

TV CORE

July 2024

Monthly Newsletter



NOAH GAITAN

Noah has always been interested in biology, spearheading a new biotechnology course at his high school and becoming interested in a wide range of technical skills in addition to diverse topics including ecology, genetics, microbiology, and evolution. When choosing a college, Noah decided on UCSD to be able to explore all biological disciplines and impacts of health outcomes as a general biology major with a minor in global health. Here, he began his research journey in the summer of 2019 researching Inflammatory Bowel Disease in murine models.

Noah came to TV Core as an undergraduate research assistant in the height of the COVID-19 pandemic in 2020 as a UCSD student in the UC LEADS graduate readiness program. It was here that he became enthralled with research and continued on at UCSD through the BS/MS program, finishing his masters in 2023.

A San Diego native, Noah grew up with two older sisters and surrounded by much of his extended family where he enjoyed making music, playing basketball and baseball, and spending time with family and friends. He still enjoys these same hobbies and has added new ones such as starting a sneaker collection! He is also a very proud dog dad to his senior pups Holly, Riley, and Leila.

Unfortunately, Noah is leaving CFAR and moving positions. He says, "As I move on to my next opportunity, I don't see it as me closing the door on academia, but rather exploring a different environment and applying everything I have learned in my short career as a scientist. I would like to deeply express my gratitude to every single member of TV Core. You all have made such a huge impact on not only my research journey, but growth as an individual. Thank you for everything!"

Noah, We will miss you so much. Thank you for all of your hard work the past 4 years!

SUMMARY OF "ASYMPTOMATIC CMV REPLICATION DURING EARLY HIV INFECTION IS ASSOCIATED WITH LOWER CD4/CD8 RATIO DURING HIV TREATMENT"

The study investigates the impact of subclinical cytomegalovirus (CMV) and Epstein-Barr virus (EBV) replication on T-cell dynamics in men with HIV who started antiretroviral therapy (ART) early. Analyzing 604 samples from 108 individuals, researchers found that higher levels of subclinical CMV replication were associated with lower CD4/CD8 ratios, primarily due to increased CD8+ T-cell counts. CMV replication did not affect CD4+ T-cell counts. Age also influenced CD4/CD8 ratios independently of CMV. In contrast, EBV replication impacted CD8+ T-cell counts and baseline CD4/CD8 ratios but did not affect recovery rates. The findings suggest that subclinical CMV replication during early HIV infection hinders CD4/CD8 ratio recovery during ART, indicating a potential target for therapeutic intervention.

The study found that higher levels of subclinical cytomegalovirus (CMV) replication in individuals with HIV were associated with lower CD4/CD8 ratios during antiretroviral therapy (ART). This was mainly due to an increase in CD8+ T-cell counts, while CD4+ T-cell counts remained unaffected. Since a low CD4/CD8 ratio is linked to increased inflammation, morbidity, and mortality, managing CMV replication could help improve immune recovery in HIV patients. Targeting CMV with therapeutic interventions might reduce the expansion of CD8+ T cells, thereby helping to normalize the CD4/CD8 ratio and potentially decrease the associated health risks, making it a promising area for future research and treatment strategies.

LOOKING FORWARD

Women's Equality Day, observed on **August 26**, marks the 1920 certification of the 19th Amendment, granting American women the right to vote. This day celebrates the strides made toward gender equality and underscores the ongoing fight for women's rights in all areas of society.

This **August** marks the **37th anniversary** of the FDA approving the first human testing of a candidate vaccine against HIV.

Our next **Team Building** will be on Aug 6th at 12:00pm – 3:00pm. It's a "sip & paint" event and art teachers will be at the event to help. Lunch will be served.

TRY SOMETHING NEW!

Tune in to the Paris Olympics from July 26-August 11 to see the best athletes in the world compete in an array of 32 different spots. This year, there are 11,040 athletes competing and the US has more athletes than any other country at 592.

The Olympics are a global celebration of athletic excellence, uniting nations through the spirit of competition and camaraderie. Watching sports during the Olympics offers a chance to witness incredible feats of strength, skill, and determination from athletes who have dedicated their lives to their craft. It's not just about the medals and records; it's about inspiring stories, cultural exchange, and the pure joy of seeing human potential realized on a world stage. Engaging with the Olympics helps foster a sense of global unity and motivates us to pursue our own goals with the same passion and resilience.

In honor of the olympics, this month's Try Something New is to watch a new sport.

Engaging with sports entertains and promotes physical activity and wellness. Seeing athletes push their limits can motivate individuals to adopt more active lifestyles, set personal fitness goals, and embrace healthier habits.



40 YEARS

Since June 18, 1984, Karole Ignacio has been an important and founding member of our lab. We are very excited to hear more from and about her in August's newsletter when she is our Person of the Month. Until then, please join us in congratulating Karole on this incredible milestone. A current Laboratory Manager for us, celebrating 40 years at the San Diego Center for AIDS Research is an incredible accomplishment and we could not be more thankful for you, Karole!

SHOUTOUT!

We would like to wish a very happy birthday to Sanjay (7/5), Harold (7/5), and Magali (7/14)!

To the left, Dr. Jill Blumenthal is pictured receiving the big honor of being recognized as a Friend of Pride for all her work in support of the LGBTQ community and in creating a more equitable and inclusive clinical environment. Dr. Blumenthal is a frequent collaborator of the TV Core team and inspiration to so many of us.

We would like to congratulate Marissa Suarez on completing her treatment. There will be a brunch in her honor on August 12.

Thank you and congratulations to our first ever high school volunteer, Nikki Muktari. It was a pleasure having you in the lab!

A final shoutout goes to DeeDee Pacheco as she just received the employee of the year award for health science from UCSD. There is a virtual ceremony on August 29th where her award will be presented.