

NCVDLS Annual Report

North Carolina Veterinary Diagnostic Laboratory System

Volume 2

12/16/2013

2012-2013

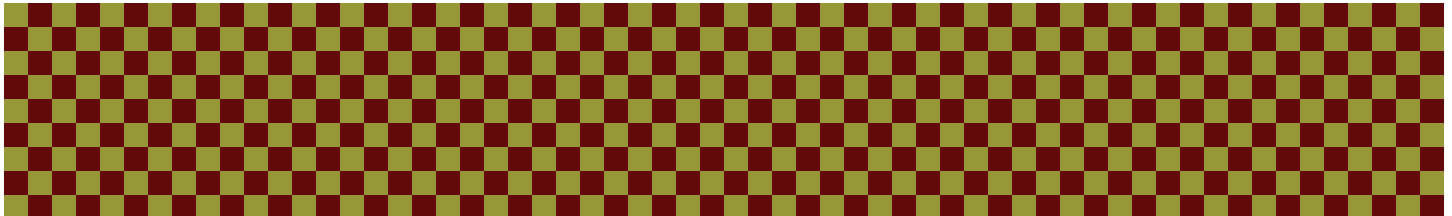


North Carolina Department of Agriculture
& Consumer Services
Veterinary Division

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

Table of Contents

Page	
2	Mission Statement/Message from the Director
4-6	Facilities and Laboratory Personnel
7	External Laboratory Advisory Committee
8-9	Budget and Facility Information
9	Professional Development and Outreach
10	Proficiency Testing
11-15	NCVDLS Accession Information
16-24	NCVDLS Test Counts by Taxonomy



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
785 Airport Road
Fletcher, NC 28732
(828) 684-8188

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

page
intentionally
left blank

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 prior fiscal year (FY 12/13) was a busy one for the North Carolina Veterinary Diagnostic Laboratory System. Our overall accession count increased by 10.8%, with the largest increase seen at our Western Animal Disease Diagnostic Laboratory, showing an impressive 19.59% growth.

In addition to an elevated workload, we completed a three-year Homeland Security-funded construction project involving installation of a generator designed to power the entire laboratory during emergency situations. Two other Homeland Security-funded projects were nearing completion by June 30, 2013, and will be finalized during the FY 13/14 fiscal year.

A good bit of the last six months of FY 12/13 was spent preparing for our American Association of Veterinary Laboratory Diagnosticians (AAVLD) Accreditation Site Visit, which was successfully completed the week of September 8th through September 12th. After an intensive examination of all sections in all four NCVDLS laboratories, the AAVLD granted full accreditation for five (5) years on the condition that we provide an acceptable response to non-conformances revealed during the audit.

It is our hope that you will find the information contained in this edition of the NCVDLS Annual Report both interesting and useful. Our goal remains 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

page
intentionally
left blank

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
Phyllis Howard	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
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

Building Maintenance

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
Melissa Waller, BS	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
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

NCVDLS Branch Facilities

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
Diedre Mahaffey	Medical Laboratory Assistant II
Carrie Rowell, BS	Medical Laboratory Technician II

Northwestern Animal Disease Diagnostic Laboratory

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

Brad Barlow, DVM Resident 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, 2012-2013

Dr. Mahogany Caesar	5 years service	April, 2013
Tom Miller	5 years service	May, 2013
Carrie Rowell	5 years service	February, 2013
Mary Baker	10 years service	April, 2013
Dr. Jennifer Haugland	10 years service	August, 2013
Kim Howle	20 years service	June, 2013
Dell Weaver	20 years service	June, 2013
Brenda Howell	25 years service	June, 2013

RETIREMENTS

Kathy Schmidt, Safety Officer
Rollins Animal Disease Diagnostic Laboratory, 7 years

Maggie Nelson, Medical Laboratory Assistant III
Griffin Animal Disease Diagnostic Laboratory, 9 years

Bing Tang, Medical Laboratory Technologist II
Rollins Animal Disease Diagnostic Laboratory, 20 Years

Doug Carroll, Maintenance Mechanic V
Rollins Animal Disease Diagnostic Laboratory, 28 years

Jennifer Pruitt, Medical Laboratory Technologist III
Rollins Animal Disease Diagnostic Laboratory, 35 years

External Laboratory Advisory Committee Members

NAME	ADDRESS
Dr. Allen Cannedy Mixed Practice	Small Ruminant and Camelid Services 110 Merlot Drive Hillsborough, NC 27278
Dr. Eric Gonder Poultry – Turkeys	Butterball, LLC PO Box 10009 Goldsboro, NC 27532
Dr. Jennifer Haugland NCVDLS	Rollins Diagnostic Laboratory 1031 Mail Service Center Raleigh, NC 27699-1031
Dr. Richard Kirkman Large Animal	20416 US Hwy 64 West P O Box 350 Siler City, NC 27344
Dr. Shannon Jennings Poultry – Chickens & Turkeys	House of Raeford P O Box 699 Rose Hill, NC 28458
Dr. David Marshall State Veterinarian	NCDA&CS, Veterinary Division 1030 Mail Service Center Raleigh, NC 27699-1030
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
Dr. Rick Sharpton Poultry – Chickens	Perdue, Inc. 1071 Vicksburg Dr. Winterville, NC 28590
Dr. Betsy Sigmon Small Animal	Creature Comforts Animal Hospital 3435 Kildaire Farm Road Cary, NC 27518
Dr. Chad Smith Corporate Swine	Goldsboro Milling Co. 938 Miller’s Chapel Road Goldsboro, NC 27532
Dr. Becky Tilley Poultry – Turkeys	Butterball, LLC PO Box 10009 Goldsboro, NC 27532

The NCV DLS 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

Budget Summary	Total
Purchased Contractual Services 5321	\$134,596
Utility/Energy Services 5322	\$274,688
Repair Services 5323	\$91,877
Maintenance Agreements 5324	\$63,015
Rentals/Leases 5325	\$4,113
Travel & Other Employee Expenses 5327	\$37,683
Communications & Data 5328	\$84,068
Other Services 5329	\$17,060
General Admin Supplies 5331	\$24,185
Facility and Hardware Supplies 5332	\$21,271
Vehicle/Equipment Operating Supplies 5333	\$2,852
Clothing and Recreational Supplies 5335	\$992

