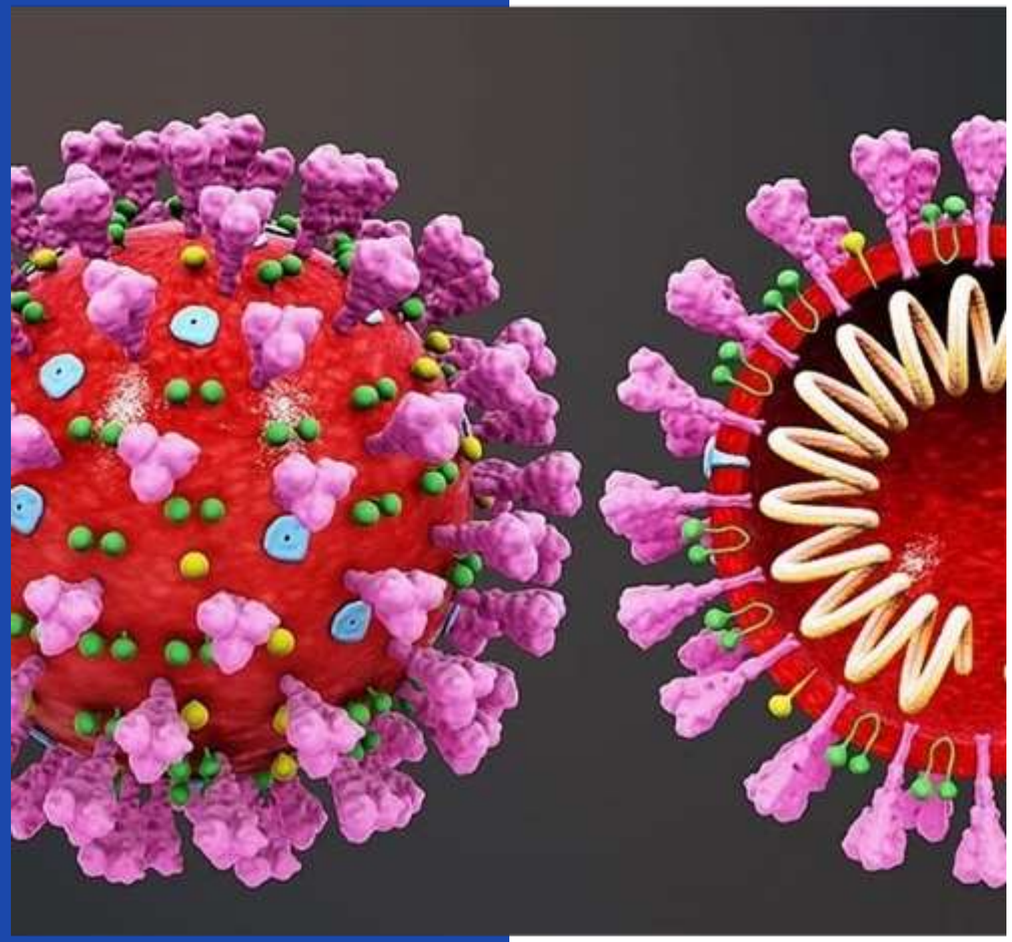

COVID-19
专题科普讲座

2021年2月

厦门燕旭安生物科技有限公司
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燕旭安
YAN XU AN
BIOTECHNOLOGY

