Advanced Technology Core

San Diego Center for AIDS Research

June 2026

Monthly Newsletter



AMANDA IMMER

Amanda joined the Translational Virology Core as a Staff Research Associate I after earning their B.S. in Microbiology with a minor in Spanish from UC Santa Barbara. Although Amanda initially wanted to pursue microbiology, it was an infectious disease course during their senior year that inspired them to pursue research in infectious diseases. After graduation, Amanda spent nine months at Apeel Sciences conducting microbiology research in food science before deciding to transition back to molecular biology research and joining the TV Core.

Throughout college, Amanda immersed themselves in a variety of communities and activities that continue to shape their life today. Living in a student housing cooperative where food justice was a central part of the community's mission, volunteering with an animal advocacy organization, participating in intramural sports such as volleyball, and discovering a passion for rock climbing sparked a lasting commitment to sustainability, environmental stewardship, and increasing access to healthy, plant-based foods.

Outside the lab, Amanda enjoys spending as much time outdoors as possible. Whether hiking, climbing, trail running, or camping, they love exploring nature and staying active. Amanda is also passionate about gardening, cooking with fresh ingredients, and supporting local farmers markets. Recently, they began volunteering with San Diego 350 as a member of the organization's Plant-Forward Team, where they contribute to climate justice efforts by promoting sustainable, plant-based food systems.

When not conducting research or enjoying the outdoors, Amanda can often be found reading, crafting, or playing the guitar. We are thrilled to welcome Amanda to the Translational Virology Core and are excited to have them on the team. We can't wait to see the contributions and impact they'll make within, and outside of, our lab!

PROJECT HIGHLIGHT

Mattia Trunfio et al., 2026

The study **"Central Nervous System T-cell immune architecture, and not HIV burden, tracks with cognition under long-term viral suppression"** investigates whether cognitive impairment in people living with HIV on long-term suppressive antiretroviral therapy is more closely associated with persistent HIV in the central nervous system (CNS) or with the local immune response. Using postmortem brain and spinal cord tissue from 12 participants in the Last Gift rapid autopsy program, HIV DNA and RNA were measured across five CNS regions, profiled T-cell receptor repertoires (TCRRs), and compared with neurocognitive assessments performed before death.

Although HIV DNA and RNA remained detectable throughout the CNS, neither the size nor the transcriptional activity of the HIV reservoir was associated with cognitive performance. Instead, cognitive function was more strongly associated with the organization of local T-cell populations. Greater T-cell receptor richness and diversity in the hippocampus and spinal cord correlated with poorer performance in several cognitive domains, while immune characteristics measured in peripheral blood showed no relationship with cognition. The study also found that each CNS region possessed a distinct immune architecture, highlighting the compartmentalized nature of brain immune responses.

Further analyses showed that pathogen-specific T-cell responses were linked to cognition. Higher numbers of HIV-specific T-cell clonotypes in the basal ganglia were associated with better global cognition, processing speed, and attention, whereas CMV-specific clonotypes were associated with poorer learning and memory. These findings suggest that the composition and specialization of CNS-resident T cells, rather than the amount of persistent HIV alone, are more closely related to long-term brain health in people living with HIV, identifying local immune architecture as a potential target for future therapeutic strategies.

CALIFORNIA SENATE RECOGNITION



The State of California's Senate awarded a certificate of recognition to the Last Gift Team! The certificate says:

"In recognition of its extraordinary contributions to HIV research, community engagement, and scientific innovation. Through compassion, collaboration, and unwavering commitment to participants and their families, The Last Gift Team has advanced efforts toward an HIV cure while demonstrating the power of generosity, dignity, and hope in scientific discovery."

COMING UP

July 4- American Independence Day
July 11- San Diego Pride kicks off with a community march in Hillcrest
July 18- San Diego Pride parade (10 am-3 pm). The largest single-day civic event in San Diego, drawing over 250,000 attendees through Hillcrest. Best of all, it's free to attend.
July 18-19- San Diego Pride Festival in Balboa Park. Features multiple stages with live music, drag performances, food vendors, community organizations, and local artists.
July 23-26- San Diego Comic-Con International returns to the Convention Center

Birthdays:
July 5th: **Harold**

Labbiversary:
July 1st marks Lizzy's 8-year lab anniversary!

CFAR
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THE LAST GIFT DOCUMENTARY WON THE EMMY!

On June 27th, our documentary "The Last Gift: Jim's Courage, Our Hope" won the Pacific Southwest Emmy Award in the Health/Medical category!!!

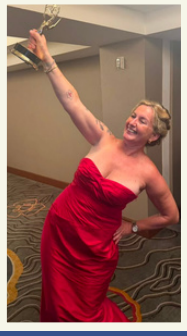


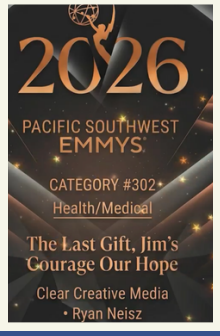














Highlight

Alec

Alec is excited to return to the Translational Virology Core this summer as a Lab Assistant after first joining the lab through the CADRE internship program last year. He is entering his senior year at UC Berkeley, where he studies Neuroscience, and plans to apply to medical school after graduation. This summer, he is balancing his work in the lab with studying for the MCAT and volunteering in the Neurology ICU at Jacobs Medical Center. Outside of the lab, Alec is a competitive golfer who has competed internationally for several years. He also enjoys going to the gym and spending time outdoors. We are excited to welcome Alec back to the TV Core this summer!

Nikki

Nikki is excited to return to the Translational Virology Core this summer after being away for the past two years. She is entering her second year as an undergraduate at the University of Southern California, where she is majoring in Health Promotion and Disease Prevention through the Keck School of Medicine while pursuing a minor in Iranian Studies. She hopes to attend medical school and eventually pursue a career in Emergency Medicine. This summer, Nikki is assisting with freezer consolidation in the lab while also shadowing a general surgeon specializing in bariatric surgery. Outside of the lab, Nikki works as a gymnastics coach at the gym where she trained and competed for most of her life. Welcome back to the lab, Nikki!

Victoria

Victoria is a rising senior at La Jolla High School and is excited to join the Translational Virology Core this summer. She is contributing to the lab through the Green Labs Certification initiative and the Last Gift Quilt Project. As a fourth-year Biomedical Sciences Pathway student and president of her school's Environmental Action Club, Victoria is passionate about biology and its intersection with social and climate justice. Looking ahead, she hopes to explore how systemic disparities influence the effects of stress on the gut microbiota. Outside of the lab, Victoria enjoys staying active by going on walks and lifting weights, cooking for her family and friends, and listening to music. Whether it's Celia Cruz, SZA, The Strokes, or another favorite artist, she loves singing along to whatever fits the moment. We are excited to have Victoria join the TV Core this summer!



Alec



Nikki



Victoria

WHAT A TEAM!
DOUBLE AUTOPSY DAY





A HUGE THANK YOU to this incredible team. A rough night of two autopsies back to back, but everyone showed up, stepped in wherever needed, and worked together seamlessly.

The dedication, compassion, and teamwork you all bring to the Last Gift Program never cease to amaze me. Because of your efforts, we were able to honor our participants and their families while advancing research. I feel incredibly lucky to work alongside such an amazing group of people. ❤️🧩

- Dr. Sara Gianella Weibel



