

## SPECIAL REPORT: RHDV2 Virus Update

# **Deadly rabbit virus continues spread across North America**

BY ERIK R. BOGART

In our Fall/Winter 2020 Newsletter, we reported about a looming health threat that could spell catastrophe for rabbits in our region. The threat is a foreign animal disease called RHDV2, or rabbit hemorrhagic virus serotype 2, that exclusively affects domesticated and wild rabbits, is highly contagious, and is almost always fatal.

The virus has been spreading across the western United States over the last year and a half. In our last newsletter, we reported that the virus was then present in seven states in the Southeastern United States. Unfortunately, since then, cases have been reported in five additional states—Oregon, Idaho, Montana, Wyoming, South Dakota and Florida.

RHDV2 destroys cells in the infected rabbit's liver causing hepatitis; the virus also creates lesions on the heart, lungs or other organs that lead to massive internal bleeding, which explains why many of the rabbits who have succumbed to rabbit hemorrhagic disease are found with bloody fluid around their mouths and noses. It can also cause systemwide inflammation in the rabbit's delicate body. Death occurs from liver failure or hemorrhaging due to an impairment in the blood's ability to clot. The fatality rate is documented to be 90% in infected rabbits, according to the North Carolina Wildlife Resources Commission, who add that those rabbits that manage to survive the virus can go on to shed it for an additional two months or more. The virus is usually a swift and sudden killer, with rabbits often living only a few days at most after exposure; sadly, in the majority of cases the only observed sign of the illness is sudden death.

Because the virus is known to be hardy and can be spread through fomites, the House Rabbit Society warns that humans could inadvertently spread the virus to a domestic rabbit (even if the rabbit is kept inside) via the human's clothing or shoes that have been contaminated (for example, if a human walks on grass containing urine or feces from a wild or domesticated rabbit that was infected). An outbreak in a New York City veterinary clinic last year cost the lives of eleven house rabbits over the course of just a few days.

There are several vaccines on the market in Europe that can counter this virus effectively (the virus has been present in Europe for several years), however, because RHDV2 is still considered a "foreign animal disease" in the United States, USDA regulations will only allow importation of vaccines to a state that has already reported the presence of RHDV2 within its borders; even then, there are several layers of bureaucracy to work through to make the vaccine available to rabbit owners. The Rabbit Sanctuary has taken the position that if we were forced to wait until RHDV2 comes to our state before the importation of vaccinations can be authorized in South Carolina, it would at that point be too late to stop this infectious, deadly virus from spreading like wildfire across an unprotected rabbit population.

There is word that an American company has been working on developing an RHDV2 vaccine, according to the VIN (Veterinary Information Network) News Service (<https://news.vin.com>). On May 5, 2021, VIN News reported that Medgene Labs, a biotechnology company based in Brookings, South Dakota, has an RHDV2 vaccine in development. This is potentially very good news, for two reasons: first, a vaccine produced domestically will be more readily available and will avoid the bureaucracy and delays affecting the importation of foreign vaccines. Secondly, while the two European vaccines presently being imported

to RHDV2-affected states use inactivated virus derived from the livers of rabbits infected in a lab, Medgene Labs says they are using a recombinant technology similar to the COVID-19 vaccines manufactured by Pfizer and Moderna. What this means is that Medgene's vaccine, unlike the ones presently imported, does not involve the infecting and euthanizing of rabbits in its production. However, it is still unclear when the vaccine would ultimately become available in the United States as the USDA approval process can take year or more, with no clear timeline at the present.

Much of the present guidance from the USDA with regard to the prevention of or protection from RHDV2 involves detailed biosecurity measures. Rabbit Sanctuary, Inc. is the only animal sanctuary in the State of South Carolina that has been certified by the Global Federation of Animal Sanctuaries, and is the only rabbit rescue anywhere to have received GFAS recognition. As such, the Sanctuary already has strict biosecurity measures in place. However, with the serious health threat posed by RHDV2, the Sanctuary has enacted an even stronger biosecurity plan to address the problem, incorporating most of the recommendations promulgated by the USDA.

Many experts in the animal health field believe that the virus will eventually become endemic to the continental United States. This means that any fight against RHDV2, to be successful, must be fought on multiple fronts. When new rabbits are admitted to the Sanctuary, they first must be checked by a vet and kept in quarantine until it is determined that the new arrival does not have any health problems and can safely interact with the other rabbits and move into its regular living quarters. The Rabbit Sanctuary has been formulating a plan to expand the Health Care Building, which would involve extending its screened-in porch to add a special quarantine area. This would allow for added protection from any RHDV2 infection risks. However, such a project would of course incur additional costs.

The Rabbit Sanctuary is a 501(c)(3) organization that receives no federal grants. The operation of the Sanctuary is made possible due to the generosity of its donors. Readers of this newsletter should know how much the Rabbit Sanctuary appreciates your continued financial support as they continue their vital mission. Your donations will help assure that our beloved Sanctuary bunnies will continue to stay safe and healthy in their "home for life."