THE QUIBBLER

THE UCSD MEDICAL-SCIENTIST TRAINING PROGRAM NEWSLETTER 12/2020

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Welcome from the Quibbler Team

2020 has been a difficult year. We have lost much and many, but we have gained a deeper appreciation for the importance and strength of our communities. Cut off from the wider world, we have sought joy and comfort from the people around us. Now more than ever, we need to celebrate the good things in each other's lives. We want to know who got engaged or married, who had a new child, who published amazing work, who spoke at an interesting conference, who helped fight for social justice, and who explored the best buffalo cauliflower spots in San Diego. Examples of all of these can be found in the pages within.

That is why we are starting The Quibbler newsletter. Despite dire circumstances, the UCSD MSTP has continued to accomplish great things, and we need a platform to come together and celebrate one another. With this Winter issue, we are inaugurating a quarterly publication that highlights the activity within our community and raises our spirits. Stay safe, take care, and welcome to The Quibbler.

THE TEAM


Diana Smith


Ilya Verzhbinsky


Isabel Constantino


Alexandra Stream

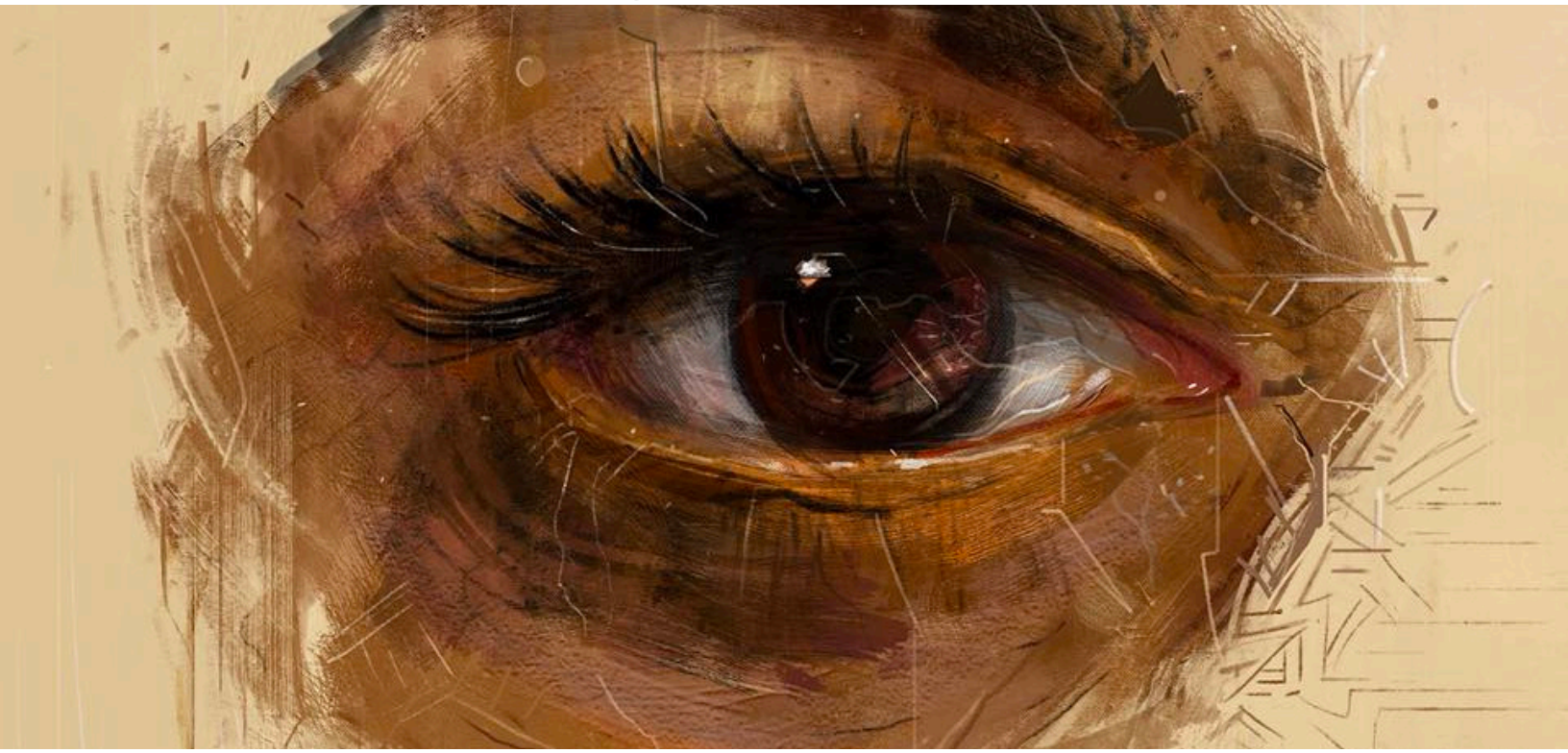

Brett Taylor


Meghana Pagadala


Juliet Nicodemus


Dr. Jeff Gold

MSTP Diversity Taskforce



2020 has been a historic year for discussions of race and racism across the country, and UC San Diego is no exception. Although the MSTP has long been focused on issues of diversity, equity, and inclusion, the past year has reinvigorated those discussions among students and leadership alike.

