

NORTH CAROLINA VETERINARY DIAGNOSTIC LABORATORY SYSTEM

Fiscal Year Report
2011-2012



North Carolina Department of Agriculture
& Consumer Services
Veterinary Division

Steven W. Troxler, *Commissioner of Agriculture*
David T. Marshall, DVM, *State Veterinarian*
Karen W. Post, DVM, MS, *Director of Laboratories*

North Carolina Veterinary Diagnostic Laboratory System

Fiscal Year 2011-2012 Annual Report



Rollins Animal Disease
Diagnostic Laboratory
1031 Mail Service Center
Raleigh, NC 27699-1031
(919) 733-3986

Northwestern Animal Disease
Diagnostic Laboratory
1689 N. Bridge St.
Elkin, NC 28621
(336) 526-2499

Western Animal Disease
Diagnostic Laboratory
PO Box 279
Arden, NC 28704
(828) 684-8188

Griffin Animal Disease
Diagnostic Laboratory
401 Quarry Rd.
Monroe, NC 28112
(704) 289-6448

NCVDLS Mission Statement



It is the mission of the North Carolina Veterinary Diagnostic Laboratory System to provide veterinarians, the animal industry, and the citizens of North Carolina with accurate and timely laboratory support services in order to diagnose, conduct surveillance, and assist in responding to and preventing animal disease. Both protection of public health and the food supply are important components of this mission.

Message From the Director

The following pages represent the inaugural edition of the NCVDLS Annual Report. We have compiled a summary of laboratory and staff activities for the 2011-2012 fiscal year. Data from all four laboratories within our system are included.

We hope that our stakeholders will find the information both interesting and useful. It is our goal to provide clients with accurate and timely diagnostic services per our Mission Statement. Please do not hesitate to contact us about this annual report, if you have questions.

Regards,

Karen W. Post DVM, MS

Karen W. Post, DVM, MS
Diplomate ACVM

NCVDLS Brief History

The North Carolina Veterinary Diagnostic Laboratory System (NCVDLS) was established in 1947 by the North Carolina Department of Agriculture. The laboratory is fully accredited by the American Association of Veterinary Laboratory Diagnosticians through 2013 and offers services in bacteriology, molecular diagnostics, mycology, parasitology, pathology, serology, and virology.



Accredited by the American Association of Veterinary Laboratory Diagnosticians

Rollins Animal Disease Diagnostic Laboratory in Raleigh, NC is the central laboratory, with branch laboratory locations in Arden, Elkin, and Monroe. The laboratories are open Monday through Friday, 8 a.m. to 5 p.m. Emergency after hours, weekend, and holiday submissions can be arranged by contacting the individual laboratory.

USDA-APHIS-NAHLN National Animal Health Laboratory Network



The Rollins Animal Disease Diagnostic Laboratory facility is one of 12 original core members of NAHLN. Participating laboratories perform routine diagnostic tests for endemic animal diseases, as well as targeted surveillance and response testing for foreign animal diseases.

Currently Rollins Laboratory is participating in surveillance programs for classical swine fever (CSF), avian influenza (AI), swine influenza virus (SIV), Pseudorabies (PRV), and endemic Newcastle disease (END).

USDA-APHIS-NAHRS National Animal Health Reporting System

The NCVDLS also participates in the National Animal Health Reporting System (NAHRS). NAHRS is an important component of the National Animal Health Surveillance System. By providing timely summary-level information on animal health status to our trading partners, NAHRS helps protect the US share of the global market for animals and animal products.



NCVDLS Facilities and Laboratory Personnel

Rollins Animal Disease Diagnostic Laboratory

1031 Mail Service Center
Raleigh, NC 27699-1031
Phone: (919)733-3986
Fax: (919)733-0454

Director of Laboratories

Karen W. Post DVM, MS, D-ACVM

Assistant Director

Richard Mock PhD

Administrative Staff

Cheryl Hearn	Administrative Officer I, Section Supervisor
Mechelle Johnson	Administrative Assistant I
Rebecca Boone	Medical Laboratory Assistant II
Charlotte Dover	Processing Assistant IV
Connie Howen	Processing Assistant IV
Paul Miller	Processing Assistant III
Cindy Orlosky	Processing Assistant V
Brandy Rodgers	Processing Assistant IV
Tamara Seago	Processing Assistant V
Dell Weaver	Medical Laboratory Assistant II

Bacteriology

Sandy Murphy, BS, M-ASCP	Medical Laboratory Supervisor I, Section Supervisor
Lisa Besco, MLT-ASCP	Medical Laboratory Technologist I
Eileen Floyd, MLT, CSMLS	Medical Laboratory Technologist I
Lee Goldbach, MS	Medical Laboratory Technologist I
Elizabeth Ortiz, BS	Medical Laboratory Technologist II
Bill O'Shields	Medical Laboratory Assistant III
Jeri Smart, BS	Medical Laboratory Technologist I
Amy Stein, AAS, MLT-ASCP	Medical Laboratory Technologist I
Laura Tweed, BS, MT-ASCP	Medical Laboratory Technologist I

Building Maintenance

Doug Carroll	Maintenance Mechanic V, Section Supervisor
Joey Stephenson	Maintenance Mechanic IV

Information Technology

Tom Miller	Business and Technology Applications Analyst
Josh Shepherd	Business and Technology Applications Analyst

Molecular Diagnostics

Beverly Wood, BS, MT-ASCP	Laboratory Medical Specialist, Section Supervisor
Chad Menard, BS	Medical Laboratory Technologist III
Diana Kuo, BS, MS	Medical Laboratory Technologist II

Pathology

Avian Pathologist

Tahseen Abdul Aziz DVM, MS, PhD, D-ACPV

Anatomic Pathologists

Peter Moisan DVM, MS, D-ACVP, D-ABVP

Anatomic Pathologists, cont'

Steve Rushton DVM, D-ACVP
Alison Tucker MS, VMD, D-ACVP

Diagnosticians

Jennifer Haugland DVM
Stacy Robinson DVM
Mahogany Caesar DVM

Necropsy Assistant

Laura Marley Trotter, BS Medical Laboratory Technician II

Histopathology

Mary Baker, HT-ASCP Medical Laboratory Technologist III, Section Supervisor
Faye Coombs, HT-ASCP Medical Laboratory Technologist I
Judy Liverman Medical Laboratory Technician II
Cindy Nipper, HT-ACSP Medical Laboratory Technologist I

Immunohistochemistry

David Weil, BS, HT-ASCP Medical Laboratory Technologist I

Quality Assurance and Safety

Ghazala Jawad, MS Medical Laboratory Supervisor III, Quality Manager

Serology

Jennifer Pruitt, CLA-ASCP Medical Laboratory Technologist III, Section Supervisor
Brandon Brown, BS Medical Laboratory Technologist I
Kim Gooden Medical Laboratory Technologist I
Aisha Phipps, BS Medical Laboratory Technologist I

Virology

Chad Cecil, PhD. Laboratory Medical Specialist, Section Supervisor
Earlene Allen Medical Laboratory Technologist I
Karen Bruce, BS Medical Laboratory Technologist I
Sharon Greer Graham Medical Laboratory Technologist I
Kim Howle, BA, MS Medical Laboratory Technologist III
Fuhing Lo, BS Medical Laboratory Technician II
Angie Murphy, BS Medical Laboratory Technologist II
Denise Parker, BA Medical Laboratory Technician II
HuiQing Tang, BS Medical Laboratory Technologist I

Griffin Animal Disease Diagnostic Laboratory

401 Quarry Road
Monroe, NC 28112
Phone: (704)289-6448
Fax: (704)283-9660

Kim Hagans, DVM Resident Director
Reg Ridenhour, DVM Veterinary Diagnostician
Sherry Casey Processing Assistant IV
Kathy Harwood, AAS Medical Laboratory Technologist I
Kristie Long Medical Laboratory Technician II

