

**From:** Fauci, Anthony (NIH/NIAID) [E]  
**Sent:** Tue, 4 Feb 2020 13:05:59 +0000  
**To:** Cassetti, Cristina (NIH/NIAID) [E]  
**Subject:** FW: 2019-nCoV: potential infection on CD4 cells.  
**Attachments:** Insert positions in HIV gp120.pdf

Please have someone respond to this person.

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**From:** (b) (6)  
**Sent:** Tuesday, February 4, 2020 2:07 AM  
**To:** Fauci, Anthony (NIH/NIAID) [E] (b) (6)  
**Subject:** 2019-nCoV: potential infection on CD4 cells.

Dear Dr. Fauci,

As you realized the Indian researcher published a paper few days ago entitled "Uncanny similarity of unique inserts in the 2019-nCoV spike protein to HIV-1 gp120 and Gag", which was latterly withdrawn due to the controversial indication. I did a quick SWISS-MODEL online calculation. Page 1-3 of the attachment show the flexible loops of insertion "1", "2", and "3" originally from V4, V5 and V1 of HIV-1 gp120, respectively. But they are in presence on the spike protein of both bat and 2019 coronavirus (page 4 and 6). These insertions are potential CD4 binding domains (no proof yet but highly likely) and spatially won't interfere with ACE-2 binding domain (both SARS and 2019 coronavirus target ACE-2, page 5 and 6). In another word, the 2019 virus could be potentially dual-targeting, infecting the lung and potentially CD4 T cells too (like HIV, see page 6)!

It is **VERY URGENT** to have clinicians follow up the confirmed cases such as by isolating their CD4 cells and doing RT-PCR. Please reach out to them. Research labs including mine after obtaining Spike protein of 2019-nCoV shall examine its interaction with CD4.