Drs. Neil Chi and Paul Insel, co-Directors of the MSTP, note that "The leadership of the UCSD-MSTP has had a strong commitment to diversity for many years and has initiated a number of programs in support of this commitment. Foremost among these efforts is the establishment of an MD/PhD-specific Summer Undergraduate Research Fellowship (SURF) Program for under-represented minority (URM) students. The UCSD-MSTP was one of the first US MD/PhD programs to initiate such a program. This program was partially supported by the NIH for many years and now is supported by UCSD Health Sciences and the UCSD School of Medicine."

The MSTP-SURF program is directed by Dr. Albert Hsaio, a UCSD-MSTP alumnus and Radiology faculty member. Several MSTP students each year serve as Advocates for the SURF trainees and have found this to be a highly rewarding opportunity to mentor undergraduates with an interest in the physician-scientist career path. Importantly, a number of MSTP-SURF "graduates" have matriculated in the UCSD-MSTP. Currently there are 15 ethnic URM, 11 non-URM disadvantaged and 3 disabled students among the 85 MSTP trainees.

The MSTP Diversity Task Force was created this past year to develop new initiatives that can further enhance diversity among applicants and matriculants to our MSTP. "As the only medical school in the region, we should aim towards more accurately reflecting the diversity of the community that we are a part of," states Anupam Garg, MS4 and student co-chair of the Diversity Task Force. "With that in mind, I believe that we still have a long way to go towards improving diversity within the program and that we must continue to work together as a program to make the MSTP a more welcoming and inclusive space."

> "As the only medical school in the region, we should aim towards more accurately reflecting the diversity of the community that we are a part of"
> -Anupam Garg, MS4

The Task Force is comprised of subcommittees that focus on three areas: admissions, community outreach, and opportunities for current students. "Some of the next steps include revising our admissions process to recruit a more diverse student body, increasing our outreach efforts in the San Diego community, and organizing educational training opportunities and creating a safe and supportive environment for current students," states Garg. "We are currently working on identifying actionable items in each of these domains. In order to create lasting change, these next steps must be a joint venture between students and faculty." -Diana Smith, MS2

Student Spotlight

Hometown:
Lamont, California

Undergrad Institution:
University of California, Berkeley

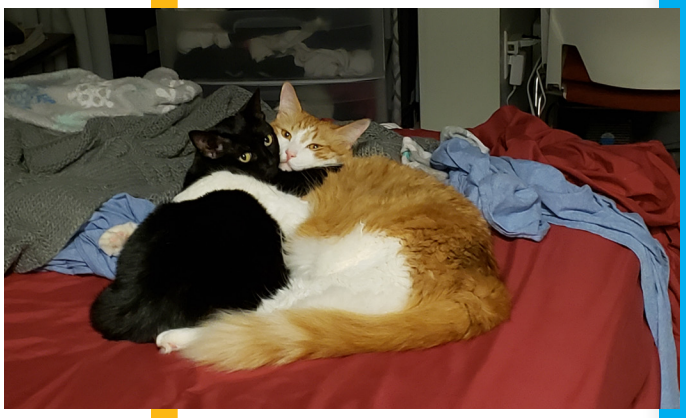
Graduate Department:
Neuroscience

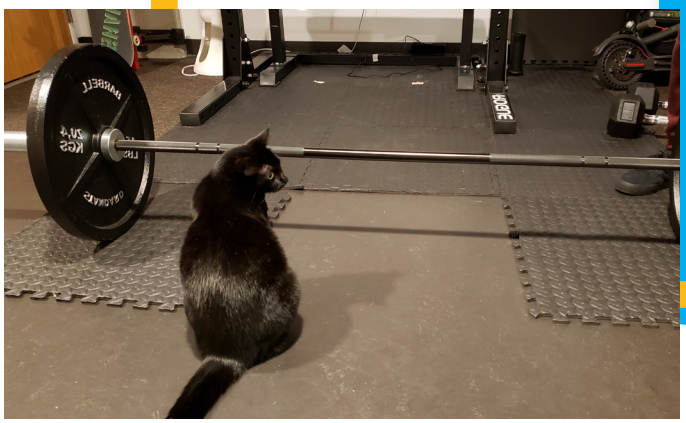
Lab:
Dr. Edward Callaway

Favorite Activity:
Skateboarding (in Mesa Nueva parking lots!); playing with my two cats and watching them fight; making puzzles; and hanging out with my (mostly MSTP!) friends every Friday.

Favorite Restaurant in San Diego:
Spicy City on Convoy Street (not surprisingly, spicy Szechuan style food).

