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BioCONNECT

SF State Biology Newsletter, Fall 2021



Giovanna Tuccori

Happy Holidays everyone! We hope you enjoy the latest version of the Biology department BIOCONNECT magazine.

This issue focuses on how our department, campus and community have come back strong. Let us know how you like it.



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Faculty, Staff, Alumni and Students



Letter from the Chair

Dear Alumni, Friends, and Current Students, Staff, and Faculty,

We hope that this magazine finds you safe and supported as we finish off 2021 and head into the New Year. Though the pandemic is not yet behind us and the struggles continue to be very real, we are fortunate to be transitioning back to face to face (aka F2F) learning. This fall, roughly 25% of our classes were held in person and next spring, this number will rise to over 50%. While shifting to online learning modalities stretched our faculty to be both creative, compassionate, and resilient multitaskers, the return to face to face instruction is requiring our hardworking staff to be strategic, responsive, and flexible. I am filled with gratitude and appreciation for the efforts of all members of our Biology community.

Despite the many challenges of returning to F2F learning, this fall has shown us that it is entirely worth it. Students are once again actively engaging in hands on learning, which is so very critical for their training. And we are once again reveling in the delight of interacting with friends and colleagues in person. This issue of BioCONNECT is focused on "Coming Back Strong" and highlights the experiences of students, staff, and faculty.

In our last edition of BioCONNECT, we shared that we were preparing to launch a new campus wide Certificate in Climate Change Causes, Impacts, and Solutions this fall. As a number of students had already taken many of the courses for the Certificate before we launched it this fall, I am super excited to report that a number of students have already earned the Certificate!

And, as always, please consider supporting us in our efforts by making a gift to the Department of Biology. Please reach out to me for more details. All gifts large and small are most appreciated and allow us to keep supporting our students.

Warmly,

Laura Burrus, Chair of Biology lburrus@sfsu.edu

Giving Back to Biology...

The Department of Biology is working hard to support all students in their endeavors to promote the health of living beings on this planet. To do this work, we need your support. Please think about giving \$50, \$200, or even \$1,000 to support your favorite cause! Funding priorities are described below:

+GIVING WHERE THE NEED IS GREATEST

Unrestricted Gift | any amount

By giving in this way, you allow us the flexibility to respond to rapidly changing needs.

+PROMOTING STUDENT SUCCESS IN STEM DISCIPLINES Fund Endowed BioLuminary Awards up to \$25,000

Our data show that hands-on learning has an enormously positive impact on graduation rates and is critical for launching scientific careers. You could consider a gift towards an existing award. For example, to the newly established Association of Biology Students endowment or in memory of beloved faculty members, Jim Duncan and Felipe-Andres Ramirez-Weber.

+HOW TO GIVE

By mail Please make your check or money order payable to the University Corporation, San Francisco State and mail to:

Office of University Development San Francisco State University 1600 Holloway Avenue, ADM 153 San Francisco, CA 94132

Please indicate your funding priority on the check! (eg, Biology Unrestricted Gift or ABS BioLuminary Award)

If you have any questions, please call 415-338-1042 or email at <u>develop@sfsu.edu</u>

Online Follow the instructions to the right ->





Biology undergraduate student working in Microbiology Lab...

Click here to make an online donation today

SF State University College of Science & Engineering Online Donation Form

* Required Information

About Your Gift







Graduate Student Alyssa Gimenez, Cell and Molecular Biology, HER Lab

"Coming back in-person has benefited me because I can finally come back into lab and conduct experiments necessary for me to collect data on a novel study! I'm able to finally meet my PI, lab mates, and even some of my cohort in person. I've founded a club at SFSU a little bit after I was first matriculated into the Master's in Biology program and it's been a great experience just learning how to virtually run the club, but also making plans to meet in person with my members and Co-Presidents."

The I&ED Club uses its platform to host career panels and a guest speaker series that inform students of all disciplines about the different paths they can take in health and research." We're also the first biology club founded and run by an all-Pilipino board as far as I know, which I take immense pride in!

Undergraduate John Gonzales Majoring in Cell Molecular Biology

"Finally returning to lab in person has given me the gift of kinesthetically learning how to improve my skills with using lab tools such as a micropipette and lab instruments such as a compound light microscope. I am able to FEEL the density of various agars, improve my dexterity while using a loop and simultaneously turning a plate, and also nearly perfecting aseptic technique!"



"It has been a delight to attend classes in person, get to explore many skilled things and the vast cultural diversity inside the campus is so refreshing with new ideas and innovations. I am in fact an international graduate student and my first time in the states has been thrilling so far."





Coming Back Strong



Graduate Student Ernst Heinz V. Pulid Cell and Molecular Biology, Sanchez Lab

The Infectious & Emerging Diseases Club was created by Ernst Pulido and Jan Cajulao, who are both Filipino-American Masters students . "We built this club in order to bring students who care about public health, medicine, and disease together to present and share research."

