Wanjalla Lab Newsletter

Issue 02 | October 2025

Theme: Gratitude

F

Reflection from Dr. Wanjalla

This month, we are celebrating small and big wins. Our laboratory has received its first R01-level funding to study CD3+ T cell-CD14+ monocyte complexes in a longitudinal study. We are thrilled and filled with gratitude to continue this important research.

Summer Students Spotlight

We are proud to highlight our two amazing summer students:

• Solomon Debrezion is working on a manuscript of his summer research on immune complexes from the CNICS cohort. He is building on our previous work, where PBMCs were stimulated ex vivo, and then, using flow cytometry, we examined whether there were differences in immune complexes. Stay tuned for the interesting findings.

• Risabh Kumar is back in school but continues to work with us during the school year to design FRET analysis.

Research Highlight: CD3+ T cell–CD14+ Monocyte Complexes

Our recent paper, led by Dr. Laventa Obare and team, characterizes a population of CD3+ T cell–CD14+ monocyte complexes that are increased in people living with HIV (PLWH) and those with glucose intolerance. These complexes form immune synapses, harbor more HIV, and are metabolically active. While cross-sectional, this study lays the groundwork for future longitudinal work using the CNICS cohort to understand complex-driven inflammation.

Postdoc Spotlight: Dr. Laventa Obare

This quarter, we are thrilled to highlight Dr. Laventa Obare, the very first postdoctoral fellow to join our lab. Since joining the team, Dr. Obare has made remarkable strides in her research career—publishing four first-author manuscripts, contributing three review articles, and working tirelessly toward what we anticipate will be her masterpiece in a top-tier journal. Beyond her scientific achievements, Dr. Obare brings curiosity, creativity, and resilience to the lab every day. She has a natural gift for learning and teaching, inspiring both peers and mentees alike. Outside of research, she finds joy in the outdoors and in caring for nature's plants—including reviving the ones in our office that needed a little extra love! With her big dreams, unwavering dedication, and ability to thrive as both a scholar and a mentor, there is no doubt that Dr. Obare will achieve extraordinary things in the years to come. We are proud to celebrate her as a cornerstone of our growing lab community.

Kudos Corner

• Kudos to my team for submitting four abstracts to CROI and four New Investigator Award applications! So proud of the hard work!

Abstracts submitted to CROI 2026

1. Victoria R. Stephens, Laventa M. Obare, Xiuqi Zhang, Kisyua Nthenge, Ronald McMillan, Cassia Labeb, Praveena Prasad, Victoria Baskerville, Samuel S. Bailin, Mona Mashayekhi, Curtis Gabriel, Melanie McReynolds, Antentor Hinton, John R. Koethe, Celestine N. Wanjalla. CD4⁺ T cell subsets as mediators of metabolic dysfunction and cardiovascular disease risk in people living with HIV. *CROI 2026 - submitted*
2. Laventa M. Obare, Kisyua Nthenge, Cassia Labeb, Victoria Stephens, Ronald McMillan, Xiuqi Zhang, Lindsey Stolze, Quanhu Sheng, Samuel Bailin, Gabriel Curtis, Mona Mashayekhi, John Koethe, Davey Smith, Sara Gianella, Celestine N. Wanjalla. Single-cell profiling reveals a pathogenic fibroblast phenotype in aortas of Persons living with HIV. *CROI 2026 - submitted*
3. Solomon Debrezion, Joshua Simmons, Ronald McMillan, Laventa M. Obare, Victoria R. Stephens, Cindy Nochowicz, Xiuqi Zhang, Kisyua Nthenge, Mona Mashayekhi, Samuel Bailin, Curtis L. Gabriel, John R. Koethe, April Pettit, Jeffrey Martin, Celestine N. Wanjalla, for CNICS. Ex vivo antigen stimulation affects the abundance of the T cell–monocyte complex in People living with HIV. *CROI 2026 – submitted*
4. Ronald McMillan, Laventa M. Obare, Victoria R. Stephens, Kisyua Nthenge, Lindsey Stolze, Quanhu Sheng, Samuel Bailin[1], Xiuqi Zhang, Annet Kirabo, John R. Koethe, Yan Ru Su, Tarek Absi, Davey Smith, Sara Gianella, Celestine N. Wanjalla. CMKLR1 as a potential target of atherosclerotic cardiovascular disease in PLWH. *CROI 2026 - submitted*