Research/Development & Edu Supplies 5337	\$1,149,218
Other Materials & Supplies 5339	\$706
Equipment 5345	\$55,842
Art, Other Artifacts & Literature 5346	\$1,623
Intangible Assets (Computer software) 5347	\$19,318
Legal, Licenses & Permit Costs 5351	\$9,590
Unemployment Comp Payments 5352	\$0
Other Admin Expenses 5358	\$8,193
Other Expenses 5359	\$4,434
TOTAL	\$2,005,324
Personal Services 72% (Salaries, Benefits, etc.)	\$5,008,585
TOTAL	\$7,013,909

2012-2013 NCVDLs General Funds

Recurring

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

- reimbursement for BSE Surveillance Sample Collection and Testing

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

- reimbursement for Scrapie Sample Collection and Testing

USDA-APHIS-VS Blanket Purchase Agreement—\$10,000

- reimbursement for Swine Influenza Sample Testing

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—\$13,952

- reimbursement for surveillance and testing of Pseudorabies samples

USDA-NIFA Cooperative Agreement—\$166,000

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

2012-2013 Physical Improvements/New Equipment Purchases

Rollins Laboratory

- Construction completed for addition of generator to operate the entire laboratory
- Renovation of receiving completed to allow for a more biosecure sample check-in area
- Addition of exterior cameras, additional lighting, DVR system, and intercom for Front Lobby and Receiving doors

Northwestern Laboratory

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

Griffin Laboratory

- Sprinklers added throughout building
- 2 Air Condition Units for front of building
- Tecan replacement
- Front office door seals
- Ring weld to dock
- Roof leak repairs front office
- Money allotted for perimeter fence

Professional Development and Outreach

Dr. Tahseen Abdul-Aziz	Poultry Health Allied Meeting	Raleigh, NC
Dr. Mahogany Caesar	Emerging and Exotic Diseases of Animals Course USAHA/AAVLD Annual Meeting	Online course Greensboro, NC
Dr. David Drum	Emerging and Exotic Diseases of Animals Course USAHA/AAVLD Annual Meeting	Online course Greensboro, NC
Dr. Kim Hagans	Emerging and Exotic Diseases of Animals Course	Online course
Dr. Jennifer Haugland	Emerging and Exotic Diseases of Animals Course USAHA/AAVLD Annual Meeting 2012 NC Veterinary Conference	Online course Greensboro, NC Raleigh, NC
Dr. Richard Mock	USAHA/AAVLD Annual Meeting	Greensboro, NC
Dr. Peter Moisan	Emerging and Exotic Diseases of Animals Course	Online course
Dr. Richard Oliver	5th Annual Merit Rabies Symposium USAHA/AAVLD Annual Meeting	Raleigh, NC Greensboro, NC
Dr. Karen Post	USAHA/AAVLD Annual Meeting	Greensboro, NC
Dr. Darrell Rector, Jr.	Emerging and Exotic Diseases of Animals Course	Online course
Dr. Reginald Ridenhour	2012 NC Broiler Breeder and Hatchery Mngmt Conf USAHA/AAVLD Annual Meeting NC Poultry Health 2012 Meeting	Statesville, NC Greensboro, NC Raleigh, NC
Dr. Stacy Robinson	USAHA/AAVLD Annual Meeting 2012 NC Veterinary Conference	Greensboro, NC Raleigh, NC
Dr. Alison Tucker	Emerging and Exotic Diseases of Animals Course USAHA/AAVLD Annual Meeting	Online course 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.

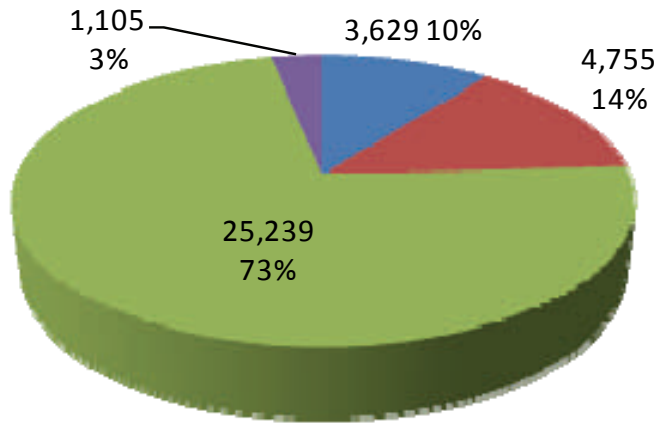
Blind Sample Tests are administered by section supervisors to random technologists. Samples have “dummy” accession numbers and are incorporated into the daily workload. When complete, test results are evaluated by section supervisors for accuracy and timeliness.

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
Influenza	IHC Panel (Ring Test)	Rollins Lab IHC	AAVLD/NVSL
West Nile Virus Panel	Ring Test	Rollins Lab IHC	AAVLD/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
MG & MS PCR	PCR	Rollins Lab Molecular	NPIP
Brucellosis	STP, STT, BAPA, Rivanol, CF	Rollins Lab Serology	NVSL
Anaplasmosis	c-ELISA	Rollins Lab Serology	NVSL
Johne's Disease	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
Pseudorabies	ELISA (G1 & GB), 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	Griffin Lab Bacteriology	NPIP
MG & MS	Plate & ELISA	Griffin Lab Serology	NPIP
Avian Influenza	AGID	Griffin Lab Virology	NVSL
Brucellosis	BAPA	Western Lab Serology	NVSL
Equine Infectious Anemia	AGID	Western Lab Virology	NVSL
Avian Influenza	AGID	Northwestern Lab Serology	NVSL
MG & MS	Plate	Northwestern Lab Serology	NPIP

NCVDLS 2012-2013 *Accession Information

Total Accessions for NCVDLS: 34,728



- Griffin Laboratory
- Northwestern Laboratory
- Rollins Laboratory
- Western Laboratory