Our Students

Graduate Student, Jan Mikhale Cajulao Cell and Molecular Biology, Sanchez Lab

"Coming back in person, albeit safely rules in place, has allowed me to jump-start my research and see my friends again. Being cooped up at home made me miss the lab, my peers, and the simple things, such as grabbing boba or coffee in between classes/experiments."





Undergraduate Gabriela Turcios Majoring in Cell Molecular

Undergraduate Joseph Ragasa

Double Majoring in Biology and Business Administration

"Returning to campus in person has allowed

me to rekindle relationships with friends and

pandemic. In-person classes have also allowed

professors that abruptly halted due to the

me to rebuild my work ethic, and provide a

better learning environment that cultivates my curiosity and supports my career

endeavors. "

"Being back in person has been great because of the interactions I have with my classmates. I've been able to meet new people something I really missed last year. I also love being back in the lab doing experiments since having hands on work has helped me gain the research skills I need."

Coming Back Strong

Our Students

Graduate Student Tyrine Bailey Cell Molecular Biology Marquez-Magana Lab

"I completed my undergrad here at SFSU and I am now a 1st-year master student. Coming back in person was vital to my learning process and my lab research. I am able to see my lab members, get hands on help and even see my peers and professors who I've only known through a screen."



Undergraduate Elisa Lopez Majoring in Zoology

"Coming back to campus and in-person classes has been so good. I have a safe haven where I am able to study with a nice cold coffee without so much background noise!"



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Undergraduate Lauren Nobriga Majoring in Microbiology Currently working Jasper Therapeutics as a Lab Assistant.

"Working remote requires a great deal of discipline and it can feel isolated. I learn best in an environment where I can have meaningful conversations about what I'm learning. Now that we are attending classes in person again, I feel like I am able to create more meaningful relationships with my professors and classmates."

Graduate Student Kate Montana Integrative Biology, Esposito Lab

"While I have not had any in-person classes at San Francisco State, I have been able to work on site at the California Academy of Sciences nearly every day since August. I relish having my own workspace outside of my house and colleagues with whom I can chat in person. I feel like I am really working at the Cal Academy, which has been a dream of mine. "





Undergraduate Denisse Nguyen Martinez Double Majoring in Physiology & Nutrition & Dietetics Minoring in Chemistry

"I have a mix of in person and virtual classes. I am super excited to come back to campus and actually learn. I wanted to go back to those times that after a class or an exam, when you would talk about it with friends and classmates. Coming to campus has motivated me to stay on top of my to-do list. Coming back in person has also helped me expand my circle, my connections and get to know my teachers better."

Undergraduate Ingrid Mazariegos Majoring in Microbiology Minoring in Computer Applications

"We get to talk to each other in person again. It's so much easier to initiate a conversation in person with a classmate during labs. Whereas online I tend to think about if it's awkward to reach out to someone I don't know."



Coming Back Strong

Our Students

Undergraduate Angela Sanchez Majoring in General Biology Minoring in Marketing

"Coming back to SFSU in person felt really great. I found my lifelong friends that turned into family. Also, it restored my focus, motivated me to keep going, and I am determined to finish this semester stronger."





Justin Chan Biology Stockroom Manager

Coming Back Strong



Min Yi (Mandy) Huang Instructional Support Technician II B.A. Child & Adolescent Development, SFSU 2009 "My experience of working during the shelter in place was very unique. Working during SIP required adjusting to limited man power, learning and adapting to many changes in how to work more efficiently and responsibly without disregarding Covid safety measures. Transitioning back to in person learning has brought back the friendly faces of staff, faculty and students, making the department feel less lonely and safer."



Justin Chan joined the Biology department in

2006, after getting his degree at SFSU in Dietetics,

2005. "Before I joined Biology Department, I was

invited to a few Biology department events. The

impression to me was that it is a great place to

work, people were friendly and cared about what

they do. Shortly after graduating from SFSU, there was a position opened in Biology. I was excited

about this job opportunity, because I saw the

career potential and the working environment

working in the stockroom as an Instructional

Support Technician has moved up to become the

Stockroom Manager. Last year he received the

"The diversity of the work that I do guarantees

that no day is like any other, it keeps the

Don Eden Award for exceptional service in

support of our research endeavors.

would be a good fit for me." Justin started

Vincent Cheung, Instructional Support Technician B.A. Art, SFSU 2000

day going by fast and lets me continuously learning new things. I am always focused on bettering the community, which makes me feel good when the day is done. Also, the people that I encounter every day is an addition to the joyfulness of my job."

