

Kai Burrus
Professor
Chair of Biology
(she, they, ya'll)

Vance Vredenburg
Professor
Associate Chair
(he, him, his)

Darleen Franklin
Instructional Staff
(she, her, hers)



WELCOME TO SF STATE BIOLOGY!!!



Agenda

- 5:30-5:32 Agenda
- 5:32-5:35 Welcome
- 5:35-6:00 Get to Know Our Students
- 6:00-6:20 Explore Our Concentrations and Majors
- 6:20-6:35 Learn about Pre-Health Profession Support
- 6:35-7:00 Discover Ways to Get Involved

What is your status?

- I am an incoming freshman
- I am a loved one of an incoming freshman
- I am a transfer student
- I am a loved one of a transfer student

Where are you located right now?

- San Francisco Bay Area
- Northern California (outside of Bay Area)
- Southern California
- Western United States (outside of California)
- Eastern United States
- Outside of the US



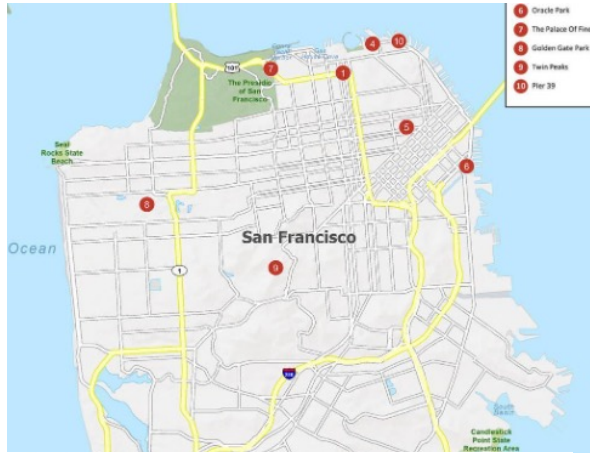
Our Vision



Our vision is to change the face of science by training diverse scholars to answer urgent questions across Biology, from human and ecosystem health to the nature of life itself.