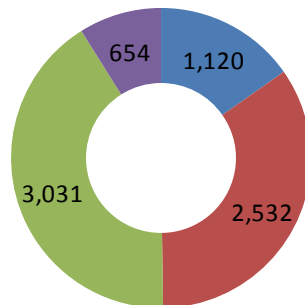
Fiscal Year Comparison of Accessions

	FY 11/12 to FY12/13		
	2011-2012	2012-2013	% Increase
Rollins	23,885	25,239	5.67%
Western	924	1,105	19.59%
Northwestern	4,618	4,755	2.97%
Griffin	3,156	3,629	14.99%
Total	32,583	34,728	
	Average Increase: 10.80%		

Accession Count by Taxonomy

Avian	16,081
Bovine	1,306
Camelid	134
Canine	8,202
Caprine	538
Equine	5,572
Feline	1,666
Fish	24
Miscellaneous	269
Ovine	112
Porcine	813

NCVDLS Necropsy Test Total = 7,337



- Griffin
- Northwestern
- Rollins
- Western

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

<u>Bacteriology Tests</u>	Griffin	Northwestern	Rollins	Western
Acid Fast Stain	0	0	42	0
Aerobic Culture	0	0	8,247	0
Anaerobic Culture	0	0	221	0
Antimicrobial Susceptibility	0	0	2,588	0
<i>Bartonella</i> spp. Culture	0	0	16	0
<i>Brachyspira</i> spp. Culture	0	0	9	0
<i>Brucella</i> spp. Culture	0	0	59	0
<i>Campylobacter</i> spp. Culture	0	0	110	0
<i>Clostridium difficile</i> toxin assay	0	0	67	0
<i>Clostridium perfringens</i> culture	0	0	401	0
Diffquik stain	0	0	10	0
FA, <i>Clostridium chauvoei</i>	0	0	40	3
FA, <i>Clostridium novyi</i>	0	0	14	0
FA, <i>Clostridium septicum</i>	0	0	31	1
FA, <i>Clostridium sordellii</i>	0	0	14	0
Gram Stain	0	0	20	0
Johne's Culture	0	0	24	0
Leptospirosis (FA) test	0	0	98	0
<i>Listeria</i> spp. Culture	0	0	110	0
<i>Mycoplasma</i> spp. Culture	0	0	201	0
NPIP <i>Salmonella</i> Culture	3,479	0	5	0
Rollins Bacteriology Referral	0	0	1	0
Ruminant Mastitis Culture	0	0	260	0
<i>Salmonella</i> spp. Culture	0	0	1,418	0
<i>Taylorella equigenitalis</i> (CEM) culture	0	0	93	0
<i>Yersinia</i> spp. Culture	0	0	65	0
TOTAL	3,479	0	14,164	4
<u>Mycology Tests</u>				
	Griffin	Northwestern	Rollins	Western
Fungal Culture	0	0	243	0
Rollins Mycology Referral	0	0	2	0
TOTAL	0	0	245	0
<u>Parasitology Tests</u>				
	Griffin	Northwestern	Rollins	Western
<i>Cryptosporidium</i> IFA	0	0	109	14
Fecal Examination - Centrifugation Sucrose	0	0	74	0
Fecal Examination - Direct Smear	0	504	6	12
Fecal Examination - Flotation	87	28	279	813
<i>Giardia</i> IFA	0	0	61	13
Modified McMaster's	175	0	423	116
<i>Trichostrongylus</i> exam	0	0	87	0
TOTAL	262	532	1,039	968

<u>Bacterial Serology Tests</u>	Griffin	Northwestern	Rollins	Western
Anaplasmosis (ELISA)	0	0	1,047	0
<i>Bordetella avium</i> (ELISA)	0	0	10	0
<i>Brucella abortus</i> (BAPA) (Plate)	0	0	6,268	172
<i>Brucella abortus</i> (Card)	0	0	211	0
<i>Brucella abortus</i> (SPT)	0	0	1	0
Johne's (ELISA)	0	0	1,267	0
<i>L. autumnalis</i> (MAT)	0	0	91	0
<i>L. bratislava</i> (MAT)	0	0	212	0
<i>L. canicola</i> (MAT)	0	0	431	0
<i>L. grippotyphosa</i> (MAT)	0	0	431	0
<i>L. hardjo</i> (MAT)	0	0	431	0
<i>L. icterohaemorrhagiae</i> (MAT)	0	0	431	0
<i>L. pomona</i> (MAT)	0	0	431	0
<i>Mycoplasma gallisepticum</i> (ELISA)	54,023	21,615	126,141	0
<i>Mycoplasma gallisepticum</i> (HI)	0	0	205	0
<i>Mycoplasma gallisepticum</i> (Plate)	116	206,344	1,139	0
<i>Mycoplasma hyopneumoniae</i> (ELISA)	0	0	51	0
<i>Mycoplasma meleagridis</i> (ELISA)	19,741	0	21,892	0
<i>Mycoplasma meleagridis</i> (HI)	0	0	41	0
<i>Mycoplasma synoviae</i> (ELISA)	54,023	21,615	126,392	0
<i>Mycoplasma synoviae</i> (HI)	0	0	727	0
<i>Mycoplasma synoviae</i> (Plate)	178	206,344	1,322	0
<i>Neospora caninum</i> (ELISA)	0	0	61	0
<i>Salmonella pullorum</i> (Plate)	9,601	0	0	0
<i>Salmonella pullorum</i> (Tube)	3,633	0	46	0
Rollins Serology Referral	0	0	14	0
TOTAL	141,315	455,918	289,293	172

<u>Virology Tests</u>	Griffin	Northwestern	Rollins	Western
Bovine Viral Diarrhea Virus Antigen Capture (ELISA)	0	0	1,551	0
<i>Chlamydia</i> (ELISA)	0	0	58	0
<i>Coccidia</i> (AO)	0	0	17	0
<i>Cryptosporidium</i> (AO)	0	0	4	0
Electron microscopy - negative stain	0	0	166	0
Flourescent Antibody Test (FATST)	0	0	83	0
Virus Isolation - Avian Influenza (egg inoculation)	0	0	15	0
Virus Isolation (cell culture)	0	0	526	0
Virus Isolation (egg inoculation)	0	0	370	0
TOTAL	0	0	2,790	0