Maggie Nelson
Carrie Rowell, BS

Medical Laboratory Assistant II
Medical Laboratory Technician II

Northwestern Animal Disease Diagnostic Laboratory

1689 N. Bridge St.
Elkin, NC 28621
Phone: (336)526-2499
Fax: (336)526-2603

Darrell Rector, Jr., DVM	Resident Co-Director
Brad Barlow, DVM	Resident Co-Director
Barbara Bright, BS	Medical Laboratory Technologist II
Marcella Galyean, AAS	Medical Laboratory Technician II
Brenda Howell	Processing Assistant IV
Nicholas Mosley	Veterinary Laboratory Assistant I

Western Animal Disease Diagnostic Laboratory

785 Airport Road
Fletcher, NC 28732
Phone: (828)684-8188
Fax: (828)687-3574

Richard Oliver, DVM	Resident Director
David Drum, DVM, MS	Veterinary Diagnostician
Darlene Ayers	Processing Assistant IV
Lia Barth, BS	Medical Laboratory Technician II
Wilson Smith	Medical Laboratory Assistant II
Mary Swanson, DVM	Medical Laboratory Technician II

SERVICE MILESTONES, 2011-2012

Jennifer Pruitt	35 years service	June, 2012
Darlene Ayers	25 years service	September, 2011
Cheryl Hearn	20 years service	September, 2011
Mechelle Johnson	20 years service	September, 2011
Sandy Murphy	20 years service	March, 2012
Dr. Karen Post	20 years service	April, 2012
Kim Howle	20 years service	June, 2012
Josh Shepherd	15 years service	October, 2011
Aisha Phipps	10 years service	February, 2012
Lee Goldbach	5 years service	August, 2011
Ghazala Jawad	5 years service	October, 2011
Dr. Mahogany Caesar	5 years service	April, 2012

RETIREMENTS

Mr. Paul Rector, Medical Laboratory Assistant
Western Animal Disease Diagnostic Laboratory, 35 years

Dr. Gene Erickson, Veterinary Specialist
Rollins Animal Disease Diagnostic Laboratory, 22 years

Ms. Kitty Angier, Medical Laboratory Technologist I
Rollins Animal Disease Diagnostic Laboratory, 13 years

External Laboratory Advisory Committee Members

NAME	ADDRESS
Dr. Oscar Fletcher Veterinary Teaching Hospital	NCSU – College of Veterinary Medicine 4700 Hillsborough St. Raleigh, NC 27606
Dr. Richard Mock NCVDLS	Rollins Diagnostic Laboratory 1031 Mail Service Center Raleigh, NC 27699-1031
Dr. Karen Post NCVDLS	Rollins Diagnostic Laboratory 1031 Mail Service Center Raleigh, NC 27699-1031
Mr. Larry Wooten	NC Farm Bureau PO Box 27766 Raleigh, NC 27611
Dr. Leslie Wolf State Public Health Laboratory	DHHS – State Public Health Laboratory 1918 Mail Service Center Raleigh, NC 27699-1918
Dr. Betsy Sigmon Small Animal	Creature Comforts Animal Hospital 3435 Kildaire Farm Road Cary, NC 27518
Dr. Perry Harms Porcine	Murphy-Brown LLC/Smithfield Premium Genetics P O Box 759 Rose Hill, NC 28458
Dr. Richard Kirkman Large Animal	20416 US Hwy 64 West P O Box 350 Siler City, NC 27344
Dr. Randy Jones Large Animal/Dairy	Livestock Veterinary Services PO Box 6580 Kinston, NC 28501
Dr. Shannon Jennings Poultry	House of Raeford P O Box 699 Rose Hill, NC 28458
Dr. Rick Sharpton Poultry—Chickens	Perdue, Inc. 2800 Stantonsburg Rd., Apt. 1B Greenville, NC 27834
Dr. Jennifer Haugland NCVDLS	Rollins Diagnostic Laboratory 1031 Mail Service Center Raleigh, NC 27699-1031
Dr. Allen Cannady Mixed Practice	Small Ruminant and Camelid Services 110 Merlot Drive Hillsborough, NC 27278
Dr. Sally Vivrette Equine	Triangle Equine Mobile Vet Services 103 Candy Apple Court Cary, NC 27513
Dr. David Marshall State Veterinarian	NCDA&CS, Veterinary Division 1030 Mail Service Center Raleigh, NC 27699-1030
Dr. Eric Gonder Dr. Becky Tilley Poultry—Turkeys	Butterball, LLC PO Box 10009 Goldsboro, NC 27532

The NCVDLs established an External Laboratory Advisory Committee (ELAC) in 2005. Our initial purpose was to better serve our clients by uniting a diverse group of veterinarians and industry representatives to discuss the laboratory's offered services, as well as legislation that directly affected our mission. We are appreciative of their time and advice.

General Funds, Funded Contracts and Cooperative Agreements

NCVDLS General Funds

Purchased Contractual Services	\$95,089	Research/Development & Edu Supplies	\$1,021,078
Utility/Energy Services	\$286,034	Other Materials & Supplies	\$40
Repair Services	\$110,072	Equipment	\$34,592
Maintenance Agreements	\$84,484	Art, Other Artifacts & Literature	\$3,321
Rentals/Leases	\$6,266	Intangible Assets (Computer software)	\$11,813
Travel & Other Employee Expenses	\$33,765	Legal, Licenses & Permit Costs	\$9,074
Communications & Data	\$101,199	Unemployment Comp Payments	\$0
Other Services	\$13,846	Other Admin Expenses	\$2,604
General Admin Supplies	\$22,872	Other Expenses	\$4,029
Facility and Hardware Supplies	\$57,890	Other Miscellaneous Expenditures	\$0
Vehicle/Equipment Operating Supplies	\$7,431	Personal Services 72% (Salaries, Benefits)	\$5,091,384
Clothing and Recreational Supplies	\$743	TOTAL	\$6,997,626

Recurring

USDA-APHIS-VS Blanket Purchase Authorization—\$24,440

- reimbursement for BSE Surveillance Sampling

USDA-APHIS-VS Blanket Purchase Authorization—\$6,480

- reimbursement for Scrapie Sample Collection

USDA-AHPIS-VS Classical Swine Fever Surveillance Cooperative Agreement—\$76,967

- reimbursement for surveillance and testing of Classical Swine Fever samples

USDA-APHIS-VS Pseudorabies Surveillance Cooperative Agreement—\$11,660

- reimbursement for surveillance and testing of Pseudorabies samples

USDA-NIFA Cooperative Agreement—\$182,000

- to aid the Food and Agriculture Defense Initiative for surveillance and early detection of animal diseases

Non-Recurring

USDA-APHIS-WS Cooperative Agreement—\$64,328

- Feral swine disease surveillance and management—PRRS, PCV2 and Swine Influenza

Department of Homeland Security

- Grant for the renovation of Receiving and security enhancements \$49,130
- Cooperative Agreement for LIMS enhancements to address hazard preparedness \$50,000

2011-2012 Physical Improvements/New Equipment Purchases

NCVDLS

In July, 2011 NCVDLS implemented USALIMS from Computer Aid Inc. This new system is designed to provide better tracking of specimens throughout our labs, to support improved formatting of client test reports, to expedite distribution of client reports and to enhance client billing services, and to allow enhanced data retrieval for epidemiological and broad analysis of laboratory data and testing.

