



Connecticut Veterinary Medical Diagnostic Laboratory

Department of Pathobiology and Veterinary Science
College of Agriculture and Natural Resources
University of Connecticut

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CVMDL: Our Mission

- Service: Provide veterinary diagnostic testing services to veterinarians and citizens of Connecticut and the region
- Research: Conduct basic and applied research related to animal and zoonotic diseases of importance to our region
- Teaching: Instruction of undergraduate students and graduate pathology residents in veterinary diagnostic techniques

University of Connecticut



CVMDL structure

- CVMDL is part of the Department of Pathobiology and Veterinary Science, within the College of Agriculture and Natural Resources at the University of Connecticut
- CVMDL is also the Connecticut state veterinary diagnostic laboratory, and the last remaining full-service veterinary diagnostic laboratory in the 6 state New England region
- Faculty members of our department generally have research, teaching and service (diagnostic) duties
- Administratively, CVMDL director answers to the Pathobiology Department Head (cooperatively), Dean of College, and less directly, the State Veterinarian and Commissioner of Agriculture for the State, and as a member lab, the NAHLN coordinator

CVMDL Staff

- Senior Faculty Pathologists-5
 - Pathology Residents-3-4
 - Other Associated Faculty-3
 - Technical and Support Staff-16
 - Student Laboratory Workers - 15+
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- Accredited by the American Association of Veterinary Laboratory Diagnosticians
 - Member of the National Animal Health Laboratory Network

CVMDL Testing Programs

- Necropsy
- Histopathology
- Serology
Regulatory Testing
Diagnostic Serology
- Parasitology
- Virology
- Molecular Diagnostics
- Microbiology
- Mastitis



CVMDL: partnerships

- CT Department of Agriculture
- CT Department of Public Health
- CT Department of Environmental Protection
- CT Agricultural Experiment Station
- USDA APHIS Veterinary Services
- USDA APHIS Wildlife Services
- National Veterinary Services Laboratory, Ames, IA
- National Animal Laboratory Health Network
- American Association of Veterinary Laboratory Diagnosticians
- CT Farm Bureau, CVMA, area veterinarians and the animal owners of Connecticut and the region

Necropsy



Necropsy

- Gross necropsy performed by veterinary pathology residents with oversight of senior pathologist on duty
- Histopathology performed on all cases. Special stains (eg immunohistochemistry, in-situ hybridization) conducted as needed
- Ancillary tests conducted to help determine disease etiology: parasitology, bacteriology, virology, toxicology, molecular biology) (up to 2 ancillary tests included in cost of necropsy)
- Biopsy service
- Courier (animal pickup) service



Serology

- Specific Tests:
 - Brucellosis (blood and milk)
 - Avian Influenza
 - West Nile Virus
 - Johnes disease
 - Pullorum disease
 - Lyme disease
 - Pseudorabies
 - Mycoplasma
 - Equine Herpes virus
 - Salmonella pullorum
 - Many others



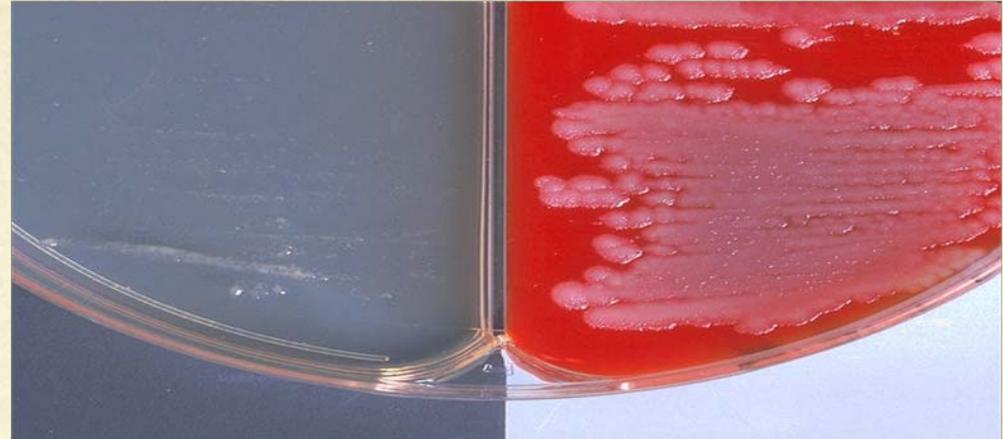
Virology

- Specific tests:
 - Rabies direct fluorescent antibody staining (from brain tissue of suspect animal)
 - Virus isolation: growing virus present in sick/dead animal in a cell culture in the laboratory to identify the particular virus present
 - Avian viruses (Avian Influenza, Exotic Newcastle disease, others) are grown in eggs instead of cell culture



Microbiology

- Culture
 - Aerobic
 - Anaerobic
- Antibiotic sensitivity
- Omnilog system
- Johnes TREK ESP (mycobacteria) culture system
- Mastitis testing program



Molecular Diagnostics

- Current tests available:
 - Avian Influenza
 - Exotic Newcastle Disease
 - Mycobacteria of aquatic species
 - Johnes disease of ruminants
 - Equine Herpes Virus
 - Bovine Herpes Virus
 - Lyme disease (*Borrelia burgdorferi* in ticks)
 - *Anaplasma phagocytophila* in ticks
 - *Babesia microti* in ticks
 - FMD
 - CSF
- Other PCR tests are under development
- Both real-time and traditional platforms are utilized



CVMDL

- We are not a commercial laboratory
- We conduct veterinary diagnostic work that is of importance to the region, even if it is not profitable (we do need to break even)
- We are partially supported by the Connecticut Dept. of Agriculture and the University of Connecticut
- We make up the remainder of our operating budget by charging fees for services and conducting specialized disease surveillance work for state and federal agencies

How Can CVMDL Participate in VET-LRN?

- Expertise in veterinary pathology
- Passive surveillance of pets, livestock and wildlife already in place
- Expertise in serological, molecular, histopathological and other diagnostic techniques
- Desire to explore new surveillance testing areas
- Established lines of communication and collaboration (NAHLN, CT Dept of Public Health, Regional Departments of Agriculture, USDA APHIS VS & WS)

How Can CVMDL & UCONN Participate in VET-LRN?

- The University of Connecticut is a land grant university with faculty expertise in translational and applied research
- College of Agriculture & Natural Resources has strong programs in:
 - Pathobiology & Veterinary Science (CVMDL is part of this Department)
 - Nutritional Sciences (human nutrition)
 - Animal Science (animal nutrition and other programs)
 - Allied Health Sciences (medical diagnostic and other programs)

Connecticut Veterinary Medical Diagnostic Laboratory



- Our lab is dedicated to detection of animal and zoonotic diseases, and protection of animal and public health
- We are constantly improving our technology and staff training to offer the best disease detection and surveillance methods possible
- We are a resource for veterinarians and animal owners in Connecticut and the region