Advice for a MS1's:
Don't spend all your time studying in classes and pursue your other passions, whether it be free clinic, research, or (for me) Colors of the Brain and weightlifting. You will always be busy your first year, but you need to be able to unwind. Try to develop relationships with your cohort, too. When you're deep into studying (e.g., STEP1), it is nice to have a support system that is going through the same things that you are.





(Top) Maribel's cute cats, Kira and L, share their love before night falls and they start chasing each other (Bottom) L needs to add a couple more pounds before starting deadlifts.

Maribel's journey has taken her from UC Berkeley, where she studied the relationship between traumatic brain injury and epilepsy, to the University of Pennsylvania, where she explored the role of a repeat expansion mutation in different neurodevelopmental disorders, and back to the Golden State, where she is currently a G3 in UCSD's MSTP and the Neurosciences Graduate Program. Maribel has found a (temporary) home at the Salk Institute for Biological Studies in the lab of Professor Edward Callaway. In developing an innovative mapping technology by combining rabies tracing with single cell transcriptomics, Maribel investigates different cortical neuro-circuits for her PhD project. Clearly, Maribel has some science chops, but her impact at UCSD goes beyond what she brings to the lab.

As a MS1, Maribel started the Colors of the Brain (CoB) organization with three other UCSD graduate students. CoB seeks to diversify STEM. CoB pairs undergraduate students with graduate mentors ¬– both from traditionally underrepresented backgrounds ¬– to create a supportive environment for younger students to receive assistance and advice on application processes, coursework, and more. The Neurosciences Graduate Department has been very supportive since its inception, and Maribel and the other CoB student leaders have grown the program every year. Recently, CoB has created a new summer research fellowship in partnership with the Kavli Institute for Brain and Mind (KIBM) at UCSD. Seeking to lift up and support students from underrepresented backgrounds, the CoB KIBM fellowship will soon select the inaugural undergraduate mentees to begin their research project for this upcoming summer. Uniquely, this fellowship will give preference to students with no research experience: "Our goal is to help students get their foot in the door. Then, we can have a team of graduate students train them and help them apply to more competitive fellowships down the road."

When asked about her future goals, Maribel said that she hopes to run a basic systems neuroscience lab and, with the "clout" that comes with being a PI, to advocate for and strive towards diversity in STEM. The Quibbler thinks that, given her current thesis work, her role in CoB, and recently being awarded the prestigious Soros Fellowship, it seems that no clout is necessary and that she's already well on her way!

-Brett Tayler, M1

Quibbles to think about:

"My definition of *success* was not success in terms of monetary reward or even professional recognition. It was more at the level of, 'Can I actually do science that I'm going to be proud of? And can I feel like I've made the right choice with my life, that I decided to do something that I can actually do well?' There were a number of times when I was younger when I thought maybe the answer is no and maybe I'm on the wrong track. And again, my stubbornness came into play, because I'm also *not a quitter*."

-Jennifer Doudna, 2020 Nobel Prize in Chemistry

GRADUATE SCHOOL AFFAIRS

Conquering Graduate School During a Pandemic

Graduate school is tough enough, working with long hours at the lab bench, writing papers, brainstorming novel ideas, and preparing for numerous meetings. With the COVID-19 pandemic, we have had to reimagine ways to continue to be productive as labs went into lockdown, meetings were exclusively taken over Zoom, and new work schedules were adopted. Since the lockdown in March, many labs have reopened to near-normal hours; however, there is no doubt the pandemic has had an effect on all graduate students.

The MSTP administration hosted a town hall to field concerns and questions from students on graduation timelines, advancement to candidacy, and more. Additionally, more regular MSTP Office Hours have been held to help students through the process.

Here are some suggestions to help you master graduate school during a pandemic.

Zoom Exhaustion

Most meetings are now conducted virtually via Zoom. Zoom meetings have been critical to updating PIs on research progress, communicating ideas, etc. This format has the benefit of efficiency, but many people feel overloaded with Zoom meetings. Whether there has been an increase in meetings due to COVID-19 or not, Zoom exhaustion is real and compounded by other stressors due to the pandemic. Here are some initiatives that I have personally tried to combat Zoom exhaustion.

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The Interview Is Virtual

BUT THE STAKES ARE REAL

Many traditions have fallen by the wayside due to the COVID-19. High school students missed prom. College students missed graduations. This year's MS-4s will miss out on traveling around the country visit prospective residency programs, and all the wining and dining that goes along with it.

I am a residency program director (Child Neurology). We are about halfway through our virtual interviews. Here is some advice for anyone interviewing.

1. Review any material ahead of time

Many programs have printed material they distribute on traditional interview days; this material is meant to serve a remainder for students after they return home. Many programs are sending this material ahead of time by mail or e-mail. Review the material ahead of the interview and generate questions to ask on your virtual interview day.

