

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>.

The application deadline is February 14, 2025. Early applications may increase your chances of finding a faculty mentor.

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, we ask that students seek out and establish a relationship with a mentor before submitting an application. Students who already work with a mentor at UCSF on aging related research may continue working with their mentor. MSTAR students may work with any UCSF faculty who do aging related research, but we suggest starting with these faculty who are familiar with the MSTAR program: See [MSTAR Mentor List](#) in the other tabs and check MENTOR AVAILABILITY (once list is finalized and live) prior to contacting the mentors. 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 and Wednesday 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 2025, they would go to the AGS meeting in May 2026). 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.
- The start and end dates of the program are flexible to account for variation in medical school schedules, but all students must be present for 7 weeks from 6/23/25 – 8/8/25.
- 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.
- In 2023, The NIH NRSA Pre-doctoral stipend level was \$2262 per 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!

First Name	Last Name	Email	Research Blurb
Louise	Aronson	Louise.Aronson@ucsf.edu	Louise Aronson MD MFA https://profiles.ucsf.edu/louise.aronson Geriatrics, anti-ageism, public medical communication, healthy aging, optimizing aging, geriatrics education, medical humanities, writing, health and healthcare Louise Aronson is a geriatrician and writer whose work focuses on health equity for older adults. Her current work is focused on expanding geriatric care and public perceptions of old age to more accurately attend to the decades and diversity of elderhood, developing innovative programs and practices to empower older adults to retain agency and maximize wellness as they age. These efforts include a novel clinical practice, the AGE SELF CARE group visit program, and writing for medical, policy, public health and lay presses.

Anna	Chodos	Anna.Chodos@ucsf.edu	<p>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, poverty in older adults, dementia, elder abuse.</p> <p>Dr. Anna Chodos is the Director for Whole Person Geriatrics in the San Francisco Health Network, our integrated safety net system of health care. 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 also focuses on the ethical challenges of caring for older adults who have no surrogate decision makers. She is the medical director of the outpatient Geriatrics Consult Service and the Geriatrics-Neurology Cognitive Clinic at Zuckerberg San Francisco General, as well as a primary care provider at the adult medicine primary care clinic at ZSFG.</p>
Ken	Covinsky	covinsky@medicine.ucsf.edu	<p>Ken Covinsky, MD, MPH http://profiles.ucsf.edu/kenneth.covinsky Email: covinsky@medicine.ucsf.edu Factors impacting ability of older persons to care for themselves, using measures of physical and social functioning to predict health outcomes</p> <p>Dr. Covinsky is interested in the broad determinants of health outcomes in older persons. He uses various data sources 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.</p> <p>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/.</p>
Jessica	Eng	Jessica.Eng@onlok.org	<p>Jessica Eng, MD, MS http://profiles.ucsf.edu/jessica.eng Email: Jessica.Eng@onlok.org Primary care panel management of complex adults, Interprofessional team care, Home-based care, program evaluation.</p> <p>Jessica Eng, MD, MS, is an Associate Professor of Medicine in the Division of Geriatrics, Department of Medicine at the University of California San Francisco (UCSF). A graduate of Harvard College and the Boston University School of Medicine, she completed her internal medicine residency and geriatric fellowship at Boston Medical Center. She is a graduate of the VA Quality Scholars program. She is a board certified geriatrician and internist.</p> <p>Dr. Eng's main research and education interests are the development and implementation of healthcare teams that apply geriatric principles to adults with complex serious illnesses. She is particularly interested in using primary care panel management of complex adults, interprofessional team care, and home-based care to improve patient-centered outcomes.</p> <p>She currently serves as the Medical Director of On Lok, a Bay Area health care organization dedicated to serving the spectrum of care needed by older adults. She serves as core faculty for the National VA Quality Scholars program and mentor to medical students, fellows and early career faculty on quality improvement projects and implementation research.</p>
Meredith	Greene	Meredith.Greene@ucsf.edu	<p>Meredith Greene, MD http://profiles.ucsf.edu/meredith.greene Email: Meredith.Greene@ucsf.edu interests: HIV and aging; integrating geriatrics into HIV care settings</p> <p>Dr. Greene is interested in how to improve the care of older adults living with HIV infection. Her research has focused on describing aging concerns for older adults living with HIV as well as working to develop new care models incorporating geriatrics to serve this population. She currently provides geriatric consults to two of the HIV clinics affiliated with UCSF.</p>

