

**From:** Fauci, Anthony (NIH/NIAID) [E]  
**Sent:** Sun, 8 Mar 2020 17:06:22 +0000  
**To:** Conley, Sean P. CDR USN WHMO/WHMU  
**Cc:** Munster, Vincent (NIH/NIAID) [E]; Marston, Hilary (NIH/NIAID) [E]; (b) (6); Lerner, Andrea (NIH/NIAID) [E]; Eisinger, Robert (NIH/NIAID) [E]; Birx, Deborah L (b) (6)  
**Subject:** FW: Stability data - spoke to Vincent.  
**Attachments:** 2020-03-03 Manuscript Stability\_MASTER.docx

Sean:

As per our recent conversation, here is a paper that is under review at the NEJM. It is from Dr. Vincent Munster who works in my institute. It confirms what we surmised that after almost two weeks, the chances of viable virus being present in the facility is extremely low based on his studies reported in this paper. Figure 1B in the paper is of particular relevance regarding our discussion of surfaces.

Best regards,  
Tony

---

**From:** Marston, Hilary (NIH/NIAID) [E] <(b) (6)>  
**Sent:** Saturday, March 7, 2020 3:40 PM  
**To:** Fauci, Anthony (NIH/NIAID) [E] (b) (6)>; Lane, Cliff (NIH/NIAID) [E] (b) (6)>  
**Cc:** Lerner, Andrea (NIH/NIAID) [E] (b) (6)  
**Subject:** Stability data - spoke to Vincent.

Talked to Vincent. Attaching his manuscript, under review with NEJM. Vincent is available at (b) (6) if you need him.

**How the experiments were done:**

Aerosol – A solution of live virus was made and aerosolized in a rotating drum (keeping it in aerosol form); at various time points, air was removed and amount of virus measured (using end-point titration on Vero cells).

Surface – A base solutions of live virus was made and placed on specific surfaces (plastic, etc) and at various time points, coating was taken away and virus contained was titrated.

Note that surface experiments with proteinaceous material (e.g., respiratory secretions) are underway, as are variations in relative humidity and temperature.

**How do you interpret aerosol data?**

Decay in aerosols occurs over three hours, so if the virus is aerosolized (via aerosol-generating procedures or cough), the moment it drops below a certain threshold, it would be hard to get an infectious dose/infection. Of course we do not actually know the infectious dose, which limits our ability to give firm guidance based on this data.