Viral Serology Tests	Griffin	Northwestern	Rollins	Western
Adenovirus 127 (HI)	0	0	3	0
Avian Encephalomyelitis Virus (AGID)	0	0	91	0
Avian Encephalomyelitis Virus (ELISA)	0	0	1,265	0
Avian Influenza (AGID)	24,123	99,633	7,194	0
Avian Influenza (ELISA)	13,320	0	67,533	0
Avian Paramyxovirus-1 (APMV-1) (ELISA)	0	0	10,688	0
Avian Paramyxovirus-1 (APMV-1) (ELISA) Turkey	0	0	84	0
Avian Paramyxovirus-1 (APMV-1) (HI)	0	0	182	0
Bluetongue Virus (AGID)	0	0	32	0
Bluetongue Virus (c-ELISA)	0	0	354	0
Bovine Leukosis Virus (ELISA)	0	0	1,221	0
Bovine Viral Diarrhea Virus Type 1a (VN)	0	0	220	0
Bovine Viral Diarrhea Virus Type 2 (VN)	0	0	209	0
Caprine Arthritis Encephalitis (cELISA)	0	0	1,235	0
Caprine Arthritis Encephalitis/Ovine Progressive Pneumonia (AGID)	0	0	65	0
Chicken Anemia Virus 1:10 (CAV) (ELISA)	0	0	4,137	0
Equine Infectious Anemia (AGID)	0	0	9,279	147
Equine Infectious Anemia (ELISA)	0	0	220	8
Hemagglutination Test	0	0	1	0
Hemorrhagic Enteritis (AGID)	0	0	12	0
Infectious Bovine Rhinotracheitis Virus (VN)	0	0	212	0
Infectious Bronchitis Virus - Ark (HI)	0	0	592	0
Infectious Bronchitis Virus - Conn (HI)	0	0	547	0
Infectious Bronchitis Virus - Delaware (HI)	0	0	103	0
Infectious Bronchitis Virus - Mass (HI)	0	0	620	0
Infectious Bronchitis Virus (ELISA)	0	0	10,896	0
Infectious Bronchitis Virus JMK (HI)	0	0	583	0
Infectious Bursal Disease (AGID)	0	0	99	0
Infectious Bursal Disease (ELISA)	0	0	10,954	0
Influenza Antigen (ELISA)	1,213	0	3,903	0
Johne's (AGID)	0	0	31	0
Johne's (ELISA)	0	0	446	0
<i>Neospora caninum</i> (ELISA)	0	0	10	0
Parainfluenza 3 (VN)	0	0	51	0
Porcine circovirus-2 (ELISA)	0	0	326	0
Porcine Parvovirus (HI)	0	0	81	0
Porcine Reproductive & Respiratory Syndrome Virus (ELISA)	0	0	582	0
Pseudorabies Virus g1 (ELISA)	0	0	5	0
Pseudorabies Virus gB (ELISA)	0	0	4,289	0
REO (ELISA)	0	0	11,113	0
Rollins Virology Referral	0	0	2	0
Swine Influenza Virus Beta H1N1 (reassortant) (HI)	0	0	122	0
Swine Influenza Virus Delta H1N1 (human-like) (HI)	0	0	5	0
Swine Influenza Virus H3N2 (HI)	0	0	122	0
Viral Arthritis (AGID)	0	0	70	0
TOTAL	38,656	99,633	149,789	155

Rollins Lab Histology

Cytology	1,440
- number of sites examined	
Histology	38,816
- routine H & E slides produced and examined	
Special Stains	863
- includes files and gram for bacteria, PAS and GMS for fungi, stains for copper and mineral, other miscellaneous stains	

Rollins Lab Immunohistochemistry Tests

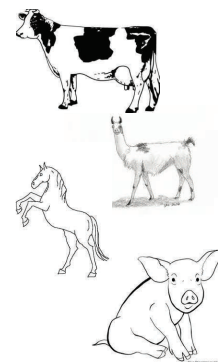
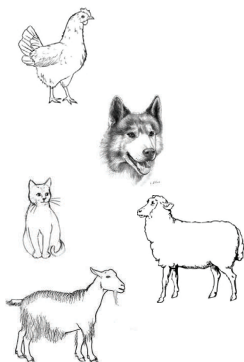
Adenovirus	25	Feline Herpes Virus 1	15
Bovine Coronavirus	2	Feline Leukemia Virus	28
Bovine Respiratory Syncytial Virus	14	Feline Panleukopenia	17
Bovine Virus Diarrhea	67	Ferret Coronavirus	1
Bovine Virus Diarrhea Ear Notch	149	Influenza Virus	4
Canine Coronavirus	9	<i>Leptospira sp.</i>	17
CD18	5	Melan A	11
CD20	2	<i>Neospora caninum</i>	11
CD3	27	Pancytokeratin AE1/AE3	7
CD79a	1	PAX 5	26
Canine Distemper Virus	58	Porcine Circovirus II	12
Canine Parvovirus	27	Porcine Coronavirus-TGE	10
CKIT	27	Porcine Reproductive & Respiratory Syndrome Virus	9
Eastern Equine Encephalitis Virus	11	Recut clides	10
Equine Herpes Virus 1	4	<i>Toxoplasma gondii</i>	14
Feline Coronavirus	55	Vimentin	2
		Von Willebrand factor	2
		West Nile Virus	11
TOTAL			690