Ashwin	Kotwal	Ashwin.Kotwal@ucsf.edu	<p>Ashwin Kotwal, MD, MS https://profiles.ucsf.edu/ashwin.kotwal Email: Ashwin.Kotwal@ucsf.edu Social Relationships, Loneliness, Social Isolation, Health, End-of-Life, Serious Illness among Older Adults, (Cancer, COPD, Heart Failure, Dementia, etc.)</p> <p>Dr. Kotwal was an MSTAR student as a first year medical student in 2010 and now practices geriatrics and palliative care at the San Francisco VA Medical Center. Dr. Kotwal's main area of research focuses on understanding how social isolation or feelings of loneliness can impact quality of life and health care use among older adults. He uses two approaches to address research questions. First, he uses large national surveys such as the Health and Retirement Study (https://hrs.isr.umich.edu/about) or the National Social Life Health and Aging Project (https://www.norc.org/Research/Projects/Pages/national-social-life-health-and-aging-project.aspx) which have detailed questions on health, social lives, and health care use among older adults. Second, he works with local, community-based organizations to develop and evaluate interventions which address loneliness and social isolation. Dr. Kotwal works with students to identify projects of mutual interest using available data from one of these two sources. For example, prior published student-led projects examined advanced care planning among immigrant older adults, impaired mobility and social isolation, loneliness among spouses of persons with dementia, and the use of technology among older adults to improve social connections.</p>
Sei	Lee	Sei.Lee@ucsf.edu	<p>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 2 main areas of research interest:</p> <ol style="list-style-type: none"> 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) 2. Geriatric Diabetes: I'm interested in how varying levels of diabetes control affects geriatric outcomes such as incontinence, falls and functional decline in the frail elderly.
John	Newman	JNewman@buckinstitute.org	<p>John Newman, MD PhD http://profiles.ucsf.edu/john.newman https://www.buckinstitute.org/lab/newman-lab/ Email: JNewman@buckinstitute.org Geriatrics, geroscience, dementia, delirium, metabolism, ketone bodies</p> <p>Dr. Newman is a geriatrician and basic scientist whose laboratory at the Buck Institute studies how energy metabolism in cells affects aging. Ketone bodies are normal molecules that our own bodies make during a fast to provide energy to cells. But ketone bodies have drug-like functions as well that control important processes like inflammation and how genes are expressed. Our lab studies how the many functions of ketone bodies affect the aging brain. This will help explain why some people, as they age, are more vulnerable than others to dementia (permanent memory loss) or to delirium (a sudden confusion while sick), and lead to new treatments for these complex and important geriatric conditions.</p>

Edgar	Pierluissi	Edgar.Pierluissi@ucsf.edu	<p>Edgar Pierluissi, MD http://profiles.ucsf.edu/edgar.pierluissi Email: Edgar.Pierluissi@ucsf.edu</p> <p>Hospitalization-associated disability, delirium, acute care for elders</p> <p>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.</p>
Stephanie	Rogers	Stephanie.Rogers@ucsf.edu	<p>Stephanie Rogers, MD, MPH https://profiles.ucsf.edu/stephanie.rogers Email: Stephanie.Rogers@ucsf.edu</p> <p>Making health systems "age-friendly" or safe, healthy, and person-centered for older adults, ageism in medicine, implementation of clinical models for older adults.</p> <p>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 physical and mental decline, and the implementation and testing of medical technology particularly in transitions from hospital to home. She currently the founding medical director of UCSF's Age-Friendly Health System and is the founder/medical director of the Acute Care for Elders (ACE) units, Geriatrics-Orthopedics Co-management program, UCSF Delirium Reduction Program, Geriatrics Inpatient consultation service, and is working to build a Geriatrics Emergency Department.</p>
Alexander	Smith	Alexander.Smith@ucsf.edu	<p>Alex Smith, MD http://profiles.ucsf.edu/alexander.smith Email: Alexander.Smith@ucsf.edu</p> <p>Palliative care, Prognosis</p> <p>Dr. Smith works with Dr. Lee to study how long older adults have to live and communicating this information to patients.</p>
Michael	Steinman	mike.steinman@ucsf.edu	<p>Michael Steinman, MD http://profiles.ucsf.edu/michael.steinman Email: mike.steinman@ucsf.edu</p> <p>Polypharmacy, Multimorbidity, Prescription Drugs, Drug Industry, Deprescribing</p> <p>Dr. Steinman's research is focused on understanding and improving the quality of prescribing for elders with long-term diseases. His research program includes studies of reducing use of unnecessary and harmful medication in older adults, common problems that result from inappropriate prescribing; assessing prescribing quality and defining best practices in patients with common combinations of diseases; and developing improved methods for assessing the burdens of having multiple chronic diseases. In addition, Dr. Steinman maintains an active research interest in the impact of pharmaceutical industry marketing on physician prescribing behavior.</p>

