

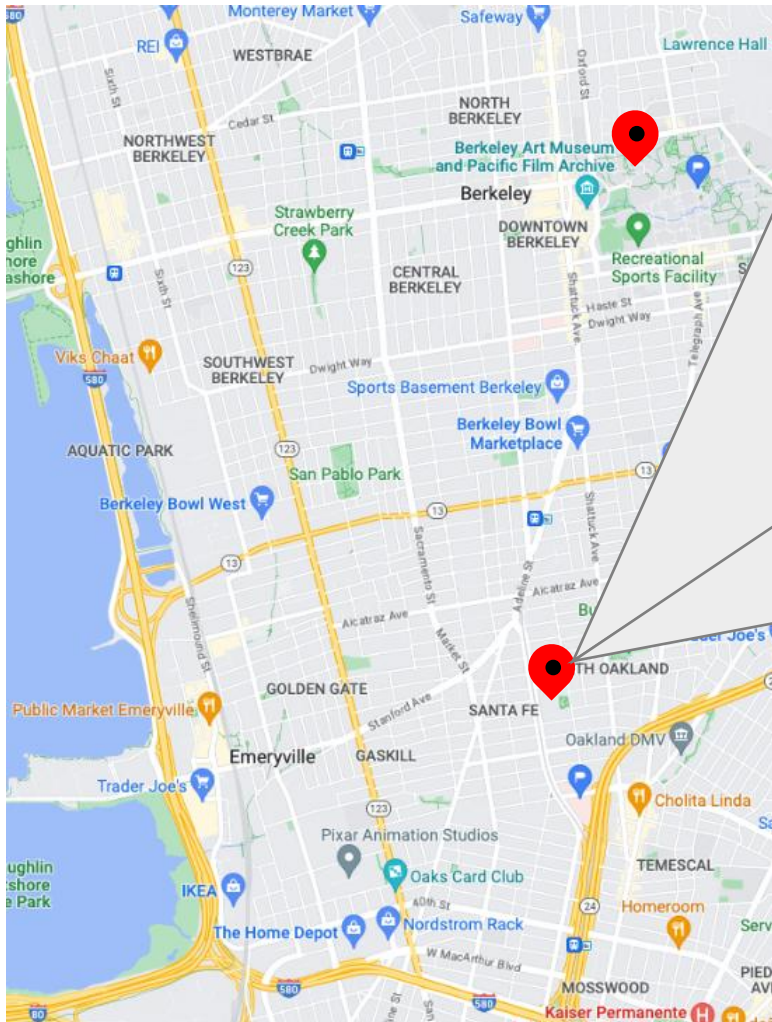


University of California
San Francisco

A Core Journey – Possibility to Adversity to Community

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UCSF MLK Research Building



History

1923–1946

University High School

1946–1960s

Merritt School of Business

1970s

North Peralta Community College
Grove Street College

1980s

community space, movie set, etc.

1992

National Register of Historic Places

1999–2020

Children's Hospital Oakland
Research Institute (CHORI)

2020–present

UCSF MLK Research Building
MLK Cores created

UCSF MLK Cores

Cytometry

- BD FACSAria flow cytometer & sorter
- BD LSRFortessa flow cytometer
- Agilent Seahorse Fe96 cell analyzer
- Cytex ImageStream MKII imaging flow cytometer

Microscopy

- Zeiss confocal fluorescence microscope
- Keyence fluorescence microscope
- Molecular Devices ImageXpress Pico analyzer

Molecular Biology

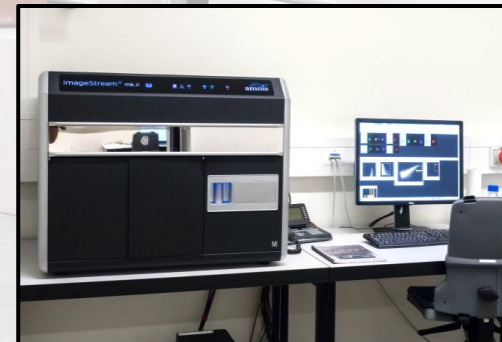
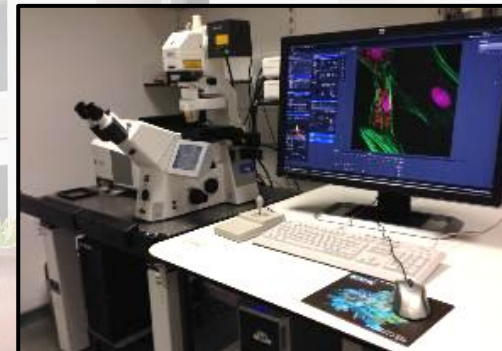
- ThermoFisher QuantStudio 6 RT-qPCR system

