

Ape SARS CoV-2 Vaccination Statement

To all AZA institutions with ape species:

This document is intended to provide a general overview of SARS CoV-2 vaccination considerations for apes under human care. It is not intended to be utilized as a recommendation for or against vaccination for SARS CoV-2 in non-human apes.

Each Zoo needs to do a risk analysis of their ape populations for exposure to the SARS CoV-2 virus. We continue to strongly recommend the proper use of PPE and social distancing, as used for prevention of the spread of SARS CoV-2 virus between humans, in staff working with at-risk species of animals whenever possible. Encouraging staff members to become vaccinated during the phased roll-out of vaccinations in the United States is also prudent.

You may have learned from recent press releases; San Diego Zoo Wildlife Alliance recently had confirmed cases of SARS CoV-2 infection in their lowland gorilla troop. Subsequently, they made the decision to vaccinate their orangutans and bonobos with an experimental vaccine from Zoetis.

It is important to note that the FDA has not approved any drugs for the diagnosis, cure, mitigation, treatment or prevention of COVID-19 in animals. The US Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) Center for Veterinary Biologics (CVB) regulates veterinary biologics, including vaccines, diagnostic kits and other products of biological origin. The APHIS CVB has not licensed any products to diagnose, treat or prevent COVID-19 in animals

Zoetis, a global manufacturer of animal medicines and vaccines, has been working to develop a recombinant subunit vaccine to protect domestic carnivores against SARS CoV-2. They are seeking approval for use of this vaccine in mink and will make the vaccine available for extra-label use in other species. This vaccine uses a recombinant antigen which is adjuvanted to increase its immunogenicity. These types of subunit vaccines are generally considered safe, and some are effective across species. However, there is currently no information available for the safety and/or efficacy of this vaccine in non-human ape species.

Zoetis plans to begin production of its new vaccine this spring. It will be a two-dose regimen given three weeks apart. They have offered to make the vaccine available at little to no cost to the zoo community. Zoos may ask to receive doses in the coming months to vaccinate their apes and other at-risk animals in their collections. Individual institutions that are interested in trialing this vaccine in their animals should discuss their interest and the required documentation / notifications with:

John M. Hardham, Ph.D. | Research Director, Global Biologics
Director, Zoetis Center for Transboundary and Emerging Diseases
Zoetis | 333 Portage Street, KZO-300-204.3, Kalamazoo, MI 49007
Office: 269-359-9211 | Mobile: 269-492-5253 | john.m.hardham@zoetis.com
Visit Us: zoetis.com

Currently, no studies are available to indicate the safety or efficacy of any SARS CoV-2 vaccination in non-human apes. It is encouraging to note that the orangutans and bonobos that received the experimental Zoetis vaccine in San Diego had no obvious negative effects, but no

data is available to confirm efficacy in this group of animals. Similarly, no safety or efficacy data for great apes is available on any other SARS CoV-2 vaccination products already produced or in production for use in humans.

As zoos make decisions on SARS CoV-2 vaccinations for their apes, the information learned will provide prospective data for non-human primates in human-care, as well as for apes in wild living situations. Any zoos that proceed with vaccination for SARS CoV-2 in apes are asked to share the vaccine protocols utilized. Information should include which vaccine and protocols were utilized, any outward negative effects, and if there was serology for SARS CoV-2 done. (see below)

Please fill out the attached table with the relevant information and send this information to:

Dr. Priya Bapodra at Priya.bapodra@columbuszoo.org

Your Name /Institution:

Your Contact Information:

Species	Ape ID/Studbook #	Vaccine manufacturer	Dose and Frequency Given	Pre-titers (Y/N)	Post-titers (Y/N)	Adverse effects / comments

We have identified a lab willing to run SARS-CoV-2 serology testing (virus neutralization assay)

If Interested- please contact:

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Associate Professor
Director, Virology Laboratory
Department of Population Medicine and Diagnostic Sciences
Animal Health Diagnostic Center
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Thank you all for everything that you do every day to keep the animals in your care healthy,

Your ape veterinary advisors:

Ape TAG:

Dr. Hayley Murphy (hmurphy@zooatlanta.org)

Bonobo SSP:

Dr. Priya Bapodra (Priya.bapodra@columbuszoo.org) and Dr. Vickie Clyde
(vclydev@gmail.com)

Chimpanzee SSP:

Dr. Kathryn C. Gamble (kgamble@lpzoo.org) and Dr. Kay Backues (kbackues@tulsazoo.org)

Gorilla SSP:

Dr. Pam Dennis (PMD@clevelandmetroparks.com), Dr. Tom Meehan
(Thomas.Meehan@CZS.org), Dr. Sam Rivera (srivera@zooatlanta.org) and Dr. Hayley Murphy
(hmurphy@zooatlanta.org)

Orangutan SSP:

Dr. Nancy Lung (nancylung2@gmail.com) and Dr. Joe Smith (joe.smith@kidszoo.org)