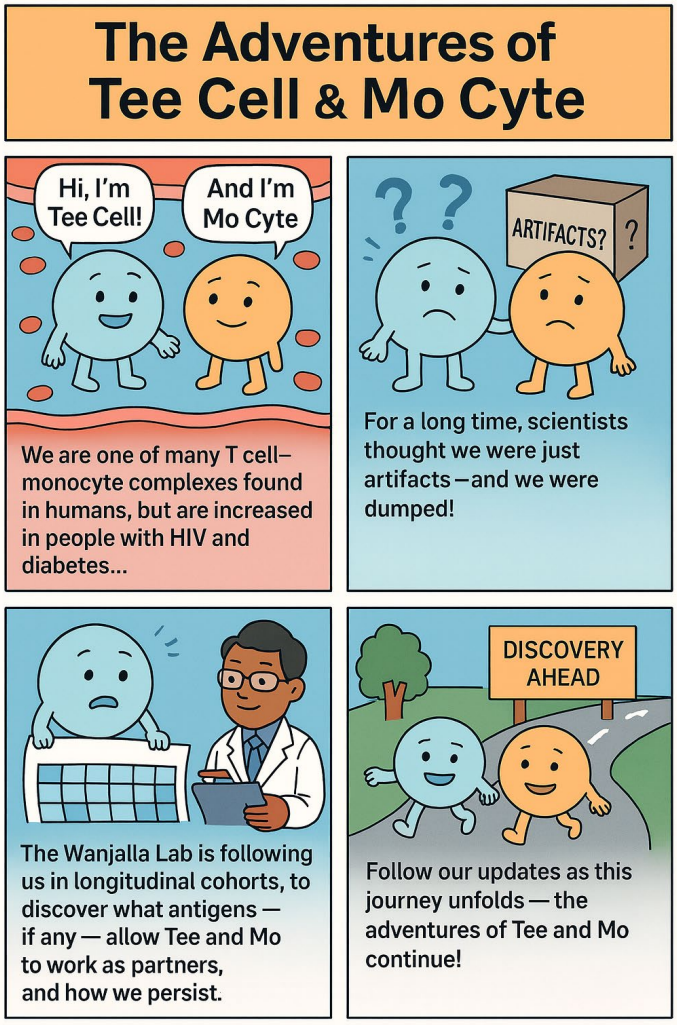
Upcoming Deadlines

- BWF-PDEP: October 15, 2025 – January 20, 2026
- AAI Abstract: Sept 3 – Oct 15, 2025
- IAS Abstract: Nov 2025 – Jan 2026

Upcoming Conferences

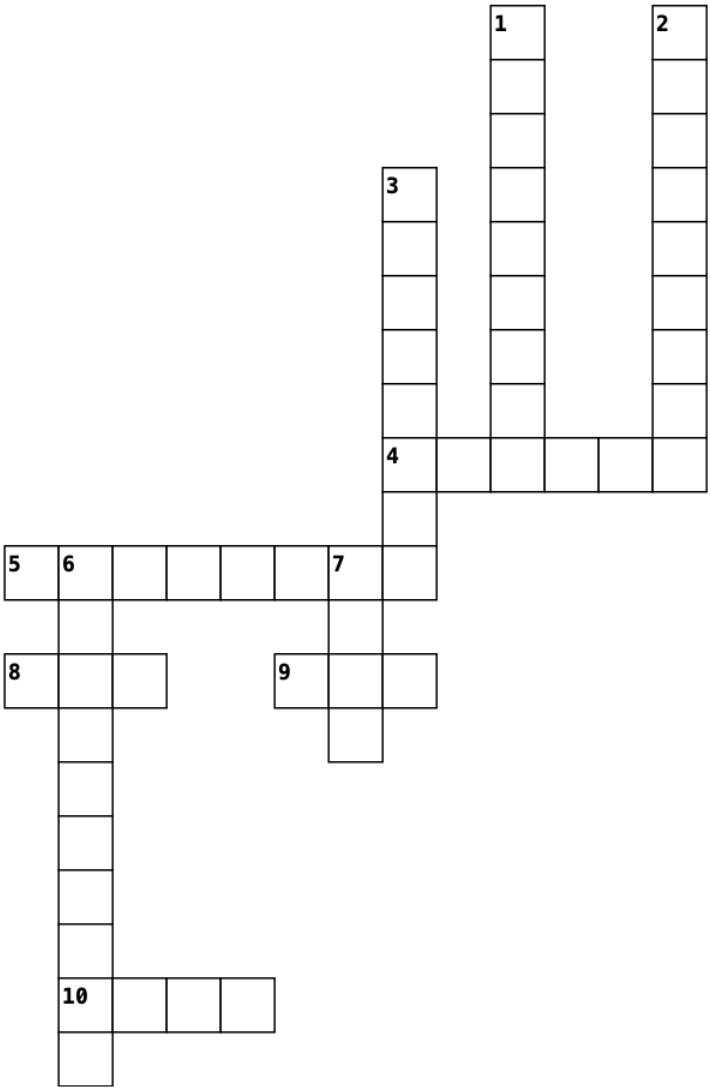
1. CROI 2026 (Feb 22–25, Denver, CO)109th AAI Annual Mee
2. 26th FOCIS Annual Meeting (Jun 9–12, San Francisco, CA)
3. Southeast Immunology Symposium 2026 (early June)
4. 26th Int'l AIDS Conference (Jul 25–30, Rio/Virtually)
5. AHA Scientific Sessions 2026: Nov 7–9, Chicago, IL

Comic strip



Fun Corner: Crossword Challenge!

T cell-Monocyte Complexes - PMID: 40073149



Across

4. Immune cells identified by the CD3 marker.

5. These immune cell "doublets" link T cells and monocytes, once thought to be artifacts.

8. Virus used as a model for chronic inflammation in this study.

9. Blood test (abbreviation HbA1c) used to measure long-term glucose control.

10. Anti-inflammatory cytokine negatively correlated with complex formation.

Down

1. Imaging method that revealed stable and transient cell interactions.

2. Immune cells identified by the CD14 marker.

3. Metabolic disease associated with more immune complexes in PLWH.

6. Drug that reduced complexes by blocking oxidative phosphorylation.

7. Subset of $CD4^+$ T helper cells enriched in the complexes.