Spectroscopy

- Agilent 6495C LC-MS
- Agilent 5900 ICP-OES
- Millipore Direct Detect IR Spectrometer

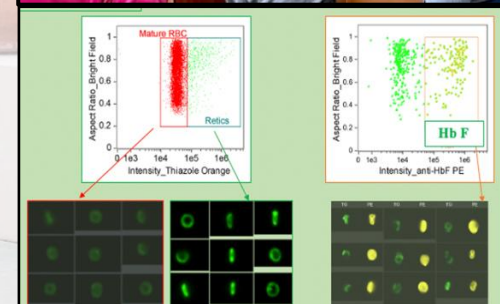
Service Core

- Turnkey Cell Culture Facility
- Dishwashing & Autoclave services
- Service Management – gas cylinders, backup freezers, dry ice, etc
- Shared Instrumentation – plate readers, gel imagers, etc



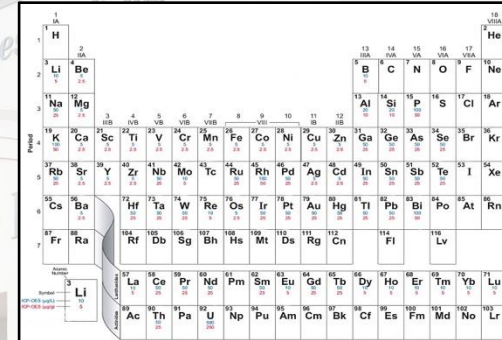
UCSF MLK Cores – ImageStream

- This instrument combines flow cytometry with high-resolution fluorescence microscopy, providing brightfield and fluorescent images for each cell in sample, allowing for multiplexed cellular analyses and identification of rare cell populations.
- Training and data analysis is available on site. Sophisticated AI/ML modules available from the vendor.
- Consulting on experimental design and technical writing for grant applications or manuscripts is also available.
- Samples can be transported to MLK Cores. Users have access to cell culture facility with reservable incubators and biosafety hoods.
- Applications:
 - Cellular activation and apoptosis in complex cell mixtures
 - Receptor co-localization & nuclear translocation
 - Objective morphological classification of heterogeneous cellular samples
 - Determination of the biological consequences of cell-cell interactions
 - Copy number & translocation fluorescence in-situ hybridization (FISH) studies
 - Cytokinesis-block micronucleus assay (CBMN) at high throughput
 - Extracellular vesicles and small particle analysis

