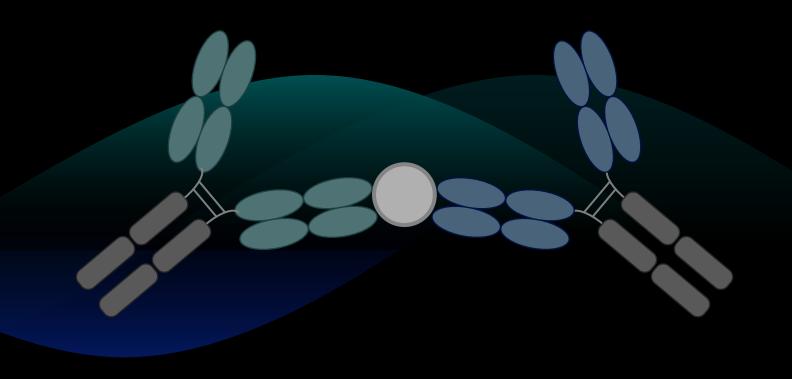
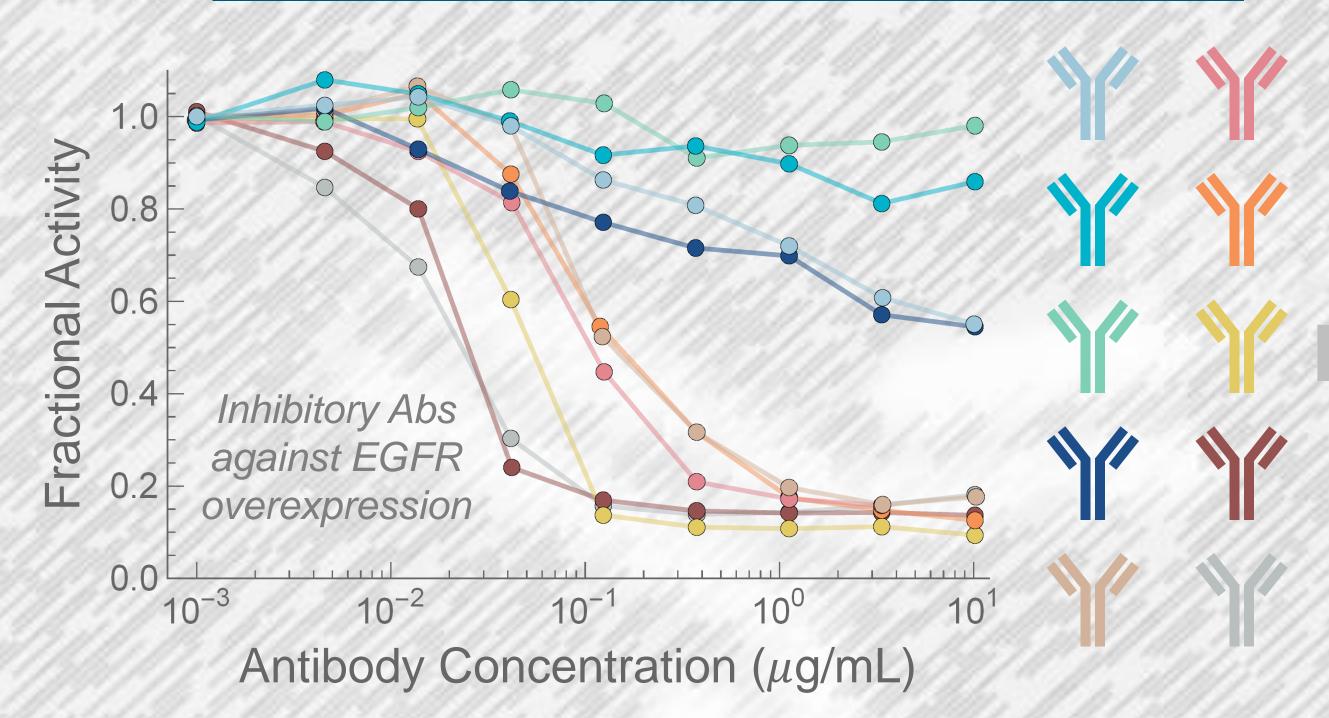