Rollins Lab Molecular Diagnostics Tests

Avian Influenza H5 RRT-PCR	19	Mycoplasma gallisepticum PCR	1,532
Avian Influenza H7 RRT-PCR	19	Mycoplasma gallisepticum PCR-IDEXX	152
Avian Influenza Matrix RRT-PCR	5,109	Mycoplasma synoviae PCR	1,588
Avian Paramyxovirus-1 (APMV-1) Matrix RRT-PCR	329	Mycoplasma synoviae PCR-IDEXX	177
Bovine Viral Diarrhea Virus PCR	53	NAHLN influenza matrix - PCR (fee)	106
Classical Swine Fever PCR	821	Porcine Epidemic Diarrhea Virus (PCR)	8
<i>Clostridium perfringens</i> genotyping	151	Porcine Reproductive & Respiratory Syndrome Virus European - PCR	209
Creelan Cal-Mex RNA	3	Porcine Reproductive & Respiratory Syndrome Virus North American PCR	210
<i>E. coli</i> genotyping	49	Rollins Molecular Diagnostics Referral	12
Eastern equine encephalitis PCR	92	Swine Influenza Virus - NP PCR	259
Foot and Mouth Disease PCR	32	Swine Influenza Virus subtyping PCR	2
Infectious Bronchitis PCR	387	Transmissible Gastroenteritis TGE/Porcine Respiratory Coronavirus PRCV PCR	33
Infectious Laryngotracheitis Virus (PCR)	238	West Nile Virus PCR	92
<i>Lawsonia</i> PCR	7	TOTAL 11,689	

NCVDLS Total Test Count By Animal Species

Avian	1,171,161	92.81%
Bovine	21,257	1.68%
Camelid	1,510	0.12%
Canine	26,156	2.07%
Caprine	6,969	0.55%
Equine	13,774	1.09%
Feline	6,852	0.54%
Fish	286	0.02%
Miscellaneous	1,953	0.15%
Ovine	1,320	0.10%
Porcine	10,635	0.84%
TOTAL	1,261,873	100.00%



Miscellaneous Species Test Procedures

Includes the following: antelope, bat, bear, binturong, bison, chameleon, deer, Bearded Dragon, elk, ferret, fox, frog, giraffe, hedgehog, opossum, primate, rabbit, raccoon, reptile, rodent, skunk, snake, squirrel, sugar glider, turtle, wallaby, and wolf.

Adenovirus (IHC)	2	GMS Stain	2
Aerobic Culture	244	Gram Stain	5
Anaerobic Culture	36	Gram Stain (Histopathology)	27
Antimicrobial Susceptibility	44	Gross Exam Production/Wildlife	52
Brachyspira spp. Culture	5	Gross Exam Small Companion	53
<i>Brucella abortus</i> (BAPA) (Plate)	100	Histopathology H & E	891
<i>Brucella</i> spp. Culture	3	<i>Lawsonia</i> (PCR)	1
<i>Campylobacter</i> spp. Culture	4	<i>Leptospira</i> sp. (IHC)	2
Canine Distemper Virus (IHC)	4	Leptospirosis (FA) test	2
Caprine Arthritis Encephalitis (cELISA)	1	<i>Listeria</i> spp. Culture	1
Chronic Wasting Disease	94	Masson's Trichrome Stain	3
<i>Clostridium difficile</i> toxin assay	14	Modified McMaster's	1
<i>Clostridium perfringens</i> culture	21	Organ Pluck	75
<i>Clostridium perfringens</i> genotyping (PCR)	5	Outsource Test	4
Congo Red Stain	3	PAS Stain	4
<i>Cryptosporidium</i> (IFA)	4	Prussian Blue Stain	2
Cytology	10	Rabies—Outsource	25
Decalcify Tissue	9	Recut Wet Tissue	16
<i>E. coli</i> genotyping (PCR)	7	Recut-H&E Diagnostic	14
Electron microscopy - negative stain	6	<i>Salmonella</i> spp. Culture	54
Fecal Examination - Direct Smear	2	Toluidine Blue Stain	1
Fecal Examination - Flotation	59	Toxicology—Outsource	10
Ferret Coronavirus (IHC)	1	Warthin Starry Stain	2
Fites Stain	5	West Nile Virus (IHC)	1
Fungal Culture	12	<i>Yersinia</i> spp. Culture	5
<i>Giardia</i> (IFA)	5	TOTAL	1,953