Justin describes his feelings about working through the pandemic..."Working during the pandemic was one of the most unforgettable experiences. There were many fears and worries about getting exposure to the virus and bringing the virus home. On the other hands, we felt our job was important that it overcame our fears and worries. We followed the pandemic protocols (PPE, hand washing and physical distancing... etc.) and thankfully we all remained healthy."

Our Staff

"We made the best of working through the pandemic shelter in place. With no students or faculty around, we discovered new task, learned new skills, and switched our work duties from direct user support to more project basic. Hopefully, life will return to normal and we look forward to seeing people again."

Elliot Levin Greenhouse Coordinator B.S., Recreation, Parks, and Tourism Administration, 2018, SFSU

Only having worked in Biology for a few months, Elliot Levin our new Greenhouse manager survived more than just the pandemic. He very nearly lost his job to a wave of staff layoffs in 2021, but was spared at the last moment. Throughout it all, Elliot has been super resilient. "During the shelter in place order, I was still maintaining 40 hours per week on campus. It was important to have the greenhouse collections still maintained and promote outreach through social media. It was, however, very isolating, the campus was so quiet!" As the campus reawakens, Elliot is getting visitors to the new greenhouse. "I certainly have become busier as labs have started to come back to in person instruction. I enjoy being able to have students drop in to volunteer, or simply tour the greenhouse collection. It is important to provide the space for a connection between us and plant life."

Coming Back Strong





Our Staff

Elliot Levin

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Lisa Galli B.S. MAJOR 1999, SFSU Burrus Lab Manager, BUILD Budget Specialist, SEO Research Coordinator

Lisa Galli has worked at SFSU for 22 years and wears many hats. In addition to serving as the manager of the Burrus lab where she investigates the mechanisms by which Wnt signals travel through embryos, she provides administrative support to the SF BUILD Program and teaches Molecular Biology to Genentech Scholars. The training of the Genentech Scholars includes a 1-hour seminar during each semester and culminates into as 8-week summer research experience. She also helps with the Biology Department budget. During the height of the pandemic, Lisa was at risk of losing her position due to budget cuts. Fortunately, it was made clear that her roll in the department was essential and that so many programs depended on her wealth of knowledge. "Coming back on campus and in person biggest impact for me is training students in the lab and in person (not over zoom!) and getting back to the research I know how to do."

Darleen Franklin

Coming Back Strong

B.S., 2006 & M.S., 2014 Microbiology Biology Instructional Services Facilities Lab Manager

Darleen Franklin manages both the biological media production and microbial cultures needed for teaching labs. She provides technical support, source equipment and aid in the development of lab experiments for the Microbiology & Cell Science teaching lab courses in the Department of Biology. Training research lab users of Hensill Hall building sterilizers & is responsible for maintaining this equipment operational status. Proactively Darlene serves on committees that positively impact our teaching & research sectors and our students & employees. Some of these committees include the Campus Biosafety Committee, Biology Virtual Gator Day, Biology Graduation & SF State of Women Summit 2018. "In May 2020, working 100% remote and learning that other University institutions had research labs still functioning or returning, I was concerned about our research labs safe return to campus that was affecting graduation rates for our student population, especially the graduate students. Reaching out to my colleagues across the campus, I learned that we shared the same concern. This led to brainstorming meetings & research of safety practices at other campuses, and this led to proposals to the University body to address a plan for a safe return to campus for both field and on campus research work.

I returned to work on site in June 2020. I had to safely clean up and disinfect all the reagents, microbial cultures and check on the equipment for the microbiology teaching lab rooms that stood still in time when we went into shelter in place since March 2020. It was during these next few months that I was reminded of how much physical labor my student staff performed doing these tasks. As I cleaned thousands of decontaminated test tubes at the sink area before loading them up in the dishwasher, I would think to myself how grateful I am for ALL my wonderful student lab assistants that made this task seem so easy. I missed their sharing of their life stories and camaraderie.



A pivotal moment for me came when I was assigned to work on the BioSLAM project for the microbiology courses. This involved working with faculty, lecturers, other alumni and GTAs to transform our undergrad experience in learning science in a remote setting and grounded in equity and inclusion. I found this project personally very rewarding. As more of the campus community becomes vaccinated against COVID-19, I can enjoy hearing student and colleagues' voices in the once empty hallways, instead of worrying about my personal safety & potentially bringing home this infection to my loved ones. Also, it's great to see colleagues open to and incorporating the idea of having virtual modules of learning incorporated into the teaching lab experiments onsite for the students. Our team leaders of lecturers & faculty did an amazing job getting this done and I am proud to be a part of this Department!"



Streaking a microbial sample on a nutrient agar plate

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Jee Quong B.S. Business Administration, 2002, SFSU Biology Academic Office Coordinator

As the Academic Office Coordinator (AOC), Jee Quong supports the entire department including the chair, faculty, staff and students.