Rollins Laboratory

- Histology Section—automated slide labeler
- Bacteriology—new incubators
- Serology—new incubators

Arden Laboratory

- Stainless steel cabinetry replaced in Necropsy suite
- Flooring repaired and resealed in Necropsy suite
- Overhead lighting replaced with high efficiency fluorescent fixtures
- Ceilings repaired/repainted in Necropsy, Receiving and front offices
- Installation of card access/card reader doors
- New equipment—outdoor after hours drop-off cooler

Elkin Laboratory

- Ceiling repairs and painting in the large animal Necropsy suite
- New telephone system
- New equipment—ELISA testing equipment and software, conference room chairs

Griffin Laboratory

- Installation of new fire alarm and sprinkler systems
- Installation of card access/card reader doors
- New equipment—incubators, vacuum pump for AI plates, ELISA Reader, Washer and Dryer, AC Units, refrigerator and scanner for copier

Professional Development and Outreach

Rollins Laboratory

- Dr. Tahseen Abdul-Aziz
 - attended the 2012 Western Poultry Disease Conference in Scottsdale, AZ
- Dr. Mahogany Caesar
 - attended the 2011 North Carolina Veterinary Conference in Raleigh, NC
 - completed the Emerging and Exotic Diseases of Animals Online course
- Dr. Jennifer Haugland
 - attended the North Carolina Veterinary Conference in Raleigh, NC
 - attended the Eastern Fish Health Workshop in Charleston, SC
 - completed the Emerging and Exotic Diseases of Animals Online course
- Dr. Richard Mock
 - attended an AAVLD Accreditation Committee Meeting in St. Louis, MO
 - attended the 54th Annual AAVLD Meeting in Buffalo, NY
 - attended the 2012 North Carolina Veterinary Conference Swine Health Meeting in Raleigh, NC
 - attended an AAVLD Accreditation Committee Meeting in Las Vega, NV

- Dr. Peter Moisan
 - attended the 54th Annual AAVLD Meeting in Buffalo, NY
 - attended the Eastern Fish Health Workshop in Charleston, SC
 - completed the Emerging and Exotic Diseases of Animals Online course
- Dr. Karen Post
 - attended the 54th Annual AAVLD Meeting in Buffalo, NY
 - participated in three audits—two NPIP and one NAHLN
- Dr. Stacy Robinson
 - attended the North Carolina Veterinary Conference in Raleigh, NC
- Dr. Alison Tucker
 - attended the CL Davis Symposium on Respiratory Pathology and the 54th Annual AAVLD Meeting in Buffalo, NY
 - completed the Emerging and Exotic Diseases of Animals Online course
- Beverly Wood
 - attended a Biocontainment Basics and Zoonotic Disease Training Course in Ames, IA
- Cindy Nipper, Faye Coombs
 - attended the NC Society of Histopathology Technician's Meeting and Workshop in Raleigh, NC

Arden Laboratory

- Dr. David Drum
 - attended the East Tennessee VMA meeting
 - attended the 7th Annual Equine Encore, Equine Medicine Conference in Athens, GA
 - completed the Emerging and Exotic Diseases of Animals Online course
- Dr. Mary Swanson
 - attended the Backyard Poultry Health Conference at NCSU CVM in Raleigh, NC
- Dr. Richard Oliver
 - attended the 54th Annual AAVLD meeting and the CL Davis Diagnostic Respiratory Pathology Symposium in Buffalo, NY
 - Spoke at the 8th Annual Wildlife Rehabilitation Workshop at the WNC Nature Center in Asheville, NC
 - Served on the steering committee for Buncombe County Community Health Assessment
 - Serving as Chair of the Buncombe County Board of Health and Buncombe County Public Health Foundation

Elkin Laboratory

- Barbara Bright
 - attended the NPIP Avian Influenza Workshop in Athens, GA
- Dr. Brad Barlow
 - attended the USDA-APHIS Foreign Animal Disease Course at Plum Island, NY
- Dr. Darrell Rector
 - spoke at the Alleghany County Cattleman's Association and the 4H Investigative Program
 - completed the Emerging and Exotic Diseases of Animals Online course

Griffin Laboratory

- Dr. Kim Hagans
 - attended the Jackson Hole Veterinary Conference
 - completed the Emerging and Exotic Diseases of Animals Online course
- Dr. Reginald Ridenhour
 - attended the North Carolina Veterinary Conference, Poultry Conference in Raleigh, NC
- Kathy Harwood
 - attended the NPIP Avian Influenza Workshop in Athens, GA
- Maggie Nelson
 - attended the Department of Labor Annual Star Safety Conference in Greensboro, NC

PROFICIENCY TESTING

All four laboratories of the NCVDLs participate in proficiency testing from outside agencies. In addition to these external proficiency tests, laboratory sections participate in internal testing.

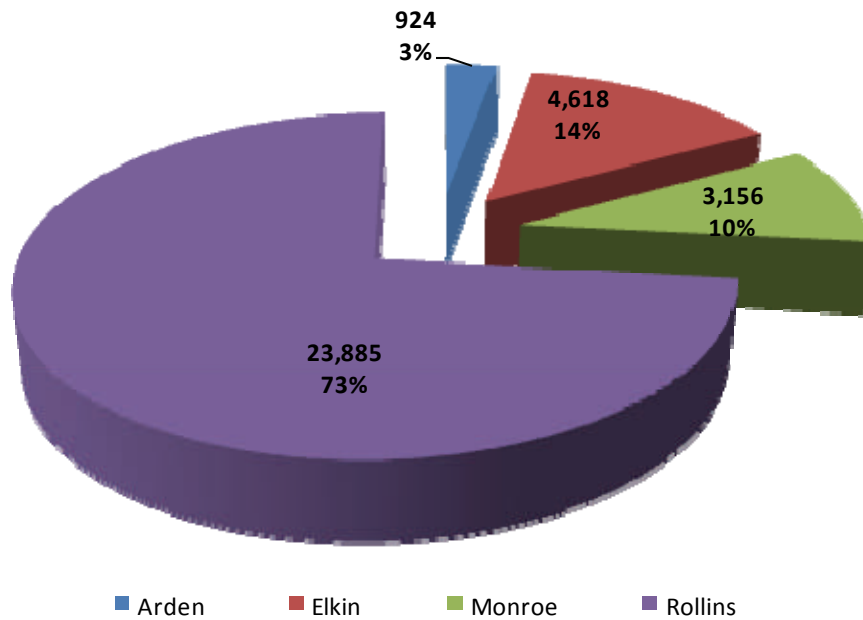
Blind Sample Tests are administered by section supervisors to random technologists. Samples have “dummy” accession numbers and are incorporated into the daily workload. When complete, test results are evaluated by section supervisors for accuracy and timeliness.

Round-Robin tests serve as interlaboratory comparisons between NCVDLs facilities.