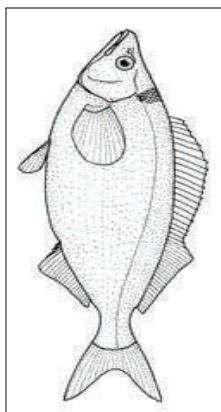
Avian Test Procedures

Acid Fast Stain	13	Infectious Bronchitis Virus - Delaware (HI)	103
Acid Fast Stain (Histopathology)	4	Infectious Bronchitis Virus - Mass (HI)	620
Adenovirus 127 (HI)	3	Infectious Bronchitis Virus (ELISA)	10,896
Aerobic Culture	2,079	Infectious Bronchitis Virus JMK (HI)	583
Anaerobic Culture	32	Infectious Bursal Disease (AGID)	99
Antimicrobial Susceptibility	963	Infectious Bursal Disease (ELISA)	10,954
Avian Encephalomyelitis Virus (AGID)	91	Infectious Laryngotracheitis Virus (PCR)	238
Avian Encephalomyelitis Virus (ELISA)	1,265	Influenza Antigen (ELISA)	5,116
Avian Influenza (AGID)	130,950	Influenza Virus (IHC)	2
Avian Influenza (ELISA)	80,853	Masson's Trichrome Stain	6
Avian Influenza H5 (RRT-PCR)	19	<i>Mycoplasma gallisepticum</i> (ELISA)	201,779
Avian Influenza H7 (RRT-PCR)	19	<i>Mycoplasma gallisepticum</i> (HI)	205
Avian Influenza Matrix (RRT-PCR)	5,105	<i>Mycoplasma gallisepticum</i> (Plate)	207,599
Avian Paramyxovirus-1 (ELISA)	10,688	<i>Mycoplasma gallisepticum</i> (PCR)	1,684
Avian Paramyxovirus-1 (ELISA) Turkey	84	<i>Mycoplasma meleagridis</i> (ELISA)	41,633
Avian Paramyxovirus-1 (HI)	182	<i>Mycoplasma meleagridis</i> (HI)	41
Avian Paramyxovirus-1 Matrix RRT-PCR	329	<i>Mycoplasma spp.</i> Culture	68
<i>Bordetella avium</i> (ELISA)	10	<i>Mycoplasma synoviae</i> (ELISA)	202,030
<i>Campylobacter spp.</i> culture	1	<i>Mycoplasma synoviae</i> (HI)	727
CD3 (IHC)	3	<i>Mycoplasma synoviae</i> (Plate)	207,844
Chicken Anemia Virus 1:10 (ELISA)	4,137	<i>Mycoplasma synoviae</i> (PCR)	1,765
<i>Chlamydia</i> (ELISA)	25	NPIP <i>Salmonella</i> Culture	3,479
<i>Clostridium perfringens</i> culture	19	Outsource Test	99
<i>Clostridium perfringens</i> genotyping (PCR)	1	Pancytokeratin AE1/AE3 (IHC)	1
Congo Red Stain	5	PAS Stain	11
Creelan Cal-Mex RNA	3	PAX 5 (IHC)	3
<i>Cryptosporidium</i> (IFA)	1	Prussian Blue Stain	1
Cytology	10	Recut Wet Tissue	77
Decalcify Tissue	2	Recut-H&E Diagnostic	34
Eastern equine encephalitis (PCR)	1	REO (ELISA)	11,113
Electron microscopy - negative stain	21	Rollins Molecular Diagnostics Referral	12
Fecal Examination - Direct Smear	513	Rollins Virology Referral	1
Fecal Examination - Flotation	118	<i>Salmonella pullorum</i> (Plate)	9,601
Fites Stain	8	<i>Salmonella pullorum</i> (Tube)	3,679
Fungal Culture	57	<i>Salmonella</i> Serotyping	38
GMS Stain	2	<i>Salmonella spp.</i> Culture	349
Gram Stain	3	Toxicology - Outsource	2
Gram Stain (Histopathology)	18	<i>Toxoplasma gondii</i> (IHC)	2
Gross Exam Poultry	4,854	Turkey Coronavirus - Outsource	270
Gross Exam Poultry - Additional Bird	220	Viral Arthritis (AGID)	69
Gross Exam Production/Wildlife	15	Virus Isolation - Avian Influenza (egg inn.)	15
Gross Exam Small Companion	61	Virus Isolation (egg inoculation)	367
Hemorrhagic Enteritis (AGID)	12	Von Kossa Stain	2
Histopathology H & E	3,610	Warthin Starry Stain	4
Infectious Bronchitis PCR	386	West Nile Virus (IHC)	4
Infectious Bronchitis Virus - Ark (HI)	592	West Nile Virus (PCR)	2
Infectious Bronchitis Virus - Conn (HI)	547	TOTAL	1,171,161

Bovine Test Procedures			
Acid Fast Stain	20	Giemsa Stain (Histopathology)	4
Acid Fast Stain (Histopathology)	1	GMS Stain	14
Adenovirus (IHC)	5	Gram Stain	10
Aerobic Culture	1,492	Gram Stain (Histopathology)	37
Anaerobic Culture	28	Gross Exam Large Companion	1
Anaplasmosis (ELISA)	1,047	Gross Exam Production/Wildlife	461
Antimicrobial Susceptibility	349	Gross Exam Small Companion	1
Bluetongue Virus (AGID)	32	Histopathology H & E	4,242
Bluetongue Virus (c-ELISA)	239	Infectious Bovine Rhinotracheitis Virus (VN)	212
Bovine Leukosis Virus (ELISA)	1,221	Johnes	2
Bovine Respiratory Syncytial Virus (IHC)	13	Johne's (AGID)	11
Bovine Spongiform Encephalopathy-Outsource	51	Johne's (ELISA)	1,240
Bovine Viral Diarrhea Virus (Antigen Capture ELISA)	1,548	Johne's Culture	16
Bovine Viral Diarrhea Virus (PCR)	8	<i>L. canicola</i> (MAT)	204
Bovine Viral Diarrhea Virus Type 1a (VN)	220	<i>L. grippotyphosa</i> (MAT)	204
Bovine Viral Diarrhea Virus Type 2 (VN)	209	<i>L. hardjo</i> (MAT)	204
Bovine Virus Diarrhea (IHC)	66	<i>L. icterohaemorrhagiae</i> (MAT)	204
Bovine Virus Diarrhea Ear Notch (IHC)	149	<i>L. pomona</i> (MAT)	204
<i>Brucella abortus</i> (BAPA) (Plate)	4,660	<i>Leptospira sp.</i> (IHC)	3
<i>Brucella abortus</i> (Card)	211	Leptospirosis (FA)	39
<i>Brucella spp.</i> Culture	18	<i>Listeria spp.</i> Culture	53
<i>Campylobacter spp.</i> culture	59	Modified McMaster's	54
CD20 (IHC)	1	<i>Mycoplasma spp.</i> Culture	71
CD3 (IHC)	1	<i>Neospora caninum</i> (ELISA)	71
<i>Chlamydia</i> (ELISA)	6	<i>Neospora caninum</i> (IHC)	8
Chronic Wasting Disease - Outsource	1	Organ Pluck	16
<i>Clostridium difficile</i> toxin assay	10	Outsource Test	94
<i>Clostridium perfringens</i> culture	109	Parainfluenza 3 (VN)	51
<i>Clostridium perfringens</i> genotyping (PCR)	33	PAS Stain	10
<i>Coccidia</i> (AO)	15	PAX 5 (IHC)	1
<i>Cryptosporidium</i> (AO)	4	Prussian Blue Stain	2
<i>Cryptosporidium</i> (IFA)	99	Rabies - Outsource	75
Cytology	9	Recut Wet Tissue	36
<i>E. coli</i> genotyping (PCR)	8	Recut-H&E Diagnostic	28
Eastern equine encephalitis (PCR)	2	Rollins Bacteriology Referral	1
Eastern Equine Encephalitis Virus (IHC)	1	Rollins Serology Referral	14
Electron microscopy - negative stain	90	Ruminant Mastitis Culture	166
FA, <i>Clostridium chauvoei</i>	42	<i>Salmonella</i> Serotyping	13
FA, <i>Clostridium novyi</i>	13	<i>Salmonella spp.</i> Culture	386
FA, <i>Clostridium septicum</i>	31	Toxicology - Outsource	26
FA, <i>Clostridium sordellii</i>	13	<i>Tritrichomonas exam</i>	81
Fecal Examination - Centrifugation Sucrose	3	Virus Isolation (cell culture)	284
Fecal Examination - Direct Smear	2	Von Kossa Stain	4
Fecal Examination - Flotation	154	Warthin Starry Stain	4
Fites Stain	4	<i>Yersinia spp.</i> Culture	24
Flourescent Antibody Test (FATST)	19		
Fungal Culture	8		
<i>Giardia</i> (IFA)	45		
		TOTAL	21,255