"Initially, the transition was challenging as many of us worked with limitations. However, one positive unintended outcome I came to treasure during the pandemic was family. Even thought my daughters had daily classes remotely and I was occupied with work, I definitely treasured and valued the moment with spent at home. It's definitely good seeing colleagues and familiar faces again. "

Our Staff

Coming Back Strong



Giovanna Tuccori B.A. Broadcasting, 1996 M.A. Education, 2010 Biology Graduate Program Administrator

At first working from home was incredibly isolating for me. I consider myself a people person and I missed the daily interactions and conversations. I also wasn't sure how I would accomplish my work tasks. Eventually with the use of programs such as Zoom and Docusign, we all managed to communicate and complete forms that helped graduate students stay on track. Coming back to the office and seeing the beautiful campus is the beginning of a new chapter in the way we provide education and services to students.



Dr. Annette Char

B.S., 1990, UC Berkeley (Zoology) Doctoral, 1997, UC Berkeley (Plant Biology) Director of the Cell and Molecular Imaging Center

As the director of the Cell and Molecular Imaging Center (CMIC), a microscopy and flow cytometry core facility at San Francisco State University, Annette trains researchers and students in the proper use and care of research equipment in the CMIC, maintains laboratory equipment, assist users with their research projects, aids in the development and writing of equipment and research grants, and carries out the administrative activities of the facility. "Working on campus during the shelter-in-place order was nerve-racking. I was constantly worried about bringing COVID back to my family, especially to my elderly mother. I had to meet with a service engineer for our flow cytometer in September last year on the day when the skies over the Bay Area turned an eerie dark red because of nearby fires. As I waited outside for him to arrive, breathing in the smoky air, it felt like the world was coming to an end with the pandemic and climate change. In addition, I was very concerned about the rise in anti-Asian racism and about getting harassed by people when I was on public transportation going to and from work. It is wonderful to be able to see the students, faculty, and staff in person again! The best parts of my job are interacting with people, teaching them about microscopy and flow cytometry, and helping them with their research projects." **11**

Journey to SFSU...

Professor Heather Murdock didn't come to San Francisco to be a science teacher, but rather a pastry chef!

Master's Program...

"I left my pastry chef position to work in the Intensive Care Nursery lab at UCSF in 1994 (The lab manager offered me a job after eating my cookies!). I realized biology, was my passion, and I could still bake for pleasure on the side, so I accepted the position. Working in the hospital inspired me to get my master's degree at SFSU, where I joined Professor Jan Randall's lab to research olfactory communication in Giant Kangaroo Rats.... After completing my Master's degree in Ecology and Systematics I got my dream job as a Biology lecturer for SFSU in 2001. Twenty years later and this is still my dream job!

A Challenging Opportunity...

"As Biol 240 lab coordinator, the hardest part of moving instruction on-line was redesigning the Biol 240 labs, but with the help of 12 faculty, staff and students working on the BIOSLAM project with me, we were able to design and write engaging labs that the students could do from home."



Biology 240 Students



Heather enjoys playing soccer and often gets Biology students and Faculty to join in.

Being Back in Person...

"I LOVE being back on campus with my students this semester!! I teach one Human Biology lecture in Burke Hall, one Biol 240 lab in Hensill Hall, and I play soccer with my students on the turf fields every Thursday afternoon. It's so wonderful to interact with the students in person, take them on field trips (walking around campus and visiting the Green House), laugh with them, meet for office hours in my office, walk around the classrooms to meet them personally and see how they are doing with their notecards, experiments, microscope slides, specimens etc. and to just see their faces is WONDERFUL!! (Most of my students on-line keep their cameras off which makes teaching to them very impersonal.) I also really enjoy watching the students interact with one another, make friends and get excited about the material and specimens that are easier to grasp in an in-person setting."



Best Part of Working in Biology

"Being with my students is absolutely the best part of my job! SFSU has the most wonderfully diverse, talented, hardworking, fun loving population of students, and I'm incredibly grateful to be a part of this community. They continue to make me proud, teach me more, keep me entertained and give me hope for our future. They are excited to learn new information, try new activities (especially on the international

tours I lead where they can river raft, kayak, zip-line, horseback ride, snorkel etc.), and I also love to see how helpful and caring they are towards one another. We are all so fortunate that many fields of science, technology, legislation and education are working together to help move us out of this pandemic. I look forward to seeing ALL of my students in person next semester!"



Dr. Brinda Govindan

B.S. Cell Biology (with honors) Cornell University, 1989

Ph.D, Cell Biology, Yale University, 1995 Postdoctoral research fellow at UCSF (1995-1998)

Professor Brinda Govindan joined SFSU as a parttime lecturer in 1999 and started teaching full-time in 2003.

