Farm Bill Section 12101

National Animal Health Laboratory Network (NAHLN)

Funded Projects
FY2020 - FY2023

FY2020 NAHLN Projects

NAHLN Lab	Project Title	Funding Amt
Increase Testing Capacity		
University of Minnesota Veterinary Diagnostic Laboratory	Validation of alternative samples for the diagnosis and surveillance of African swine fever	$47,188.00
Colorado State University Veterinary Diagnostic Laboratories	Novel Approach to Diagnose and Genetically Characterize High Consequence Pathogens Affecting Animal Health	$93,404.00
Texas A&M Veterinary Medical Diagnostic Laboratory	Development and validation of a universal real-time RT-PCR assay to distinguish between virulent APMV-1 and APMV-1 of low-virulence and development of primers-probes bank for rapid distribution to field laboratories in response to a virulent APMV-1 outbreak in the United States	$152,925.00
Oklahoma Animal Disease Diagnostic Laboratory (OADDL)	Development of an Interactive Spatial Agrometrics Tool for the Calculation of Livestock (Cattle, Swine and Poultry) Populations in the United States at the County and Parish Level	$160,424.00
University of Nebraska- Veterinary Diagnostic Center	Sequence-based real-time identification of NAHLN scope viral diseases and emerging viral diseases using long read approaches	$230,153.00
Kord Animal Health Diagnostic Laboratory	Scalable Field PCR Platform for Senecavirus A and Foot and Mouth Disease	$250,000.00
Athens Veterinary Diagnostic Laboratory, College of Veterinary Medicine, The University of Georgia	United front to develop harmonized NGS training and procedures to increase the capabilities and capacity of NAHLN laboratories in response to antimicrobial resistance (AMR)	$412,580.00
Washington Animal Disease Diagnostic Laboratory	Laboratory Detection Preparedness of Emerging Diseases in Aquatic Species	$400,000.00
Animal Health Diagnostic Center (Cornell)	Enhancing the National Animal Health Laboratory Network (NAHLN) Diagnostic Capability and Emerging Disease preparedness through Next-Generation Sequencing	$900,000.00
Enhance biosafety/biosecurity		
North Dakota State University Veterinary Diagnostic Laboratory	Enhancing laboratory preparedness for NAHLN scope diseases.	$100,310.00
University of Missouri Veterinary Medical Diagnostic Laboratory	Enhancing Testing Capacity in Biosafety Level-3 Laboratory for Improved Detection of and Response to Foreign Animal Diseases	$104,108.00
Enhance electronic messaging capabilities		
Texas A&M Veterinary Medical Diagnostic Laboratory	Preparedness for Throughput Scaling	$33,248.00
Arkansas Livestock and Poultry Commission Veterinary Diagnostic Laboratory	Interconnected Electronic Reporting and Transmission of Data	$71,500.00
Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL)	Enhancing Antimicrobial Resistance Surveillance via Veterinary Diagnostic labs through XML results messaging	$104,060.00
Clemson Veterinary Diagnostic Center	Implement NAHLN Order Message Receiver in USALIMS	$105,021.00
Oklahoma Animal Disease Diagnostic Laboratory (OADDL)	Deep Learning Computational Algorithms for Disease Diagnosis by Genome Sequence	$158,136.00
Kansas State Veterinary Diagnostic Laboratory	Strengthening and enhancement of Kansas State Veterinary Diagnostic Laboratory (KSVDL) capacity for FAD Emergency preparedness and response	$188,597.00