Rebecca	Sudore	rebecca.sudore@ucsf.edu	<p>Rebecca Sudore, MD http://profiles.ucsf.edu/rebecca.sudore Email: rebecca.sudore@ucsf.edu Advance Care Planning, Decision Making, Health Literacy, Advance Directives Communication, Health Education, Health Literacy, Advance Care Planning, Decision Making, Advance Directives Dr. Rebecca Sudore's team helps to make easy-to-read health education materials for patients, families, and caregivers in multiple languages. The PREPARE team creates these materials with the community and then tests them in research studies (PREPAREforYourCare.org). The PREPARE team's primary research focus is on improving advance care planning and medical decision making for vulnerable older adults with limited health literacy. Advance care planning allows people to name an emergency contact and write down their wishes for medical care if they were to have a serious illness. Advance directives are legal forms that allow people to write down their wishes. Dr. Sudore and her team have designed and tested interactive, web-based advance care planning tools (in English, Spanish and other languages) to prepare patients and their loved ones to make difficult medical decisions (PREPAREforYourCare.org) They have also designed and tested easy-to-read advance directives for all 50 states in multiple languages.</p>
Victoria	Tang	Victoria.tang@ucsf.edu	<p>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, and she is pursuing several projects that span different aspects of this topic. Victoria is currently studying the long-term health of frail, older adults after they undergo surgery. Additionally, with older adults, it is standard to ask about their priorities for healthcare at the end of their lives to develop what is called an "advanced care directive." Victoria is working to improve how these advanced care directives are documented in hospital electronic health records. On the national level, she is actively engaged in using her research findings to develop 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.</p>

Michi	Yukawa	Michi.Yukawa@ucsf.edu	<p>Michi Yukawa, MD, MPH http://profiles.ucsf.edu/michi.yukawa Email: Michi.Yukawa@ucsf.edu</p> <p>Dr. Michi Yukawa is a Clinical Professor in the Division of Geriatrics and the Post Acute Care Medical Director at the Jewish Home & Rehabilitation Center (JHRC).</p> <p>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.</p> <p>Clinical</p> <p>As Post Acute Medical Director at JHRC, Dr. Yukawa will provide physician leadership for implementing a new patient care partnership in which UCSF geriatricians provide the clinical care for patients discharged from UCSF Health to JHRC's short-stay rehabilitation unit. She also will provide medical directorship for the entire 120-bed short-stay rehabilitation unit, known as the Friedman Pavilion. She will work with UCSF hospitalists and primary care to enhance the quality of the transition process for UCSF patients from hospital to JHRC and back to UCSF primary care and provide education for JHRC staff in geriatrics and quality indicators. She also will facilitate implementation science research into JHRC's clinical environment, including integrating Geriatrics and Geriatric-Palliative Care fellows into research and quality improvement projects.</p> <p>Research</p> <p>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</p>
First Name	Last Name	Email	Research Blurb
Katrina	Abuabara	katrina.abuabara@ucsf.edu	<p>Katrina Abuabara, MD, MA, MSCE http://profiles.ucsf.edu/katrina.abuabara https://abuabara.ucsf.edu/ Email: katrina.abuabara@ucsf.edu</p> <p>Dermatology, skin barrier, aging, inflammatory skin disease</p> <p>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.</p>
Tamara	Alliston	tamara.alliston@ucsf.edu	<p>Tamara Alliston, PhD https://profiles.ucsf.edu/tamara.alliston https://allistonlab.ucsf.edu/ Email: tamara.alliston@ucsf.edu</p> <p>Skeletal mechanobiology, aging, TGF-beta signaling, bioengineering</p> <p>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.</p>

