Conditions in Aging Adults

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**Beth Cohen, MD, MAS**

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Coronary Disease, Afghan Campaign 2001-, Iraq War, 2003-, Stress Disorders, Post-Traumatic

Dr. Cohen studies the effects of posttraumatic stress disorder (PTSD) on physical health, particularly cardiovascular health. Dr. Cohen is principal investigator of the Mind Your Heart Study, a prospective cohort study of veteran patients designed to understand the mechanisms through which PTSD damages physical health. She is also interested in how PTSD affects health as patients age, and is exploring the impact of PTSD on physical and cognitive function.

**Lisa Ellerby**
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Many diseases that impact brain function develop during aging and affect the quality of life and our ability to live a successful healthy lifespan. These neurological diseases include Huntington’s, Alzheimer’s, and Parkinson’s. The Ellerby lab focuses on understanding the fundamental mechanisms that lead to age-related neurodegenerative diseases and identifying new therapeutic targets for these diseases. We are excited to use new technologies to interrogate why these neurological diseases are so abundant as we age and identify small molecule or protein therapeutics for these diseases. Induced pluripotent stem cells (iPSC) derived from patient cells, genomics, proteomics, small molecule screens, single cell analysis, and CRISPR/Cas9 are all technologies applied to deepen our understanding of these diseases and aging.

**Sarah Hooper, JD**

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Sarah Hooper is the Executive Director of the UCSF/UC Hastings Consortium on Law, Science & Health Policy and Adjunct Professor of Law at UC Hastings College of the Law. Through the Consortium, she develops interprofessional programs for faculty and students, including educational curricula and degrees, joint research, and clinical training and service programs. In particular, Sarah led the Consortium’s effort to establish the Medical-Legal Partnership for Seniors clinic (MLPS) and now as its Policy Director is working to scale the model locally and nationally.

Sarah’s research focuses on legal issues in aging and dementia care, including health care decision making and informed consent, capacity, elder financial abuse, the link between health and access to civil justice, and models of comprehensive and coordinated care. She is a 2018 Leaders for Health Equity Fellow with George Washington University.

Sarah teaches or has taught "Elder Law & Policy," “Law of End of Life Care,” “Medical-Legal Partnership for Seniors Seminar,” “Concentration in Law & Health Science Seminar,” "Health Law: Research Compliance & Ethics" and “Master of Studies in Law for Healthcare Providers Seminar” at UC Hastings and is a frequent guest lecturer at UCSF.

**Alison Huang, MD, MAS**

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Menopause, Women’s Health, Urinary Incontinence, Urogenital Atrophy

Dr. Huang's research is directed at advancing understanding of the impact of menopause and aging on health and well-being in women.  She has a particular interest in improving management of genitourinary aging in women, including atrophic changes in the urogenital tract, self-reported genitourinary symptoms, vaginal and urinary tract infections, and sexual function and related quality-of-life domains in older women. She has mentored 3 past MSTAR students on aging-related projects, all of which have involved national meeting presentations and authorship on peer-reviewed research publications for those students. Past projects involving medical students have included analyses of the impact of diabetes to sexual function in older women, treatment strategies for menopausal symptoms in midlife women, and the impact of urinary incontinence on quality of life in older women of diverse backgrounds.

**Lauren Hunt, PhD, RN, FNP**
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Keywords: Hospice, Palliative Care, Dementia, Pain, Symptoms Burden, Acute Care Use.

Lauren Hunt's research focuses on two primary areas: 1) assessing symptom burden and palliative care needs of vulnerable older adults across care settings; and 2) evaluating hospice and palliative care models and policies for older adults with dementia. She primarily leverages nationally-representative surveys, such as the National Health and Aging Trends Study, the Health and Retirement Study, and Medicare administrative claims to approach her research.

**James Iannuzzi, MD, MPH**
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Surgery, Risk Assessment, Cognitive Impairment

Dr. Iannuzzi’s work focuses on surgical outcomes and predictive modelling to identify high risk surgical candidates. His research uses large datasets to create clinically useful risk scores predicting the need for new post-surgical nursing home support or rehabilitation, and readmissions. Current projects also examine the impact of cognitive status on surgical outcomes. Students will have the opportunity to participate in literature reviews, analysis and interpretation of data, and manuscript preparation.