Camelid Test Procedures

Aerobic Culture	145	Gram Stain (Histopathology)	3
Anaerobic Culture	6	Gross Exam Production/Wildlife	66
Antimicrobial Susceptibility	12	Histopathology H & E	722
Bovine Coronavirus (IHC)	2	<i>Leptospira sp. (IHC)</i>	1
Bovine Viral Diarrhea Virus Antigen Capture (ELISA)	3	Leptospirosis (FA) test	1
Bovine Viral Diarrhea Virus PCR	45	<i>Listeria spp. Culture</i>	3
Bovine Virus Diarrhea (IHC)	1	Modified McMaster's	78
<i>Brucella abortus (BAPA) (Plate)</i>	13	Outsource Test	3
<i>Brucella spp. Culture</i>	1	PAS Stain	1
<i>Chlamydia (ELISA)</i>	1	Rabies—Outsource	7
<i>Clostridium difficile toxin assay</i>	2	Recut Wet Tissue	9
<i>Clostridium perfringens culture</i>	20	Recut-H&E Diagnostic	103
<i>Clostridium perfringens genotyping</i>	5	Rollins Mycology Referral	2
Decalcify Tissue	3	<i>Salmonella Serotyping</i>	1
Eastern equine encephalitis (PCR)	3	<i>Salmonella spp. Culture</i>	34
Electron microscopy - negative stain	3	Toxicology—Outsource	1
Fecal Examination - Centrifugation Sucrose	71	Virus Isolation (cell culture)	13
Fecal Examination - Flotation	111	Von Kossa Stain	2
Flourescent Antibody Test (FATST)	2	West Nile Virus PCR	3
Fungal Culture	2	<i>Yersinia spp. Culture</i>	5
<i>Giardia (IFA)</i>	1	TOTAL	1,510



Fish Test Procedures

Acid Fast Stain (Histopathology)	5
Aerobic Culture	42
Antimicrobial Susceptibility	16
Copper Stain (Rhodamine)	2
Decalcify Tissue	2
Diffquik stain	1
Fites Stain	2
Fungal Culture	1
Giemsa Stain (Histopathology)	9
Gram Stain	1
Gram Stain (Histopathology)	14
Gross Exam Production/Wildlife	15
Gross Exam Small Companion	11
Histopathology H & E	147
Outsource Test	1
Recut Wet Tissue	11
Recut-H&E Diagnostic	3
Toxicology	1
Warthin Starry Stain	2
TOTAL	286

Canine Test Procedures

Acid Fast Stain (Histopathology)	9	Influenza Virus (IHC)	2
Additional Fixation Required	36	<i>L. autumnalis</i> (MAT)	85
Adenovirus (IHC)	12	<i>L. bratislava</i> (MAT)	103
Aerobic Culture	1,839	<i>L. canicola</i> (MAT)	115
Alcian Blue Stain	3	<i>L. grippotyphosa</i> (MAT)	115
Anaerobic Culture	41	<i>L. hardjo</i> (MAT)	115
Antimicrobial Susceptibility	769	<i>L. icterohaemorrhagiae</i> (MAT)	115
<i>Bartonella</i> spp. culture	8	<i>L. pomona</i> (MAT)	115
<i>Brucella</i> spp. Culture	21	<i>Leptospira</i> sp. (IHC)	7
<i>Campylobacter</i> spp. culture	13	Leptospirosis (FA) test	32
Canine Coronavirus (IHC)	9	<i>Listeria</i> spp. Culture	2
Canine Distemper Virus (IHC)	54	Masson's Trichrome Stain	14
Canine Parvovirus (IHC)	27	Melan A (IHC)	10
CD18 (IHC)	5	Melanin Bleach	2
CD3 (IHC)	19	Mucicarmine Stain	1
CD79a (IHC)	1	<i>Mycoplasma</i> spp. Culture	6
CKIT (IHC)	25	<i>Neospora caninum</i> (IHC)	3
<i>Clostridium difficile</i> toxin assay	3	Organ Pluck	7
<i>Clostridium perfringens</i> culture	55	Outsource Test	6
<i>Clostridium perfringens</i> genotyping (PCR)	9	Pancytokeratin AE1/AE3 (IHC)	3
Congo Red Stain	7	PAS Stain	46
Copper Stain (Rhodamine)	13	PAX 5 (IHC)	19
<i>Cryptosporidium</i> (IFA)	4	Prussian Blue Stain	8
Cytology	1,163	Rabies - Outsource	89
Decalcify Tissue	228	Recut Wet Tissue	133
Diffquik stain	7	Recut/re-embed	15
<i>E. coli</i> genotyping (PCR)	11	Recut/unstained/charged slides (IHC)	9
Eastern Equine Encephalitis Virus (IHC)	1	Recut-H&E Diagnostic	159
Electron microscopy - negative stain	6	Recut-H&E referral	13
Fecal Examination - Direct Smear	1	Recut-H&E Teaching/consult NCSU-CVM	3
Fecal Examination - Flotation	217	<i>Salmonella</i> Serotyping	1
Fites Stain	44	<i>Salmonella</i> spp. Culture	202
Flourescent Antibody Test (FATST)	19	Swine Influenza Virus - (NP PCR)	1
Fungal Culture	103	Toluidine Blue Stain	35
<i>Giardia</i> (IFA)	8	Toxicology - Outsource	26
Giemsa Stain (Histopathology)	9	Vimentin (IHC)	1
GMS Stain	72	Virus Isolation (cell culture)	8
Gram Stain	1	Von Kossa Stain	8
Gram Stain (Histopathology)	93	von Willebrand factor (IHC)	2
Gross Exam Small Companion	534	Warthin Starry Stain	2
Hemagglutination Test	1	West Nile Virus (PCR)	1
Histopathology H & E	19,017	TOTAL	26,156