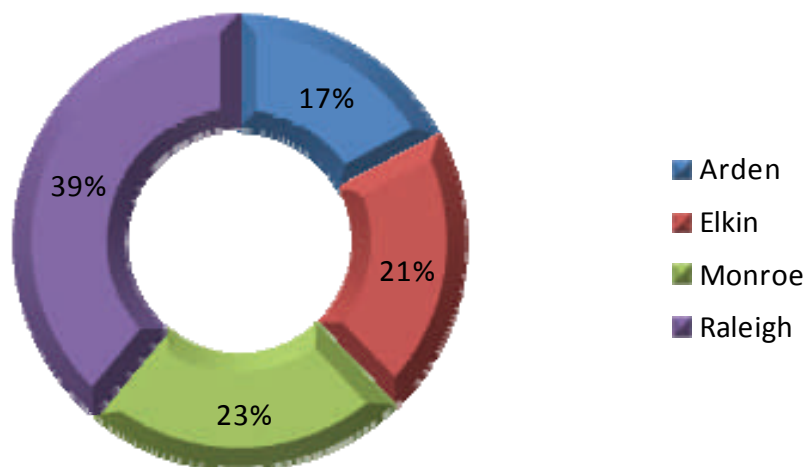
External Proficiency Testing	Test	Laboratory Section	Administering Agency
Internal Bacteriology QA Survey	Bacterial culture identification	Rollins Lab Bacteriology	AAVLD
<i>Salmonella</i> Group D	Bacterial culture	Rollins Lab Bacteriology	NPIP
Southern Bug Exchange Inter-Laboratory Comparison Program	Bacterial culture identification	Rollins Lab Bacteriology	Consortium of Southern VDLS
<i>Tylorella equigenitalis</i>	Bacterial identification	Rollins Lab Bacteriology	NVSL
Avian Influenza	Matrix Primer/ Probe Sets & H5 Primer/ Probe Sets	Rollins Lab Molecular	NAHLN
Avian Paramyxovirus -1	END/NDV for Matrix and Fusion Primer/ Probe Sets	Rollins Lab Molecular	NAHLN
Swine Influenza Virus	Rt-PCR	Rollins Lab Molecular	NAHLN
CSF/FMD	Rt-PCR	Rollins Lab Molecular	NAHLN
Brucellosis	STP, STT, BAPA, Rivanol, CF	Rollins Lab Serology	NVSL
Anaplasmosis	c-ELISA	Rollins Lab Serology	NVSL
Leptospirosis	MAT	Rollins Lab Serology	NVSL
MG & MS	Plate, ELISA & HI	Rollins Lab Serology	NPIP
Avian Influenza	AGID	Rollins Lab Virology	NVSL
Bovine Leukosis Virus	ELISA	Rollins Lab Virology	NVSL
Johne's Disease	ELISA	Rollins Lab Virology	NVSL
Pseudorabies	ELISA GB & G1, Latex	Rollins Lab Virology	NVSL
Bluetongue	ELISA	Rollins Lab Virology	NVSL
Equine Infectious Anemia	AGID	Rollins Lab Virology	NVSL
<i>Salmonella</i> Group D	Culture identification	Monroe Lab Bacteriology	NPIP
MG & MS	Plate & ELISA	Monroe Lab Serology	NPIP
Avian Influenza	AGID	Monroe Lab Virology	NVSL
Brucellosis	BAPA	Arden Lab Serology	NVSL
Equine Infectious Anemia	AGID	Arden Lab Virology	NVSL
Avian Influenza	AGID	Elkin Lab Serology	NVSL
MG & MS	Plate	Elkin Lab Serology	NPIP

NCVDLS 2011-2012 *Accession Information

The total accessions for NCVDLS: 32,583.



Necropsy Accessions for NCVDLS



*Accessions may contain more than one test and more than one sample.

Western Animal Disease Diagnostic Laboratory—Arden, NC

Number of Accessions

Necropsy	586
Parasitology	436
Bacterial Serology	11
Viral Serology	122

Northwestern Animal Disease Diagnostic Laboratory—Elkin, NC

Number of Accessions

Necropsy	705
Parasitology	174
Bacterial Serology	5,160
Viral Serology	3,765

Hoyle C. Griffin Animal Disease Diagnostic Laboratory—Monroe, NC

Number of Accessions

Bacteriology	789
Necropsy	387
Parasitology	165
Bacterial Serology	2,608
Viral Serology	1,429
Virology	503

Rollins Animal Disease Diagnostic Laboratory—Raleigh, NC

Number of Accessions

Bacteriology	6,263
Cytology	1,005
Fungal Cultures	217
Histology	9,064
Immunohistochemistry	409
Molecular	2,322
Necropsy	1,326
Parasitology	460
Serology	6,963
Viral Serology	15,049
Virology	452

Outsourced Testing—All Labs

Number of Accessions

Bovine Spongiform Encephalopathy	33
Chronic Wasting Disease	34
Johnes	1
Rabies	174
Salmonella Serotyping	105
Scrapie	10
Turkey Coronavirus	112
Miscellaneous Outsourced Test	108
Toxicology	31

Bacteriology Accessions

	Rollins	Arden	Elkin	Monroe
Aerobic Culture	3,156	N/A	N/A	N/A
Acid Fast Stain	42			
Anaerobic Culture	125			
Antimicrobial Susceptibility	1,296			
<i>Bartonella</i> spp. culture	14			
<i>Brachyspira</i> spp. Culture	6			
<i>Brucella</i> spp. Culture	18			
Bulk Tank milk Culture	5			
<i>Campylobacter</i> spp. culture	75			
<i>Clostridium difficile</i> culture	3			
<i>Clostridium difficile</i> toxin assay	37			
<i>Taylorella equigenitalis</i> (CEM) culture	17			
<i>Clostridium perfringens</i> culture	261			
Diffquik stain	7	▼		
FA, <i>Clostridium chauvoei</i>	32	7		
FA, <i>Clostridium novyi</i>	17	5		
FA, <i>Clostridium septicum</i>	28	5		
FA, <i>Clostridium sordellii</i>	16	5		
Gram Stain	9	N/A		
Johne's Culture	30			
Leptospirosis (FA) test	74			
<i>Listeria</i> spp. Culture	86			
<i>Mycoplasma</i> spp. Culture	72			▼
NPIP <i>Salmonella</i> Culture	1			780
Rollins Bacteriology Referral	2			N/A
Ruminant Mastitis Culture	49			↓
<i>Salmonella</i> spp. Culture	742			↓
Sdix <i>Salmonella</i> detection	N/A			9
<i>Yersinia</i> spp. Culture	43	▼	▼	N/A
TOTAL	6,263	22	0	789

Parasitology Accessions

	Rollins	Arden	Elkin	Monroe
<i>Cryptosporidium</i> IFA	51	14	N/A	N/A
Fecal Examination - Centrifugation Sucrose	0	5	0	0
Fecal Examination - Direct Smear	14	8	0	0
Fecal Examination - Flotation	182	370	174	59
<i>Giardia</i> IFA	39	13	N/A	N/A
Modified McMaster's	158	26	0	106
<i>Trichostrongylus</i> exam	16	N/A	N/A	N/A
TOTAL	460	436	174	165

Bacterial Serology Accessions

	Rollins	Arden	Elkin	Monroe
Anaplasmosis (ELISA)	76	N/A	N/A	N/A
<i>Bordetella avium</i> (ELISA)	21	↓		
<i>Brucella abortus</i> (BAPA) (Plate)	546	11		
<i>Brucella abortus</i> (Card)	5	N/A		
<i>Brucella abortus</i> (RAP)	48			
<i>Brucella abortus</i> (SPT)	2			
<i>Brucella abortus</i> (STT)	1			
<i>L. bratislava</i> (MAT)	27			
<i>L. canicola</i> (MAT)	99			
<i>L. grippotyphosa</i> (MAT)	99			
<i>L. hardjo</i> (MAT)	99			
<i>L. icterohaemorrhagiae</i> (MAT)	99			
<i>L. pomona</i> (MAT)	99			↓
<i>Mycoplasma gallisepticum</i> (ELISA)	2,333			1,042
<i>Mycoplasma gallisepticum</i> (HI)	51		↓	N/A
<i>Mycoplasma gallisepticum</i> (Plate)	107		2,580	26
<i>Mycoplasma meleagridis</i> (ELISA)	0		N/A	406
<i>Mycoplasma meleagridis</i> (HI)	679			N/A
<i>Mycoplasma synoviae</i> (ELISA)	2,337			1,044
<i>Mycoplasma synoviae</i> (HI)	100		↓	N/A
<i>Mycoplasma synoviae</i> (Plate)	107		2,580	12
<i>Mycoplasma hyopneumoniae</i> (ELISA)	14		N/A	N/A
<i>Salmonella pullorum</i> (Plate)	0			0
<i>Salmonella pullorum</i> (Tube)	19			78
Rollins Serology Referral	1	↓	↓	N/A
TOTAL	6,969	11	5,160	2,608