**Jennifer Lai, MD**

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Transplant hepatology, chronic viral hepatitis, autoimmune disorders, and cirrhosis, liver transplantation.

Her 3 main areas of research include integrating core principles of geriatrics (e.g., frailty, disability, palliative care, multi-morbidity) to patients with cirrhosis; investigating disparities in organ allocation and distribution; and assessing the impact of liver donor quality on outcomes.

Dr. Lai is the principal investigator for the NIH-funded Functional Assessment in Liver Transplantation (FrAILT) Study which aims to apply measures of frailty and functional status to patients with end-stage liver disease awaiting liver transplantation. Her central hypothesis is that applying principles of geriatric assessment to this population can improve our ability to identify patients who are vulnerable to adverse transplant outcomes. Her research lays the groundwork for therapeutic interventions aimed at "pre-habilitating" patients awaiting liver transplantation to improve their outcomes and quality of life.

**Courtney Lyles, PhD**
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As a health services researcher with both quantitative and qualitative expertise, Dr. Lyles’ research focuses on digital inclusion and digital health design, implementation, and evaluation for diverse and underserved populations. More specifically, she leads studies to train patients to be able to access digital technologies/interventions, as well as use these platforms to improve health behaviors and outcomes - with the ultimate goals of reducing health disparities. Dr. Lyles currently holds two R01s on mobile application design for patients with chronic disease at the San Francisco Health Network, is an associate director of the UCSF Program in Implementation Science, and co-directs the UCSF Population Health and Health Equity data projects.

**Anil Makam, MD, MAS**
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Anil is an academic hospital medicine physician and a health services researcher. His research is at the intersection of geriatrics, hospital medicine, and post-acute care, specifically focusing on the role of long-term acute care hospitals (LTACs). His research interest stemmed from his simple observation that Dallas had many LTACs whereas San Francisco had very few, yet he cared for similarly sick and frail hospitalized older adults in both places. His research is funded by an NIA GEMSSTAR grant (2016-2018) and an NIA K23 Career Development Award (2016-2021). Dr. Makam applies health services research and epidemiological methods using Medicare claims, EHR data, and prospective cohort data to examine predictors and variation in LTAC use, comparative effectiveness of the LTAC model of care versus alternative care settings, and patterns of recovery for older adults transferred to LTACs.

He has also continued to work at the interface of hospital medicine, quality of care, evidence-based medicine, and overuse, publishing several high impact studies in JAMA Internal Medicine, Circulation, BMJ Quality & Safety, and Journal of Hospital Medicine.

He has successfully mentored MSTAR students in the past. His mentees have presented first-authored abstracts at the AGS Annual Meeting, with authorship on peer-reviewed publications. In addition to participating in a mentored research project, his summer mentorship program consists of two mentored self-guided curricula on epidemiology and statistical programming.

**Tien Peng, MD**
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The lung can be compartmentalized into the proximal conducting airways and the distal alveoli, each employing distinct stem/progenitors to support the divergent roles of each sub-compartment. An emerging paradigm is that the underlying stroma engages in complex feedback loops with the stem/progenitors to modulate their behavior. Despite their homogeneity in appearance, it is increasingly apparent that the lung stroma contains diverse subsets, each uniquely suited to maintain the nearest stem/progenitor population. Utilizing sophisticated mouse genetic models, population and single cell RNA sequencing, and human tissue studies, our lab is investigating how segregated stromal identities are maintained in distinct locales and context, and how disruption of those stromal identities can lead to human diseases and aging-related phenotypes.

**Urmimala Sarkar, MD, MPH**

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Health Information Technology, Social Media, Patient Safety, Health Disparities, Health Literacy, Diabetes Mellitus Type 2

Urmimala Sarkar MD, MPH is Associate Professor of Medicine at UCSF in the Division of General Internal Medicine and a primary care physician at San Francisco General Hospital’s Richard H. Fine People's Clinic. Dr. Sarkar’s research focuses on (1) patient safety in outpatient settings, including adverse drug events, missed and delayed diagnosis, and failures of treatment monitoring, (2) health information technology and social media to improve the safety and quality of outpatient care, and (3) implementation of evidence-based innovations in real-world, safety-net care settings.