My journey and where I am at

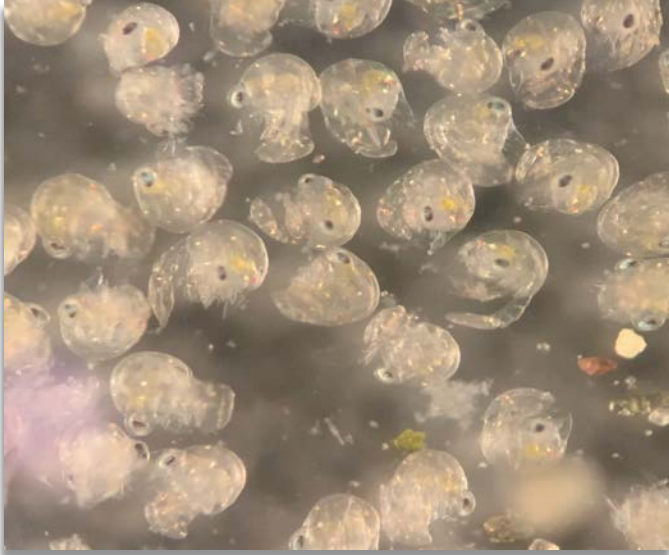


A PARTNERSHIP OF SAN FRANCISCO STATE UNIVERSITY AND CITY COLLEGE OF SAN FRANCISCO

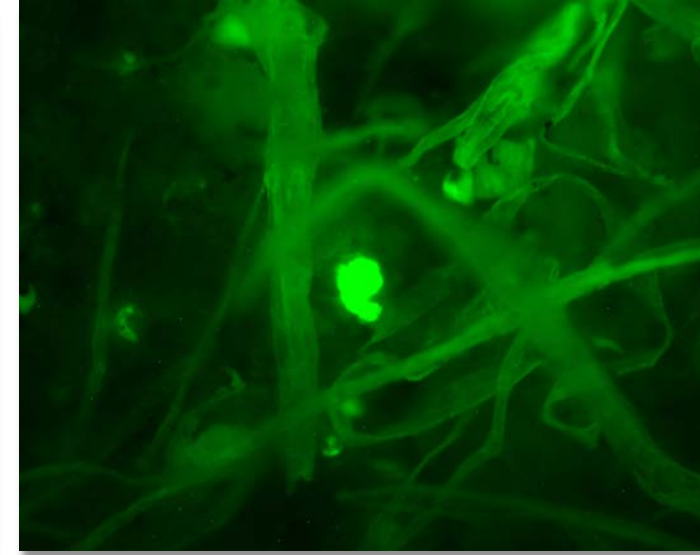
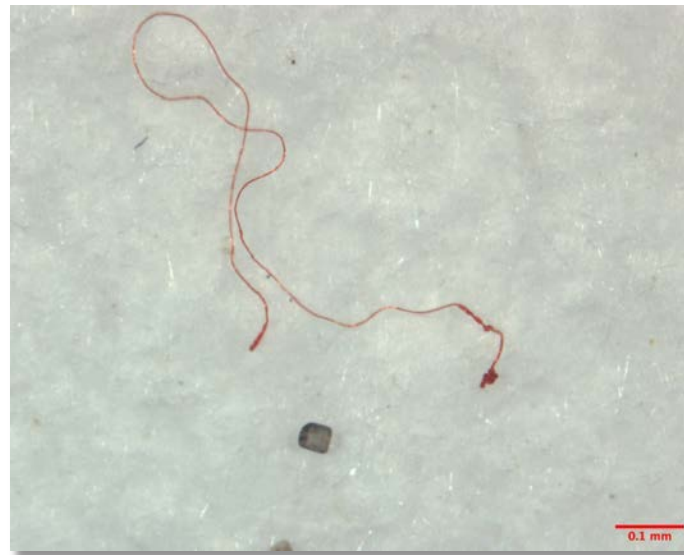


STUDENT
ENRICHMENT
OPPORTUNITIES

Research at SF State



Pacific Mole Crab
(Emerita analoga)



Foundational skills

- Foundational skills in field collection, data entry/analysis, scientific writing, and science communication
- International fellowships and various conferences
- Gave me the agency to pursue my passion and develop my career

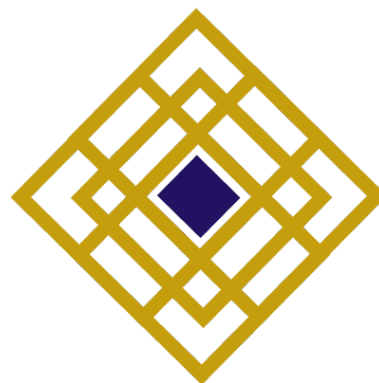
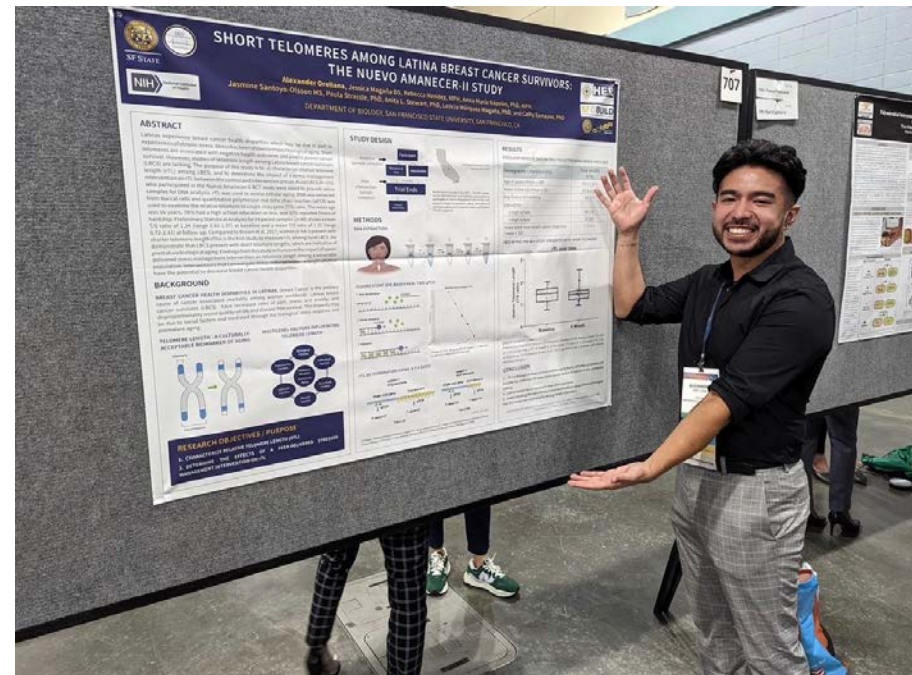
Next Steps