2. Manage your background

Most students are virtually interviewing from home. If you have watched any TV during the pandemic, you know that the Zoom "background" is an important element of your presentation. TV personalities tend to set-up in front of a bookcase with books and knick-knacks designed to make a point. Many of our applicants have set up in front of a plain white wall or screen; this is fine, but also forgettable. Most popular is a set-up in a clean room in front of a wall with a framed picture on it.

Avoid back-light; that is, don't' set up in front of a window. Make sure you have a good light on your face that prevents shadows. If your natural set-up doesn't allow this, consider an inexpensive LED "selfie" ring light; such can be found for $10. If your apartment is messy, use a UCSD-approved virtual background (search "UCSD zoom background").

3. Manage your audio

The most common mistake made in virtual interviewing is relying on your computer speakers and built-in microphones. When you use the built-in microphone, there is a tendency to speak at a higher volume, which gives your voice a harsh and unfriend-

ly quality. Further, built-in microphones are multi-directional, which picks up ambient noise (dogs, motorcycles going by on the street). Even the cheap, white headphones that come with every iPod will provide superior sound quality for you and the interviewer, and will prevent you from shouting.

4. Remember you still need to interview!

Virtual interviewing is weird and different, but it is still interviewing. Practice ahead of time. Have a 1 minute, a 5 minute, and a 10 minute version of your research talk ready to go. Be prepared for classic interview questions; for example, "What's your greatest weakness" and "Describe a time where you experienced conflict and what you did to resolve it." Know some basics about the institution where you are interviewing, and (if possible) the person with whom you are interviewing. Be confident, be yourself, and your interview will go well!

-Dr. Jeff Gold

The Dr. Gold Checklist:

1. Review any material ahead of time
2. Manage your background
3. Manage your audio
4. Remember you still need to interview!

Graduate School Affairs

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1. Scheduling all Zoom meetings on one day. This is not always possible if you have big collaborator meetings; however, I try to schedule as many of my more informal meetings on the same day, so I can have uninterrupted research time on other days.

2. Take Zoom meetings while going on a walk. There are meetings where you are in the role of the observer more than the participant. To get a change of environment, I have listened in on these meetings while on my phone and taking a walk, which has definitely helped with Zoom fatigue.

3. Reducing the number of meetings. Another thing that has helped with Zoom exhaustion is just cutting down the number of meetings that I have. Before scheduling a meeting, I think about whether I really need to schedule a Zoom meeting or whether I can communicate what I need through email or Slack. Additionally, I have tried to schedule 30-minute meetings, rather than 1-hour long meetings. Work tends to expand to fill the allotted time; shorter meetings are often more efficient and just as productive.

Staying Healthy

Physically distancing during this pandemic can definitely feel isolating. There are times when I miss happy hour with my lab mates, free lunch at talks, and getting coffee on campus. At this time, talking time for yourself is critical and will only help with staying productive.

1. Keep in touch with lab mates and friends virtually. Our lab has set up a virtual happy hour every Friday to complain, destress and connect during the pandemic. Additionally, I just call up friends; this helps me remember that we all are going through the same thing and can help each other out.

2. Working out. One way to stay sane is to stay physically healthy. Lots of free workout videos are available that are worth trying out. Also, taking the time to get a run in or doing your choice of workout outside before it gets dark can help you get some fresh air and lift your spirit.

3. Don't Stress. With the pandemic, time to graduation and meeting other deadlines might be very stressful. However, the whole research field is experiencing the same hit to productivity, so remember to give yourself a break and reach out to the MSTP office/directors about concerns.

Expand your Toolkit

Before the pandemic hit, you might have mapped out your projects or thesis aims. With the pandemic, progress on some of these projects may not be possible, especially if you are reliant on other labs for experiments or data. Take the time to maybe expand your toolkit and learn a new technique or skill. Perhaps this is the chance to write a review paper or something that is still productive but not necessarily in your plans. Who know, maybe learning a new skill or technique could turn into a thesis aim or paper.

-Meghana Pagadala, G3

Welcome to the new Slytherin members: Quetzal Flores-Ramirez (UC Berkley) and Amin Mahmoodi (UC Irvine). Congrats to graduate Spencer Moore, a newly-minted Ophthalmology Resident at U. of Arizona, Tucson. Vitor Martins has earned his PhD from the BMS program (Thesis lab: Simon Schenk). Congratulations to newlywed Alta Steward! The GSA Outstanding Community Leader Award and the UCSD Tribal Membership Initiative Fellowship were awarded to Alec Calec, most impressive! Continued congrats to Slytherins with current F30 awards: Katherine Lee and Meghana Pagadala! Slytherins have many publications to be proud of this year: Morgen Chalmiers (Med Anthropol), Cong Dinh (FEMS Microbiol Rev), Anupam Garg (Ann Clin Transl Neurol, J Clin Med), Christina Garza (Nat Struct Mol Biol), Eulanca Liu (Int J Radiat Oncol Biol Phys, Neuroimage), Vitor Martins (J Cachexia Sarcopenia Muscle, Am J Physiol Endocrinol Metab), Daniella McDonald (Cell, Facial Plast Surg Aesthet Med), Meghana Pagadala (Br J Cancer), Alta Steward (Neurology, Mov Disord), and Lawrence Wang (Immunity, J Virol).

