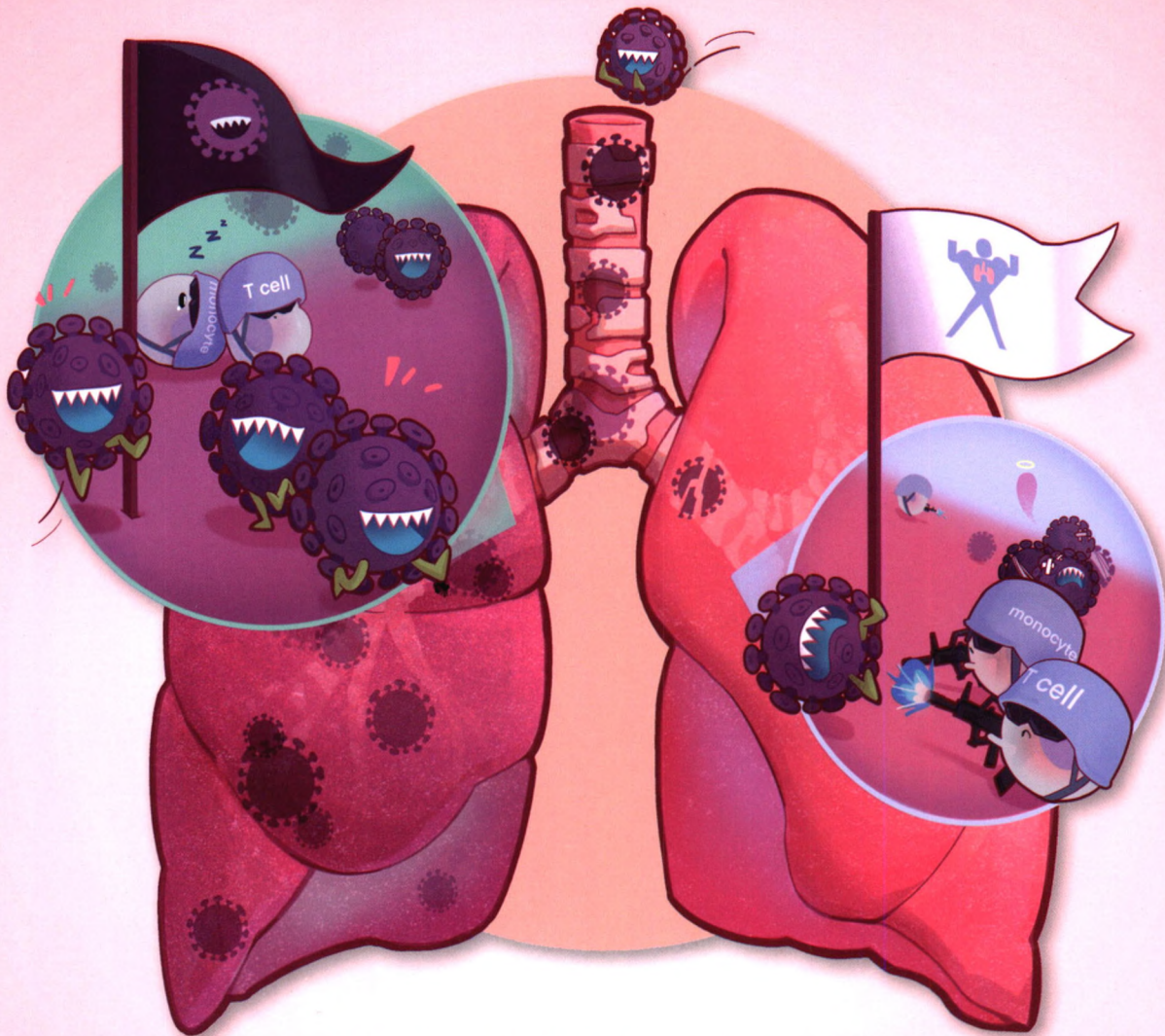


Cell Research

Volume 31 Number 11 November 2021



Distinct immune signatures underlie asymptomatic & presymptomatic SARS-CoV-2 infections