"Over the years I have taught courses in Human Biology, Genetics, Cell and Molecular Biology and Microbiology. I've also participated in the summer BRIDGES research program and conducted research boot camps for community college students. I came to work at SFSU because I was able to focus on teaching undergraduates from diverse backgrounds and with a variety of life experiences. I truly love my students and get excited about sharing my passion and curiosity about microbiology with them. ...I feel so fortunate to have the best students and colleagues in the world!"

Creativity and Liberation...

"Pandemic teaching has been intense and exhausting but at the same time creative and liberating. I (we) have been forced to seriously examine our teaching choices and craft curricula that are robust and student-centered in any format. Our zoom rooms became places to share and connect, and to support each other during this difficult time."

Returning to Campus

"What a JOY!! The first day of in-person class felt almost surreal and even with masks on. Being physically present with students filled me with positive energy. Students learn science by doing it, so it feels amazing to be back in the laboratory where they get the full handson experience! The hybrid course structure also enables students to be well-prepared for the in-person lab each week."







Our Faculty





Students in General Microbiology Laboratory





Faculty Accomplishments

For this newly funded project, the Anastassov lab will investigate the unusual visual system of the cartilaginous fish Little Skate (L. erinacea), which is capable of seeing across large ranges of light intensity with a limited complement of visual neurons. Interestingly, the retina of the skate possesses only one type of light sensitive neuron, called a rod photoreceptor, which can perform the work of several other neurons, collectively called cone photoreceptors. Retinas with a full complement of rods and cones, called duplex retinas, process visual information under bright and dim light conditions by alternating between the rod and cone systems. Proper function in such duplex retinas depends on the continuous and seamless utilization of both rods and cones. Importantly, when either type of photoreceptor is lost during retinal degeneration, the remaining photoreceptors, be they rods or cones, cannot perform the function of the opposite cell type. Most vertebrate retinas have this "duality" barrier and many current vision restoration efforts are targeted towards replacing the lost photoreceptor population. However, in the simplex retina of L. erinacea, rods can function over a full range of illumination. We hypothesize that this functional plasticity can be traced back to adaptations at the level of individual rods and the downstream retinal circuitry, thus illuminating new pathways for the processing of visual information among vertebrate species. This project is also relevant to public health, as it will reveal mechanisms of functional adaptation in a naturally occurring monotypic retina, which could hold the key to expanding the functional repertoire of surviving photoreceptors in diseased duplex retinas and consequently lead to novel approaches in therapeutic vision restoration efforts.



Little skate (Leucoraja erinacea)



Serial section electron microscopy and 3D reconstructions of cell connections from skate retina

(14)

Professor Ivan Anastassov

NIH SC2 grant project

Examining Anti-Racist Healing in Nature to Protect Telomeres of Transitional Age BIPOC for Health Equity

Deaths from chronic diseases are disproportionately higher in communities of color accounting for persistent racial/ethnic disparities in health. This is expected given the well-documented health inequities in the United States caused by centuries-old underinvestment in the wellness of Black, Indigenous, People of Color (BIPOC). To begin to redress this underinvestment during an economic crisis requires costeffective, low-resource interventions like a pilot study in which biology graduate student, Eric Johnson, used a communityengaged, transdisciplinary approach to investigate the psychosocial and biological outcomes of a 2-hour walk in nature for an underserved, poor community in the East Bay. The results of the Promoting Stress reduction In The Outdoors (PASITO) study was published in 2018 (Yoshino et al., 2018) and provided the preliminary results for a new highly innovative award to a community-engaged, transdisciplinary team that includes biology Professor Leticia Márquez-Magaña, PhD.

The five-year award from the National Institutes of Health

(https://www.nih.gov/news-events/newsreleases/new-highly-innovative-nih-

research-awards-address-health-disparitiesadvance-health-equity) provides >\$2.5M for transformative research to achieve health equity. The overall goal of the transformative research is to reduce growing health disparities in BIPOC communities through examination of culturallyappropriate interventions in nature for young adults (18-26 years old). The development of chronic diseases has been linked to the embodiment of stress through biological processes that include cortisol dysregulation and telomere erosion. In fact, emerging research from several research groups, including research advanced in the Health & Equity Research (HER) Lab located in the biology department finds that erosion of telomeres in communities of color is accelerated. This is likely due to racism and discrimination that increase chronic stress and limits access to the social determinants of health (e.g., employment, education, housing). The funded research team thus aims to reduce embodied stress through increased access to what can be considered a social determinant of health - equitable access (free from harassment and threat of violence) to physical activity in public parks and open spaces.

