

Cornell University
Animal Health Diagnostic Center

PO Box 5786
Ithaca, NY 14852-5786
t. 607 253-3900
f. 607 253-3943

2022 JOINT LEGISLATIVE BUDGET HEARING

Virtual Hearing
February 1, 2022

TESTIMONY: The New York State Veterinary Diagnostic Laboratory

François Elvinger, Dr.med.vet., Ph.D., dipl. ACVPM & ECVPH
Professor and Executive Director
Associate Dean for Diagnostic Operations and Government Relations

Dear Committee Chairs and Members,

On behalf of animal agriculture and all animal health stakeholders of diagnostic services of the New York State Veterinary Diagnostic Laboratory and Animal Health Diagnostic Center (NYSVDL & AHDC) services I want to thank you, Senator Krueger, Senator Hinchey, Assemblymember Weinstein, Assemblymember Lupardo, and all Chairs and Members of represented committees for your great support of veterinary diagnostic services in the Empire State. The work of NYSVDL&AHDC diagnosticians, under contract with the Department of Agriculture and Markets, touches every district that you represent (Figures 1 and 2). Our work is highly specialized and resource intensive, and is essential for the health and wellbeing of New York State livestock and poultry populations, domestic animals and wildlife, and the economic wellbeing of food animal producers and employment in their communities. Veterinary diagnostics facilitate and support trade and are an integral part in ensuring food security and food safety on which we all depend, be it in Upstate New York or New York City.

Governor Hochul's Executive Budget for the Department of Agriculture and Markets Aid to Localities consolidates prior year separate budget lines and absorbs legislative adds "for services and expenses of the Cornell diagnostic lab including but not limited to animal health surveillance and control, avian disease, cattle health, milk production, johnes disease and salmonella Dublin bacteria, and forensic pathology programs", in a single and comprehensive budget line of \$8,270,000, which streamlines and facilitates the delivery of diagnostic services by the NYSVDL&AHDC.

Please note that current threats, in particular highly pathogenic avian influenza H5N1 in the Eastern Flyway detected first in chickens and wildbirds in Newfoundland and later in wildbirds in North and South Carolina, and African Swine Fever in the Dominican Republic and in Haiti, have put our agriculture communities as well as our diagnostic laboratory on alert and led to intense review of our preparedness to respond swiftly to an introduction of these or other emerging pathogens into New York State.

We therefore respectfully request consideration of additional funding for the following programs:

Pathogen Genomic Surveillance (\$400,000) – The threat of emerging disease, and the challenges in disease surveillance and tracking have become apparent with the SARS-CoV-2 pandemic, and we now recognize that genomic surveillance is an essential tool in informing policy and decision makers on disease control and mitigation steps. Dr. Diego Diel, Director of the AHDC Virology Laboratory, has established tools and processes to sequence SARS-CoV-2 from human and animal samples (currently companion animals, white-tailed deer, minks and ferrets). These sequencing technologies are applicable to all infectious disease agents in all host species, including the currently emerging highly pathogenic avian influenza virus H5N1 (cases in wildbirds in Newfoundland at the end of 2021 and South and North Carolina this January), or African swine fever virus, causing a highly contagious and devastating disease of swine that appeared in 2021 in the Dominican Republic and Haiti. Both disease agents are very serious threats to US livestock and poultry, with HPAI H5N1 a zoonotic agent that could add to our current pandemic challenges. The technology is essential to detect emerging diseases in animals that threaten human health, as did SARS-CoV-2. This requested funding will support technical staff position, maintenance of equipment that currently serves for human sample testing, and reagents and supplies, to cover the \$100 to \$150 cost per genomic sequence.

Avian Disease Program (\$350,000) – This program has provided diagnostic advice and services to NYS commercial poultry producers, live bird markets as well as back yard flocks who supply our many farmers markets all the way into New York City. Our laboratories maintain preparedness for avian influenza and virulent Newcastle disease, and help reduce risk to bird health and welfare, and to public health. The program with its current and prior year funding of \$252,000 generated annual deficits of \$60,000 to \$100,000 (current 9-month deficit ~\$62,000), which the AHDC has been able to absorb with fees generated from testing other non-agriculture species. Any expansion of our diagnostic support, requested by the poultry industry to address the challenges and threats posed by the very significant increases in backyard flocks, hobby poultry, smaller-sized free range and pastured poultry farms, as well as the size of the vibrant commercial-sized poultry farms in the state, will take significant resources, likely a doubling of the current funding. Sustained expansion of services needs to provide for an additional faculty position and for development efforts with additional technical staff position, reagents and supplies, to expand the portfolio of avian tests the AHDC offers, and be prepared for eventual emerging diseases, for a total add request of \$350,000 . Note that funding for genomic sequencing above will benefit preparedness for emerging diseases in birds as well.