Julie	Anderson	jandersen@buckinstitute.org	<p>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 Aβ 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.</p>
Jalayne	Arias	Jalayne.arias@ucsf.edu	<p>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.</p>
Michelle	Arkin	michelle.arkin@ucsf.edu	<p>Michelle Arkin, PhD Pharmaceutical Chemistry Director, Small Molecule Discovery Center Genentech Hall, S512D University of California San Francisco 600 16th St, San Francisco, CA 94143 https://pharm.ucsf.edu/arkin https://pharm.ucsf.edu/smdc email: michelle.arkin@ucsf.edu Drug discovery, chemical biology, screening, neurodegeneration, fibrosis, cancer Dr. Arkin is a chemical biologist in the department of pharmaceutical chemistry. Her lab develops biochemical and cellular assays to measure how proteins are dysregulated in age-related diseases, and then develops drug-like molecules that may alter the course of the disease. The lab specializes in 'challenging' or 'undruggable' targets, like protein-protein interactions and disordered proteins. The group is highly interdisciplinary, including biochemistry, biophysics, chemistry, high-throughput screening, and fragment-based discovery.</p>
Mary Helen	Barcellos-Hoff	Maryhelen.barcellos-hoff@ucsf.edu	<p>Mary Helen Barcellos-Hoff, Ph.D. https://cancer.ucsf.edu/people/barcellos-hoff.mary-helen https://barcelloshofflab.ucsf.edu/laboratory-dr-mary-helen-barcellos-hoff Maryhelen.barcellos-hoff@ucsf.edu Cancer biology, aging, radiation therapy, carcinogenesis, TGFβ I am a cancer and radiation biologist who studies radiation as a cancer therapy and as a carcinogen of breast. We use mouse models, human cells and tumors, molecular and cell biology methods and bioinformatics to investigate the responses to ionizing radiation that determine cancer frequency or treatment response. We focus on the activity of transforming growth factor beta (TGFβ), whose activity is induced by radiation, and its roles in the DNA damage response, immunosuppression and inflammation. In regards to aging, we have a large collection of blood, plasma, bone marrow, spleen and tumor specimens collected from mice as a function of age at irradiation spanning the lifetime of female Balb/c mice. We are conducting multi-omic analysis of these to frame a more comprehensive view of aging per se in females and how it is perturbed by radiation and systemic inflammation.</p>

Deb	Barnes	deborah.barnes@ucsf.edu	<p>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 a Professor with the UCSF Weill Institute for Neurosciences, Departments of Psychiatry and Behavioral Sciences and Epidemiology & Biostatistics. She is also affiliated with the Osher Center for Integrative Health. Dr. Barnes' research focuses on identification of factors that may increase or decrease dementia risk; development of risk prediction models for cognitive impairment and dementia in older adults; 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, mental and social activity. She developed the Preventing Loss of Independence through Exercise (PLIE) integrative group movement program for people living with dementia (https://plie4dementia.com/) and is performing a multisite embedded pragmatic clinical trial of a tool that uses electronic health record data to identify patients with undiagnosed dementia (EHR Risk of Alzheimer's And Dementia Assessment Rule, eRADAR). She also is leading a project funded by the California Department of Public Health to improve dementia detection in primary care statewide. In addition to her academic role, Dr. Barnes is co-founder and Chief Science Advisor for Together Senior Health (https://togetherseniorhealth.com/) and has several ongoing Small Business Innovation Research grants from NIH.</p>
Scott	Bauer	Scott.Bauer@ucsf.edu	<p>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. Dr. Bauer also has active projects using data from the Baltimore Longitudinal Study of Aging, Osteoporotic Fractures in Men Study, Women's Health Initiative Observational Study,</p>
Mallar	Bhattacharya	mallar.bhattacharya@ucsf.edu	<p>Mallar Bhattacharya, MD mallar.bhattacharya@ucsf.edu https://bhattacharyalab.ucsf.edu https://profiles.ucsf.edu/mallar.bhattacharya Dr. Bhattacharya is a pulmonary and critical care doctor and basic scientist whose laboratory at UCSF Parnassus studies how aging and cellular senescence affect the fibrotic response to lung injury and infection. Injury to the lung induces a cellular senescence profile that is associated with immune activation, which in turn feeds back to activate fibroblasts and induce lung scarring. Our lab explores how immune cells regulate both activation and senescence of lung fibroblasts. This research will help to elucidate why aged individuals are more vulnerable to severe lung injury in the setting of critical illness and to identify new molecular targets for therapies.</p>
Willa	Brenowitz	Willa.Brenowitz@ucsf.edu	<p>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 multi-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.</p>