Yoshino, A., Wilson, J., Velasquez, E., Johnson, E., and Márquez-Magaña, L. (2018). Healthy Parks Healthy People as an Upstream Stress Reduction Strategy (PASITO study). Recreation, Parks, and Tourism in Public Health 2:35. PMID 30931424

Dr. Leticia Márquez-Magaña NIH SC2 grant project

Faculty Accomplishments

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Lucy joined SFSU Biology in mid-September as the new SEPAL Program Coordinator. Although a chemist by training, Lucy is devoted to increasing diversity, equity, and inclusion in all STEM fields. Lucy received her B.A. from Dartmouth in 2016 and Ph.D. from UC Davis in 2020, both in chemistry. During graduate school, Lucy founded and managed a peer mentoring program that helps firstgeneration college students and underrepresented minorities in science transition into the college community both academically and socially.

New Hire

After graduating, Lucy worked in a research lab at UCSF briefly before discovering her true passions lie in making science more accessible and welcoming. As a first-generation college student and woman of color in science herself, she wanted to transition to a career which would allow her to be more involved in helping diverse students (with similar backgrounds) advance in the sciences, which is how she discovered SEPAL at SFSU! Now at SEPAL, she has found a community that shares these values and encourages her to be a part of the biology education research, assessment, discussion, programming, and more in different ways. As a new SEPAL person, Lucy is really enjoying being a part of the inclusive efforts of SEPAL!



Sam Goodfellow M.S. Cell Molecular Biology Burrus Lab

Miriam Valenzuela M.S. Cell Molecular Biology, 2019 L. Chen Lab

"Inclusion, diversity, and advocacy are pillars by which SFSU is built upon. As students of the Biology Department, we wanted to follow suit. Through SACNAS (Society for the Advancement of Chicanos/Hispanics and Native Americans in Science), we were able to not only amplify and make space for marginalized communities in science, but hopefully inspire younger generations to pursue careers in STEM. From organizing lab tours for K-12 kids, organizing science days at elementary schools, giving talks at community colleges, and even taking off our science hats to help when our community needed it during the Santa Rosa Fires, we were privileged to have been a part of something bigger than ourselves."

"Whenever we think of SFSU, we think of community. We met individuals whom we consider friends for life, we met mentors who we aspire to be like, and we met each other. It started with volunteering for an outreach event followed with mutual friends who had a similar vision for an organization. Although we were at different stages of our Master's, we managed to pursue a longdistance relationship."

As Sam entered his PhD program at the University of New Mexico one year before Miriam, they had to endure a long-distance relationship. Despite the trials and tribulations, they managed to reunite and are now part of the same PhD program. Being a part of UNM Biomedical Sciences Graduate Program has given Sam and Miriam plenty of freedom when it came to exploring their interests. Sam joined the lab of Dr. Steven Bradfute focusing on diagnostics and epidemiological studies of orthohantaviruses in different host reservoirs, while Miriam joined the lab of Dr. Eric Bartee, a lab focusing on oncolytic virotherapy, or the use of viruses as an immunotherapy for cancer.

"Through our previous research training, we've been successful in our careers." Sam has managed to secure several scholarships, including a training grant through NIH, while also publishing multiple first author papers, one featured on the cover of Journal of Virology, Vol. 96 Issue 1 in 2022.

Miriam has held several leadership positions, pioneering a community service outreach position within the program and has given several oral talks, one at the International Oncolytic Virus Conference 2021 and is preparing for publication of her thesis.



The proposal

"We were both very lucky to have found the labs and mentors we did and even more fortunate for the opportunity to build a community here at UNM similar to the one we had at SFSU. In addition to the strides we've made in our scientific journey,



Alumni Accomplishments SFSU Biology Love Story Where are they now?

we have also begun building a life together. We're the proud parents of two rambunctious border collie puppies named Pip and Poppy. With the foundation of SFSU in our training, we reflect often on the incredible impact it had on us, both on our scientific journey and our personal one. We encourage everyone to seek that community and make those memories, as the moments you are currently living will be some of those that will have an everlasting impact on your life."



Sam, Miriam, Pip and Poppy



Rima Singh M.S. Cell Molecular Biology, 2019 Fuse Lab

Currently, I am in my second year of PhD program at UC Irvine. My current lab focuses on Pancreatic cancer. I am specifically studying immune programming in primary vs metastatic tumor. Even though I love my new lab and school, SFSU will always hold a special place in my heart. I made great memories, especially during the few weeks before my defense. It was stressful but I had great lab mates who made the journey easier.

Alumni Accomplishments



Amina Khababa B.S. Physiology, 2015, Moffatt Lab M.S. Stem Cell Science, 2017, L. Chen Lab

I've been enjoying being a mom while still working full time as an Account Executive at Phoenix Bioinformatics. After leaving the bench I am happy to work for a company that's geared towards sustaining scientific databases once they have lost grant funding and supporting researchers in the process. I am forever grateful for the lifelong relationships and bonds created with fellow classmates and professors. The SFSU Biology community is truly amazing and holds a special place in my heart. Domenique Banta M.S., Microbiology, 2020 Joseph Chen lab

Started PhD at UCSC in the PBSE program under the MICRO track.