Veterinary Forensic Pathology Program (\$200,000) – New York State increased penalties for aggravated animal abuse (Article 26 of Agriculture and Markets Law relating to Cruelty to Animals, §353) in response to citizen concerns that resulted in a dramatic increase in forensic necropsies with extensive case workup and expert testimony in court. This new and essential line is providing resources for state agencies to more effectively pursue animal abuse and cruelty cases. With the inclusion of this line in Governor Hochul's lump sum line for the NYSVDL, veterinary forensics lost some of its visibility for many of the NYS constituents who care for animal well-being and are

engaged in the fight against animal cruelty. Note that the VDL has expanded its faculty expertise with funding provided in the current year budget, a gain that can now be sustained with the comprehensive funding line. Adding dedicated funding with a separate line will clearly indicate the commitment to respond to the cruelty epidemic and increasing case numbers which our pathologists address.

Antimicrobial Usage Reduction to Address Antibiotic Resistance (Quality Milk Production Services - QMPS - \$400,000) – QMPS activities promote and enhance quality of milk and quality of on-farm management systems resulting in a marketing advantage of New York’s animal agriculture in national and international commerce. QMPS scientists have developed diagnostic testing systems and procedures to reduce antibiotic usage on farms, to reduce treatment costs, maintain animal welfare AND fight the emergence of antibiotic resistance that not only provides a financial benefit to dairies, but also contributes to reducing antimicrobial resistance threatening both animal and human health. QMPS veterinarians are engaged in a concerted effort to implement selective dry cow treatment, an effort that requires resources in all four regional laboratories in Canton, Cobleskill, Ithaca and Warsaw, in particular expert veterinary technical support to carry the effort forward.

Demand for diagnostic testing at the Veterinary Diagnostic Laboratory has increased year over year, which has led to significant supply and staffing challenges, further exacerbated by the pandemic. Funding support from New York State, in particular the legislative add-ons for this current fiscal year have allowed the NYSVDL & AHDC to maintain its diagnostic services to New York State animal and public health stakeholders. On behalf of our stakeholders we are encouraged by the proposed comprehensive funding line in Governor Hochul’s Executive Budget and appreciate your consideration of the proposed complementary lines to provide the full veterinary diagnostic services to the Empire State. Thank you for your support.

Respectfully presented by:
François Elvinger fe65@cornell.edu c: 607 882 0057

Appendix:

Responsibilities and accomplishments of the 50 faculty and 160+ administrative and technical staff at the main Ithaca lab and regional QMPS laboratories in Canton, Cobleskill, and Warsaw, and the Duck Research Laboratory in Eastport on Long Island include:

- Comprehensive veterinary diagnostic services in anatomic and clinical pathology; microbiology and immunology (sections of bacteriology, virology, parasitology, molecular diagnostics, serology); toxicology; endocrinology; comparative coagulation;
- Active programs include Avian Health and the Duck Research Laboratory on Long Island, Quality Milk Production Services (QMPS), and the Wildlife Health Laboratory;
- FY 2021 273,919 accessions* from 7,386 veterinary client accounts
 - 100,920 accessions from 1,026 NYS veterinary client accounts (Figure 1)
 - ~ 900,000 tests and panels (36% bovine; 37% equine; 17% canine and feline)
 - comprehensive consulting for veterinarians on diagnostic strategies and result interpretation by Veterinary Support Services faculty

*Accession – a unique interaction of a veterinarian or dairy producer with the laboratory (submission of f.ex. one nasal swab from a horse for herpesvirus testing; or one biopsy; or 500 blood samples from dairy or beef to be tested for *Anaplasma*, a blood parasite transmitted by ticks; or 200 milk samples for mastitis testing; or one or more dead birds, a dead bear or cow or dog or horse for necropsy);

