



March 10, 2025

**Acuitas' Scientist Co-Authors Article in
Journal of Experimental Medicine
with Scientists from the Walter and Eliza Hall Institute of
Medical Research & Perelman School of Medicine**

Vancouver, B.C. – Acuitas Formulation Development Research Scientist Jennifer Moon collaborated with scientists from the Walter and Eliza Hall Institute of Medical Research and Perelman School of Medicine (including Norbert Pardi) on an article published by the *Journal of Experimental Medicine* titled: “Transient inhibition of type I interferon enhances CD8⁺ T cell stemness and vaccine protection.”

The scientists identified a specific window of time where blockade of the type I interferon receptor (IFNAR) to promote generation of stem cell-like memory CD8⁺ (T_{SCM}) cells following viral infection and mRNA-lipid nanoparticle vaccination. They identified a reversible developmental pathway where transcriptionally distinct T_{SCM} cells emerged from a transitional precursor of exhausted T cellular state, coinciding with viral clearance. Differentiation of the T_{SCM} cells was correlated with T cell retention within the lymph node paracortex due to disrupted CXCR3 chemokine gradient formation. These effects were linked to increased antigen load and a surprising increase in IFN γ , which controlled cell location. Ultimately, vaccination with the IFNAR blockade promoted T_{SCM} cell differentiation and enhanced protection against chronic infection. These findings propose an approach to vaccine design whereby modulation of inflammation promotes memory formation and function.

Please click [here](#) to read the publication.

-END-