第六部分

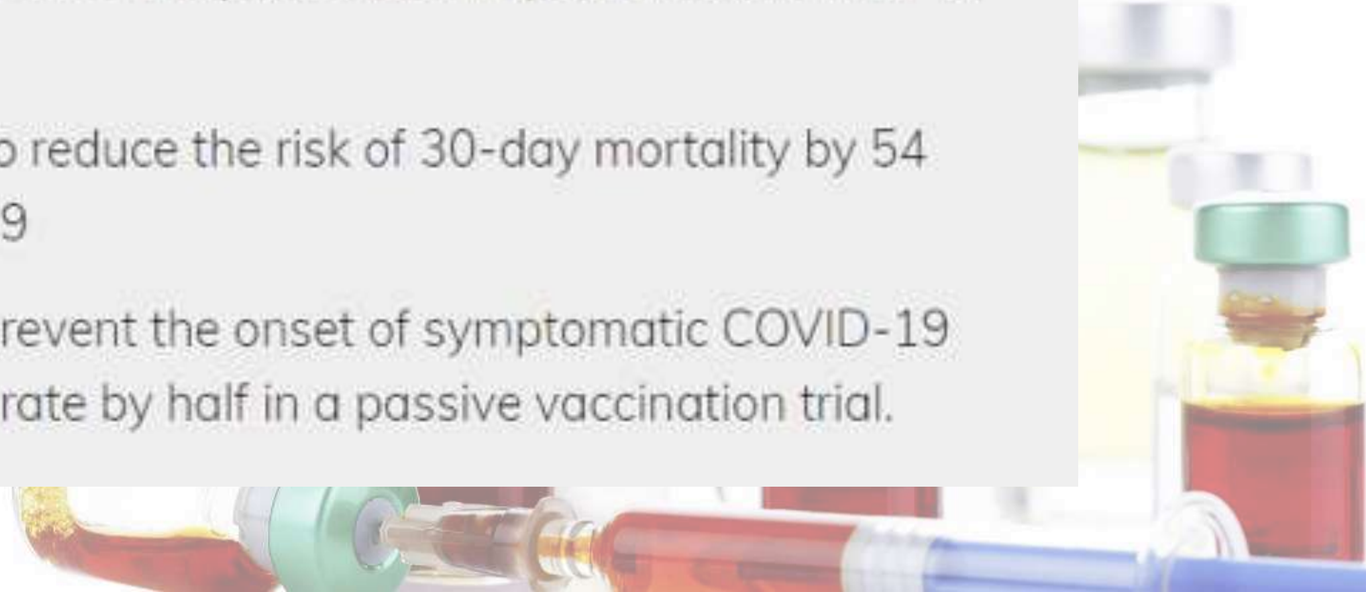
其他治疗药物

靶向药、中和抗体

抗体

Some successes in clinical trials so far:

- Lilly's antibody combination was found to decrease patients' risk of COVID-19 hospitalisation and death by 70 percent
- Celltrion Group's anti-COVID-19 monoclonal antibody treatment candidate, CT-P59, was found to reduce recovery times and risk of hospitalisation in patients with mild-to-moderateand moderate symptoms
- EUSA Pharma's Siltuximab was shown to reduce the risk of 30-day mortality by 54 percent in patients with serious COVID-19
- REGEN-COV was shown to completely prevent the onset of symptomatic COVID-19 infection and reduce the overall infection rate by half in a passive vaccination trial.



抗体药可能对新变种效力减弱

抗体紧急使用授权

- Lilly‘s **bamlanivimab** (LY-CoV555) administered with **etesevimab** (LY-CoV016) receives FDA emergency use authorization for COVID-19.
- The U.S. Food and Drug Administration issued an emergency use authorization (EUA) for casirivimab and imdevimab to be administered together for the treatment of mild to moderate COVID-19 in adults and pediatric patients ［Casirivimab / imdevimab是由美国生物技术公司Regeneron Pharmaceuticals开发的，即REGEN-COV2］

https://www.covid19treatmentguidelines.nih.gov/tables/table-3a/

https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-authorizes-monoclonal-antibodies-treatment-covid-19

抗体药可能对新变种效力减弱—突变逃逸

REPORT

Prospective mapping of viral mutations that escape antibodies used to treat COVID-19

Tyler N. Starr[1,*], Allison J. Greaney[1,2,3,*], Amin Addetia[1,4], William W. Hannon[1,4], Manish C. Choudhary[5], Adam S. Din...
+ See all authors and affiliations

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CORONAVIRUS

Prospective mapping of viral mutations that escape antibodies used to treat COVID-19

Tyler N. Starr[1]*, Allison J. Greaney[1,2,3]*, Amin Addetia[1,4], William W. Hannon[1,4], Manish C. Choudhary[5], Adam S. Dingens[1], Jonathan Z. Li[5], Jesse D. Bloom[1,2,6]†

Antibodies are a potential therapy for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), but the risk of the virus evolving to escape them remains unclear. Here we map how all mutations to the receptor binding domain (RBD) of SARS-CoV-2 affect binding by the antibodies in the REGN-COV2 cocktail and the antibody LY-CoV016. These complete maps uncover a single amino acid mutation that fully escapes the REGN-COV2 cocktail, which consists of two antibodies, REGN10933 and REGN10987, targeting distinct structural epitopes. The maps also identify viral mutations that are selected in a persistently infected patient treated with REGN-COV2 and during in vitro viral escape selections. Finally, the maps reveal that mutations escaping the individual antibodies are already present in circulating SARS-CoV-2 strains. These complete escape maps enable interpretation of the consequences of mutations observed during viral surveillance.

