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NEWSLETTER

The COVID-19 Pandemic Continues- and is Worse!®

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In This Issue:

Inauguration day, January 20, 2021, was the 1-year anniversary of the first case of COVID-19 diagnosed in this country, and after 27 million infections with SARS-CoV-2 and 468,217 deaths, and the slow roll-out of the vaccine, I am struggling to understand how such an “advanced” country has allowed this to happen. Some milestones from this year: 93,000 deaths worldwide just in the last week, and a record 4,375 Americans died of COVID on inauguration day. This issue of the Newsletter will discuss some current aspects of the world-wide continuing, and worsening, pandemic in people and animals.

Dr. Anthony Palminteri:

Another friend, and major influence in my veterinary career, Dr. Tony Palminteri, a co-owner of the Oradell Animal Hospital (OAH) in Paramus, NJ died on November 10, 2020 (non-COVID-19 related). He was the first board certified veterinary surgeon in New Jersey, and the OAH was the first veterinary referral hospital in New Jersey. Tony was able to discuss veterinary hospital architectural best practices as easily as he answered orthopedic surgery questions. He was always active, he achieved the 9th Dan rank in Ju Jitsu, loved to sail, ski, and garden.



Dr. Tony Palminteri at the dedication, in 2002, of the new Oradell Animal Hospital, which he designed.

Tony allowed me to investigate cases of FeLV infected cats, in the early 1970s, at OAH, which enabled us to discover the contagious transmission and clinical spectrum of the virus. We performed most of our epidemiological and clinical studies of *Bartonella* from pet cats at the hospital in the 1990s. He even hired me for moonlight work at the hospital when I first began my research career in 1967. Our families have been good friends for 54 years. Tony will be greatly missed by family, friends, veterinary medicine and, by me.

Bill Hardy

Why is the Pandemic Worse?

The pandemic is worse due to holiday gatherings, lack of routine mask wearing in many parts of the country, pandemic fatigue, and politics. As of the printing of this Newsletter, **February 10, 2021**, the data are staggering: **world-wide infections 107,011,739 and deaths 2,343,666, USA infections 27,193,849 and deaths 468,217** (Johns Hopkins Univ Med, <http://coronavirus.jhu.edu/>). Our only hope to control this virus is through effective worldwide vaccine implementation, development of an effective therapy and a worldwide political will for implementation of remediation programs.

Animals:

We continue to review the animal SARS-CoV-2 world literature to find what animals are susceptible to this virus.¹ It is imperative to determine if any pet, or peridomestic, wild, or endangered animals can become a natural reservoir for this virus and possibly transmit the virus back to susceptible people. The list of animals susceptible to infection with the SARS-CoV-2 virus is increasing as indicated in the following tables. The virus has been confirmed in 3 families of the Order Carnivora: canids- dogs and racoons, felids- pet cats, tigers, lions, pumas/cougars and snow leopards, and mustelids- minks and ferrets. These findings are alarming in that new animal species, replicating the SARS-CoV-2, may create an uncontrollable reservoir that may create even more pathogenic viral variants which may be capable of jumping back to humans or to other species.

Pet cats can be infected from their owners and can transmit the virus to other cats by the aerosol route. To date, no pet cats have been shown to be able to transmit the virus back to people, but minks are able to do so (see the USDA data, as of January 15, 2021, on the back of the Newsletter). Pet dogs and cats are the species most often exposed to infected people, whereas mink breeding facilities worldwide, have the most infected animals due to their crowded housing facilities.

Now the question is: should a vaccine be developed for pets and other animals? There is a pet cat SARS-CoV-2 vaccine in development. Do we need a vaccine for endangered non-human primates and other endangered species? Translating the human vaccine methods to animal species should be relatively easy.

In Africa, the COVID-19 pandemic creates a wildlife crisis by reduced funding due to tourist

reductions, restrictions on the operations of conservation agencies and wildlife managers, and increased human threats to wildlife.²

SARS-CoV-2 Susceptibility of Peridomestic Wildlife Animals

Animal	Susceptible & Shed Virus
Deer mice	Yes
Bushy-tailed wood rats	Yes
Striped skunks	Yes
Mink	Yes & Shed
Ferrets	Yes & Shed
Fruit bats	Yes & Shed
White-tailed deer	Yes
Raccoons	Yes
House mice	No
Cottontail rabbits	No
Black-tailed prairie dogs	No
Fox Squirrels	No

SARS-CoV-2 Susceptibility of Pet Animals

Animal	Susceptible & Shed Virus
Cats	Yes & Shed
Dogs	Yes
Ferrets	Yes & Shed
Hamsters	Yes

SARS-CoV-2 Susceptibility of Farm Animals

Animal	Susceptible & Shed Virus
Cattle	No
Pigs	No
Horses	No
Chickens	No
Ducks	No

SARS-CoV-2 Susceptibility of Wild Animals

Animal	Susceptible & Shed Virus
Lions (zoo)	Yes
Tigers (zoo)	Yes
Gorillas (zoo)	Yes
Snow leopards (Zoo)	Yes
Pumas/cougars	Yes
Grivets	Yes
Tree shrews	Yes
Rhesus monkeys	Yes
Cynomolgus macaques	Yes
Common marmosets	Yes
Pangolins	Yes