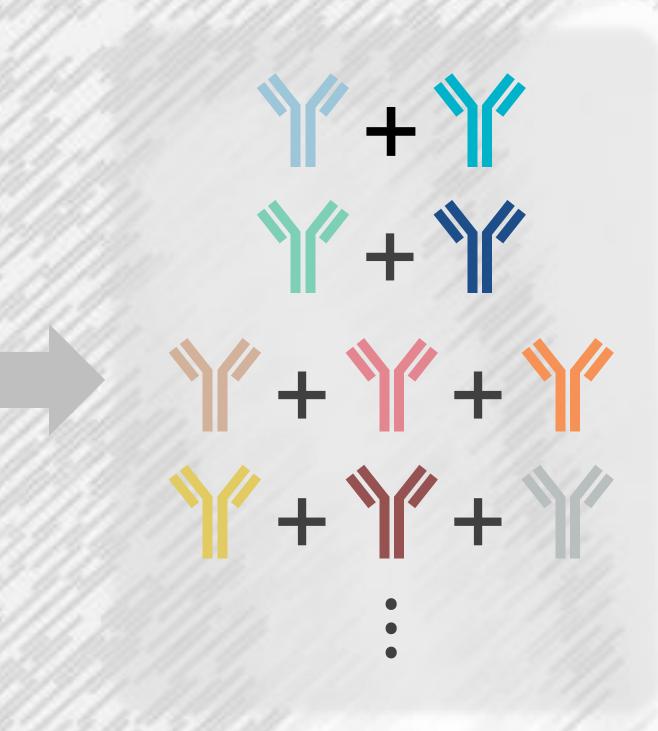
Two Are Better Than One! Predicting the Varied and Counter-Intuitive Actions of Antibody Mixtures

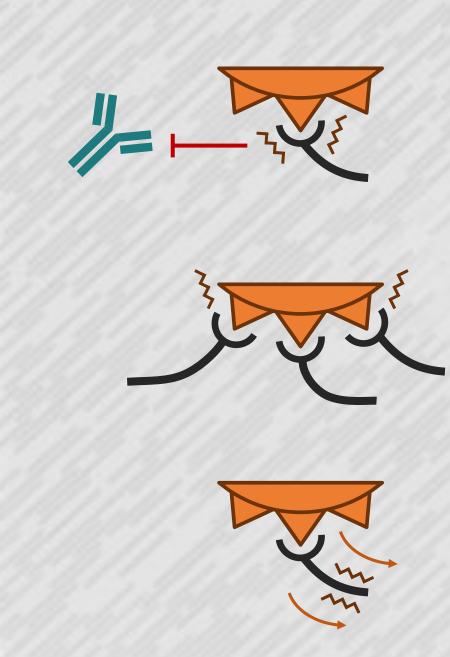


Tal Einav and Jesse Bloom, Fred Hutch Basic Sciences Division and Computational Biology Program

