

# TV CORE

December 2024

Monthly Newsletter



## VANESSA GOMEZ-MORENO

Vanessa, a San Diego native, joined TV Core in February 2022 after a career shift sparked by the pandemic. Before entering the lab field, she worked as a bookkeeper at the San Diego airport, handling payroll, financial management, and tax preparation. When the pandemic led to her being laid off, she found herself at the San Diego Blood Bank, processing blood donations. It was here that she discovered her passion for impactful, behind-the-scenes work in the medical field, and she's been committed to this career path ever since.

The youngest of three sisters, Vanessa attended community college before transferring to UC San Diego. Outside of her professional life, she's passionate about sewing and owns four sewing machines. She taught herself to make pajama pants and is now aiming to create her own leather jacket! Recently, she also learned to ride a bike and is enjoying the process of improving. For relaxation, Vanessa loves watching her all-time favorite show, *Desperate Housewives*. In 2025, she plans to set up a camping trip with her sisters and her boyfriend, John, (all pictured) combining her love for adventure and family time.

Thank you for your continued hard work and dedication to TV CORE, Vanessa!



## PROJECT HIGHLIGHT

**"Distinct blood CD3+ CD14+ T Cell-Monocyte complexes harbor HIV and are dynamic, glucose-dependent, and increased in individuals with glucose intolerance"** is a study that investigates CD3+ CD14+ T cell-monocyte complexes in people with HIV (PWH) and their role in chronic inflammation and metabolic disease. These complexes, significantly more abundant in PWH with glucose intolerance (prediabetes or diabetes), harbor higher levels of HIV DNA compared to isolated CD14+ monocytes or CD4+ T cells, making them a critical component of the HIV reservoir.

Their formation and persistence are metabolically demanding, relying on glucose and oxidative phosphorylation. These complexes are enriched with activated immune cells, including TH1 and TH17 subsets, which contribute to systemic inflammation. A bidirectional relationship is suggested, where HIV-driven inflammation exacerbates glucose intolerance, creating conditions for complex formation, which in turn drives metabolic dysfunction.

These findings highlight the interplay between HIV, inflammation, and metabolic disease, offering insights into potential therapeutic strategies targeting these complexes to reduce metabolic complications and improve HIV cure efforts.

## LOOKING FORWARD

Time to embrace the new year, and January is full of exciting new beginnings! It's a time for fresh starts, whether it's setting New Year's resolutions, diving into winter activities, or enjoying seasonal events like New Year's festivals and Martin Luther King Jr. Day celebrations (January 15).

## THANK YOU FOR A WONDERFUL 2024

As we close the chapter on 2024, we want to take a moment to reflect on an incredible year of collaboration, research, and progress. Our lab has achieved milestones that are only possible because of the dedication and passion of our CFAR team.

To our researchers, students, and collaborators—thank you for your hard work and commitment to advancing science and improving the lives of people living with HIV.

As we look ahead to 2025, we remain inspired by the challenges and opportunities that await.

Here's to another year of impactful research, meaningful connections, and shared purpose. Thank you for being part of our journey!

Pictured: TV CORE at our holiday party!



We send our heartfelt condolences to the family of Jim Dunn, after his passing on 12/30. Jim nominated us for the A. Brad Truax award and is pictured in the top right photograph. He was an incredible supporter of the Last Gift as well as a study participant and his legacy will live forever in our hearts. We keep his wife Susan in our thoughts during this difficult time.



## PHOTOS FROM THE A. BRAD TRUAX AWARDS

Although TV Core did not win, here are some pictures from the beautiful ceremony!



## SHOUTOUT!

We would like to wish a very happy birthday to Elizabeth (12/3)!

We would also like to congratulate Lizzy for passing her ID Boards!

And shoutout to our incredible Last Gift team for their unwavering dedication and compassion. Mobilizing with hours of notice, they perform rapid research autopsies with precision and care, often throughout the full night.

The Last Gift study is conducting such impactful research, offering invaluable insights into HIV at the end of life. This program honors the altruism of participants, who view their contribution as a final act of activism and a legacy for future generations.

Thank you for your tireless efforts in advancing science while upholding dignity and humanity!