Where are they now?

Noah Jaffe M.S. Marie Biology, 2016 Cohen Lab

"I am currently a data scientist working for Levi Strauss & Co. Though this is not an academic research position, as one might expect after completing a master's in marine biology, my entry into to the field of data science followed directly from my time as a master's student with my mentor, Dr. Sarah Cohen. My fondest memory of my time at SFSU has to be one of the conferences that we went to together as a lab! The conference was a meeting of the Western Society of Naturalists in Tacoma, WA, and Dr. Cohen took us out to dinner as a lab in the evening after we all presented our research. In addition to some wonderful lab team bonding, Dr. Cohen introduced us to leaders in our respective fields and we got to meet so many other researchers from other labs."





Cecilia Hernandez B.S. 2017, M.S. 2020, Marine Biology Cohen Lab

I completed the Single Subject Credential program at SF state 2020-2021, shortly after completing the master's. I am currently working at George Washington High School and teach 9th grade Biology and Health classes. I still keep in touch with faculty at SFSU and hope to collaborate with labs in the future as a way to engage students in science/ biology through the practice of research.

Alumni Accomplishments

Where are they now?

Alex Cabrera Cellular and Molecular Biology, 2019 SEPAL Lab

"After completing my research with SEPAL and graduating with my master's degree, I was hired to teach a smattering of biology courses at Canada College and Foothill College. I taught at these institutions for 2 years and decided to pursue a master's in higher education so that I could transition to an administrative role in a college or university setting. I am currently at the University of Michigan on a full-ride scholarship and plan to begin my research endeavors next semester. I would like to continue my work at SEPAL and study effective advising and mentoring techniques for STEM undergraduate students. My fondest memory from SFSU is my time at SEPAL. My advisor (Kimberly Tanner), labmates, and all the amazing SEPAL people that I had the privilege of working with made my time at SF State such a positive time of growing and learning. I am so excited for all of the new and continuing students at SF State and hope they all have a wonderful experience, too. "



Alumni Accomplishments

Morgan Meyers M.S. Marine Biology, 2016 Carpenter Lab

I recently finished my PhD (2020) in marine zooplankton ecology from the University of Otago in Dunedin, New Zealand. I've since moved back to the States after accepting a full-time teaching position at the University of Georgia as a Lecturer in the Department of Genetics. In this role I'm really enjoying using and building on the many evidence-based teaching practices designed to improve student comprehension, participation, and classroom equity that I learned from my SFSU teaching mentors including Dr. Kimberly Tanner, Tatiane Russo-Tait, and Stephen Ingalls in my large-enrollment introductory biology classes for nonmajors.





Ntsaum Steve Vang M.S. Microbiology, 2020 Pasion Lab

I've officially moved back to Sacramento to be with family. I then went on to complete a second master's degree in biomedical science. Now, I am currently working at a psychiatric hospital for about a year now. I was just recently accepted into medical school (Ross University) and will be starting in January. I am looking forward to spending my first two years on the Caribbean islands. Fondest memory: having pizza and beer at the campus pub after a long day of lectures and experiments. Shout out to the Pasion Lab! Miss you all!

Where are they now?



Angel Ayala M.S. Cell & Molecular Biology, 2020 CIRM program (Wernig lab, Stanford University)

"I am a second year PhD student in the Inlay lab at the University of California, Irvine. My research focuses on Graft-versus-Host Disease which is a complication that arises from an allogeneic hematopoietic stem cell transplant. My fondest memories are hanging out with other grad students.

Where are they now?

Lauren Amundson M.S. Evolutionary Biology, 2016 Kavanaugh Lab

After graduating from SFSU I decided to travel and work abroad. I went to New Zealand for 6 months and worked on farms and traveled around the islands. I returned to the Bay Area and got a job writing science curriculum. The Covid-19 pandemic resulted in me getting laid off so, again I went adventuring. I road tripped to nine states and camped and hiked in the many National Parks. I returned to the Bay Area yet again where I found employment at College of Marin as a laboratory technician for the Biology department I absolutely love it! My favorite memory of SFSU was working as a GTA for the Biology department. Mentoring students was such a great experience and I really loved every minute of it! I made some lifelong friends out of my fellow grad students and think back fondly of my days at SF State.



Alumni Accomplishments

Jessica Bolivar B.S. Botany, 2010 M.S. Cell and Molecular Biology, 2019 Riggs Lab

I am a third year Ph.D candidate at UC Davis in the Biochemistry, Molecular, Cell and Developmental Biology (BMCDB) graduate group. Currently, I am studying how cells respond to stress. A mechanism used by cells to respond to stress involves forming cytoplasmic structures called stress granules (SGs).