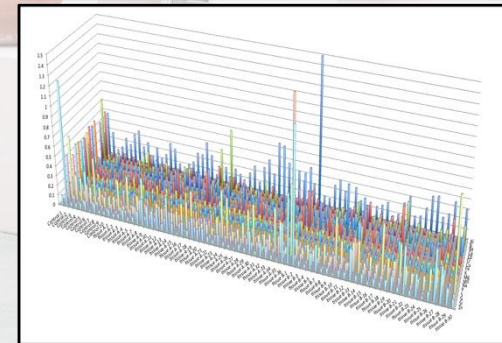


UCSF MLK Cores – ICP-OES

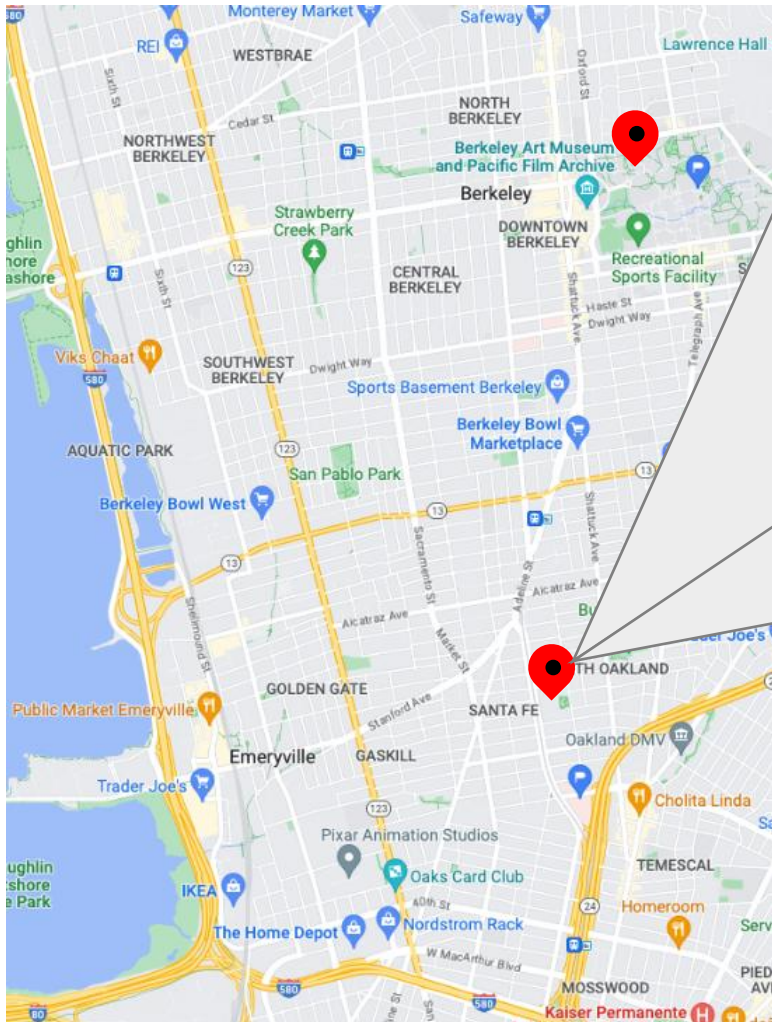
- Elemental analysis service can simultaneously measure nutrient minerals (Ca, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, P, S, & Zn) and many additional elements (Al, As, B, Ba, Cd, Ce, Dy, Er, Eu, Gd, Ho, La, Li, Lu, Nd, Ni, Pb, Pr, Si, Sm, Tb, Ti, Tm, & Yb) within a single run for medical, pharma, agricultural, and specialty sample types.
- Detection limits vary per element but are typically in the low PPB range with excellent precision and reproducibility.
- Consulting on experimental design and technical writing for grant applications or manuscripts is also available.
- Samples can easily be shipped or couriered to MLK Cores. Sample prep is available and turn-around is usually brief.
- Applications:
 - Zn content in blood, urine, hair, & fingernail samples for nutritional surveys
 - Fe content in tissues from animal models treated with experimental chelators
 - Ca & Mg content in media and cell pellets from cellular differentiation studies
 - As & Pb content in soil samples from disparate urban garden locations
 - Toxic metal contaminants in wine from vineyards impacted by regional fires
 - Mineral content in kidney stones and urine from urolithiasis patients
 - Elemental profile correlations in *C. elegans* library for a GWAS study



A standard periodic table of elements, showing element symbols and atomic numbers. The table is organized into periods (rows) and groups (columns). Elements are color-coded by groups: alkali metals (red), alkaline earth metals (orange), transition metals (green), post-transition metals (blue), metalloids (purple), nonmetals (yellow), and noble gases (grey).



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Post Core Activities

Staff & Equipment

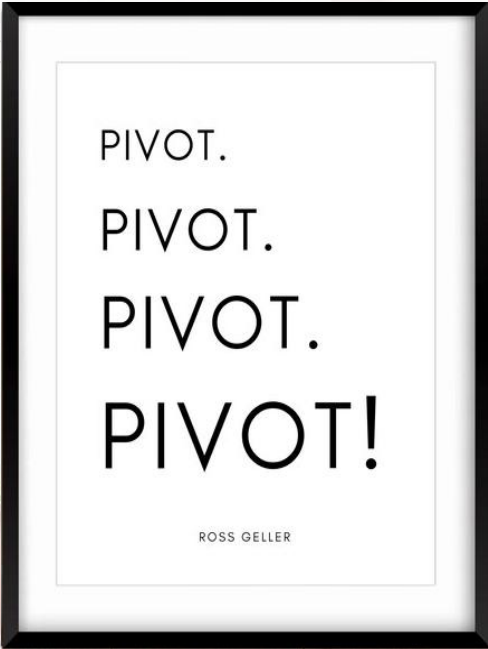
- some staff transferred to new department
- service core duties picked up by individual labs
- all equipment transferred to new department
 - many instruments run as shared equipment in situ
 - specific instruments transferred to main-user laboratories

Continuing ICP-OES Spectroscopy

- existing clients became collaborators, with supply trading
- creating external service
 - External Sales & Services of Education Related Activity (UCSF)
 - Service Level Agreement (UC Merced)
- exploring relationships with other core facilities

Continuing Former MLK Cores Activity

- many flow & microscopy instruments run as shared equipment
- integration into existing resident internship program
 - UCSF Summer Student Research Program (SSRP)
- creating a resident workforce development program
- exploring community partnerships for sustained activities



PIVOT.
PIVOT.
PIVOT.
PIVOT!

