

**Using “non-change against changes” strategy
to develop pan-CoV vaccines and therapeutics**

使用 “以不变应万变” 策略研发冠状病毒通用疫苗和药物

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Common drug targets of enveloped viruses

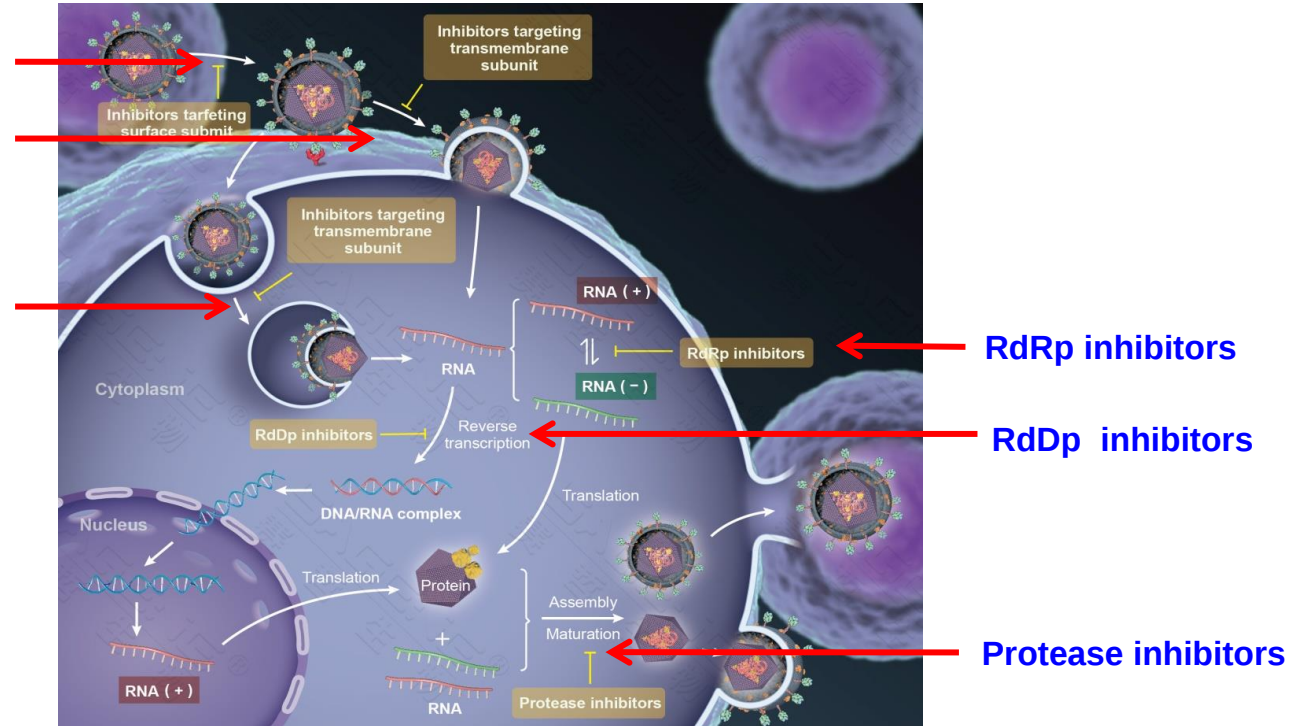
Block virus entry

Viral attachment inhibitors

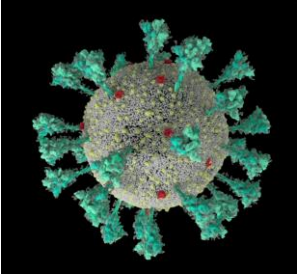
Viral fusion inhibitors

Viral endocytosis inhibitors

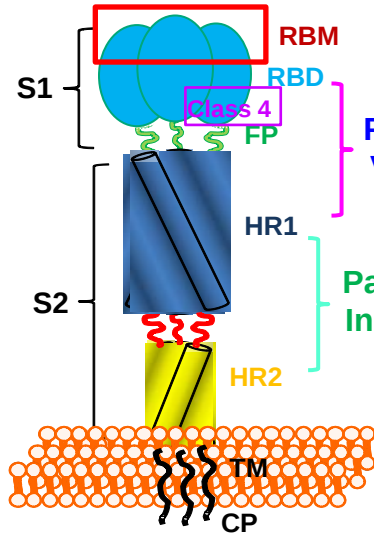
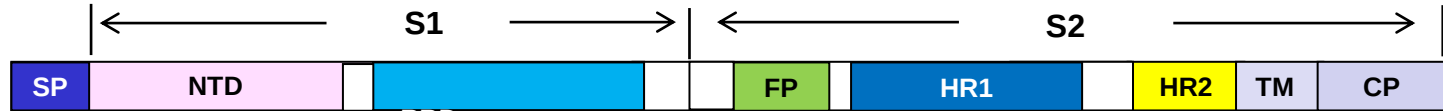
Inhibit virus replication