NAHLN Lab	Project Title	Funding Amt
Athens Veterinary Diagnostic Laboratory, College of Veterinary Medicine, The University of Georgia	Enhancing the National Animal Health Laboratory Network (NAHLN) Diagnostic Capability through electronic reporting and transmission of data	$412,122.00
Increase emergency preparedness		
Rollins Animal Disease Diagnostic Laboratory	Enhancing Testing Capacity and Diagnostic Capabilities Using High Throughput Polymerase Chain Reaction Assay	$66,021.00
Wyoming State Veterinary Laboratory	One Health Wyoming: Enhancing Interlaboratory Coordination for Emerging Diseases	$55,321.00
USGS National Willdife Health Center	Capacity building in Wisconsin--Enabling compliance at the National Wildlife Health Center and surge support for the Wisconsin Veterinary Diagnostic Laboratory	$100,946.00
University of Pennsylvania PADLS New Bolton Center	Enhanced surveillance and outbreak surge capacity testing for high-consequence, NAHLN-scope animal diseases	$144,056.00
USGS National Willdife Health Center	Building capacity to rapidly detect agents of emerging infectious disease	$167,292.00
Cornell Animal Health Diagnostic Center/New York State Veterinary Diagnostic Laboratory (AHDC/NYSVDL)	Cornell AHDC/NYSVDL Emergency Preparedness Capacity	$195,093.00
Colorado State University Veterinary Diagnostic Laboratories	Enhancement of Chronic Wasting Disease and Scrapie Diagnostic Testing Capabilities	$197,200.00
Bronson Animal Disease Diagnostic Laboratory	Enhancement of Chronic Wasting Disease Capacity	$150,000.00
TOTAL FUNDED		**$4,999,705.00**

FY2021 NAHLN Projects		
NAHLN Lab	Project Title	Funding Amt
Test method development and validation		
Kansas State Veterinary Diagnostic Laboratory	Development and validation of Point of Care (POC) assays for ASF and CSF for rapid outbreak response	$ 499,871.00
University of Minnesota Veterinary Diagnostic Laboratory	Agent Of Disease Point-Of-Care Genomics (AOD-POCgen): A Simplified Purpose-Built Platform And Improved Diagnostic Tool For Testing of Foreign Animal Diseases	$ 425,924.00
Texas A&M Veterinary Medical Diagnostic Laboratory	Development of rapid and reliable next-generation sequencing and bioinformatics procedures for identification, pathotype prediction, and subtyping of influenza A viruses and optimization for use with clinical samples	$ 313,546.00
Kord Animal Health Diagnostic Laboratory	Completion of Scalable Field PCR Platform for Senecavirus A and Foot and Mouth Disease	$ 250,000.00
Bronson Animal Disease Diagnostic Laboratory (BADDL)	Validation of Real-Time PCR (qPCR) assays for the OIE listed reportable and emerging crustacean disease pathogens	$ 229,527.00
Veterinary Diagnostic Laboratory (VDL), University of Illinois	Novel loop-mediated isothermal amplification (LAMP) systems as on-site diagnostic tools for classical swine fever and African swine fever viruses	$ 215,777.00
University of Georgia Tifton Veterinary Diagnostic Laboratory	Enhancing Swine Diagnostics for the detection and differentiation of ASF and CSF from other economically significant septicemic diseases: Development of novel multiplex high throughput Taqman qPCR panels and point-of-care isothermal diagnostic platforms	$ 176,861.00
University of Minnesota Veterinary Diagnostic Laboratory	Animal virome panel for optimization and validation of next generation sequencing for endemic, emerging and foreign animal disease viruses	$ 141,568.00