Abigail	Buchwalter	Abigail.Buchwalter@ucsf.edu	<p>Abigail Buchwalter, PhD https://physiology.ucsf.edu/content/abigail-buchwalter-phd Abigail.Buchwalter@ucsf.edu</p> <p>Cell biology, aging, genome organization</p> <p>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.</p>
Kaitlin	Casaletto	Kaitlin.Casaletto@ucsf.edu	<p>Cognitive Resilience and Precision Dementia Prevention</p> <p>Dr. Casaletto is a neuropsychologist at the UCSF Memory and Aging Center. Her research program aims to identify the biologic and behavioral drivers of dementia prevention. Her work incorporates extensive neuropsychological testing, surveys, and digital health measurement of lifestyle behaviors (e.g., Fitbit), as well as biological markers of brain aging across typically aging adults and those with neurodegenerative disease. Her work has particularly focused on applying novel molecular fluid biomarkers reflecting synaptic, glial, immune, and vascular functioning to highlight relevant neurobiological pathways related to resilient aging. Her overarching goal is to identify the neurobiology of resilient brain aging in a person-specific manner to uncover dementia prevention targets and precision therapies.</p>
Peggy	Cawthon	peggy.cawthon@ucsf.edu	<p>Peggy Cawthon, PhD, MPH https://profiles.ucsf.edu/peggy.cawthon peggy.cawthon@ucsf.edu</p> <p>Dr. Cawthon is PhD epidemiologist who is Scientific Director California Pacific Medical Center Research Institute/Sutter Health and adjunct faculty at UCSF. She leads many large cohort studies on aging and musculoskeletal health in older adults including MrOS, SOF, SOMMA, and MOST. She often mentors junior scientists in the use of these data. Dr. Cawthon's research particularly focuses on sarcopenia, and she has led the development of definitions for this condition.</p>
Beth	Cohen	beth.cohen@ucsf.edu	<p>Beth Cohen, MD, MAS http://profiles.ucsf.edu/beth.cohen Email: beth.cohen@ucsf.edu</p> <p>Keywords: Tobacco and cannabis policy and health impacts</p> <p>Dr. Cohen conducts research on national trends in tobacco and cannabis use, perceptions of risk, and impacts on health. She has data on these topics available from a national longitudinal survey.</p>
Kelsey	Collins	kelsey.collins@ucsf.edu	<p>Kelsey H. Collins, PhD kelsey.collins@ucsf.edu</p> <p>Dr. Collins is an Assistant Professor in the UCSF Department of Orthopaedic Surgery and Musculoskeletal Center. She leverages her interdisciplinary background in bioengineering, endocrinology, and physiology to determine molecular mechanisms of tissue crosstalk in musculoskeletal diseases. Previously, osteoarthritis, or the painful loss of cartilage lining our joints, was dismissed as an inevitable consequence of aging or mechanical overload. However, disproportionately, osteoarthritis is present in individuals with obesity, which involves both metabolic and biomechanical factors. A key link between these factors is excess adipose tissue. The Collins Lab is delineating which factors are involved in fat-cartilage signaling that contribute to osteoarthritis susceptibility and pain to generate a new class of regenerative medicine-based therapies using induced pluripotent stem cells, multi-omic approaches, and CRISPR-Cas9 genome engineering. As pathological fat signaling may play a role in many debilitating disease processes, the mechanisms and therapies we study have far-reaching implications to aging, obesity, diabetes and other chronic diseases.</p>

Lisa	Ellerby	lellerby@buckinstitute.org	<p>Lisa Ellerby, PhD lellerby@buckinstitute.org https://www.buckinstitute.org/lab/ellerby-lab/ 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.</p>
Sarah	Hooper	hoopers@uchastings.edu	<p>Sarah Hooper, JD https://expertfile.com/experts/sarah.hooper Email: hoopers@uchastings.edu 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.</p>
Alison	Huang	Alison.Huang@ucsf.edu	<p>Alison Huang, MD, MAS http://profiles.ucsf.edu/alison.huang Email: Alison.Huang@ucsf.edu Keywords: Genitourinary Aging, Older Women's Health, Urinary Incontinence, Nocturia and Sleep Disruption, Menopause, Nocturia, Interpersonal Violence, Aging and Sexual Function Dr. Huang is a patient-oriented researcher dedicated to advancing understanding and improving management of the impact of aging on women's health and genitourinary health. She has mentored six past MSTAR students on aging-related projects, all of which have involved national meeting presentations and authorship (usually first authorship) on peer-reviewed research publications for those students, as well as several students with national or international meeting presentation awards. Past projects involving medical students have included analyses of treatment-seeking for urinary incontinence among older women of diverse backgrounds, older abuse/mistreatment among older community-dwelling women and men, associations between interpersonal trauma on aging-associated functional decline in older women, treatment strategies for menopause symptoms, and sexual function in midlife and older women, among other topics.</p>
Lauren	Hunt	lauren.hunt@ucsf.edu	<p>Lauren Hunt, PhD, RN, FNP https://profiles.ucsf.edu/lauren.hunt Email: lauren.hunt@ucsf.edu 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.</p>
James	Iannuzzi	james.iannuzzi@ucsf.edu	<p>James Iannuzzi, MD, MPH Email: james.iannuzzi@ucsf.edu 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.</p>