Welcome to the new Hufflepuff members: Alis Balayn (UCLA), Trever Carter (Notre Dame), and Matthew Donnelly (Cornell). Congrats to graduates Nikos Protopsaltis (Pathology Resident at U. of Cincinnati), Jessica Meves (Psychiatry Research Track Resident, U. Michigan), and Matt Kolar (Dermatology Resident UCSD and winner of the Barbara & Paul Insel award as outstanding 2020 MSTP graduate). Hufflepuff really know how to graduate 'em! Robert Kim has earned his PhD from the Neuroscience program (Thesis lab: Terry Sejnowski). Continued congrats to Hufflepuff with current F30 awards: Elischa Sanders and Denis Smirnov! Hufflepuffs continue to publish excellent work: Jason Adams (Acta Neuropathol), Alis Balayan (Biomaterials, Tissue Eng Part C Methods), Sahil Shah (J Clin Med & Am J Ophthalmol with Slytherin Anupam Garg), Erica Silva (G3 Bethesda), Denis Smirnov (Psychol Aging, Neurology), and Ilya Verzhbinsky (PLoS One, IEEE Trans Med Imaging). Truly impressive!

House Standings

By Isabel Constantino, G3

Welcome to the new Ravenclaw members: Jianna Cressy (John Hopkins) and Genevieve Curtin (Tulane). Congrats to graduate Priya Nayak who is now a Family Medicine Resident at UCSD. Jennifer Dumdie has earned her PhD from the BMS program (Thesis lab: Heidi Cook-Anderson) and won the 2020 Chancellor's Dissertation for Biological Sciences! Congratulations to newlyweds Shannan McClain, Emily Ho, and Moly Kwiatkowski, who also earned her PhD this year from the Neurosciences program (Thesis lab: Jared Young). Maribel Patiño was awarded a prestigious Soros Fellowship. Ravenclaws were active authors this year: Isabel Costantino & Hufflepuff Jason Adams (J Med Case Rep), Genevieve Curtin (J Virol), Amy Taylor (Cell Death Differ, Nat Neurosci), and Ben Tsuda (Proc Natl Acad Sci USA).

Welcome to the new Gryffindor members: Oye Bosompra (UCLA), Lauren Ostrowski (and new puppy Luna; Brown) and Brett Taylor (Fordham)! Congrats to graduate Angela Ianni, who is beginning her Psychiatry Research Track Residency at U. of Pittsburgh. Liam King has earned his PhD from TSRI (Thesis lab: Erica Ollmann Saphire). Congratulations to Greg Poore and Helen Wang on their recent nuptials. Honeymoons may be delayed, but happy marriages continue! Evan Masutani received an American Heart Association fellowship and an RSNA Trainee Research Prize. Amazing, Evan! Continued congrats to Gryffindors with current F30 awards: Hunter Bennett, Greg Poore, and Kyle Marra! Gryffindor had a prolific year of publications: Jason Seidman and Hunter Bennett (Immunity), Andrea Dickey (Mol Biol Cell), Eric Geier (J Appl Physiol), Kyle Marra (Invest Ophthalmol Vis Sci), Evan Masutani (Radiology, Radiol Artif Intell, Radiol Cardiothorac Imaging), Lauren Ostrowski (Epilepsia), Greg Poore (Nature), Diana Smith (Am J Prev Med), and Kevin Tenerelli (Restor Neurol Neurosci).

SAN DIEGO EATER

The Buffalo Cauliflower Guide you didn't know you needed

Inspired by its popular predecessor buffalo wings, buffalo cauliflower has risen in popularity. Cauliflower is used as a delicious meat alternative that perfectly absorbs spices. This crunchy-on-the-outside-soft-on-the-inside appetizer is a must try!

I was tempted to try this dish at various places in San Diego after some recommendations from buffalo cauliflower connoisseur and my MSTP "big sib," Saumya Jani. Fortunately for me, San Diego is home to numerous restaurants that serve it. I have added a map with six of these spots and have selected the three options closest to UCSD to review here to kick off the Quibbler's first San Diego Affairs column. While all three dishes are recommendable, I ranked them based on my personal preferences followed by brief explanations.

