Email sent from Dan on Thursday May 20, 2020:
Guys-

We have our first data on the SilverSol.
Bottom line conclusions so far:

Pretreatment of virus for one hour , then diluting virus 1:10 into medium results in 85% reduction in infectivity into pseudo Corona virus at either 10 or 30ppm. Interestingly even more effective in the benign VSV virus (96%). No apparent effect on cytotoxicity.

Rob is going to do more of a dose response curve, then look at different time points.

Best wishes for a wonderful Memorial Day. Remember our fallen heroes.

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I pretreated the virus by diluting the virus in these three solutions or media alone. Then, I spiked the virus onto cells, at a volume of 5 uL into 50, effectively reducing the silver sol seen by the cells by 1/10. After infection proceeded for 1 hr, I replaced the media, so that the experiment only analyzed how the prettx affected the ability of the virus to effectively enter cells. This experiment showed a pretty significant reduction in infectivity for both rVSV-SARS-2 and the VSV-G control. Note that there was no effective difference between the 0 ppm formulation and the media only pretx. To me this experiment could be indicative of how SIlverSol could function as a disinfectant/ or surface tx for surgical masks for example, and silver nanoparticles have been proposed for this purpose in the past. There is definitely some room to dose down here, to better determine an IC50.

On a separate note, I have attached a preprint that gained some attention a while ago, basically an in silico screen of small molecules to enrich for molecules that may obstruct the Spike-ACE2 binding interaction by either binding the receptor binding domain or the receptor- spike interface. Quercetin showed up in their analysis as a hit! which could explain the specificity relative to VSV-G. Still doesn't explain why quercetin also inhibits EBOV mediated entry though.

Best,
Rob

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