

# CONNECTICUT VETERINARY MEDICAL DIAGNOSTIC LABORATORY

## 2020 REPORT

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**UConn** | COLLEGE OF AGRICULTURE,  
HEALTH AND NATURAL RESOURCES

PATHOBIOLOGY AND VETERINARY SCIENCE

## MESSAGE FROM THE DIRECTOR



The Connecticut Veterinary Medical Diagnostic Laboratory (CVMDL) provides testing and pathology that paves the way for future veterinary diagnostic methodology. This report outlines our services to Connecticut, the region and nation. Our collaborative efforts are monitoring and mitigating emerging health concerns at the nexus of human, animal, and environmental interactions.

We provide and oversee diagnostic services for veterinarians, agricultural producers, aquariums and stewards of Connecticut wildlife, as well as for residents of Connecticut and New England. Our faculty and staff members include pathologists, microbiologists, technicians, veterinary pathology residents, histotechnologists and students.

CVMDL is recognized as one of the laboratories qualified to test for COVID-19 in animals. Although the science linking the virus to animals is evolving every day, we are developing a better understanding of the virus as it relates to animal-to-human transmission and animal-to-animal transmission, and to what extent animals harbor the virus.

CVMDL affords our students the opportunity to learn from a diverse group of people who are experts in their respective fields. CVMDL is continuously improving our teaching and residency programs and serves as a veterinary pathology center for the state of Connecticut.

CVMDL has a long history of service to our state, region, and nation. Our work continues to transcend boundaries and lead efforts to improve health outcomes.

Salvatore Frasca Jr., V.M.D., Ph.D., Diplomate A.C.V.P.  
Director  
Connecticut Veterinary Medical Diagnostic Laboratory



The Connecticut Veterinary Medical Diagnostic Laboratory (CVMDL) is accredited by the American Association of Veterinary Laboratory Diagnosticians. We are the only veterinary diagnostic laboratory in New England with this accreditation. This certifies our quality and proficiencies through a rigorous Quality Management System. We are assisted in our efforts by the Department of Pathobiology and Veterinary Science at the UConn College of Agriculture, Health and Natural Resources.

Accreditation is a voluntary, third party-reviewed process by a certifying body providing formal recognition of laboratory competence and quality. As part of accreditation, a laboratory's quality management system (QMS) is thoroughly evaluated on a regular basis to ensure continued management and technical competence and compliance with appropriate laboratory quality management system standards. AAVLD Accreditation does not certify a product or service, rather it attests that a laboratory adheres to documented processes and quality controls in conformance with ISO-based international standards. Conformance to standards inherently contributes to higher quality, safety, reliability, and consistency of services.

## Why

Zoonotic diseases are transmissible between species, including animal-to-human which may lead to pandemics. Examples diseases and illnesses that CVMDL monitors are:

- SARS-CoV-2 (COVID)
- Eastern Equine Encephalitis
- *E. coli*
- Over 12 other diseases
- Avian Influenza
- West Nile Virus
- *Salmonella*

Monitoring known and emerging diseases is vital to protecting the health and safety of humans and animals. Animal diseases impact public health, agricultural economies and aquatic habitats. Management and mitigation address the environmental and health effects caused by zoonotic disease interactions.

## How

We lead federal, state, and local agencies, as well as other partners in animal diagnostics and pathobiology efforts surrounding zoonotic diseases. Surveillance and detection of federally recognized domestic and foreign disease agents allows public health officials to plan, prepare, and mitigate pandemics and other health emergencies. Pathology and diagnostic services across species improve human and animal health outcomes. Our ongoing research enhances animal health diagnostics and public health by adapting diagnostic tests and protocols for diseases.

## What

CVMDL provides animal autopsy services (necropsies) and laboratory testing of samples from animals to address disease concerns of agricultural, wildlife, aquatic, companion and exotic animals for federal and state agencies, corporate laboratories, veterinary hospitals, law enforcement, and private citizens of Connecticut, the New England region, and the nation.



## Mission Statement

The Connecticut Veterinary Medical Diagnostic Laboratory (CVMDL) at UConn – Storrs Campus is dedicated to providing top quality diagnostic services to our clients, who are comprised of veterinarians, members of the agricultural industry, caretakers of companion, zoo, and aquatic animals, stewards of Connecticut wildlife, and residents of Connecticut, New England, and beyond. We work cooperatively with federal and state veterinary agencies to enhance disease surveillance and response.

CVMDL is hosted in the Department of Pathobiology and Veterinary Science in UConn's College of Agriculture, Health and Natural Resources. For more information visit <http://cvmdl.uconn.edu>.

## Objectives

- To provide appropriate leadership and clear vision to federal, state and local agencies as well as private veterinary practices in animal diagnostics and pathobiology including zoonotic diseases.
- To maintain compliance with the accreditation requirements of the American Association of Veterinary Laboratory Diagnosticians (AAVLD).
- To build client service and satisfaction through informative, fact filled client interaction.
- To continue to improve quality of service through UConn employee involvement in this state laboratory.