1. Regents Pizzeria

Buffalo Cauliflower at Regents is my favorite of the three. A fun part of this dish is that you can choose the sauce, similar to how you can with chicken wings. Regents offers the following sauce options: buffalo, honey BBQ, Nashville hot, honey habanero orange, parmesan garlic, jalapeno, habanero, ghost and scorpion sauce. I have tried both the jalapeño and the honey habanero orange sauce, and would recommend either one. The dish was very spicy, covered in a generous quantity of sauce, crunchy on the outside, and soft/tender on the inside. I also appreciated that it came with a side of fresh carrots and celery. **$9.50.**

2. California Pizza Kitchen (CPK)

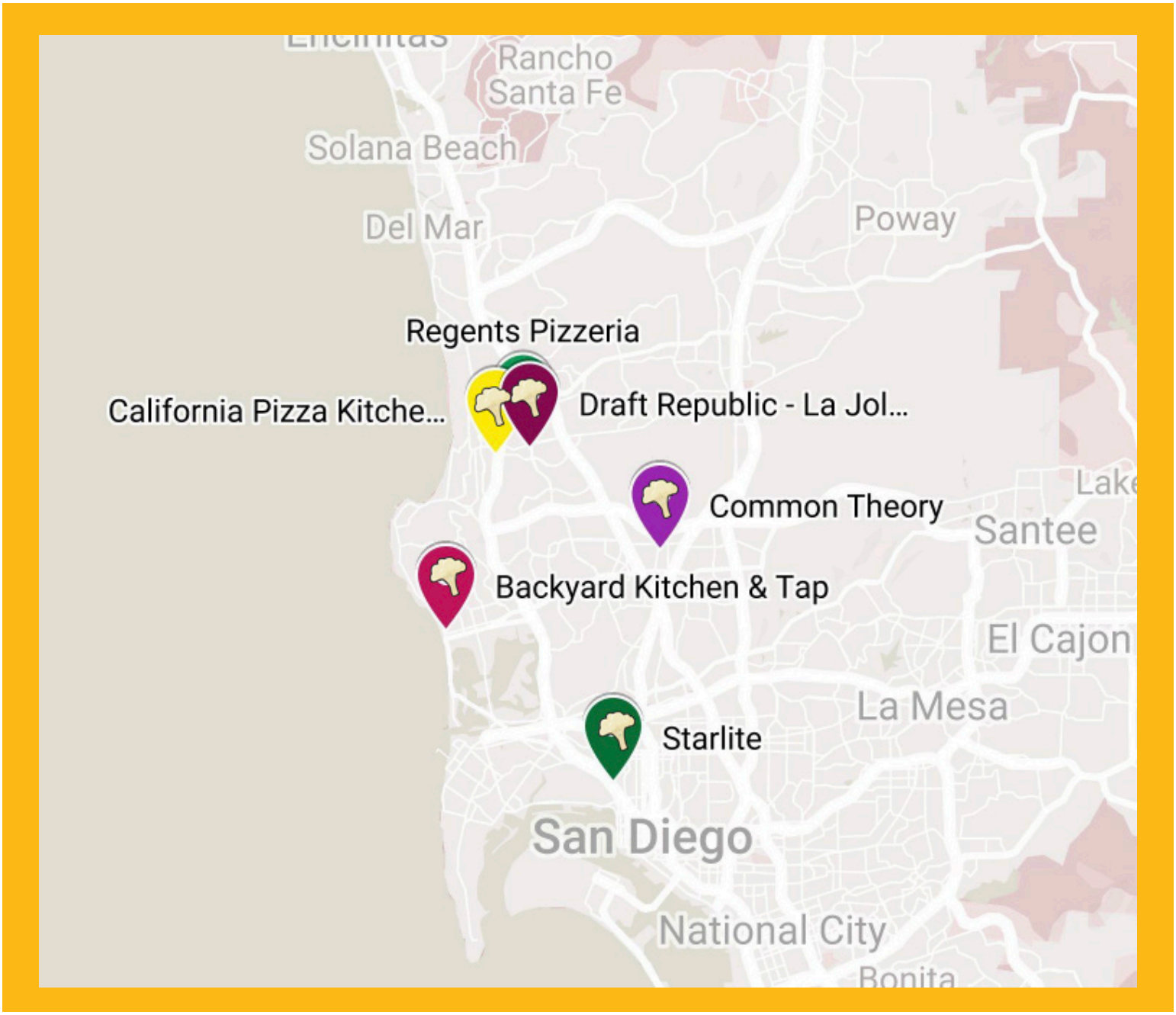
CPK's Spicy Buffalo Cauliflower is made with a Sriracha buffalo sauce and topped with celery, cilantro, and gorgonzola. Of the three options reviewed here, this was my second favorite. The dish is first notable for its aesthetically pleasing presentation. Another thing that sets this dish

apart is the gorgonzola cheese, which is a creamy addition to counteract the spiciness of the cauliflower. Also, shout out to the convenient curbside pick-up option! **$9.49.**