Structural insights into MC4R activation by different ligands

Enhancing anti-tumor immunity with an IL-15 pro-cytokine

NudCL2 is an autophagy receptor for CP110 degradation



(Founded in 1990)

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SPRINGER NATURE

Coordinating Editor for this issue
 Fangfang Hu

RESEARCH HIGHLIGHTS

1139 Tracing the origins of SARS-CoV-2: lessons learned from the past

Qihui Wang, Hua Chen, Yi Shi, Alice C. Hughes, William J. Liu, Jingkun Jiang, George F. Gao, Yongbiao Xue, Yigang Tong

1142 ERASE: a novel nucleic-acid based antiviral mechanism

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1144 The reinvention of potato *Open*

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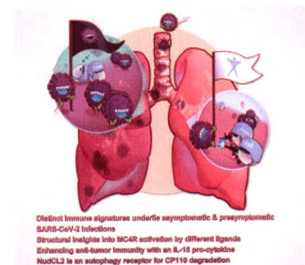
Shanhe Yu, Caixia Di, Shijun Chen, Mingquan Guo, Jiayang Yan, Zhaoqin Zhu, Li Liu, Ruixue Feng, Yinyin Xie, Ruihong Zhang, Juan Chen, Mengxi Wang, Dong Wei, Hai Fang, Tong Yin, Jinyan Huang, Saijuan Chen, Hongzhou Lu, Jiang Zhu, Jieming Qu

1163 Structural insights into ligand recognition and activation of the melanocortin-4 receptor

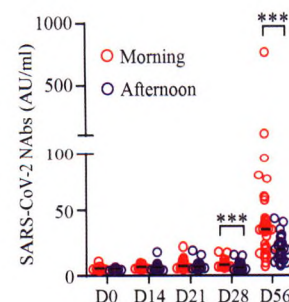
Huibing Zhang, Li-Nan Chen, Dehua Yang, Chunyou Mao, Qingya Shen, Wenbo Feng, Dan-Dan Shen, Antao Dai, Shanshan Xie, Yan Zhou, Jiao Qin, Jin-Peng Sun, Daniel H. Scharf, Tingjun Hou, Tianhua Zhou, Ming-Wei Wang, Yan Zhang

1176 Structures of active melanocortin-4 receptor-Gs-protein complexes with NDP- α -MSH and setmelanotide *Open*

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Cover: The SARS-CoV-2 attacks host cells offensively via the respiratory system. In the asymptomatic subjects, the immune cells are active and finally kill the virus (right); whereas in the presymptomatic subjects, the immune cells are slack, the virus evades the attack of the immune system and amplifies quickly, and eventually causes the host to suffer from COVID-19 (left). The image is designed by Shanhe Yu and edited by Lehua Huang. See page 1148-1162 by Shanhe Yu et al. for details.



Participants vaccinated in the morning showed significantly higher levels of NAb in the sera. See page 1215-1217 by Hui Zhang et al. for details.

- 1190 Tumor-conditional IL-15 pro-cytokine reactivates anti-tumor immunity with limited toxicity**

Jingya Guo, Yong Liang, Diyuan Xue, Jiao Shen, Yueqi Cai, Jiankun Zhu, Yang-Xin Fu, Hua Peng

- 1199 NudCL2 is an autophagy receptor that mediates selective autophagic degradation of CP110 at mother centrioles to promote ciliogenesis *Open***

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- 1212 Design and development of an oral remdesivir derivative VV116 against SARS-CoV-2 *Open***

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- 1215 Time of day influences immune response to an inactivated vaccine against SARS-CoV-2**

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- 1218 Nuclear translocation of the 4-pass transmembrane protein Tspan8 *Open***

Yuwei Huang, Junjian Li, Wanqing Du, Siyang Li, Ying Li, Haozhi Qu, Jingxuan Xu, Li Yu, Rongxuan Zhu, Hongxia Wang