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“Our oceans are changing, and there are a lot of unusual mortality events, in particular with large whale species in the greater Atlantic region. As new issues emerge with the ocean it becomes increasingly important to monitor what is occurring. It's tremendously difficult to study these whales; the data we collect is sometimes the only information we have on these animals. Mystic Aquarium has a great relationship with CVMDL. We have a strong connection with UConn, and our conservation and animal care are greatly enhanced through our partnership with CVMDL.”

- Dr. Allison Tuttle, Senior Vice President of Zoologic Operations, Mystic Aquarium

“We send a lot of our clients to CVMDL for the necropsy service. We want a necropsy done in the proper environment, where better diagnostic samples can be obtained and processed, as opposed to what we can collect in a field necropsy. Most of the time we're mainly looking for infectious disease so we can change what happens for the other animals left on a farm.”

- Dr. Scott Morey '06 (CAHNR) of Fenton River Veterinary Hospital in Tolland



**66,943 Test Run Anually**  
**162+ Types of Tests and Services Provided**



**12,849 Histology Samples Per Average Year**

**\$1 Million in External Funding for Laboratory Analyses**

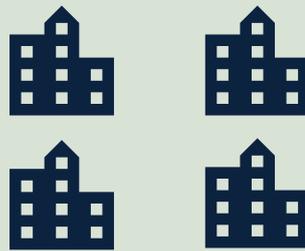


**2,279 Active Clients**

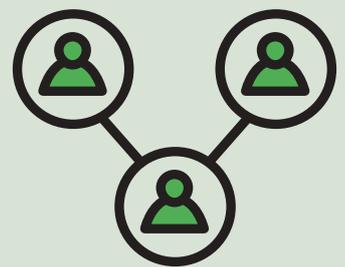
# CVMDL BY THE **NUMBERS**



**144 Connecticut Towns Served**  
**6 Types of Tests and Services Offered**  
 at **No Cost** to the State



**4 Federal Agencies Served**



**3 State Agency Partners**



**Connecticut and 6 Other State Departments of Agriculture Contract for Specialized Testing and Expertise Provided by the CVMDL Pathologists**



**2 Vaccine Research Projects**



**5 Emerging Disease Research Projects**



**12 Faculty**

**11 Staff**

**2 Residents-In-Pathology**



## Enhancing Animal Health

Families and tourists visiting an aquarium transports people to a new and exciting experiences: an underwater world filled with many different plants and animals. Connecticut's famous Mystic Aquarium cares for 5,000 animals from over 355 species, from octopuses to sea lions. Studying these animals offers a unique opportunity to improve conservation efforts and increase these species in the wild. It supports the aquarium's mission to care for and protect our ocean planet through the joint efforts of research and education.

CVMDL is a partner in caring for and enhancing the health of the aquatic animals at Mystic Aquarium and has collaborated with its veterinarians for almost 30 years. Read about our collaboration at <https://bit.ly/Mystic-CVMDL>.



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CVMDL is hosted by the Department of Pathobiology and Veterinary Science, which also hosts the Center for Excellence in Vaccine Research, allowing for collaborations to promote animal health.

## UConn's Center of Excellence for Vaccine Research

The Center of Excellence for Vaccine Research (CEVR) at UConn was established in 1998, making it the oldest university-based animal vaccine center in the country, <http://cevr.uconn.edu/index.php>. Core research faculty comprising CEVR have active research programs and expertise in the areas of immunology, genomics, transcriptomics, microbial pathogenesis, virology, bacteriology, next-generation vaccine delivery systems, disease diagnostics and surveillance. We have a strong history of multi-institutional collaborative funding and research, with university, government, and corporate collaborators. This proactive and multidisciplinary approach to collaborative vaccinology has proven fruitful in the development of novel vaccines and diagnostic/surveillance strategies. CEVR is integrated into the Department of Pathobiology and Veterinary Science, which houses strong academic research faculty actively engaged in vaccine and infectious disease projects.

After a national call for proposals the USDA awarded us funds to create the national **U.S. Animal Vaccinology Research Coordination Network**, (USAVRCN) <https://cag.uconn.edu/pvs/usanimalvaccinenetwork/aboutUs.php>

The Network is comprised of academic, government, and corporate vaccine researchers, brought together on a formal basis to identify current and future vaccine and diagnostic needs and opportunities in the US, and to collaboratively set broad goals and priorities for addressing them. The goal of the network is to act collectively to improve strategies for the timely development of, efficacious next generation vaccines, and flexible diagnostic platforms to monitor for emerging infectious diseases that have the potential for catastrophic impact on the U.S. agriculture industry. Network findings and suggestions are communicated on a regular basis to the USDA NIFA leadership to assist them with setting national research directions and funding priorities.