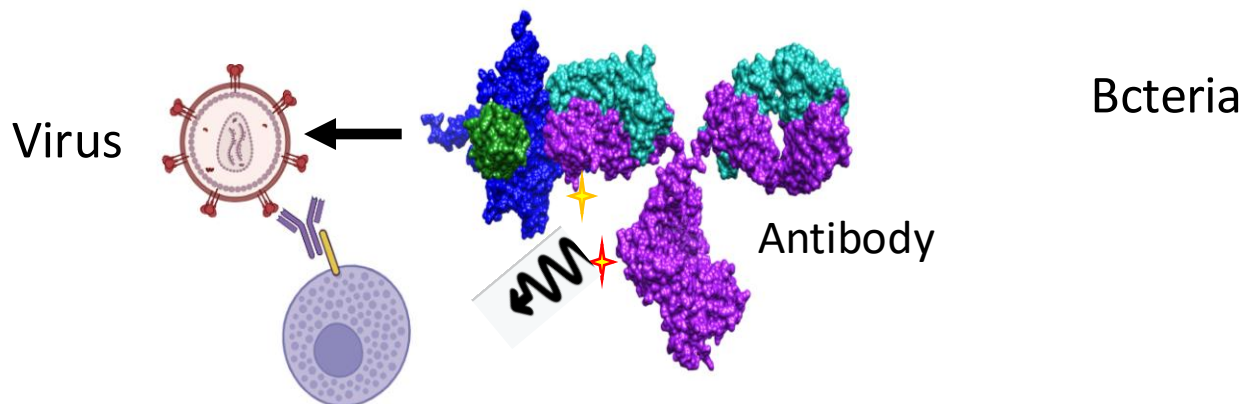
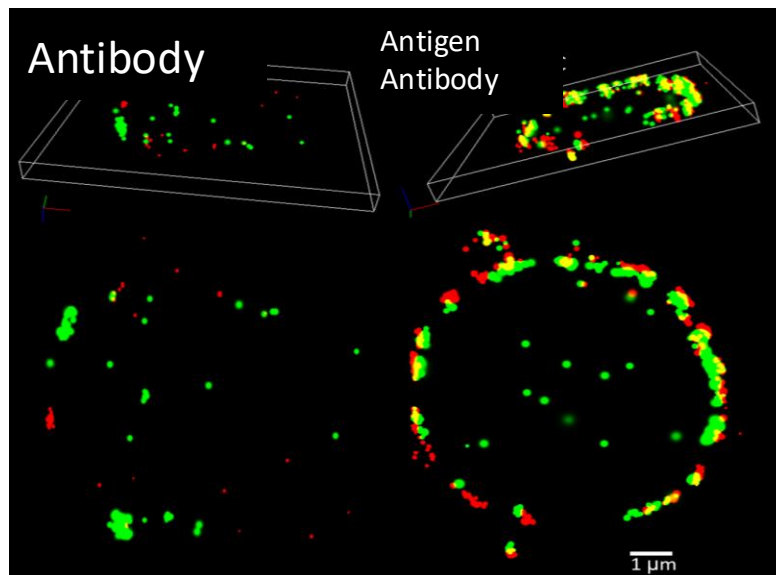


Integrating imaging modalities for spatiotemporal characterization of Antibody – Microbe Dynamics (Bacteria and Viruses)

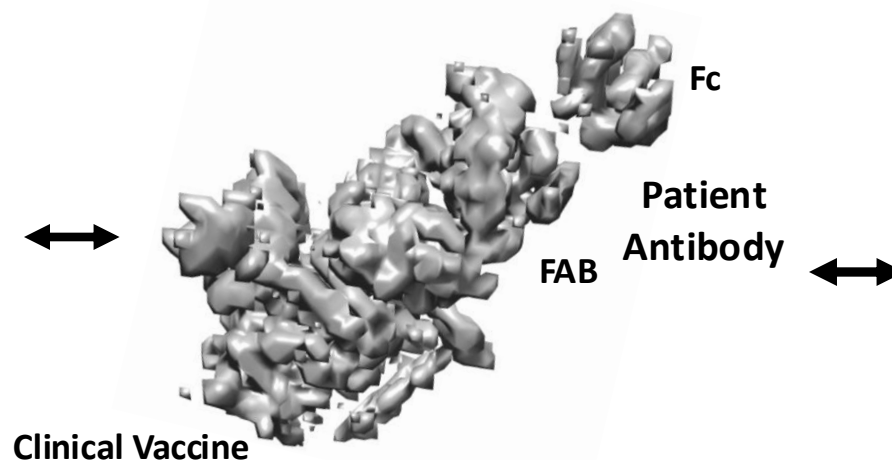


Super-resolution Microscopy



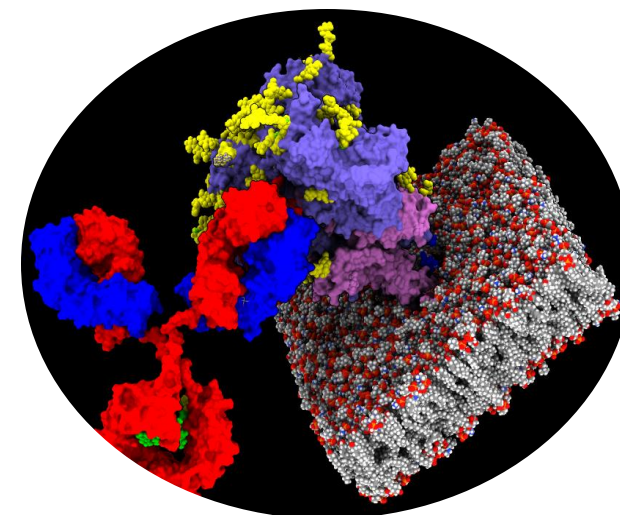
Antigen-Antibody host cell dynamics

CryoEM



- Novel clinical vaccine characterization
- Whole Antibodies
- Antigen-induced Antibody Function
- Multi-imaging modalities