- Regulatory testing of animals and animal products, including for Foreign Animal Disease investigations;
- Early detection and diagnostic surge capacity (high complexity, high throughput testing) for high impact diseases including foot and mouth disease, avian influenza, African swine fever. Level 1 laboratory in the National Animal Health Laboratory Network. Biosafety Level 3 necropsy and diagnostic laboratory space for highly contagious disease agents that threaten the economic wellbeing of animal agriculture;
- Chronic Wasting Disease (CWD) surveillance
 - Major role of Wildlife Health Laboratory faculty in developing the New York State Interagency CWD Risk Minimization Plan with Department of Environmental Conservation and Department of Agriculture and Markets, under Department of Environmental Conservation contract
 - Annual testing of several thousand submissions;
- Veterinary forensic pathology services to support investigation and prosecution of animal abuse and cruelty crimes;
- Antibiotic Usage Reduction Program developed in Quality Milk Production services that guides judicious use of antibiotics for mastitis treatment in dairy cows, reducing costs and combating development of antibiotic resistance;
- Animal testing for SARS-CoV-2 by PCR, virus isolation and for antibodies to the virus; first confirmed detection in an animal in the US (tiger in Bronx Zoo) and reported to the OIE (Office International des Epizooties – World Organization for Animal Health); also provided expertise for confirmation of first cases in dogs and cats and other species in the US;

- Genomic sequencing of coronaviruses (also influenza viruses and other pathogens) to enhance surveillance and response by the virology laboratory for Tompkins County Health Department and New York State;
- Expertise and staff to stand up the Cornell COVID-19 Testing Laboratory (CCTL) that since mid-August 2020 through January 27, 2022 has tested 1,863,429 samples from Cornell student and employees as well as surrounding communities.

Figure 1: 2021 New York State Veterinary Practice Clients (n=1,026)

NYS CY2021: Client distribution by zip code
January 1, 2021 to December 31, 2021

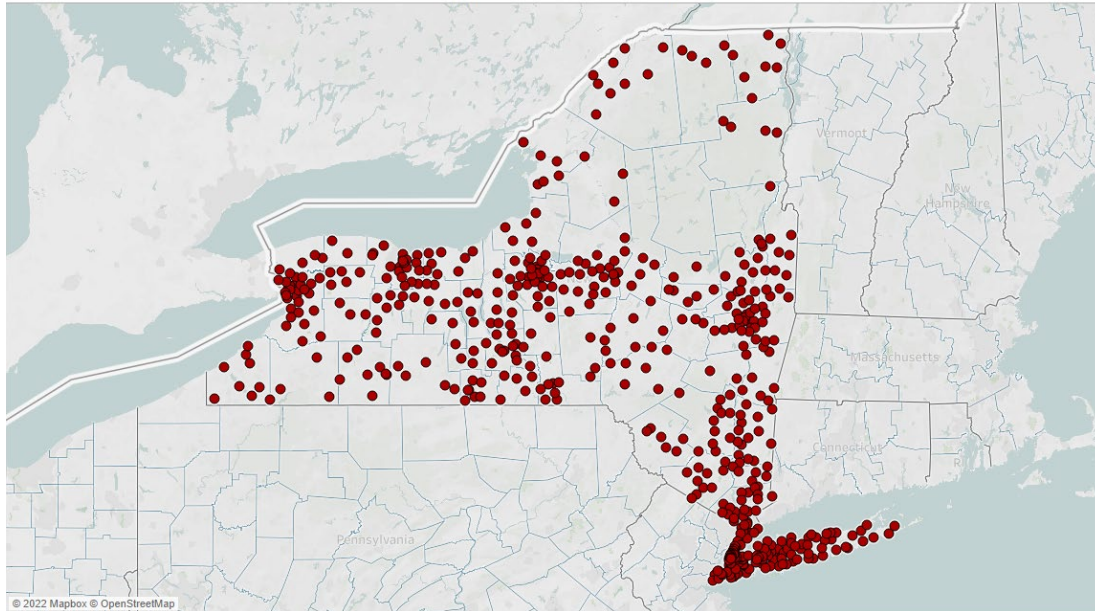


Figure 2: 2021 New York City Veterinary Clinic Clients (by ZIP code; n=87)

NYS CY2021: Number of clients by zip code
Bronx, Brooklyn, Manhattan, Queens, Staten Island
January 1, 2021 to December 31, 2021