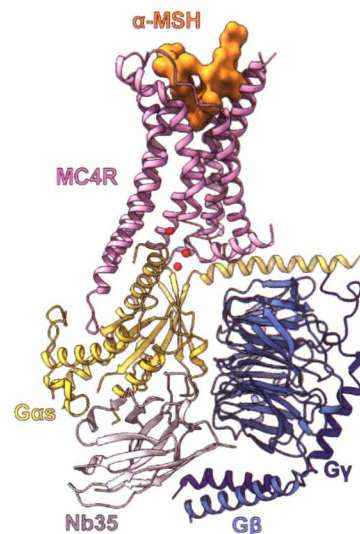
CORRECTIONS

- 1222 Author Correction: Interferon-armed RBD dimer enhances the immunogenicity of RBD for sterilizing immunity against SARS-CoV-2**

Shiyu Sun, Yueqi Cai, Tian-Zhang Song, Yang Pu, Lin Cheng, Hairong Xu, Jing Sun, Chaoyang Meng, Yifan Lin, Haibin Huang, Fang Zhao, Silin Zhang, Yu Gao, Jian-Bao Han, Xiao-Li Feng, Dan-Dan Yu, Yalan Zhu, Pu Gao, Haidong Tang, Jincun Zhao, Zheng Zhang, Jiaming Yang, Zhenxiang Hu, Yang-Xin Fu, Yong-Tang Zheng, Hua Peng

- 1223 Author Correction: Mechanical activation of spike fosters SARS-CoV-2 infection**

Wei Hu, Yong Zhang, Panyu Fei, Tongtong Zhang, Danmei Yao, Yufei Gao, Jia Liu, Hui Chen, Qiao Lu, Tenny Mudianto, Xinrui Zhang, Chuxuan Xiao, Yang Ye, Qiming Sun, Jing Zhang, Qi Xie, Pei-Hui Wang, Jun Wang, Zhenhai Li, Jizhong Lou, Wei Chen



Cartoon representation of the α -MSH-bound MC4R-Gs complex. See page 1163-1175 by Huibing Zhang et al. for details.

ADVANCE ONLINE PUBLICATION

Zipper head mechanism of telomere synthesis by human telomerase

Futang Wan, Yongbo Ding, Yuebin Zhang, Zhenfang Wu, Shaobai Li, Lin Yang, Xiangyu Yan, Pengfei Lan, Guohui Li, Jian Wu and Ming Lei

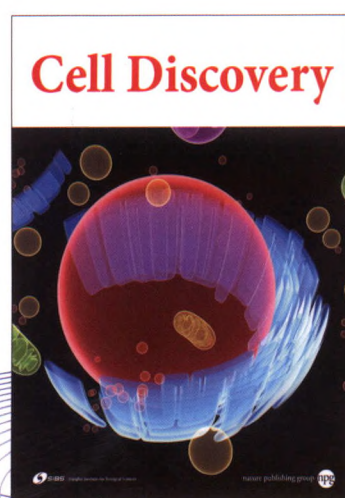
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Initial whole-genome sequencing and analysis of the host genetic contribution to COVID-19 severity and susceptibility

Cell Discov. 2020 Nov 10;6(1):83. doi: 10.1038/s41421-020-00231-4.

The differential immune responses to COVID-19 in peripheral and lung revealed by single-cell RNA sequencing

Cell Discov. 2020 Oct 20;6:73. doi: 10.1038/s41421-020-00225-2.

Immune cell profiling of COVID-19 patients in the recovery stage by single-cell sequencing

Cell Discov. 2020 May 4;6:31. doi: 10.1038/s41421-020-0168-9.

Phosphorylation of cGAS by CDK1 impairs self-DNA sensing in mitosis

Cell Discov. 2020 Apr 28;6:26. doi: 10.1038/s41421-020-0162-2.

Single-cell RNA sequencing reveals the heterogeneity of liver-resident immune cells in human

Cell Discov. 2020 Apr 28;6:22. doi: 10.1038/s41421-020-0157-z.

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