

“Convergence in T cell receptor repertoires”

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Date: Sep 8th (Tue) 2026

Time: 10:00 am – 11:00 am

Venue: BIKEN Hall

Abstract :

The diversity of antigen receptors created by somatic recombination is a hallmark of adaptive immunity. Yet, the extent to which this diversity is refocused by convergent selection is increasingly becoming apparent. In my talk, I will present some of our recent progress on two fundamental questions. First, what does convergence reveal about the molecular determinants of T cell specificity? Second, how can we leverage convergence to study human adaptive immunity to infectious disease?

Publications :

- [1] C. T. Turner*, A. Tiffeau-Mayer*, J. Rosenheim, A. Chandran, R. Saxena, P. Zhang, et al. “Evolution of T cell responses in the tuberculin skin test reveals generalisable Mtb-reactive T cell metaclones.” Nature Communications (2026).
- [2] Y. Nagano, A. Pyo, M. Milighetti, J. Henderson, J. Shawe-Taylor, B. Chain, and A. Tiffeau-Mayer. “Contrastive Learning of T Cell Receptor Representations”. Cell Systems (2025).
- [3] A. G. Pyo, Y. Nagano, M. Milighetti, J. Henderson, C. G. Callan Jr, B. Chain, N. S. Wingreen, and A. Tiffeau-Mayer. “Data-driven Discovery of Biophysical T Cell Receptor Co-specificity Rules”. PRX Life 3.3 (2025), p. 033005.

Chairs: Daron Standley (Professor, Biken)

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