NAHLN Lab	Project Title	Funding Amt
Mississippi Veterinary Research and Diagnostic Laboratory	Development and validation of real-time quaking-induced (RT-QuIC) as confirmatory testing for chronic wasting disease CWD	$ 141,433.00
Kansas State Veterinary Diagnostic Laboratory	Point-of-care detection of ASFV, CSFV and FMDV using a single device for sample tracking, extraction, detection and remote data analysis and reporting	$ 128,900.00
University of Missouri Veterinary Medical Diagnostic Laboratory	Validation of ASR1 Peptoids-ELISA for the Detection of Chronic Wasting Disease Prion in Samples with Low Prion Burden	$ 116,323.00
Wisconsin Veterinary Diagnostic Laboratory	Validation of KingFisher Duo Prime for low-throughput nucleic acid extraction platform to enhance capacity for rapid NAHLN scope disease testing	$ 72,366.00
Pennsylvania Veterinary Laboratory	Validation of a high-throughput method for the detection of African Swine Fever virus	$ 55,000.00
Emergency Preparedness		
Ohio Animal Disease Diagnostic Laboratory	Enhancing BSL-3 capabilities of Ohio Animal Disease Diagnostic Laboratory	$ 234,065.00
University of Minnesota Veterinary Diagnostic Laboratory	Increasing NAHLN ASF response capacity in Minnesota	$ 228,374.00
Thompson Bishop Sparks State Diagnostic Laboratory	Enhance capacity for faster identification of bacterial foreign animal diseases at the Thompson Bishop Sparks State Diagnostic Laboratory	$ 227,025.00
VA Tech Animal Laboratory Services	Enhancing Chronic Wasting Disease Testing Capability	$ 203,198.00
Arizona Veterinary Diagnostic Laboratory	Arizona Veterinary Diagnostic Laboratory NAHLN Enhancement (Priority 2) 2020 Cooperative Agreement Project Proposal, Farm Bill Section 12101	$ 183,992.00
University of Minnesota Veterinary Diagnostic Laboratory	Enhancing diagnostic and surveillance capabilities for early detection of emerging and foreign animal diseases using high throughput sequencing	$ 168,000.00
University of Minnesota Veterinary Diagnostic Laboratory	VirSlayer -a quick and easy to use bioinformatics pipeline for detection of endemic, emerging and foreign animal disease viruses	$ 100,507.00
Oregon Veterinary Diagnostic Laboratory	Sample Processing Efficiency, Accuracy and Integration with CoreOne LIMs	$ 89,610.00
Thompson Bishop Sparks State Diagnostic Laboratory	Enhancing Emergency Preparedness at Three NAHLN Laboratories through professional BSL-3 Training	$ 72,582.00
Moorefield Animal Health Diagnostic Laboratory	Moorefield Animal Health Diagnostic Laboratory- Enhancement of NAHLN Emergency Preparedness	$ 63,432.00
Clemson Veterinary Diagnostic Center	To increase real-time PCR testing capacity of foreign animal diseases at the Clemson Veterinary Diagnostic Center	$ 53,188.00
Electronic Data Management		
South Dakota State University	Providing Laboratory Information Management System (LIMS) efficiencies for Foreign Animal Disease (FAD) outbreaks within multiple USDA National Animal Health Laboratory Network (NAHLN) Laboratories	$ 241,550.00
Thompson Bishop Sparks State Diagnostic Laboratory	An automated antibiotic sensitivity testing system for electronic data management and sharing the data with NAHLN	$ 198,900.00
VA Tech Animal Laboratory Services	Enhancing Electronic Reporting and Data Transmission	$ 110,472.00
Rollins Animal Disease Diagnostic Laboratory	NAHLN Messaging Audit Check	$ 50,000.00
Indiana Animal Disease Diagnostic Laboratory	Establishing messaging through newly acquired Orchard Sequoia LIMS	$ 10,450.00
Exercises and Drills		

NAHLN Lab	Project Title	Funding Amt
Kansas State Veterinary Diagnostic Laboratory	Kansas State Veterinary Diagnostic Laboratory (KSVDL) African Swine Fever Outbreak Collaborative Exercises Project	$ 76,115.00
TOTAL FUNDED		**$ 5,078,556.00**