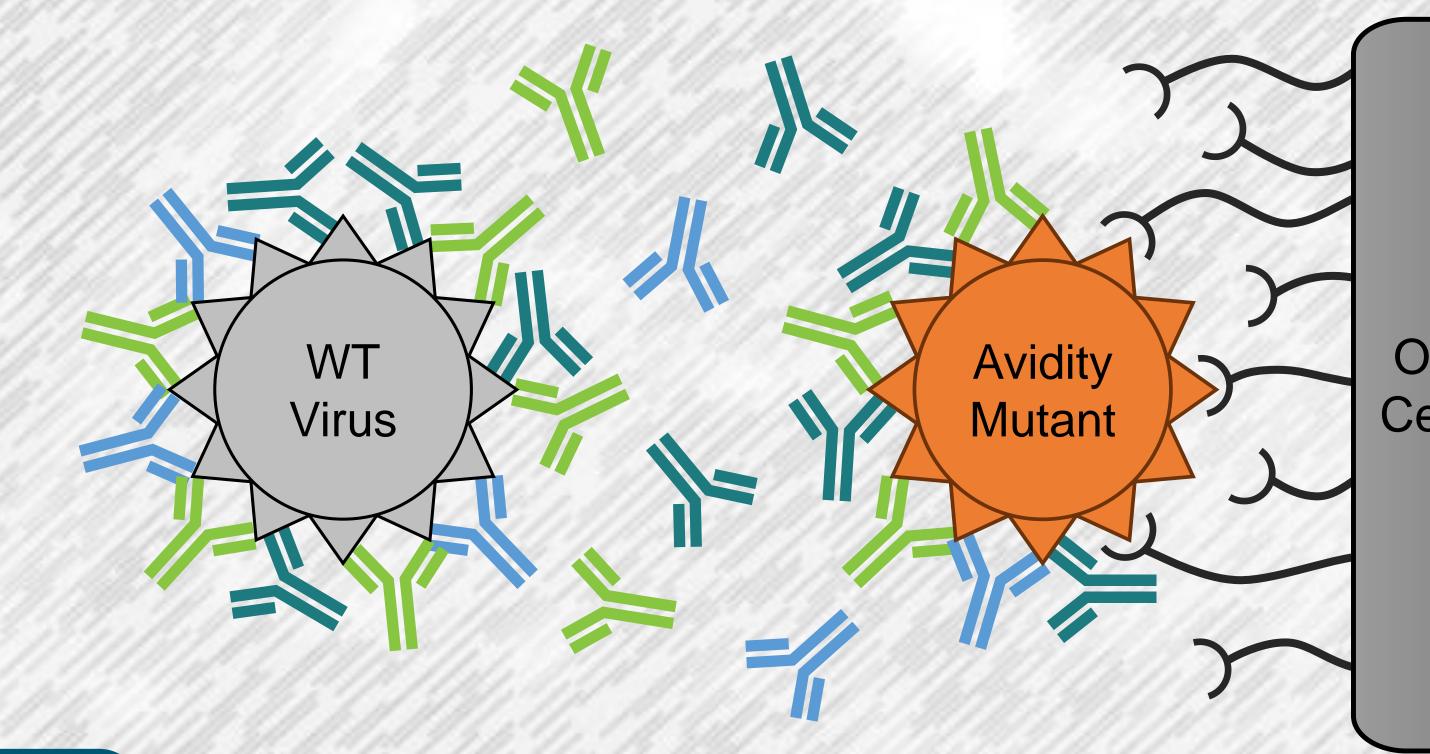








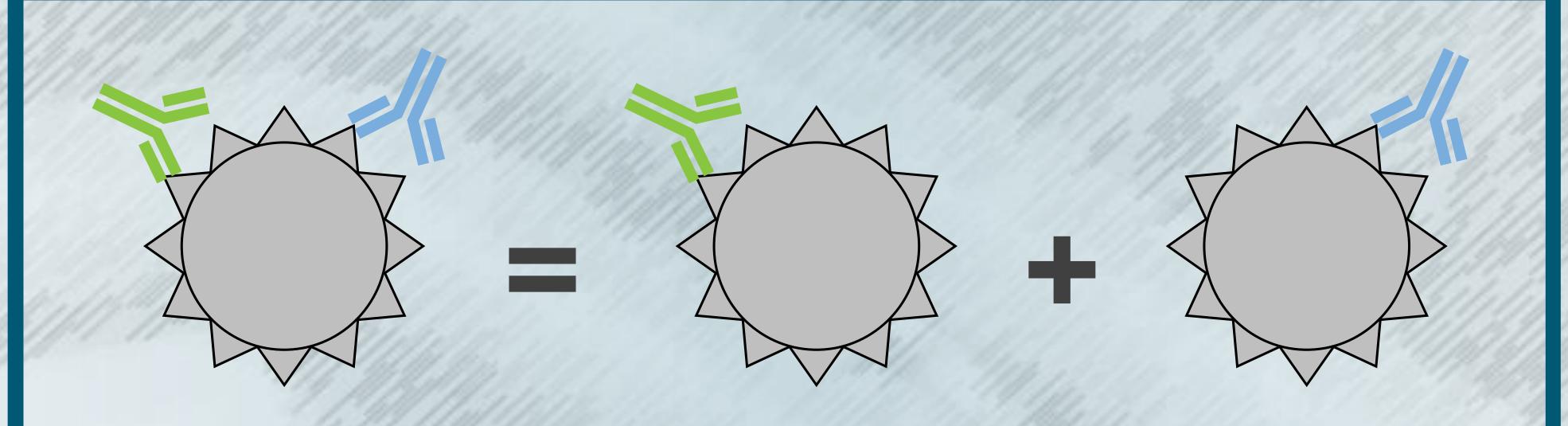




Characterizing n Abs (with n experiments) enables us to predict the potency of all 2ⁿ Ab combinations

Can we predict the potency of an Ab mixture based on its components?

How can viruses evolve in the face of polyclonal antibody protection?