Virology Accessions

	Raleigh	Arden	Elkin	Monroe
Influenza Antigen (ELISA)	2,082	N/A	N/A	404
Bovine Viral Diarrhea Virus Antigen Capture (ELISA)	93			N/A
<i>Chlamydia</i> (ELISA)	53			
<i>Coccidia</i> (AO)	3			
Electron microscopy - negative stain	70			
Fluorescent Antibody Test (FATST)	46			
Virus Isolation (cell culture)	265			
Virus isolation (egg inoculation)	71	↓	↓	↓
TOTAL	2,683	0	0	404

Viral Serology Accessions

	Rollins	Arden	Elkin	Monroe
Avian Encephalomyelitis Virus (AGID)	9	N/A	N/A	N/A
Avian Encephalomyelitis Virus (ELISA)	100		↓	↓
Avian Influenza (AGID)	918		3,765	503
Avian Influenza (ELISA)	3,716		N/A	1,025
Avian Influenza-multiple Species (ELISA)	0			N/A
Avian Paramyxovirus-1 (APMV-1) (ELISA)	411			
Avian Paramyxovirus-1 (APMV-1) (HI)	68			
Avian Paramyxovirus-1 (APMV-1) (ELISA) Turkey	39			
Avian Reovirus (ELISA)	1			
Bovine Leukosis Virus (ELISA)	122			
Bluetongue Virus (AGID)	2			
Bluetongue Virus (c-ELISA)	23			
Bovine Viral Diarrhea Virus Type 1a (VN)	52			
Bovine Viral Diarrhea Virus Type 2 (VN)	52			
Caprine Arthritis Encephalitis (cELISA)	114			
Caprine Arthritis Encephalitis/Ovine Progressive Pneumonia (AGID)	14			
Chicken Anemia Virus 1:10 (CAV) (ELISA)	127	↓		
Equine Infectious Anemia (AGID)	4,343	120		
Equine Infectious Anemia (ELISA)	86	2		
Equine Rhinopneumonitis (VN)	1	N/A		
Hemorrhagic Enteritis (AGID)	12			
Infectious Bronchitis Virus - Ark (HI)	51			
Infectious Bronchitis Virus - Conn (HI)	51			
Infectious Bursal Disease (AGID)	37			
Infectious Bronchitis Virus - Delaware (HI)	32			
Infectious Bursal Disease (ELISA)	408			
Infectious Bronchitis Virus JMK (HI)	30			
Infectious Bronchitis Virus - Mass (HI)	51			
Infectious Bovine Rhinotracheitis Virus (VN)	44			
Infectious Bronchitis Virus (ELISA)	402			
Johne's (AGID)	11			
Johne's (ELISA)	191			
Neospora caninum (ELISA)	23			
Porcine circovirus-2 (ELISA)	42			
Parainfluenza 3 (VN)	9			
Porcine Parvovirus (HI)	5			
Porcine Reproductive & Respiratory Syndrome Virus (ELISA)	69			
Pseudorabies Virus g1 (ELISA)	0			
Pseudorabies Virus gB (ELISA)	609			
Rollins Virology Referral	3			
REO (ELISA)	403			
Swine Influenza Virus Gamma H1N1 (H1N2-like) (HI)	2			
Swine Influenza Virus Delta H1N1 (human-like) (HI)	1			
Swine Influenza Virus Beta H1N1 (reassortant) (HI)	53			
Swine Influenza Virus H3N2 (HI)	55			
Viral Arthritis (AGID)	26	↓	↓	↓
TOTAL	12,818	122	3,765	1,528

Rollins Lab Histology Accessions

Cytology	1,005
- number of sites examined	
Histology	9,064
- routine H & E slides produced and examined	
Special Stains	1,136
- includes files and gram for bacteria, PAS and GMS for fungi, stains for copper and mineral, other miscellaneous stains	

Rollins Lab Immunohistochemistry Accessions

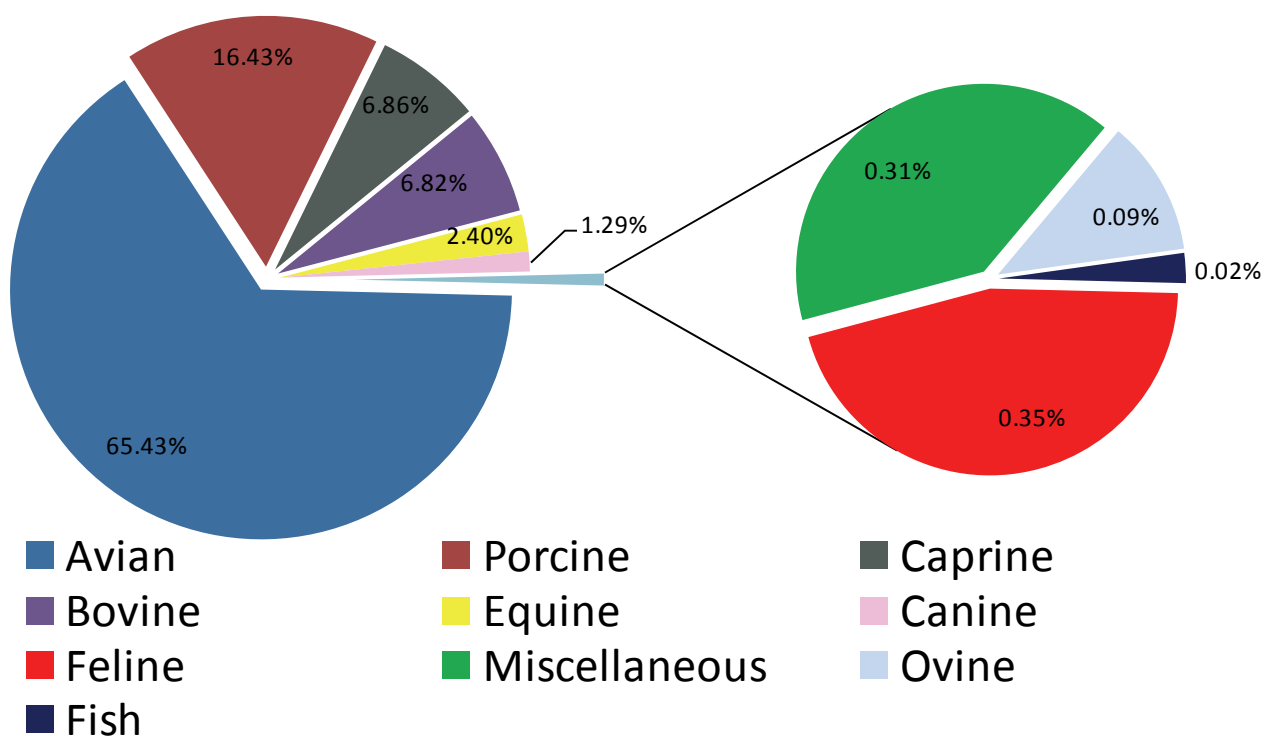
Adenovirus (IHC)	3	Feline Herpes Virus 1 (IHC)	3
Bovine Coronavirus (IHC)	3	Feline Panleukopenia (IHC)	9
Bovine Respiratory Syncytial Virus (IHC)	7	Ferret Coronavirus (IHC)	1
Bovine Virus Diarrhea (IHC)	42	Influenza Virus (IHC)	4
Bovine Virus Diarrhea Ear Notch (IHC)	7	<i>Leptospira</i> sp. (IHC)	7
Canine Coronavirus (IHC)	13	Melan A (IHC)	8
CD18 (IHC)	11	<i>Neospora caninum</i> (IHC)	11
CD20 (IHC)	2	Pancyto Keratin AE1/AE3 (IHC)	4
CD3 (IHC)	36	PAX 5 (IHC)	22
CD79a (IHC)	13	Porcine Circovirus II (IHC)	17
Canine Distemper Virus (IHC)	57	Porcine Reproductive & Respiratory Syndrome Virus (IHC)	7
Canine Parvovirus (IHC)	40	Recut/unstained/charged slides (IHC)	9
Eastern Equine Encephalitis Virus (IHC)	9	Porcine Coronavirus-TGE (IHC)	1
Equine Herpes Virus 1 (IHC)	5	<i>Toxoplasma gondii</i> (IHC)	11
Feline Coronavirus (IHC)	35	West Nile Virus (IHC)	12
TOTAL			409