- Acceptances into grad programs in marine biology
- Specific focus on microplastics
- Postbaccalaureate programs

Introduction



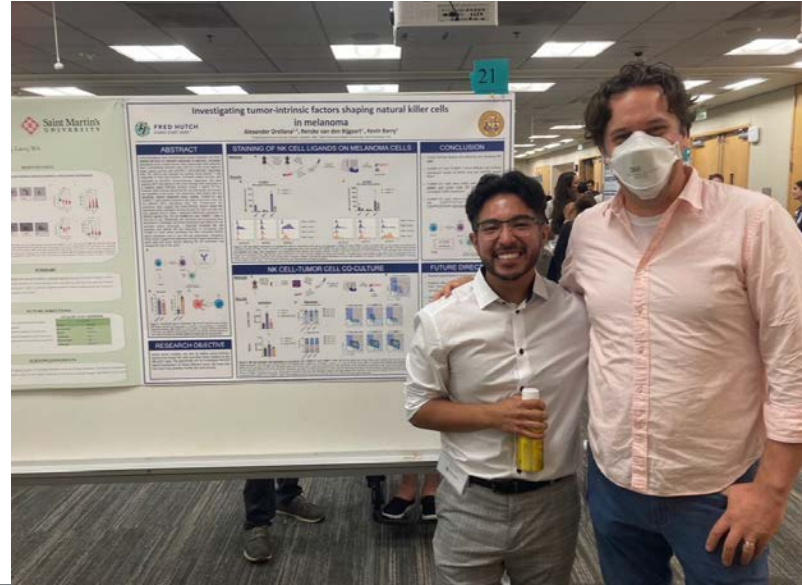
Research Journey



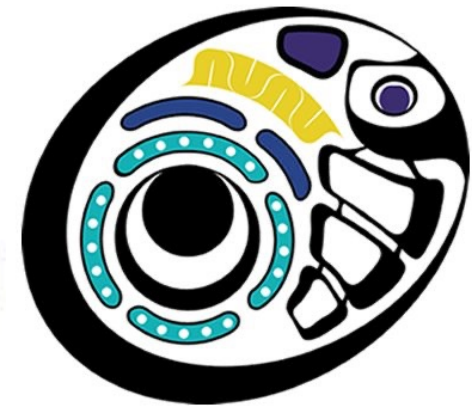
Research Journey Part 2



FRED HUTCH
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WASHINGTON





Certificate in Climate Change Causes, Impacts, and Solutions

- The Climate Change Certificate gives students a foundational understanding of climate change's causes, effects and solutions so they can take action in their communities.
- You can earn the certificate and fulfill university requirements at the same time.

PINC Minor in Computing Applications

- PINC is designed as a program for biology and chemistry / biochemistry majors.
- No prior computer science background needed.
- You will receive mentoring from motivated computer science graduate students. Receive opportunities to network with professionals working at the intersection of Biology/Chemistry and Computer Science. Increase your chances on the job market or to get into graduate school.



Biology Majors

- **Bachelor of Arts** General Biology
- **Bachelor of Science** Cell & Molecular Biology
Ecology, Evolution, & Conservation
Biology
Marine Science
Microbiology
Physiology

General Biology Bachelor of Arts



General Biology

- This is a wonderfully flexible degree for students who know that they love Biology, but aren't sure which, if any, sub-discipline they want to focus on.
- It is a terrific option for pre-health students.
- Starting next year, we expect that the degree will offer up opportunities to take courses relevant to health disparities and climate change from departments across campus.



Cell and Molecular Biology

CMB provides an excellent preparation for **entry into advanced degree** programs



Ph.D. programs in cell biology, genetics, developmental biology, physiology, molecular biology, biochemistry, and pharmaceutical chemistry;

M.D. and **veterinary medicine doctoral** programs, and graduate programs in **genetic counseling**.

With the *CMB* degree **direct job opportunities** are extensive, particularly in the Bay Area.

Employment as **laboratory technicians** or **research associates** in university, medical school, government agency, and biotechnology industry research labs. Specific **lab techniques** and **instrumentation skills** available in the *CMB* coursework give *CMB* students a competitive edge for such research-related jobs.