3. Draft Republic

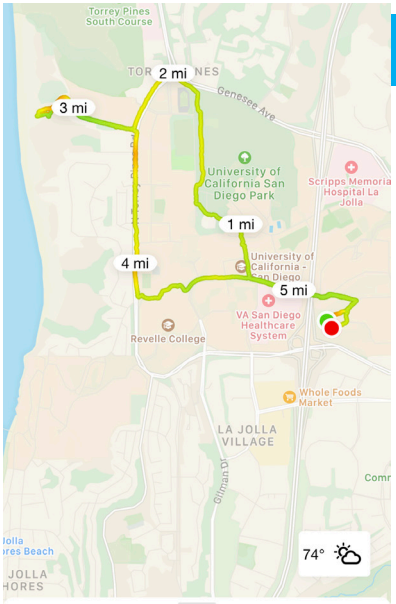
Spicy Buffalo Cauliflower from Draft Republic comes with a blue cheese dipping sauce and a few celery sticks. While the cauliflower was spicy and flavorful, this dish ranks last of the three options reviewed here. The outside was not as crunchy, and the quantity of sauce was sparse compared to the other dishes that I tried. But Draft Republic is still one of my local faves! **$11.95.**

-Alexandra Stream, MS2



HEALTH & WELLNESS

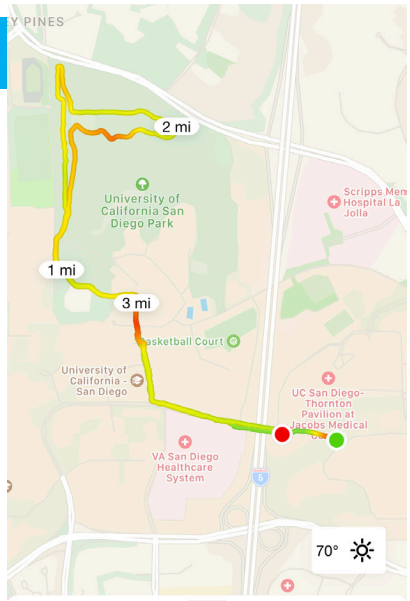
In this series on health and wellness, we will explore some of the best running, trail-running, and hiking trails in San Diego. During 'regular' times, going outside and participating in exercise are some of the easiest ways to maintain one's health – physically of course but also mentally and (even) spiritually, too! Given the COVID pandemic, though, these activities may be more important than ever – what else can we do to avoid cabin fever? It does not hurt that we live in a place where we can be outside nearly any day of the year either. We are going to start this series with three running recommendations right from graduate housing.



9'52" Avg. Pace | 330 ft Elevation | -- BPM

Gliderport Extension

Black Canyon Trail Out n Back:



9'35" Avg. Pace | 328 ft Elevation | -- BPM

These paths are our two regular runs for their simultaneous convenience (leave from your front door) and ability to transport you out of the graduate housing bubble (a thick eucalyptus grove or jaw dropping ocean views). Both paths start similarly – crossing the bridge through the undergraduate campus – but the Glider Port extension takes you a bit further to Torrey Pines Road. The extension is best done at sunset with beautiful views of Black's Beach or at night with the sky's stars lighting up the sky. Personally, I opt for the Black Canyon Trail during the day so that I can easily see the roots to hop over. Both of these runs are must-do's if you're in grad housing!

-Brett Taylor, MS1 & Ilya Verzhbinsky, MS2

THE HISTORY OF MSTP

UCSD Hillcrest hospital in the 1970s, then known as the University Hospital. All photos courtesy of the UCSD library archives and UCSD Health Science Communications Photographs

The UCSD MSTP is constantly changing and evolving. Just as our science is built upon the discoveries of those before us, the MSTP is built upon the experiences and achievements of our alumni. Looking back at the first ten years of the MSTP, it is possible to see how much the program has changed and yet how many things have stayed the same. The original students sat in the same carpet-covered seats of Garren Hall. Pulmonary physiology was taught by Dr. John West, although pictures indicate he hadn't yet picked up his fondness for bowties. Students could be found studying or looking up research articles in the Biomedical Library. The university was treating patients at Hillcrest, although at that they time UCSD had just taken over the operation and lease of the Country hospital, transforming it into a teaching hospital. Thornton, Jacobs, and the other health sciecnes facilities weren't even a gleam in the administration's eye.

In that first ten years, 19 students graduated. Some alumni have gone on to locations across the country, contributing to medicine, science and society. Some stayed close to home. One of the first graduates of the program, Dr. Glen Evans, went on to become a major figure in the sequencing of the human genome and the development of synthetic biology. He is fondly remembered by many, although he passed away from Multiple Systems Atrophy in 2010.

1976-1985

Dr. Chris Glass, a familiar face to many current students as one of our MSTP associate directors, graduated in the class of 1984. While his medical training initially took him thousands of miles away to Harvard Medical School, he found his way back to San Diego in 1986 to complete a fellowship in Endocrinology. Since then he has gone on to make major scientific contributions, including characterization of the transcriptional control of macrophage development and function, macrophage activation and chronic inflammatory diseases. Dr. Glass was well deservedly elected to the National Academy of Sciences in 2017.