Rollins Lab Molecular Diagnostics Accessions

Avian Influenza H5 RRT-PCR	5	Infectious Laryngotracheitis Virus (PCR)	65
Avian Influenza H7 RRT-PCR	5	<i>Lawsonia</i> PCR	7
Avian Influenza Matrix RRT-PCR	910	<i>Mycoplasma gallisepticum</i> PCR	310
Avian Paramyxovirus-1 (APMV-1) Matrix RRT-PCR	156	<i>Mycoplasma synoviae</i> PCR	255
Bovine Viral Diarrhea Virus PCR	42	Porcine Reproductive & Respiratory Syndrome Virus Multiplex PCR - North American & European	7
Creelan Cal-Mex RNA	5	Porcine Reproductive & Respiratory Syndrome Virus North American PCR	70
<i>Clostridium perfringens</i> genotyping	81	Porcine Reproductive & Respiratory Syndrome Virus European - PCR	70
Classical Swine Fever PCR	134	Rollins Molecular Diagnostics Referral	6
<i>E. coli</i> genotyping	18	Swine Influenza Virus - NP PCR	72
Eastern equine encephalitis PCR	14	Swine Influenza Virus subtyping PCR	2
Foot and Mouth Disease PCR	2	Porcine Coronavirus-TGE PCR	6
Infectious Bronchitis PCR	67	West Nile Virus PCR	13
TOTAL			2,322

NCVDLS TOTAL TEST COUNT By Animal Species

Avian	1,220,435
Bovine	127,188
Canine	24,116
Caprine	127,954
Equine	44,816
Feline	6,483
Fish	293
Miscellaneous	5,707
Ovine	1,769
Porcine	306,556



PERCENTAGE OF CASELOAD By Animal Species

Avian	65.43%
Porcine	16.43%
Caprine	6.86%
Bovine	6.82%
Equine	2.40%
Canine	1.29%
Feline	0.35%
Miscellaneous	0.31%
Ovine	0.09%
Fish	0.02%

Avian Test Procedures

Necropsy—Poultry	6,353
Necropsy—Wildlife	27
Necropsy—Pet Bird	43
Acid Fast Stain	15
Aerobic Culture	2,423
Anaerobic Culture	28
Antimicrobial Susceptibility	1,330
Avian Encephalomyelitis Virus (AGID)	10
Avian Encephalomyelitis Virus (ELISA)	1,890
Avian Influenza (AGID)	126,257
Avian Influenza (ELISA)	80,530
Avian Influenza H5 RRT-PCR	42
Avian Influenza H7 RRT-PCR	42
Avian Influenza Matrix RRT-PCR	3,498
Avian Paramyxovirus-1 (APMV-1) (ELISA)	7,106
Avian Paramyxovirus-1 (APMV-1) (ELISA) Turkey	301
Avian Paramyxovirus-1 (APMV-1) (HI)	295
Avian Paramyxovirus-1 (APMV-1) Matrix RRT-PCR	236
Avian Reovirus (ELISA)	20
Bordetella Avium (ELISA)	181
CD3 (IHC)	7
Chicken Anemia Virus 1:10 (CAV) (ELISA)	2,712
<i>Chlamydia</i> (ELISA)	24
<i>Clostridium perfringens</i> culture	21
<i>Clostridium perfringens</i> genotyping	2
Coccidia (AO)	1
Creelan Cal-Mex RNA	9
Cytology	19
Eastern Equine Encephalitis PCR	6
Eastern Equine Encephalitis Virus (IHC)	11
Electron microscopy - negative stain	11
Fecal Examination - Direct Smear	650
Fecal Examination - Flotation	98
Fungal Culture	88
Hemorrhagic Enteritis (AGID)	132
Histopathology H & E	3,349
Infectious Bronchitis PCR	228
Infectious Bronchitis Virus - Ark (HI)	298
Infectious Bronchitis Virus - Conn (HI)	298
Infectious Bronchitis Virus - Delaware (HI)	222
Infectious Bronchitis Virus - Mass (HI)	298
Infectious Bronchitis Virus (ELISA)	7,027
Infectious Bronchitis Virus JMK (HI)	159
Infectious Bursal Disease (AGID)	113
Infectious Bursal Disease (ELISA)	7,109
Infectious Laryngotracheitis Virus (PCR)	140

Avian Test Procedures cont'

Influenza Antigen (ELISA)	5,503
<i>Mycoplasma gallisepticum</i> (ELISA)	176,862
<i>Mycoplasma gallisepticum</i> (HI)	269
<i>Mycoplasma gallisepticum</i> (Plate)	229,995
<i>Mycoplasma gallisepticum</i> PCR	1,663
<i>Mycoplasma meleagridis</i> (ELISA)	41,884
<i>Mycoplasma meleagridis</i> (HI)	20
<i>Mycoplasma</i> spp. Culture	24
<i>Mycoplasma synoviae</i> (ELISA)	176,921
<i>Mycoplasma synoviae</i> (HI)	387
<i>Mycoplasma synoviae</i> (Plate)	229,856
<i>Mycoplasma synoviae</i> PCR	1,455
NPIP <i>Salmonella</i> Culture	2,731
Pancytokeratin AE1/AE3 (IHC)	1
PAX 5 (IHC)	4
REO (ELISA)	7,031
<i>Salmonella pullorum</i> (Plate)	12,134
<i>Salmonella pullorum</i> (Tube)	3,888
<i>Salmonella</i> Serotyping	118
<i>Salmonella</i> spp. Culture	307
Sdix <i>Salmonella</i> Detection	16
Swine Influenza Virus subtyping PCR	2
Toxicology	1
Viral Arthritis (AGID)	41
Virus Isolation (cell culture)	9
Virus isolation (egg inoculation)	196
West Nile Virus (IHC)	5
West Nile Virus PCR	1

Bovine Test Procedures

Necropsy	451
Acid Fast Stain	34
Aerobic Culture	1,228
Anaerobic Culture	14
Anaplasmosis (ELISA)	671
Antimicrobial Susceptibility	244
Bluetongue Virus (AGID)	46
Bluetongue Virus (c-ELISA)	86
Bovine Coronavirus (IHC)	2
Bovine Leukosis Virus (ELISA)	965
Bovine Respiratory Syncytial Virus (IHC)	8
Bovine Spongiform Encephalopathy	89

Bovine Test Procedures cont'