Ecology, Evolution and Conservation Biology (EECB)



Ecology, Evolution and Conservation Biology

- This program offers study in the life sciences for students interested in ecology, natural history, conservation, and population biology. The B.S. in EECB is suited for students preparing for a variety of careers, such as research, consulting, conservation, and addressing climate change.
- Ecologists are systems level biologists who study organisms and the environment around them, examining relationships and interactions between wildlife, plant life and the surrounding geography.
- If you enjoy being outside and getting curious, this career could be for you. The types of jobs EECB majors can obtain are numerous and can include animal caretaker, park naturalist, veterinarian, restoration ecologist, and natural resource manager.
- EECB can even be used by pre-health majors!

Marine Science Concentration

- Experiential: research, field and lab
- Flexible class choices: cell and molecular, physiology, behavior, earth and climate science, oceanography
- SFSU marine lab campus, in Marin
- Career skills: invertebrate and fish identification, water quality testing, microscopy, genetic analysis, GIS
- Where are our graduates?
 - state and federal agencies, non-profits, secondary teaching, PhD programs, museums and aquaria



Microbiology



- This program offers training in the study of bacteria, algae, protozoa, fungi and viruses in terms of their ecology, biochemistry, physiology, genetics and role in disease processes.
- A concentration in Microbiology is suited for students preparing for a number of careers, including healthcare, quality control microbiologists, research technicians and associates in hospitals, government laboratories and biotechnology.
- This degree could be for you if you enjoy studying a wide variety of organisms and viruses in the microscopic world.

Physiology concentration

- Our largest concentration: ~800 students.
- It is a terrific option for pre-med student and others interested in human or animal health careers.
- Classes include lectures and labs divided into Human, Animal and Plant physiology. 59 units, degree plans include options for various pre-requisite tracks for post-graduate study.
- Active research labs in neuroscience, metabolism, human and animal behavior, plant physiology.



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Interested in a Health Career, but have lots of questions???

Which health profession is right for me? What should I major in? What courses should I take? How do I get volunteer experience and internships? Which exam do I need to take? When do I apply? How do I apply?

SCI 239 Introduction to Health Professions (Units: 2)

- Introduction to the broad array of health professions, helping students make a more informed health career choice. Activities include talks from guest speakers representing various health professions, small group activities, such as suturing workshop, and student projects. Intended for freshmen and sophomores and anyone else interested taking it.
- *Instructor – Dr. Arman Kirakosian, DPM (practicing Podiatric Surgeon, Team Podiatrist for the San Jose Earthquakes of MLS, Sacramento Republic Fc of USL and Team Doctor for the Armenian Women's National Soccer Team)*
- *Dr. Arman Kirakosian also teaches Gross Anatomy at SFSU*
- *Thursdays 6 -7:40 PM*
- *In person*

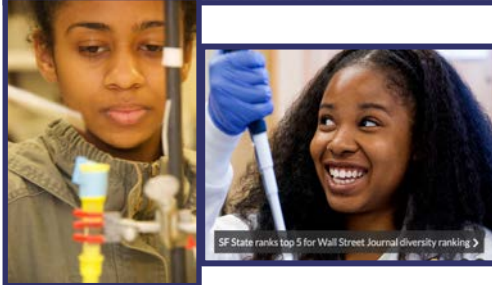


Surgical Case – Achilles Tendon Repair



Student Enrichment Opportunities (SEO)

Research



Clubs & community



- Stipends & tuition
- School supplies
- Professional development

travel



SF BUILD

- Student training opportunities
 - SF BUILD scholars program
 - BUILDing Bridges program
 - CIRCLE training program
- Stiped for research activities
- Training and mentoring to make significant contributions to biomedical research by asking innovative questions that are relevant to local communities.



SF BUILD: Creating Agents of Change in STEM



Student and Recent Grad Programs

Interested in training or research? Check out our programs for undergraduates, graduates, post-bacs, and recent grads.

[Student & Recent Grad Programs](#)

Mentee & Mentor Opportunities

- **Peer2Peer Mentor Collective**

- You can be a mentor or mentee
- One-on-one peer mentorship
- Guidance, navigate college and take advantage of resources



<https://youtu.be/YIEztNVMhiw>

- **Peer Assistants for Learning Science (PALS) & Learners Engaged in Advocating for Diversity in Science (LEADS)**

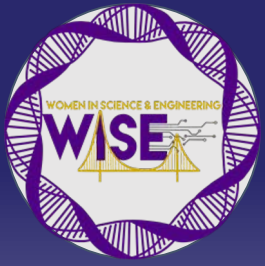
- BIOL 654 (4 units)
- Service Learning Course
- Focus on equity and diversity of scientific teaching
- Partner with SF State biology faculty and instructors that serve as mentor