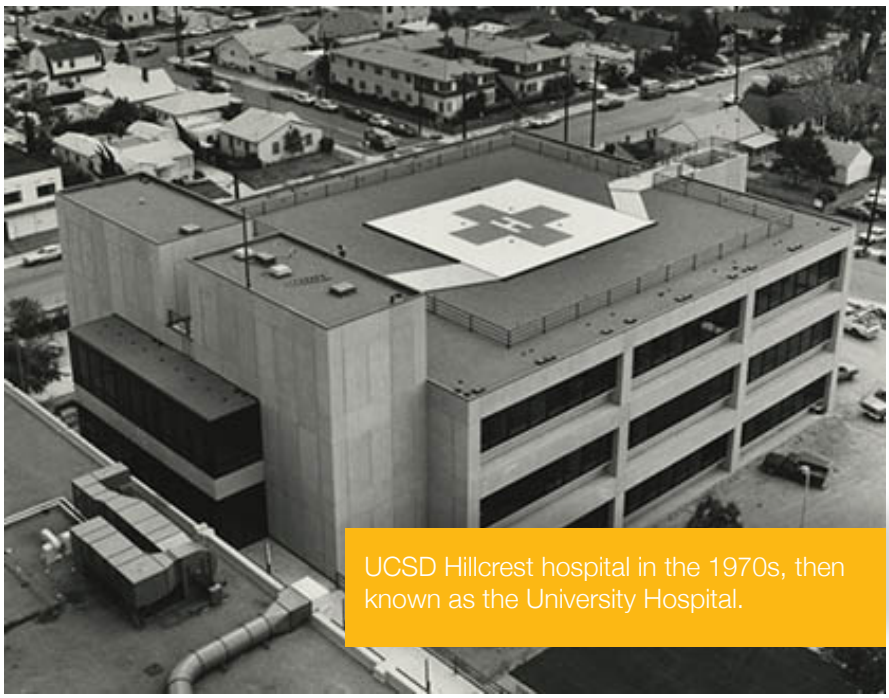
We pretty much just made everything up as we went. The energy was there and there was very little bureaucracy to bleed it off. If you were interested in something you just dove in and studied it

Dr. Clayton Wiley of the MSTP class of 1981, Professor of Pathology and Director of Neuropathology at UPMC Presbyterian Hospital, had some impactful thoughts to share about his time in the program. "Well it was a different world back then. While there have been physician scientists for centuries, the MSTP was the first formal nationwide program attempting to define a training process. To say we were all thrashing around in the dark would be an understatement. As a student navigating medical school and graduate school it was clear the two worlds were, well, worlds apart. We pretty much just made everything up as we went. The energy was there and there was very little bureaucracy to bleed it off. If you were interested in something you just dove in and studied it. Of course life in general and biomedical science in particular were simpler back then. Now-a-days there is much more definition and rules to the process, but being a physician scientist remains an exciting and rewarding career. If I had it to do all over again, I would do exactly that."

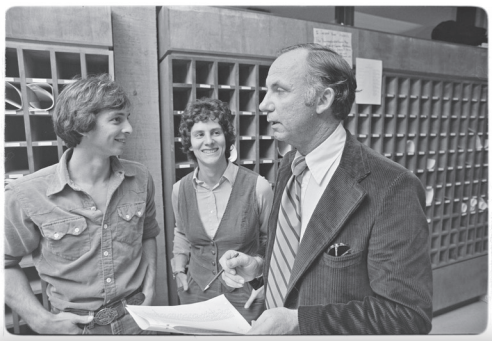
-Juliet Nicodemus, G3

1976-1985 alumni

James Stockard - 1976
Glen Evans - 1979
Richard B. Mertens - 1979
Val Catanzarite - 1980
Corey Raffel - 1980
John D. Hoff - 1981
Clayton Wiley - 1981
Eric C. Beyer - 1982
Mark W. Hamblin - 1982
Joseph Lipsick - 1982
Ellen Sung - 1983
Jonathan Z. Tepper - 1983
Dennis M. Frisman - 1983
Christopher Glass - 1984
Mark A. Smith - 1984
Dennis Templeton - 1984
Gerald F. Joyce - 1984
Geoffrey H. Murdoch - 1984
Daniel S. Rimkus - 1984



UCSD Hillcrest hospital in the 1970s, then known as the University Hospital.



(Top) Dean of the School of Medicine and Director of the UCSD MD/PhD program, Eric Wahrenbrock, with students in the 1980s. (Right) Medical students in an electrophysiology lab, 1979.

(Top left) Dean of the School of Medicine and Director of the UCSD MD/PhD program, Eric Wahrenbrock, with students in the 1980s. (Top right) Dr. John. West teaching a pulmonary physiology lab in 1970s. (Middle left) Physiology lab filled with medical students in the 1980s (Middle right) Arial view of UCSD School of Medicine and La Jolla mesa in the 1980s (Bottom) Biomedical Sciences Library