SGs are non-membrane bound organelles composed of mRNA transcripts, RNA binding proteins, and 40S ribosomal subunits bound by eukaryotic initiation factors (eIFs). I am trying to understand if translation initiation machinery plays an active role in forming these stress granules. SFSU has always been home for me. I have studied and worked at SFSU for the past fourteen years. I strive to be a better version of myself because of SFSU. My fondest memories are with my friends, co-workers and professors. From our fieldtrips (botany), retreats(center for cellular construction), Wednesday night Dave & Buster's, move-in day (housing/residential life) to just simply walking into lab and knowing that this was home for me. Thank you SFSU for making me a better person.



Alumni Accomplishments

Where are they now?

Vivien Enriquez M.S. Physiology and Behavioral Biology, 2019 Crook & Zink Lab

Currently, I am the Undergraduate Research Advisor at the University of Vermont. I support undergraduates in finding hands-on research experience across all disciplines and aid them in landing full-time summer research positions. My fondest memory of SFSU is the incredible mentorship I received from my advisors and the lifelong friendships I made within my cohort.



Samuel Goodfellow M.S. Cellular and Molecular Biology, 2018 Burrus Lab

"I am beginning my 4th year of my PhD at the University of New Mexico - Health Sciences Center in the Biomedical Sciences Graduate Program. Since my time here, I have joined a Virology lab under the advisement of Dr. Steven Bradfute in which I study the distribution and dynamics of orthohantavirus in both rodent and patient populations. Using a combination of sequencing, diagnostic tools, and fieldwork I am able to balance both basic and translational science as New Mexico holds the highest cases of hantavirus infections in the US."



Sam has managed to secure several scholarships, including a training grant through NIH, while also publishing multiple first author papers, one featured on the cover of Journal of Virology, Vol. 96 Issue 1 in 2022. "Tracing Transmission of Sin Nombre Virus and Discovery of Infection in Multiple Rodent Species"



"Upon this year, with additional research opportunities I have published 5 papers, two being a first author and have one more in revisions as a first author that is pending. In addition. I have been able to secure funding as a T32 Infectious Disease and Inflammation fellow while currently applying for an F31 this winter. ""Thanks to SFSU, I have continued giving back to the community with helping out for annual science fairs and outreach while also pursuing several leadership roles as well. My fondest memory of SFSU has got to be the amazing people and community that provided me support to finish my Master's as well as give back. I remember taking several individuals up to Santa Rosa to assist with the wildfires that affected that area in 2017. Using my platform as SACNAS President, I was able to help establish the chapter and secure it for future success. Seeing the progression of the Biology department and individuals pursing graduate opportunities altogether make me cherish the memories I was able to obtain from SFSU! " 22



Donald Thomas Wicklow

Alumni – A life of service

We are saddened to learn of the passing of Dr. Donald Thomas Wicklow.

Dr. Donald Thomas Wicklow, 81, formerly of Peoria IL, died Sunday November 21, 2021. Born June 22, 1940, in San Francisco, California, to Thomas Paton Wicklow and Willa Cope Wicklow, he married Constance Kirchhoff on Dec. 20, 1970, in Burlington, Wisconsin. They were remarried in January 2004 in Peoria, Illinois. Surviving are two sons, Cameron (m. Melanie Reeves Wicklow) of Benicia, California and Brandon (m. Dr. Danielle Germain Wicklow) of Scottsdale, Arizona; one brother Brian Wicklow of Springboro, Ohio; one sister Dr. Marcia Wicklow-Howard of Boise, Idaho; and five grandchildren.

He was a 1957 graduate of Abraham Lincoln High School in San Francisco. He completed requirements for B.A. (1962) and M. A. (1964) degrees in Biology from San Francisco State College, lettered in three varsity sports (cross country, track, & soccer) and was a President of the Sigma Pi Sigma social fraternity. He earned a PhD in Botany and Plant Pathology from the University of Wisconsin (1971). While in Madison he joined a multinational soccer club playing on Sundays throughout Wisconsin. He was on the faculty of the Department of Biology and Laboratory of Ecology, University of Pittsburgh (1970 - 1977). He was a Microbiologist at the National Center for Agricultural Utilization Research, Peoria, Illinois for 37 years, retiring in 2014.

His career included serving as Lead Scientist of the Mycotoxin Research Unit. His ecological studies of fungi and their chemistry were supported in part by the National Science Foundation and the National Institutes of Health. He was a member of the Mycological Society of America; the British Mycological Society; and the Mycological Society of Japan. He was elected to Fellowship by the American Society for Microbiology and to Centenary Fellowship in 1996 by the British Mycological Society. He received the 2016 Distinguished Mycologist award by the Mycological Society of America. The fungus Wicklowia Aquatica was named in his honor "for outstanding studies of the nature and role of fungal secondary compounds

Remembering our biology community