FY2022 NAHLN Projects		
NAHLN Lab	**Project Title**	**Funding Amt**
Increasing capacity for disease testing		
Iowa State University- Veterinary Diagnostic Laboratory	SmartChip Real-Time PCR System significantly enhances the diagnostic laboratory preparedness for rapid detection of high-consequence foreign animal diseases (FADs).	$369,000.00
Washington Animal Disease Diagnostic Laboratory	Enhancing Rapid Detection of Emerging Aquatic Diseases for Deployability	$350,000.00
Iowa State University- Veterinary Diagnostic Laboratory	Rapid identification and characterization of avian foreign animal diseases in a single-assay using Nanopore Sequencing	$323,951.00
Wisconsin Veterinary Diagnostic Laboratory	Increased capacity for disease testing with digital microscopy and whole slide imaging for NAHLN	$299,000.00
University of Georgia Tifton Veterinary Diagnostic Laboratory	Enhancing avian diagnostics testing capacity for the detection and differentiation of avian influenza virus (AIV) and Newcastle disease virus (NDV) from other economically significant viral respiratory disease agents by multiplex real-time reverse transcription-polymerase chain reaction (rRT-PCR) assays.	$224,126.32
Oregon Veterinary Diagnostic Laboratory	Increasing Regional Testing Capacity and Rapid Pathogen Characterization Capabilities at the Oregon Veterinary Diagnostic Laboratory	$183,965.98
Bronson Animal Disease Diagnostic Laboratory	Validation of Real-time Reverse Transcription PCR (RT-qPCR) Assay for the Detection of Spring Viremia of Carp Virus (SVCV)	$141,327.00
Iowa State University Veterinary Diagnostic Laboratory	ASF PCR Negative Cohort Study – Partnering to expand testing capacities, support further evaluation and validation of two commercially available ASF PCR assays, and enhance preparedness across the NAHLN.	$140,128.00
Mississippi Veterinary Research and Diagnostic Laboratory	Enhancement of chronic wasting disease (CWD) testing capacity.	$101,548.22
Nebraska Veterinary Diagnostic Center	Validation of Automated High Throughput Testing for Diseases of High Consequence	$97,071.00
Connecticut Veterinary Medical Diagnostic Laboratory	Improving CVMDL emergency preparedness and response: developing next-generation sequencing capabilities.	$69,772.00
Increasing capacity to handle surge samples		
Louisiana Animal Disease Diagnostic Laboratory	Increase Capacity For Testing for Chronic Wasting Disease (CWD)	$381,451.00
Oklahoma Animal Disease Diagnostic Laboratory	Increasing capacity to handle surge samples through online submissions and elimination of the manual sample data entry step in the laboratory	$360,077.96
Michigan State University Veterinary Diagnostic Laboratory	Web-based Sample Submission for Foreign Animal Disease Investigations	$203,480.70
Oregon Veterinary Diagnostic Laboratory	Enhancing Expedited Bulk Sample Submission and Message Processing at the Oregon Veterinary Diagnostic Laboratory	$158,840.00
Washington Animal Disease Diagnostic Laboratory	Notification of Priority and Emergency Disease Test Results	$128,260.00
Texas A&M Veterinary Medical Diagnostic Laboratory	Data Exchange Between NAHLN Laboratories and Offices of State Animal Health Officials	$117,777.00
University of Minnesota VDL	Enhancing surge capacity with a streamlined online sample submission web application	$99,647.00

NAHLN Lab	Project Title	Funding Amt
Enhancing laboratory emergency preparedness		
Oregon Veterinary Diagnostic Laboratory	Enhancing OVDL emergency preparedness for regulatory testing through exercise and inter-agency coordination	$332,348.69
University of Minnesota Veterinary Diagnostic Laboratory	Increasing ASF preparedness by improving diagnostic submissions to the NAHLN laboratory in Minnesota	$177,478.21
Bronson Animal Disease Diagnostic Laboratory	Enhancement of Laboratory Testing Capacity, Biosafety & Biosecurity Practices, and Communications Through Emergency Preparedness Exercises to Prepare for Outbreaks of African Swine Fever and Foot and Mouth Disease.	$146,876.00
TOTAL FUNDED		**$4,406,126.08**

