CERVIDAE HEALTH RESEARCH INITIATIVE

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Message from the Director

Identifying our stakeholders' needs is one of the most important jobs of CHeRI. It drives everything else that we do. This winter we surveyed Florida deer farmers to identify the most pressing barriers to maximizing production. Their responses will help guide our next round of strategic planning. Stay tuned, the updated CHeRI strategic plan will be available in late April.

Thank you, always, for your support - *Sam*

Dr. Samantha Wisely
Director, CHeRI

CHeRI Researcher Retreat

CHeRI PIs L to R: John Lednicky (PHHP EGH), Jason Blackburn (CLAS GEOG), Sam Wisely (IFAS WEC), Juan Campos (CVM LACS), Nathan Burkett-Cadena (IFAS FMEL), and Kutti Subramaniam (CVM IDP).

CHeRI researchers, L to R: Zoe White (Biological Scientist- Wisely Lab), Austin Surphlis (MS student- Subramaniam Lab), Rayann Dorleans (Biological Scientist- Wisely Lab), Savannah Grace (PhD student- Wisely Lab), Pedro Viadanna de Oliveira (Post doc, Subramaniam Lab)

UF CHeRI scientists met January 26th - 27th in St. Petersburg, FL, to review past and ongoing research, identify knowledge gaps, and create a roadmap for incorporating stakeholder needs into future research. This was our first opportunity for principal investigators, employees and students to meet as a group since the pandemic. The depth and breadth of science that our scientists and students have created is phenomenal! Everyone involved was excited to help craft the next 5 years of science at CHeRI.

CHeRI 2022 by the numbers

As we plan for the future, let's look back on what we did in 2022. We provided diagnostic services for ***238*** cervids - 121 necropsies and 105 animals from three live sampling events. The vast majority of these animals were white-tailed deer.

Of the ***121*** necropsied animals:

- 62 tested positive for EHDV. 22 of those were EHDV-2.
- 25 tested positive for BTV
- 10 tests showed co-infection with EHDV and BTV.

While most EHDV cases occurred during September and October, some cases occurred in January, April, and June.

We are seeing increased use of our electronic resources for deer farmers. We had ***9435*** visitors to our CHeRI website, and ***934*** visits to the CHeRI dashboard. Traffic to these sites was highest during peak hemorrhagic disease outbreaks in Florida. We also received ***99*** phone calls and ***87*** emails from deer farmers seeking advice.

Progress with bluetongue virus

CHeRI is dedicated to reducing death from hemorrhagic disease viruses. While we have made a big dent in EHDV, Bluetongue virus (BTV) is the second largest killer of deer in Florida. Our first step to developing an effective vaccine is to determine which bluetongue strains are circulating in Florida. Currently, all work on unknown BTV strains must be done in a biosafety level 3 lab (BSL3) which is time consuming and costly. Our biological scientist, Zoe White, has developed a method to quickly identify BTV types which will reduce the amount of BSL3 work. Once we understand which types are circulating in Florida, effective vaccines can be developed. Currently, we have completely sequenced 5 strains of bluetongue circulating in Florida farmed deer: BTV-1, BTV-3, BTV-10, BTV-18, and BTV-22.

Upcoming events

February 25th, 2023: The Spring Deer Health Summit will take place in Venus, FL. Join CHeRI scientists and collaborators as they discuss ways to improve the health and productivity of your herd.

February 25th, 2023
3:30pm- 7:00pm

Lightsey Family Ranch
545 New Boot Heel Road, Venus FL

Join us for a discussion about vaccine and pre-fawing tips to have a larger and healthier fawn crop with:

Dr. Dustin Davis, DVM Dynamic Concept Services
Ashley Petersen, MS, Medgene Labs
Samantha Wisely, PhD, University of Florida
Juan Manuel Campos Krauer DVM, PhD, Univ of Florida

Appetizers provided at 5:00pm followed by a meal at 5:30pm

Kindly RSVP to dcsrepro@gmail.com or 814-521-8050

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April 21st-22nd, 2023: We look forward to participating again at the 2023 Southeast Trophy Deer Association Spring Fling this April and seeing the deer farmers that we work with! The event gives us a chance to connect with deer farmers in person. Check out our booths where we'll have some valuable information and goodies.

Survey on Pest Control Needs

Vilma Montenegro Castro, a PhD student of PI Nathan Burkett-Cadena at the Florida Medical Entomology Lab will conduct a survey with Florida deer farmers to learn about their current pest control needs. Vilma will be studying *Culicoides* resistance to permethrin. Your survey participation will help her design the best possible experiment and ultimately help CHeRI develop much needed integrated pest management for *Culicoides*, the vector of hemorrhagic disease viruses. Please visit her at the CHeRI booth at the 2023 SeTDA Spring Fling. For more information, please click here.

CHeRI Spotlights!