Bovine Viral Diarrhea Virus Antigen Capture (ELISA)	446
Bovine Viral Diarrhea Virus PCR	38
Bovine Viral Diarrhea Virus Type 1a (VN)	137
Bovine Viral Diarrhea Virus Type 2 (VN)	137
Bovine Virus Diarrhea (IHC)	57
Bovine Virus Diarrhea Ear Notch (IHC)	59
<i>Brucella abortus</i> (BAPA) (Plate)	16,155
<i>Brucella abortus</i> (Card)	175
<i>Brucella abortus</i> (RAP)	20,179
<i>Brucella abortus</i> (SPT)	51
<i>Brucella abortus</i> (STT)	1
<i>Brucella</i> spp. Culture	11
Bulk Tank milk Culture	5
<i>Campylobacter</i> spp. Culture	59
CD3 (IHC)	2
CD79a (IHC)	2
<i>Chlamydia</i> (ELISA)	3
Clostridial FAT	107
<i>Clostridium difficile</i> toxin assay	11
<i>Clostridium perfringens</i> culture	81
<i>Clostridium perfringens</i> genotyping	13
Coccidia (AO)	2
<i>Cryptosporidium</i> IFA	85
Cytology	7
Diffquik stain	1
<i>E. coli</i> genotyping	5
Electron microscopy - negative stain	54
Fecal Examination - Centrifugation Sucrose	2
Fecal Examination - Direct Smear	1
Fecal Examination - Flotation	105
Flourescent Antibody Test (FATST)	6
Fungal Culture	6
<i>Giardia</i> IFA	66
Histopathology H & E	4,176
Infectious Bovine Rhinotracheitis Virus (VN)	106
Johnes	5
Johne's (AGID)	5
Johne's (ELISA)	985
Johne's Culture	34
<i>Leptospira</i> sp. (IHC)	1
Leptospiral (MAT)	740
Leptospirosis (FA)	34
<i>Listeria</i> spp. Culture	42
Modified McMaster's	41
<i>Mycoplasma</i> spp. Culture	47

Bovine Test Procedures cont'

<i>Neospora caninum</i> (ELISA)	58
<i>Neospora caninum</i> (IHC)	15
Parainfluenza 3 (VN)	18
Rabies	51
Ruminant Mastitis Culture	192
<i>Salmonella</i> Serotyping	12
<i>Salmonella</i> spp. Culture	340
Toxicology	7
<i>Trichomonas</i> exam	20
Virus Isolation (cell culture)	240
<i>Yersinia</i> spp. Culture	16

Canine Test Procedures

Necropsy	498
Acid Fast Stain	2
Adenovirus (IHC)	3
Aerobic Culture	1,723
Anaerobic Culture	46
Antimicrobial Susceptibility	548
<i>Bartonella</i> spp. Culture	4
Bovine Coronavirus (IHC)	1
<i>Brucella</i> spp. Culture	11
<i>Campylobacter</i> spp. culture	29
Canine Coronavirus (IHC)	11
Canine Distemper Virus (IHC)	69
Canine Parvovirus (IHC)	42
CD18 (IHC)	11
CD3 (IHC)	25
CD79a (IHC)	8
Clostridial FAT	4
<i>Clostridium difficile</i> toxin assay	1
<i>Clostridium perfringens</i> culture	54
<i>Clostridium perfringens</i> genotyping	8
<i>Cryptosporidium</i> IFA	8
Cytology	1,008
Diffquik stain	6
<i>E. coli</i> genotyping	6
Electron microscopy - negative stain	8
Fecal Examination - Direct Smear	3
Fecal Examination - Flotation	149
Flourescent Antibody Test (FATST)	4
Fungal Culture	84
<i>Giardia</i> IFA	13
Gram Stain	1
Histopathology H & E	17,668

Canine Test Procedures cont'

Influenza Virus (IHC)	2
<i>Leptospira</i> sp. (IHC)	2
Leptospiral (MAT)	67
Leptospirosis (FA)	24
Melan A (IHC)	5
<i>Mycoplasma</i> spp. Culture	6
<i>Neospora caninum</i> (IHC)	1
Pancytokeratin AE1/AE3 (IHC)	2
PAX 5 (IHC)	16
Rabies	67
<i>Salmonella</i> Serotyping	5
<i>Salmonella</i> spp. Culture	292
Swine Influenza Virus - NP PCR	1
Toxicology	26
<i>Toxoplasma gondii</i> (IHC)	3
Virus Isolation (cell culture)	17
<i>Yersinia</i> spp. Culture	2

Caprine Test Procedures

Necropsy	237
Acid Fast Stain	6
Aerobic Culture	586
Anaerobic Culture	8
Anaplasmosis (ELISA)	1
Antimicrobial Susceptibility	75
Bovine Respiratory Syncytial Virus (IHC)	1
<i>Brucella abortus</i> (BAPA) (Plate)	710
<i>Brucella</i> spp. Culture	7
<i>Campylobacter</i> spp. Culture	15
Caprine Arthritis Encephalitis (cELISA)	1,248
Caprine Arthritis Encephalitis/Ovine Progressive Pneumonia (AGID)	12
<i>Chlamydia</i> (ELISA)	21
Clostridial FAT	16
<i>Clostridium difficile</i> toxin assay	6
<i>Clostridium perfringens</i> culture	118
<i>Clostridium perfringens</i> genotyping	60
Cytology	5
Electron microscopy - negative stain	2
Fecal Examination - Centrifugation Sucrose	2
Fecal Examination - Flotation	201
Fungal Culture	1

Caprine Test Procedures cont'

Histopathology H & E	1,979
Johne's (AGID)	5
Johne's (ELISA)	471
Johne's Culture	4
<i>Leptospira</i> sp. (IHC)	2
Leptospirosis (FA)	11
<i>Listeria</i> spp. Culture	49
Modified McMaster's	108
<i>Mycoplasma</i> spp. Culture	15
Rabies	35
Ruminant Mastitis Culture	28
<i>Salmonella</i> spp. Culture	174
Scrapie	3
Toxicology	2
Virus Isolation (cell culture)	3
<i>Yersinia</i> spp. Culture	22

Equine Test Procedures

Necropsy	164
Aerobic Culture	437
Anaerobic Culture	13
Anaplasmosis (ELISA)	7
Antimicrobial Susceptibility	89
<i>Campylobacter</i> spp. Culture	6
CD3 (IHC)	2
CD79a (IHC)	1
<i>Chlamydia</i> (ELISA)	5
Clostridial FAT	4
<i>Clostridium difficile</i> culture	3
<i>Clostridium difficile</i> toxin assay	14
<i>Clostridium perfringens</i> culture	13
<i>Clostridium perfringens</i> genotyping	1
Cytology	33
Eastern Equine Encephalitis PCR	30
Eastern Equine Encephalitis Virus (IHC)	4
Electron microscopy - negative stain	1
Equine Herpes Virus 1 (IHC)	5
Equine Infectious Anemia (AGID)	9,007
Equine Infectious Anemia (ELISA)	124
Equine Rhinopneumonitis (VN)	1
Fecal Examination - Centrifugation Sucrose	1
Fecal Examination - Flotation	208
Flourescent Antibody Test (FATST)	14
Fungal Culture	5
Histopathology H & E	2,050
<i>Lawsonia</i> PCR	1
Leptospiral (MAT)	24

Equine Test Procedures cont'

Leptospirosis (FA)	5
Modified McMaster's	380
PAX 5 (IHC)	1
Rabies	31
<i>Salmonella</i> Serotyping	1
<i>Salmonella</i> spp. Culture	92
<i>Taylorella equigenitalis</i> (CEM) culture	20
Toxicology	5
Virus Isolation (cell culture)	29
West Nile Virus (IHC)	8
West Nile Virus PCR	30

