Review of: "SARS-CoV-2 exposure in wild white-tailed deer (Odocoileus virginianus)"

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The manuscript reports serologic surveillance on SARS-CoV-2 in wild white-tailed deer. A total of 385 serum samples of white-tailed deer from four different US states (Michigan, Pennsylvania, Illinois, and New York) were collected in the period of January-March 2021. In addition, 239 banked serum samples of wild white-tailed deer collected between 2011 and 2020 from five states were selected for the serologic testing. All these serum samples were evaluated with a surrogate virus neutralization test (sVNT). In addition, 48 samples were parallel evaluated using both sVNT and conventional VNT (cVNT). Their data shows that 100% concordance (24/24 positive and 24/24 negative) between sVNT and cVNT. The cVNT result showed that 154 of 385 serum samples collected in 2021 (40%) were positive while only 4 (3 from 2020 and 1 from 2019) of 239 banked samples were positive. These four positive samples from 2019 to 2020 had lower percentage inhibition values (30.03%-43.72%) whereas most of those positive samples from 2021 had percentage inhibition values above 80%. This study provides supportive evidence that white-tailed deer had previous exposure to SARS-CoV-2. Future detection of SARS-CoV-2 virus, viral genome, or antigen in deer will further corroborate that deer could be naturally infected.

Specific comments:

1. For those 24 positive and 24 negative samples tested by both sVNT and cVNT, presenting the data (percentage inhibition and cVNT titer) of each sample in a table format will be more informative.
2. For those 4 positive banked samples, testing them by the cVNT is needed.
3. It will add much more value to the manuscript by performing a VN test for white-tailed deer coronavirus (bovine-like coronavirus)