Sarah	LaHue	Sara.LaHue@ucsf.edu	<p>Sara LaHue, MD https://profiles.ucsf.edu/sara.lahue Sara.Lahue@ucsf.edu Keywords: delirium, geriatrics, dementia, sleep, inpatient, geroscience Dr. LaHue is a neurologist who focuses exclusively on the care of adults in the hospital. Dr. LaHue studies delirium through several interdisciplinary lenses. Her main area of research is investigating delirium biomarkers and cognitive trajectories in older hospitalized adults. She also studies clinical predictors and outcomes associated with delirium through the UCSF Delirium Care Pathway, which collects daily delirium screening on every hospitalized patient across UCSF Health. Lastly, she studies sleep promotion using novel technologies with the hope of preventing hospital-acquired delirium.</p>
Jennifer	Lai	Jennifer.Lai@ucsf.edu	<p>Jennifer Lai, MD http://profiles.ucsf.edu/jennifer.lai Email: Jennifer.Lai@ucsf.edu 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.</p>
Courtney	Lyles	Courtney.Lyles@ucsf.edu	<p>Courtney Lyles, PhD https://profiles.ucsf.edu/courtney.lyles Email: Courtney.Lyles@ucsf.edu 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.</p>
Anil	Makam	Anil.Makam@ucsf.edu	<p>Anil Makam, MD, MAS, Email: Anil.Makam@ucsf.edu 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.</p>

Jean	Nakamura	Jean.Nakamura@ucsf.edu	<p>Jean Nakamura, MD https://nakamuralab.ucsf.edu/ Email: Jean.Nakamura@ucsf.edu</p> <p>Radiation, carcinogenesis, metabolism, longitudinal effects of radiation exposure, neurodegeneration</p> <p>Dr. Nakamura is a radiation oncologist whose laboratory studies radiation effects in diverse tissues, with a primary focus in carcinogenesis, which involves mechanisms that are shared with aging. The growing evidence that mutational processes in normal cells accumulate with age generates questions about the relationship between aging and cancer formation, which is a research focus for the Nakamura lab. Another area the lab studies relates to how radiation exposure influences normal tissue aging, which has specific relevance for human activities in space.</p>
Tien	Peng	Tien.Peng@ucsf.edu	<p>Tien Peng, MD https://profiles.ucsf.edu/tien.peng Tien.Pen@ucsf.edu</p> <p>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.</p>
Elena	Portacolone	elena.portacolone@ucsf.edu	<p>Elena Portacolone, PhD, MBA, MPH https://profiles.ucsf.edu/elena.portacolone elena.portacolone@ucsf.edu</p> <p>Living Arrangements, Health Disparities, Cognitive Impairment, Aging in Place, Artificial Intelligence Applied to Dementia Research</p> <p>Dr. Portacolone is an Associate Professor of Sociology in the Institute for Health and Aging at UCSF and a Pepper Center Scholar at the Division of Geriatric Medicine at UCSF. Dr. Portacolone is also an alumna of the Butler-Williams program at the National Institute on Aging and of the Health Disparities Institute at the National Institute of Minority Health and Health Disparities.</p> <p>Dr. Portacolone completed her undergraduate degree at the University of Turin, Italy. After working in the corporate sector in the United Kingdom, she completed an MPH degree at School of Public Health at UC Berkeley, an MBA degree at the Haas Business at UC Berkeley, and a PhD in Sociology in the Department of Social and Behavioral Science at UCSF.</p> <p>Dr. Portacolone has research experience in studying cognitive impairment, older adults who are racial/ethnic minorities, innovative recruitment strategies, as well as artificial intelligence and other technologies to support people with cognitive impairment age in place. She has led six investigations that focus on identifying barriers and facilitators to acute and long-term services and supports, increasing engagement of racial/ethnic minorities in dementia research, social integration, and emergency preparedness in vulnerable older adults, the majority of them living alone. The majority of study participants in her studies belong to racial/ethnic minorities. She has received extensive training in cognitive impairment, ethics, and advanced qualitative methods, as well as mixed methods.</p>
Anne	Suskind	Anne.Suskind@ucsf.edu	<p>Anne Suskind, MD MS http://profiles.ucsf.edu/anne.suskind Email: Anne.Suskind@ucsf.edu</p> <p>Urology, urinary incontinence, surgical decision making for older adults undergoing urologic surgery</p> <p>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).</p>