FY2022 Joint NAHLN/NADPRP Projects		
NAHLN Lab	**Project Title**	**Funding Amt**
University of Minnesota, College of Veterinary Medicine	Improving national capacity for early detection of foreign animal disease incursions: critical evaluation of field accuracy, standard of procedures, risks, challenges, and opportunities for the implementation of point of care platforms for NAHLN target diseases.	$999,346.00
Connecticut Veterinary Medical Diagnostic Laboratory, Department of Pathobiology and Veterinary Science, College of Agriculture, Health and Natural Resources, University of Connecticut.	The use of field-deployable diagnostic tests for detecting African Swine Fever Virus infections in pigs	$590,129.00
The Institute for Infectious Animal Diseases, Texas A&M AgriLife Research	Development of a National of Point-of-Care (POC) Diagnostic Testing Framework and Assessment of Economic Impacts for Importation of Current Foreign POC Testing Methodologies for Foreign Animal Disease Outbreaks	$500,000.00
Athens Veterinary Diagnostic Laboratory, and Tifton Veterinary Diagnostic & Investigational Laboratory, University of Georgia	Development of a novel multiplex point-of-care testing for the simultaneous detection of avian influenza virus and avian paramyxovirus type 1	$217,971.71
Oklahoma Animal Disease Diagnostic Laboratory	Development of a molecular point-of-care diagnostic test and a mapping platform for Foot and mouth disease (FMD) detection and tracking	$473,289.00
University of Minnesota Veterinary Diagnostic Laboratory	FMDsure: A simple and easy to use molecular diagnostic assay for rapid detection of Footand-Mouth disease virus in ruminants	$554,767.90
Purdue University	Point-of-care detection of African swine fever virus: a paper-based device for molecular diagnostics	$1,000,000.00
TOTAL FUNDED		**$4,335,503.61**

FY2023 NAHLN Projects		
NAHLN Lab	**Project Title**	**Funding Amt**
Local stockpile and capacity support		
North Dakota State University Veterinary Diagnostic Laboratory	Increasing preparedness for an African Swine Fever outbreak by stockpiling primers and probe for NAHLN laboratories	$194,097.00
Virginia Department of Agriculture and Consumer Services, Harrisonburg Regional Animal Health Lab	Expanding Support to the NAHLN by Enhancing Sustainability of Testing Capacity	$167,400.00
IT Standardization		

NAHLN Lab	Project Title	Funding Amt
Charles C. Allen Biotechnology Laboratory, University of Delaware	Enhancing efficiency of field sample submissions to high throughput laboratories	$222,343.31
C. E. Kord Animal Health Diagnostic Laboratory (KAHDL)	Improving the efficiency of FAD sample submissions through LIMS enhancements	$88,086.25
High-capacity diagnostic equipment		
College of Veterinary Medicine - Iowa State University	Development and Validation of Oxford Nanopore Technologies (ONT) Sequencing as a Molecular Point-of-Care Diagnostic (POCD) Assay	$404,919.00
South Dakota State University, Animal Disease Research and Diagnostic Laboratory	Enhancing the capacity of Animal Disease Research and Diagnostic Laboratory for early detection of emerging and foreign animal diseases using high throughput sequencing	$235,000.00
University of Georgia - Tifton Veterinary Diagnostic Laboratory	Incorporation of a semi-automated PCR workflow to improve surge testing capacity and capability for small-midsized NAHLN laboratories	$216,106.00
Colorado State University Veterinary Diagnostic Laboratories	Enhancement of High-Capacity Testing for Transmissible Spongiform Encephalopathies	$160,748.75
Ohio Animal Disease Diagnostic Laboratory	Improve capability to handle surge samples through purchasing high-capacity diagnostic testing equipment	$110,663.65
Virginia Department of Agriculture and Consumer Services, Harrisonburg Regional Animal Health Lab	Expanding Support to the NAHLN by Improving Capability to Handle Surge Samples	$80,000.00
C. E. Kord Animal Health Diagnostic Laboratory (KAHDL)	Diversifying Tennessee's Diagnostic PCR Platforms and Increasing Surge Capacity	$62,295.80
Technical personnel		
Virginia Tech Animal Laboratory Services	Broadening expertise in nanopore-based sequencing for pathogen detection and development of bioinformatics support community	$200,451.90
University of Pennsylvania PADLS New Bolton Center	Regional Veterinary Workforce Development to Enhance Early Recognition of Newly-Detected, Re-Emerging, and Foreign Animal Diseases	$102,680.71
Ohio Animal Disease Diagnostic Laboratory	Increasing the diagnostic laboratory technical expertise of the Ohio ADDL	$46,199.85
TOTAL FUNDED		**$2,290,992.22**