Coronavirus spike protein



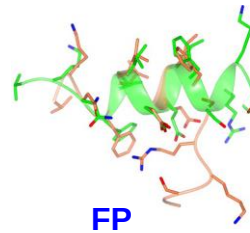
S protein



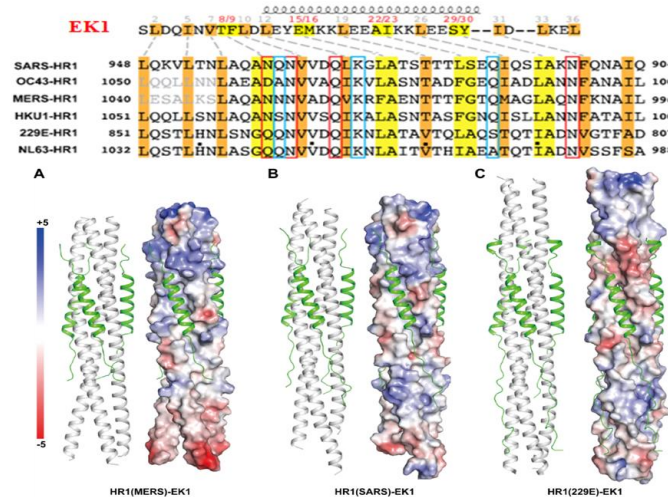
S protein

Pan-CoV Vaccine (RBD/class 4-FP-SH)

Pan-CoV Inhibitor (EK1)



FP

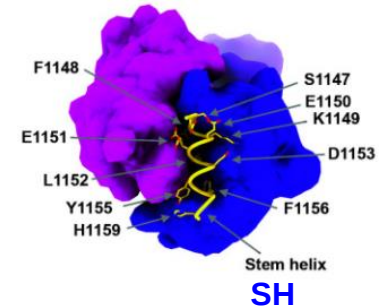


Class 1
REGN10933

Class 2
LY-CoV555

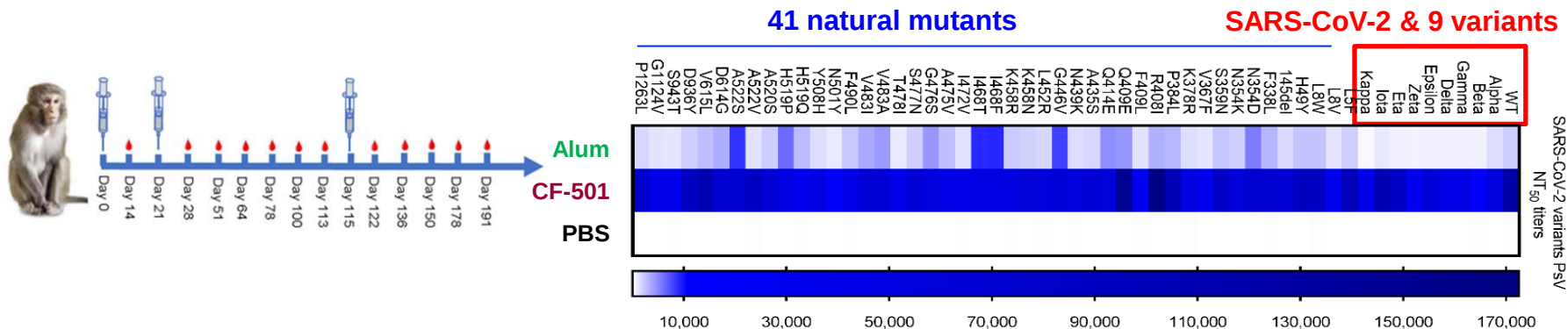
Class 4
n3130v

Class 3
n3113v



Sun X et al. *Nat Microb.* 7:1063-74 (2022)
Pinto D et al. *Science* 373:1109-16 (2021)

CF501/RBD-Fc-based pan-sarbecovirus vaccine



CF-501/RBD-Fc-based pan-sarbecovirus vaccine is highly effective against:

- 1) SARS-CoV-2 and its variants (e.g, Alpha, Beta, Gamma, Delta, Omicron BA.1~BA.5);
- 2) SARS-CoV and its variants;
- 3) Bat SARSr-CoVs (e.g., WIV1, Rs3367, and RsSHC014).

EK1-based pan-CoV fusion inhibitor

Highly potent pan-CoV fusion inhibitor **EK1** will be used in intranasal spray and inhalation formulations to prevent and treat infections of SARS-CoV-2, SARS-CoV, MERS-CoV, and also the emerging and reemerging SARSr-CoVs in the future.