Melisa	Wong	Melisa.Wong@ucsf.edu	<p>Melisa Wong, MD, MAS http://profiles.ucsf.edu/melisa.wong Email: Melisa.Wong@ucsf.edu</p> <p>Geriatric oncology, shared decision making, patient-centered communication tool intervention</p> <p>Dr. Wong's research focuses on improving the delivery of goal-concordant care for older adults with cancer. The MSTAR student will have the opportunity to join an ongoing feasibility pilot study of Dr. Wong's Best Case/Worst Case-Geriatric Oncology communication tool versus wait-list control. The MSTAR student will assist with qualitative analysis of decision-making discussions between oncologists, older adults with cancer, and their family to evaluate shared decision making using a structured measure (OPTION-5) and to identify emergent themes on decision-making needs for these patients.</p>
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Cognition Disorders, Dementia, Alzheimer Disease, Cognition, Aging

Kristine Yaffe, MD is the Scola Endowed Chair and Vice Chair, Professor in the Departments of Psychiatry, Neurology and Epidemiology, and Director of the Center for Population Brain Health at the University of California, San Francisco. She also serves as Director of NeuroPsychiatry and of the Memory Evaluation Clinic at the San Francisco VA Medical Center. In both her research and in her clinical work, she has focused her efforts towards improving the care of patients with cognitive disorders and other geriatric neuropsychiatric conditions.

Dr. Yaffe is an internationally recognized expert in the epidemiology of dementia and cognitive aging. She serves as PI of almost a dozen NIH, Department of Defense, Veterans Administration, and foundation grants and is the foremost leader in identifying modifiable risk factors for dementia. With over 600 peer-reviewed articles dedicated to improving population brain health (H-index=159 with publications in high impact journals such as the Lancet, JAMA, and NEJM), her work has formed the cornerstone for dementia prevention trials worldwide. Current studies focused on risk and resilience factors for dementia and cognitive aging include cardiovascular risk factors, lifestyle behaviors, sleep, traumatic brain injury, depression, social determinants of health, multi-domain interventions, and the life course.

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.

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Brain aging, dementia, blood-brain barrier, neuroimmunity, chemical biology, -omics

Andrew is a Sandler Faculty Fellow in the Department of Anatomy and Bakar Aging Research Institute. We study how the blood-brain barrier (BBB) regulates brain health and aging. The BBB forms a unique shelter for the brain, critical for optimal neuronal function. Our lab develops new molecular approaches to decipher and engineer unexpected communication across the BBB. We recently developed proteome tagging and single-cell techniques to discover diverse protein transport across the BBB, the mechanisms of its impairments with age, and its associations with Alzheimer's disease. Our work could inform improved drug delivery to the brain and reveal new mechanisms governing brain health we can use to engineer greater resilience to neurodegeneration.

Veronica Yank Veronica.Yank@ucsf.edu Veronica Yank, MD

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I am a primary care physician-investigator. My research focuses on informal (family/friend) caregivers and on improving care to prevent and manage chronic conditions in primary care, community, and home-based settings, particularly conditions associated with older adults, heavy caregiver burden (e.g., dementia), and elevated cardiovascular disease risk (e.g., diabetes, chronic kidney disease). I do health services research, community-based randomized controlled trials, and implementation studies using mixed methods with LatinX, urban, and rural underserved patients, families, and communities. I am core faculty within the Multiethnic Health Equity Research Center and Associate Director of the National Clinician Scholars Program at UCSF.

Kai Zhou KZhou@buckinstitute.org Kai Zhou

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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.

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Dr. Sakeen W. Kashem cares for adults with skin conditions or concerns, including aging skin, skin infections, inflammatory or autoimmune skin diseases, skin cancers, and conditions that cause itching or pain. He also cares for veterans with skin diseases at the San Francisco Veterans Affairs Medical Center.