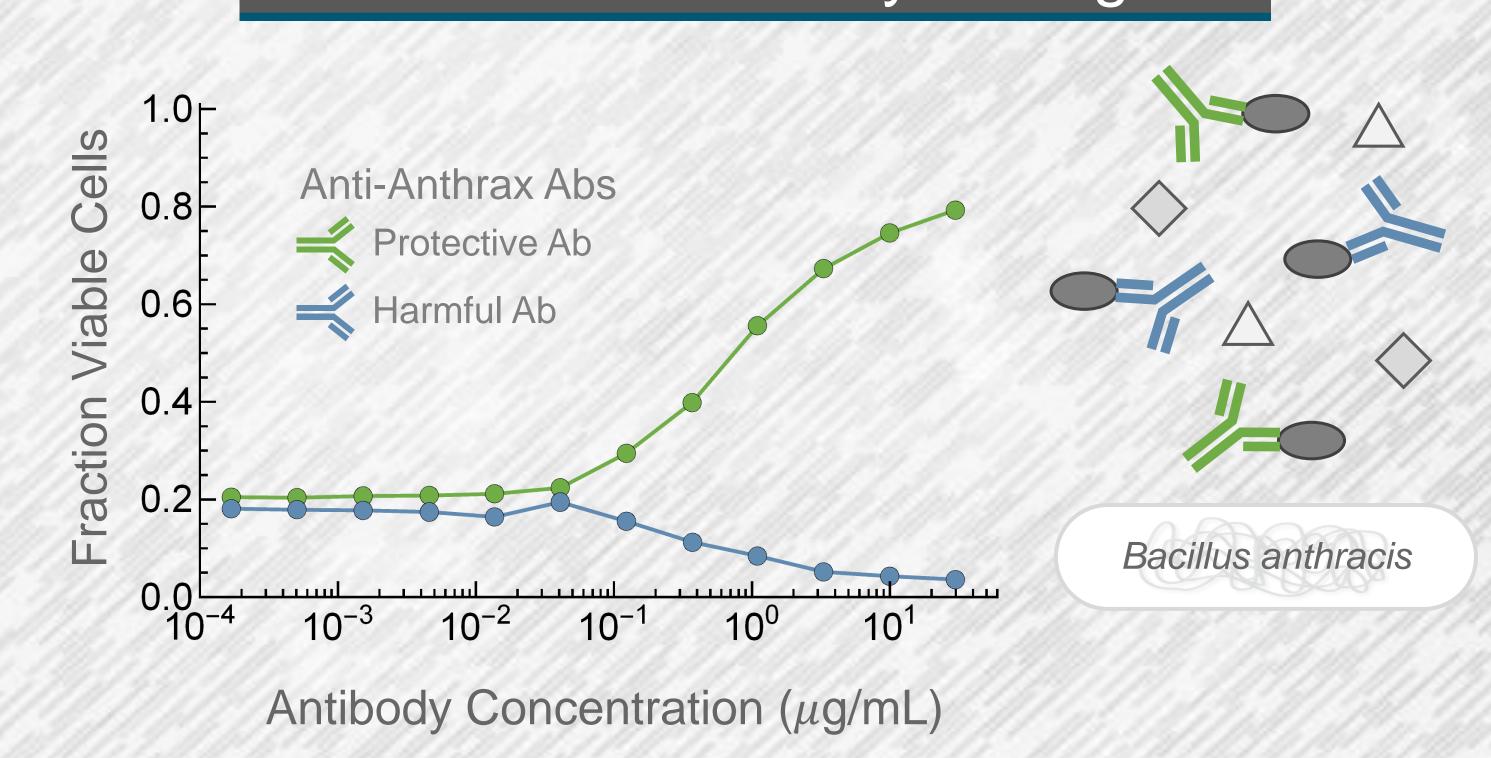


Can we understand and harness clustering to enhance Ab mixtures?

How prevalent and predictable is synergy in concerted Ab action?

Even independent antibody action can collectively give rise to complex and unintuitive behavior

Good + Bad = Very Strange



Which Ab dominates?

Non-monotonic response?

Does avidity play a role?

Mediated by allostery?

Features of response?

Equivalence to serum?

[1] Koefoed 2011 mAbs. [2] Yewdell 1986 J Virol. [3] Hensley 2009 Science. [4] Chow 2013 Cell Host Microbe



hmi Fred Hute Mahan



Mechanisms of Synergy