**Anne Suskind, MD MS**

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Urology, urinary incontinence, surgical decision making for older adults undergoing urologic surgery

Dr. Suskind’s current research aims to transform surgical decision-making for older individuals undergoing urologic surgery by studying long term outcomes (such as cognition and function) that matter to patients. Dr. Suskind’s research leverages large national databases and innovative analytical techniques to address these important issues. Current projects include building a department-wide database of patients undergoing benign urologic surgery at UCSF combined with preoperative frailty testing and prospectively collecting data on the relationship between frailty and outcomes of various overactive bladder treatments (included pharmacological and procedural therapies).

**Melisa Wong, MD, MAS**

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Geriatric oncology, lung cancer, geriatric assessment, treatment toxicity, quality of life

Dr. Wong’s research focuses on understanding and improving the care of older adults with lung cancer. She studies an expanded, patient-centered definition of cancer treatment toxicity that incorporates functional status, quality of life, and patient-reported symptoms to assist older adults and clinicians in making more informed treatment decisions. Students will have the opportunity to participate in conducting a cohort study of older adults with stage IV lung cancer receiving chemotherapy, immunotherapy, and/or targeted therapy and assist with analysis of quantitative and qualitative data.

**Kristine Yaffe, MD**

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Cognition Disorders, Dementia, Alzheimer Disease, Cognition, Aging

Kristine Yaffe, MD is Professor in the Departments of Psychiatry, Neurology and Epidemiology at the University of California, San Francisco (UCSF) and Vice Chair of Research for the Department of Psychiatry. She also is Chief of Geriatric Psychiatry and Director of the Memory Disorders Clinic at the San Francisco VA Medical Center. In addition, she is also the Roy and Marie Scola Endowed Chair in Psychiatry. In both her research and in her clinical work, she has directed her efforts towards improving the care of patients with cognitive disorders and other geriatric neuropsychiatric conditions.

Dr. Yaffe's research has focused on the predictors and outcomes of cognitive decline and dementia in older adults. She is particularly interested in identifying novel risk factors for cognitive impairment that may lead to strategies to prevent cognitive decline. Dr. Yaffe currently has funded studies investigating physical and intellectual activity, sleep disorders, chronic medical conditions including diabetes, obesity and chronic kidney disease, and depression. Another more recent focus of her work is conceptualization and characterization of Healthy Brain Aging. Her work has been published in numerous prestigious journals including the Lancet, JAMA, and The New England Journal of Medicine and she is currently funded by the NIH, DOD, State of California Public Health Department, the Alzheimer Association and other foundations.

Dr. Yaffe received her medical degree from the University of Pennsylvania. She completed residency training in both neurology and psychiatry at the University of California, San Francisco. She then completed a combined fellowship in Clinical Epidemiology and Research Methods and Geriatric Psychiatry also at the University of California, San Francisco.

**Kai Zhou, PhD**
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Proteins in a cell are metastable and not only threatened by the crowded cellular environment, but also affected by mutations, mistakes in translation and posttranslational modifications, and unpredictable environmental stresses. Proteins tend to misfold with age, which impairs protein homeostasis and is believed to be an underlying cause for many age-related diseases, including Alzheimer’s and Parkinson’s. Protein homeostasis (proteostasis), maintained through balancing protein folding and misfolding, is the key for biological systems to live long and prosper, as almost all cellular functions are fulfilled by specific proteins. The Zhou lab studies mechanisms underlying the cellular aging process, with a particular emphasis on proteostasis. We study protein folding and misfolding in both young and aging cells, with the goal of understanding the events that lead to the loss of proteostasis during cellular aging and disease as well as identifying mechanisms that can be exploited to rejuvenate aging cells. Our lab uses the budding yeast Saccharomyces cerevisiae to study these topics systematically and comprehensively at the molecular and cellular levels. Budding yeast has been proven to be a great model system for research on cellular aging and revealed longevity mechanisms that are highly conserved in metazoan. By leveraging genetic tools and libraries, we hope to progress quickly on projects to provide insights for fundamental biological questions. We are also developing new methodologies and platforms to broaden our technology portfolio that can be unleashed to break through current limitations in the field and improve our understanding of aging and age-related diseases.