Kashem's research explores the connection between the immune system and how we experience itch and pain. He also studies how the nervous system influences our immune response and ability to fight off cancer. His team has a particular focus on understanding how these interactions change as we age, aiming to improve treatments for skin diseases and quality of life for people who have them.

Kashem earned his medical degree from the University of Minnesota Medical School. He also has a doctorate in immunology from the University of Minnesota. He completed a residency in dermatology at UCSF and is currently a postdoctoral research fellow in neuroanatomy. In addition to patient care and research, he takes pride in educating future dermatologists.

Malene Hansen mhansen@buckinstitute.org Malene Hansen, PhD

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Dr. Hansen is a geneticist who studies the basic mechanisms of aging with a focus on the cellular recycling process called autophagy. During autophagy, cellular material including aggregated proteins but also organelles like mitochondria can be destined for degradation in lysosomes. Autophagy ensure cellular homeostasis, and in turn, autophagy has been linked to numerous age-related diseases, including neurodegenerative disorders and cancer. Our lab studies the role and regulation of autophagy in aging using both cell-culture models, as well as the short-lived and genetically tractable nematode *C. elegans*. Our basic studies bring important molecular information which may prove useful not only to better understanding human aging, but also ultimately provide therapeutic interventions to age-related disorder with dysfunctional autophagy.

Roarke Kamber roarke.kamber@ucsf.edu Roarke Kamber, PhD

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Macrophages, phagocytosis, cancer, CRISPR screening, lipids

The Kamber lab is interested in understanding how macrophages detect and eliminate damaged cells that arise during the aging process. We apply powerful genetic screening approaches to discover molecules that regulate the ability of macrophages to destroy unwanted cells and use a combination of biochemical, cell biological, and in vivo experiments to understand how these components work at a mechanistic level. By defining novel inter-cellular signaling pathways governing macrophage function, we aim to potentiate the development of improved immunotherapies in cancer and other diseases marked by the accumulation of abnormal cells.

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Lung transplantation, Advanced Lung Disease, Patient Centered Outcomes, Frailty, Health Related Quality of Life, Body Composition, Sarcopenia, Disability, Clinical Research

Dr. Singer is a pulmonologist specialized in lung transplantation. He is a Professor of Medicine and patient-oriented researcher with formal training in epidemiology, biostatistics, and psychometrics. Clinically, he is the Associate Medical Director of the UCSF Advanced Lung Disease and Lung Transplant Program where he specializes in the care of patients advanced lung disease and patients undergoing lung transplantation.

His research is founded on applying aging-related principles to study patient-centered outcomes in lung transplantation along three themes: 1) improving transplant candidate risk stratification by investigating frailty and body composition; 2) patient centered outcomes, including functioning, disability, health-related quality of life, and survival; and 3) developing and validating novel surveys and measures of frailty for use in advanced lung disease and lung transplantation. More broadly, he founded and direct the UCSF Advanced Lung Disease and Transplant research program, a cross-Departmental research cooperative that includes clinical, translational, and basic science investigators.

Julie Anderson jandersen@buckinstitute.org Julie Andersen, PhD

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Dr. Andersen is a neuroscientist whose laboratory at the Buck Institute studies age-related neurodegenerative diseases including Alzheimer's and Parkinson's. The bulk of research to date has concentrated on studying these disorders as independent entities, an approach which has yielded few, if any, affective treatments for either disease state. In contrast, in the Andersen lab we concentrate on what these orders have in common—the aging process itself. Current lab interest include the role of cellular senescence and autophagy/mitophagy, two important 'pillars of aging, in driving these disorders towards identification of novel therapeutics.

James Harrison james.harrison@ucsf.edu James Harrison MPH, PhD

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Hospital Medicine, Geriatrics, Care Transitions, Hospital Care, Skilled Nursing Facilities, Implementation Science

Dr. James Harrison is PhD trained researcher in the UCSF Division of Hospital Medicine and is also the Research Director of UCSF Health's Age Friendly Health System. James is a researcher and implementation scientist who seeks to improve hospital care delivery and hospital care transitions of older adults. He currently has a program of research looking to improve transitions to skilled nursing facilities including to the San Francisco Campus for Jewish Living. James uses mixed-methods to develop interventions that evaluated, implemented and are sustained in real-world clinical settings. Examples of interventions include inpatient mobility and function programs, delirium prevention, patient life stories, and decision support.