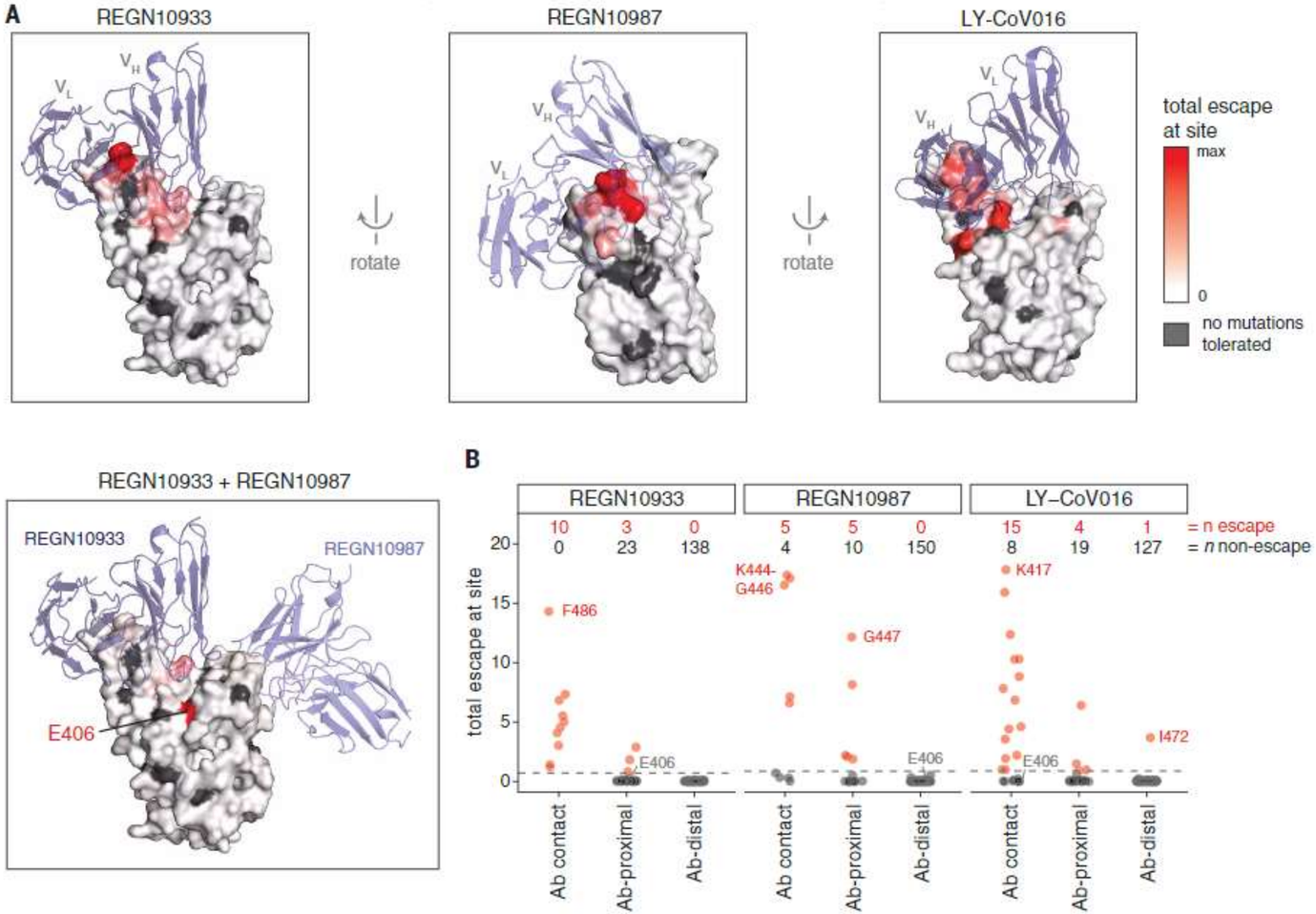

Fig. 4. Structural context of escape mutations. (**A**) Escape maps projected on antibody-bound RBD structures. [REGN10933 and REGN10987: Protein Data Bank (PDB) ID 6XDG (*11*); LY-CoV016: PDB ID 7C01 (*13*)]. Antibody heavy- and light-chain variable domains are shown as blue cartoons, and the RBD surface is colored to indicate how strongly mutations at that site mediate escape (white indicates no escape, red indicates strongest escape site for that antibody or cocktail). Sites where no mutations are functionally tolerated are colored gray. (**B**) For each antibody, sites were classified as direct antibody contacts (non-hydrogen atoms within 4 Å of antibody), antibody-proximal (4 to 8 Å), or antibody-distal (>8 Å). Each point indicates a site, classified as escape (red) or non-escape (black). The dashed gray line indicates the cutoff used to classify sites as escape or non-escape (see materials and methods for details). Red and black numbers indicate how many sites in each category are escape or non-escape sites, respectively. Interactive visualizations are at https://jbloomlab.github.io/SARS-CoV-2-RBD_MAP_clinical_Abs/, and hypothesized mechanisms of escape and additional structural details for labeled points are shown in fig. S6.

靶向药

- Remdesivir 瑞德昔伟：On October 22, 2020, FDA approved Veklury (remdesivir) for use in adults and pediatric patients (12 years of age and older and weighing at least 40 kg) for the treatment of COVID-19 requiring hospitalization.
- Plitidepsin：（又称dehydrodidemnin B，西班牙制药公司PharmaMar商品名为Aplidin），在2021年1月25日科学杂志发表的一篇临床前研究论文指出Plitidepsin可以通过宿主蛋白eEF1A有效抵抗SARS-CoV-2。
- 硝唑尼特、利巴韦林、依维菌素三种药合剂：三期临床

…

https://www.clinicaltrials.gov/ct2/resultsrecrs=&cond=Covid19&term=target+medicine&cntry=&state=&city=&dist=

研发合作

肿瘤新抗原疫苗与免疫治疗

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感谢聆听

如有疑问及建议请联系我们

厦门燕旭安生物科技有限公司

通讯地址：福建省厦门市翔安区马巷镇郑坂南里25号

联系方式:13950000322

官方网址：www.yxabio.com

邮政编码:361100

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