Feline Test Procedures

Necropsy	288
Acid Fast Stain	3
Aerobic Culture	720
Anaerobic Culture	43
Antimicrobial Susceptibility	142
<i>Bartonella</i> spp. Culture	11
<i>Campylobacter</i> spp. Culture	4
CD3 (IHC)	4
CD79a (IHC)	3
<i>Chlamydia</i> (ELISA)	8
<i>Clostridium difficile</i> toxin assay	1
<i>Clostridium perfringens</i> culture	9
<i>Clostridium perfringens</i> genotyping	4
<i>Cryptosporidium</i> IFA	7
Cytology	173
Diffquik stain	1
<i>E. coli</i> genotyping	1
Electron microscopy - negative stain	5
Fecal Examination - Direct Smear	1
Fecal Examination - Flotation	34
Feline Coronavirus (IHC)	39
Feline Herpes Virus 1 (IHC)	3
Feline Panleukopenia (IHC)	9
Fluorescent Antibody Test (FATST)	16
Fungal Culture	70
<i>Giardia</i> IFA	7
Gram Stain	1
Histopathology H & E	4,387
Leptospirosis (FA)	1
Melan A (IHC)	3
<i>Mycoplasma</i> spp. Culture	10
Pancytokeratin AE1/AE3 (IHC)	2
PAX 5 (IHC)	2
Rabies	74
<i>Salmonella</i> Serotyping	1

Feline Test Procedures cont'

<i>Salmonella</i> spp. Culture	68
Swine Influenza Virus - NP PCR	2
Toxicology	3
<i>Toxoplasma gondii</i> (IHC)	7
<i>Tritrichomonas</i> exam	3
Virus Isolation (cell culture)	25

Fish Test Procedures

Necropsy	21
Aerobic Culture	18
Antimicrobial Susceptibility	11
Fungal Culture	1
Histopathology H & E	106

Ovine Test Procedures

Necropsy	61
Aerobic Culture	99
Anaerobic Culture	3
Antimicrobial Susceptibility	8
Bluetongue Virus (c-ELISA)	14
Bovine Virus Diarrhea (IHC)	1
<i>Brucella abortus</i> (BAPA) (Plate)	56
<i>Campylobacter</i> spp. Culture	2
Caprine Arthritis Encephalitis/Ovine Progressive Pneumonia (AGID)	40
<i>Chlamydia</i> (ELISA)	6
Clostridial FAT	8
<i>Clostridium perfringens</i> culture	16
<i>Clostridium perfringens</i> genotyping	4
Cytology	2
Electron microscopy - negative stain	3
Fecal Examination - Centrifugation Sucrose	1
Fecal Examination - Flotation	63
Fungal Culture	1
Histopathology H & E	404
Johne's (AGID)	3
Johne's (ELISA)	20
Leptospiral (MAT)	10
Leptospirosis (FA)	1
<i>Listeria</i> spp. Culture	3
Modified McMaster's	15
<i>Mycoplasma</i> spp. Culture	3
Rabies	5
<i>Salmonella</i> spp. Culture	24
Scrapie	22
Toxicology	4
<i>Toxoplasma gondii</i> (IHC)	1
<i>Yersinia</i> spp. Culture	1

Porcine Test Procedures

Necropsy	73
Aerobic Culture	274
Anaerobic Culture	2
Antimicrobial Susceptibility	70
Avian Influenza-multiple Species (ELISA)	46
Bovine Viral Diarrhea Virus PCR	1
<i>Brachyspira</i> spp. Culture	7
<i>Brucella abortus</i> (BAPA) (Plate)	910
<i>Brucella abortus</i> (Card)	1
<i>Brucella</i> spp. Culture	7
Caprine Arthritis Encephalitis (cELISA)	2
Classical Swine Fever PCR	1,114
<i>Clostridium difficile</i> toxin assay	3
<i>Clostridium perfringens</i> culture	6
<i>E. coli</i> genotyping	9
Electron microscopy - negative stain	6
Fecal Examination - Direct Smear	1
Fecal Examination - Flotation	16
Fluorescent Antibody Test (FATST)	14
Foot and Mouth Disease PCR	39
Histopathology H & E	696
Influenza Virus (IHC)	4
<i>Lawsonia</i> PCR	9
<i>Leptospira</i> sp. (IHC)	2
Leptospiral (MAT)	7,116
Leptospirosis (FA)	4
<i>Mycoplasma hyopneumoniae</i> (ELISA)	131
Porcine Circovirus II (IHC)	30
Porcine Circovirus II (ELISA)	276
Porcine Coronavirus-TGE (IHC)	1
Porcine Coronavirus-TGE PCR	9
Porcine Parvovirus (HI)	50
Porcine Reproductive & Respiratory Syndrome Virus (ELISA)	856
Porcine Reproductive & Respiratory Syndrome Virus (IHC)	18
Porcine Reproductive & Respiratory Syndrome Virus European - PCR	258
Porcine Reproductive & Respiratory Syndrome Virus Multiplex PCR	365
Porcine Reproductive & Respiratory Syndrome Virus North American PCR	258
Pseudorabies Virus g1 (ELISA)	58
Pseudorabies Virus gB (ELISA)	3,906
Rabies	6
<i>Salmonella</i> Serotyping	2
<i>Salmonella</i> spp. Culture	43
Swine Influenza Virus - NP PCR	345
Swine Influenza Virus Beta H1N1 (reassortant) (HI)	550
Swine Influenza Virus Delta H1N1 (human-like) (HI)	257
Swine Influenza Virus Gamma H1N1 (H1N2-like) (HI)	15
Swine Influenza Virus H3N2 (HI)	565
Swine Influenza Virus subtyping PCR	1
<i>Toxoplasma gondii</i> (IHC)	2
Virus Isolation (cell culture)	54
Virus isolation (egg inoculation)	2

Miscellaneous Animals Test Procedures

Includes the following: alpaca, antelope, bat, bearded dragon, binturong, camel, camelid, chinchilla, deer, elk, ferret, fox, frog, gecko, gerbil, guinea pig, hedgehog, kinkajou, lemur, llama, monkey, possum, rabbit, raccoon, rat, senegal, snake, squirrel, sugar glider, turtle, wolf, and yak.

Necropsy	142
Acid Fast Stain	7
Aerobic Culture	343
Anaerobic Culture	43
Antimicrobial Susceptibility	50
Bluetongue Virus (c-ELISA)	35
Bovine Leukosis Virus (ELISA)	2
Bovine Viral Diarrhea Virus PCR	14
Bovine Virus Diarrhea (IHC)	3
<i>Brucella abortus</i> (BAPA) (Plate)	281
<i>Brucella</i> spp. Culture	1
<i>Campylobacter</i> spp. Culture	3
Canine Distemper Virus (IHC)	5
Canine Parvovirus (IHC)	1
Chlamydia (ELISA)	1
Chronic Wasting Disease	142
Clostridial FAT	12
<i>Clostridium difficile</i> toxin assay	3
<i>Clostridium perfringens</i> culture	18
<i>Clostridium perfringens</i> genotyping	3
<i>Cryptosporidium</i> IFA	5
Cytology	16
Electron microscopy - negative stain	4
Fecal Examination - Centrifugation Sucrose	7
Fecal Examination - Direct Smear	1
Fecal Examination - Flotation	192
Ferret Coronavirus (IHC)	1
Fungal Culture	4
<i>Giardia</i> IFA	4
Histopathology H & E	1,293
Johne's (ELISA)	3
Johne's Culture	4
Leptospirosis (FA)	9
<i>Listeria</i> spp. Culture	5
Modified McMaster's	68
<i>Mycoplasma</i> spp. Culture	3
Rabies	38
<i>Salmonella</i> Serotyping	2
<i>Salmonella</i> spp. Culture	56
<i>Toxoplasma gondii</i> (IHC)	1
Virus Isolation (cell culture)	10
West Nile Virus (IHC)	2
<i>Yersinia</i> spp. Culture	6