Fall is here! We've already had some rain! We need more, but hopefully not all at once! It's a busy time here at the CNPRC- our base grant proposal for the next five years is coming due at the end of the Year. In tallying up the numbers we are reminded of and thankful for your entrusting samples from your projects to us for testing. Thank you. The end of the Year?? Already??? Just a reminder that we will not be accepting samples from Nov 22-26 and Dec 24-Jan 2 unless you make arrangements with us in advance. We are trying to head off potential problems because historically we’ve had shipping delays and lost packages during these dates.

After lots of delays, we are looking forward to a January publication date in the American Journal of Veterinary Research for our TB Assay paper- it describes the use of a Gamma Interferon Release Assay in 2 control and 3 spontaneous infection cohorts. https://avmajournals.avma.org/view/journals/javm/152/10/00101814.pdf

This Fall we were able to share our SARS-CoV-2 testing algorithms and surveillance data at the Nonhuman Primate Models of AIDS and the Association of Primate Veterinarians poster sessions. A copy from one of those meetings is attached.

As always, if you don’t find the testing you need on our webpage, please contact us and we can discuss custom options. Again, thank you for your support. We wish you all a wonderful Holiday season.

SARS-CoV-2 Assays And Algorithms for Nonhuman Primate Surveillance

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Introduction / Background

With the emergence of COVID-19 and the potential threat to nonhuman primates (NHPs), the Primate Assay Laboratory (PAL) in collaboration with the National Primate Research Center (NPRC)-Pathogen Detection Working Group (PDWG), was tasked with providing testing for SARS-CoV-2 surveillance. Although some commercial and research reagents and protocols were available, none were well validated for use in NHPs.

Current Testing Algorithm

The PAL MMIA has been further refined to use a two-step process and confirmatory algorithm. No known positive samples have been retained in the final testing process. A final confirmatory test requiring ELISA confirmatory assay, 207 of the 256 confirmatory tests were reactive to NC only and 1 to S only, and 16 were non-reactive. Reaction samples were selected for PLC testing.

Conclusions

We have validated accurate assays and a testing algorithm to detect SARS-CoV-2 infection in non-human primates. Results compared favorably with other commercial and laboratory assays.

100% sensitivity has been demonstrated with samples from 16 experimentally infected animals. In addition, antibody reactivity to the correct core protein was detected and differentiated in NHPs animals running experimental spike and 6 nucleocapsid vaccine.

Using a screening and confirmatory testing algorithm 99.0% specificity has been achieved.

Over 18,800 animals across the seven NPRC’s have been tested, with no detection of spontaneous infections.

Acknowledgements

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