Reshaping Antibody Selection: Early Characterization of Large mAb Panels Revamps Lead Identification and Technology Development

> Carterra User Group Meeting 2019-09-10

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Antibody generation at BMS









WHO ARE YOU WORKING FOR?





LSA assays for selection

Capture kinetics







WHO ARE YOU WORKING FOR?

LSA assays for selection











Comparison of HT kinetics



WHO ARE YOU WORKING FOR?

Bristol-Myers Squibb 5















Affinities and epitope communities



WHO ARE YOU WORKING FOR?



Replication in groups of related samples







related samples, same selection technology, same bin

High redundancy within sample subset \rightarrow change selection criteria



Mouse strains and epitope communities







Mouse strains and affinities by epitope

Different mouse strains correlate with different affinities. Red mouse strain produces higher affinities and higher diversity.







Capturing full diversity in sequence and epitope

Multiple sequence alignment by bin:

- harness full diversity by combining sequencing and binning
- choose low sequence liability upfront
- QC binning results





Capturing full diversity

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Combined with affinities:

- understand affinity maturation
- evaluate and understand performance of transgenic mouse strains
- explore epitope specific binding characteristics
- inform immunization and selection technologies

Expanded by epitope mapping, cell binding, functional data, biophysical and biochemical characterization,...

Pick an optimal panel of diversified leads







19



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