Molecular Dynamics



Antigen-Antibody
Molecular Dynamics

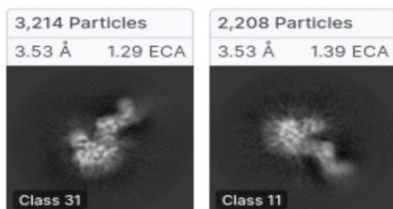
CryoEM characterization of novel clinical reagent (FLSC) in complex with PLWH Antibodies

Greg Snyder – # 309465 Univ of Maryland Baltimore

Whole Patient Antibodies

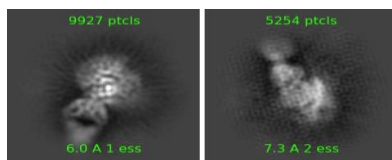
Coreceptor Binding site Ab's

**N12i2-
FLSC/
IHV01**

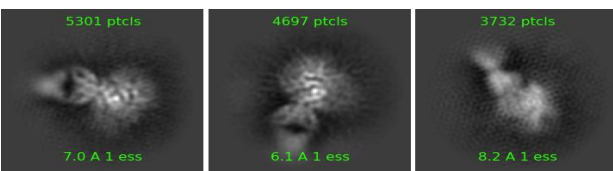


Cluster A – Ab's

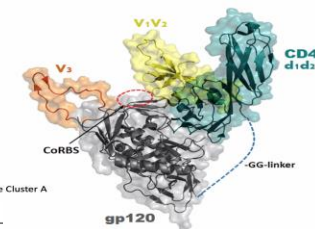
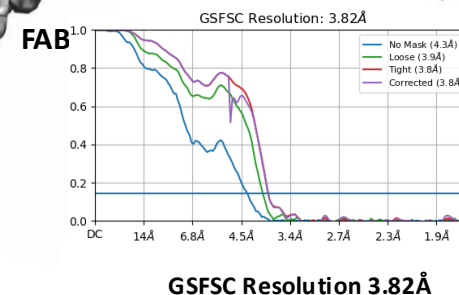
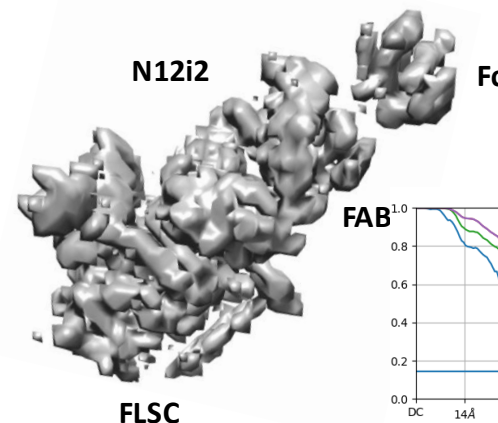
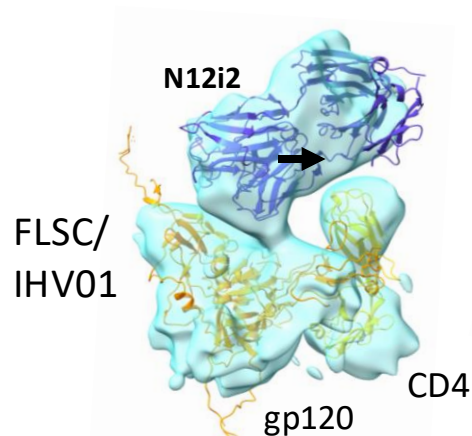
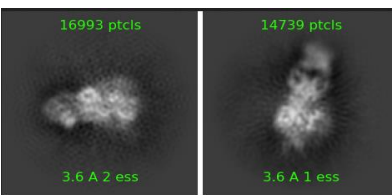
**N5i5^{wt} /
FLSC**



N5i5^{LALA} /FLSC

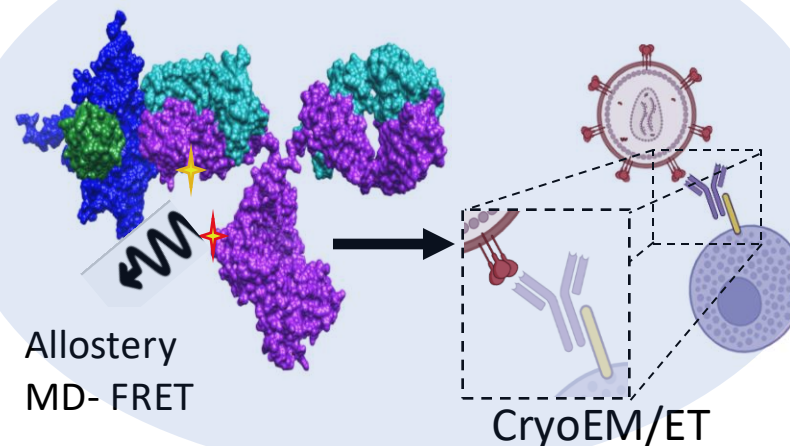


**N49*
P27/
FLSC**



Clinical Trial
Vaccine
FLSC Model

Ag-Ab-Fc dynamics



* N49 is a novel HIV donor derived Ab with unique effector function

Ray, Lewis, Snyder unpublished – manuscript in preparation