ROSS GELLER

External Sales & Services of Education Related Activity

The External Sales and Services of Education Related Activity Proposal is an alternative to a core recharge proposal for setting rates for external customers. It suits single instruments, works for one-off projects or a per-sample rate, and is designed for activities paid for by external customers rather than UCSF funds.

- **Flexible use:** The mechanism supports individual projects which are common for external work or a standard per-sample rate for future external customers.
- **No annual renewal:** Approved rates are not time-limited, unlike standard core recharge rates. If costs or scope change, a rate change request can be submitted at any time.
- **Full cost recovery:** All costs of serving external customers, including staff effort, must be recovered from customers. Effort can be built into the per-sample rate or charged as a separate hourly rate.
- **Instrument costs:** Proposal includes estimate of the share of the service contract and other expenses tied to the external work. It is based on the number of samples the instrument can reasonably process per year, which can be based on volume and cost data from a prior recharge proposal.
- **Optional surplus revenue:** Rates may include a markup above the fully costed rate. You can keep separate nonprofit and for-profit rates with surplus revenue only in the for-profit rate, or apply a reasonable markup to both.
- **F&A added on top:** The applicable F&A rate is added to the final external charge, including any surplus revenue. The UCSF rate is currently 33% and rises to 39.5% beginning in FY28.

Workforce and Community Partnerships

The former MLK Cores contains valuable resources with great potential to benefit biomedical research. By establishing partnerships with workforce development and community programs, we hope to leverage the former core space and equipment to support training, education, research, and future revenue generation. *Internal UCSF programs offer many training and career mobility opportunities for our community members.*

- **UCSF Workforce Outside-In – *Building the external pipeline***
 - **SF Build:** Preparing the clinical and biomedical workforce in partnership with San Francisco State University.
 - **Linked Learning Lab and Mission Bay Hub Ambassador Program:** Career experiences in health and biotechnology for high school students, in partnership with San Francisco Unified School District.
 - **Eden Area Program:** Career workshops and work-based learning, with SF Bay Area Regional Occupational Programs.
 - **Excellence Through Community Engaged Learning (EXCEL):** Entry-level administrative and clerical training, with Jewish Vocational Services (JVS).
 - **IT Support Program:** Training for a career in healthcare technology, with Grow with Google and JVS.
 - **Community Construction Outreach Program :** Economic opportunities for SF residents through construction work.
- **UCSF Workforce Inside-Up – *Advancing current UCSF employees***
 - **3-n-1 Medical Assistant Program:** Pathways to Medical Assistant, Phlebotomist, or EKG Technician roles, with Bay Area Medical Academy (BAMA).
 - **Practice Coordinator Training Program:** Paid accelerated training toward healthcare administration roles.
 - **Security Training Program:** A 4-month program for SF Bayview residents and interview opportunity with the UCSF police department, with Young Community Developers.
 - **Revenue Cycle upskilling:** Advancing current staff into advanced billing roles, with San Francisco State University.

Workforce and Community Partnerships

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- **Alameda County Health Pipeline Partnership (ACHPP)** – *Empowering Alameda youth for STEM jobs*
 - Collaborative network of over 15 community organizations and public agencies working to prepare underrepresented minority and disadvantaged youth for education and sustainable careers in healthcare and scientific fields. Goal is to build a professional health workforce that reflects the rich ethnic and cultural diversity of Alameda County.
 - Key activities include grants for summer and year-round youth programs, program evaluation & assessment, and sponsorship of health career conferences, networking events, and life coaching workshops.
- **Berkeley City College (BCC)** – *Supporting diverse minds reaching for success in STEM*
 - BCC Science Departments offer a comprehensive curriculum designed to prepare a diverse student population for immediate entry into the life sciences workforce or for transfer to elite four-year institutions like UC Berkeley
 - Mission and Goals
 - Workforce Readiness & Skill Upgrades: Equips high school graduates, adult career changers, and degree holders with hands-on technical skills to remain competitive in the Bay Area's booming life sciences sector.
 - Streamlined Transfer Pathways: Prepares students to advance smoothly into professional medical, pharmaceutical, veterinary, and graduate programs.
 - Closing Equity Gaps: Focuses on student-centered, active learning models to ensure academic success and retention among underrepresented groups in STEM fields.

Want to connect?



MLK Research Cores



UCSF Summer Student
Research Program



UCSF Workforce



My UCSF Profile Page