PALS/LEADS Student Perspectives - Daniela Sanchez



youtube.com/@sfsusepal



Association of Biology Students at SF State

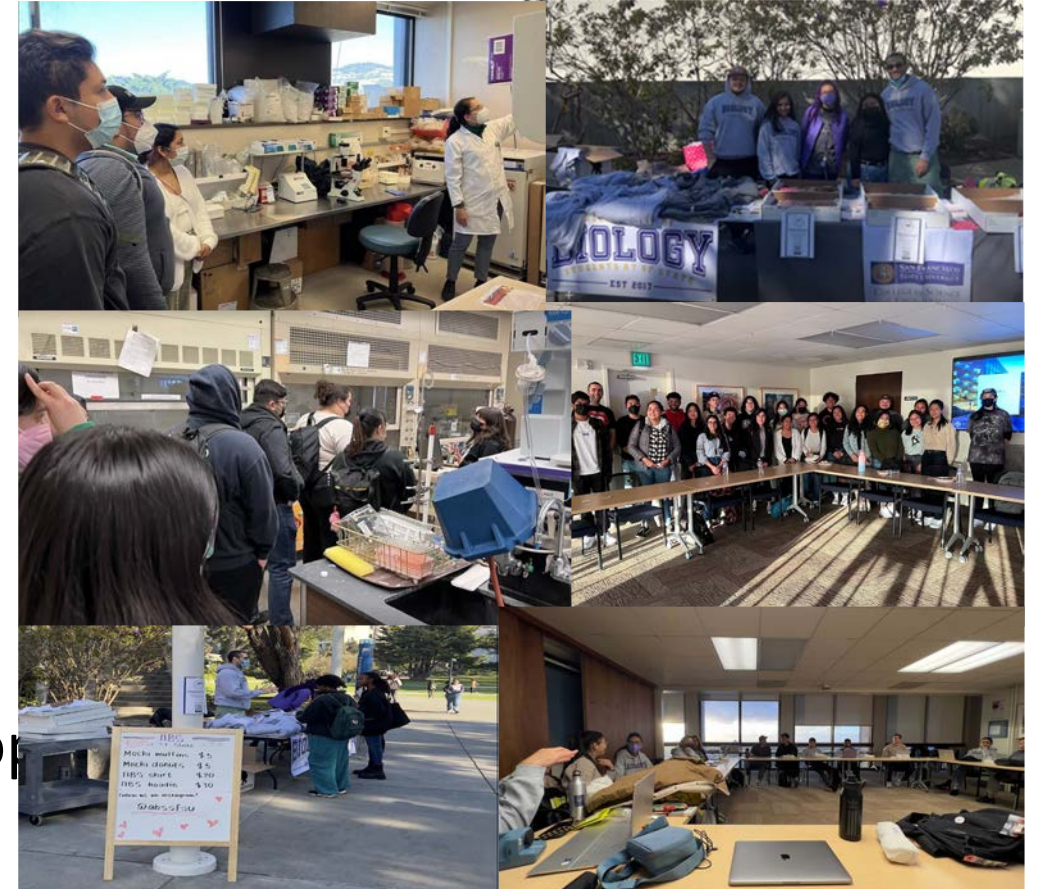


ABS Events:

On Campus Research Lab Tours
Peer-to-Peer Mentoring
Game Night
ABS Gator Mixer
GatorRaiser

Upcoming Events Planned:

Spring Surge 23' Genentech Tour
Health, Body, and Mind Events
Professional Development Workshop
Gators in STEM Picnic in GGP



Opportunities Beyond the Classroom



Research and Internship

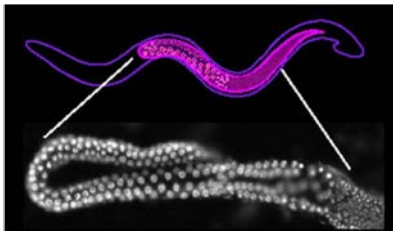
Biol 694 Cooperative Internship in Biology

Written and oral report of work performed with an outside agency and a requested written report from the agency supervisor.
Yes, it's off campus. Yes, it can be a paid or unpaid position!

Biol 699 Independent Study in Biology

Special study in the laboratory, field, or library under the direction of a research mentor.
Yes, it's class. Yes, you are doing a research project!

- Over 30% of our undergraduates are engaged in cutting-edge (lab/field) research projects (Biol 699 and Biol 694)
- Others are involved in community service



Thanks for joining us today!