Morgan Rockwell, M.S. student in Nathan Burkett-Cadena's lab at FMEL

I earned my bachelor's degree at Millikin University in Biology specializing in Veterinary Medicine. As an undergraduate, I was involved in researching hawk flies (Hippoboscidae) in correlation with the transmission of *Francisella tularensis* in Illinois birds. My research led me to volunteer at the Illinois Raptor Center, where I assisted with wildlife rehabilitation, bird banding, and Audubon outreach events. Currently, I am a master's student seeking to gain a certificate in Medical Entomology. My thesis is deciphering the vectors of *Plasmodium odocoilei* (deer malaria) in Florida deer farms. In my spare time, I like to volunteer at the Pelican Island Audubon Society to give tours discussing the native flora and fauna of Florida. In the future, I plan on obtaining a Ph.D. with research focused on wildlife and vector-borne disease ecology.

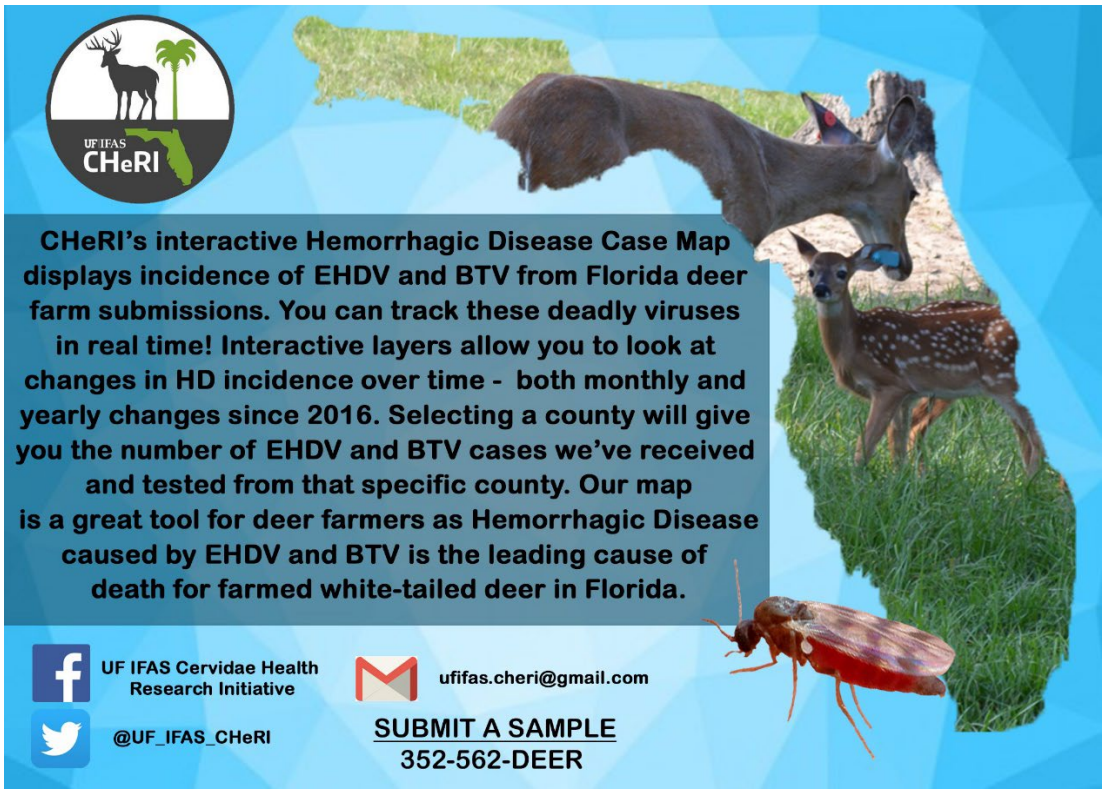
Previous CHeRI research has shown that deer malaria can increase mortality in deer infected with EHDV. I have joined the CHeRI team to identify the vectors of *Plasmodium odocoilei* (deer malaria) in white-tailed deer so that deer farmers can more effectively control co-infections. To achieve this, I travel to several Florida deer farms to collect mosquitoes and Culicoides samples. The samples will be identified and pooled for virus screening and bloodmeal analysis to identify the vectors of deer malaria.

CHeRI HD Cases Dashboard Map

2022 was a busy year for us, and 2023 is looking like a repeat of last year. So far in January we have had 2 positive EHDV cases.

Check our interactive Hemorrhagic Disease Case Map periodically to stay up-to-date on EHDV and BTV around Florida in 2023. You can also go back through the years for when to anticipate HD in your region and develop your vaccination plan. This tool is particularly useful for planning vaccinations for animals that will be shipped within Florida.

Please check out our interactive Hemorrhagic Disease Case Map here or click the picture below.



Ship us your specimens!

Did you know that you can ship us specimens from your animals for disease testing? We accept biological samples from live and dead animals, but its critically important that the samples are collected, stored and shipped correctly. Improperly prepared samples yield poor or no results. Call us prior to collecting specimens to determine which sample(s) to collect and how to store it. We will work with your veterinarian or your farm manager to ensure that the right sample is collected. To help facilitate the process we have updated our shipping address and requirements for sample shipment. These changes will ensure that your sample stays cold and that no cost is incurred by the shipper.

Call **352-562-3337** if you have any questions and please download this pdf and keep it for reference when sending CHeRI a specimen.

Contact Us:

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