Caprine Test Procedures

Acid Fast Stain	8	Histopathology H & E	2,185
Acid Fast Stain (Histopathology)	1	Johne's (AGID)	19
Adenovirus (IHC)	3	Johne's (ELISA)	448
Aerobic Culture	607	Johne's Culture	8
Alcian Blue Stain	1	<i>L. canicola</i> (MAT)	3
Anaerobic Culture	9	<i>L. grippotyphosa</i> (MAT)	3
Antimicrobial Susceptibility	104	<i>L. hardjo</i> (MAT)	3
Bluetongue Virus (c-ELISA)	26	<i>L. icterohaemorrhagiae</i> (MAT)	3
Bovine Respiratory Syncytial Virus (IHC)	1	<i>L. pomona</i> (MAT)	3
<i>Brucella abortus</i> (BAPA) (Plate)	816	Leptospirosis (FA) test	12
<i>Brucella spp.</i> Culture	9	<i>Listeria spp.</i> Culture	44
<i>Campylobacter spp.</i> culture	22	Masson's Trichrome Stain	4
Caprine Arthritis Encephalitis (cELISA)	1,233	Modified McMaster's	168
Caprine Arthritis Encephalitis/Ovine Progressive Pneumonia (AGID)	19	<i>Mycoplasma spp.</i> Culture	44
<i>Chlamydia</i> (ELISA)	14	Organ Pluck	6
<i>Clostridium difficile</i> toxin assay	9	Outsource Test	62
<i>Clostridium perfringens</i> culture	112	PAS Stain	7
<i>Clostridium perfringens</i> genotyping	64	Prussian Blue Stain	2
Copper Stain (Rhodamine)	1	Rabies - Outsource	39
<i>Cryptosporidium</i> (IFA)	7	Recut Wet Tissue	7
Cytology	2	Recut-H&E Diagnostic	25
Diffquik stain	1	Recut-H&E referral	1
Fecal Examination - Direct Smear	2	Ruminant Mastitis Culture	94
Fecal Examination - Flotation	221	<i>Salmonella Serotyping</i>	1
Fites Stain	6	<i>Salmonella spp.</i> Culture	149
Fungal Culture	4	Scrapie - Outsource	3
<i>Giardia</i> (IFA)	4	Toluidine Blue Stain	1
Giemsa Stain (Histopathology)	2	Toxicology -Outsource	12
GMS Stain	3	<i>Toxoplasma gondii</i> (IHC)	7
Gram Stain (Histopathology)	16	Virus Isolation (cell culture)	1
Gross Exam Production/Wildlife	246	Warthin Starry Stain	2
Gross Exam Small Companion	2	<i>Yersinia spp.</i> Culture	28
		TOTAL	6,969

Ovine Test Procedures

Acid Fast Stain	1	Gram Stain (Histopathology)	5
Adenovirus (IHC)	3	Gross Exam Production/Wildlife	74
Aerobic Culture	157	Histopathology H & E	589
Anaerobic Culture	7	Johne's (AGID)	1
Antimicrobial Susceptibility	20	Johne's (ELISA)	24
Bluetongue Virus (c-ELISA)	89	<i>Listeria spp.</i> Culture	7
<i>Brucella abortus</i> (BAPA) (Plate)	31	Modified McMaster's	39
<i>Campylobacter spp.</i> culture	1	<i>Mycoplasma spp.</i> Culture	2
Caprine Arthritis Encephalitis/Ovine Progressive Pneumonia (AGID)	46	Outsource Test	30
<i>Chlamydia</i> (ELISA)	4	Pancytokeratin AE1/AE3 (IHC)	1
<i>Clostridium difficile</i> toxin assay	3	Prussian Blue Stain	1
<i>Clostridium perfringens</i> culture	33	Rabies - Outsource	5
<i>Clostridium perfringens</i> genotyping (PCR)	24	Recut Wet Tissue	1
Copper Stain (Rhodamine)	1	Recut-H&E Diagnostic	5
Cytology	3	<i>Salmonella spp.</i> Culture	28
Decalcify Tissue	1	Scrapie - Outsource	12
Electron microscopy - negative stain	2	Toxicology - Outsource	6
Fecal Examination - Direct Smear	1	<i>Toxoplasma gondii</i> (IHC)	1
Fecal Examination - Flotation	53	Virus Isolation (cell culture)	4
Fungal Culture	1	<i>Yersinia spp.</i> Culture	2
GMS Stain	2	TOTAL	1,320

Equine Test Procedures

Aerobic Culture	425	Gross Exam Small Companion	3
Anaerobic Culture	29	Histopathology H & E	2,056
Antimicrobial Susceptibility	89	<i>L. autumnalis</i> (MAT)	6
<i>Brucella</i> spp. Culture	4	<i>L. bratislava</i> (MAT)	12
<i>Campylobacter</i> spp. culture	6	<i>L. canicola</i> (MAT)	12
CD20 (IHC)	1	<i>L. grippotyphosa</i> (MAT)	12
CD3 (IHC)	1	<i>L. hardjo</i> (MAT)	12
<i>Clostridium difficile</i> toxin assay	14	<i>L. icterohaemorrhagiae</i> (MAT)	12
<i>Clostridium perfringens</i> culture	14	<i>L. pomona</i> (MAT)	12
<i>Clostridium perfringens</i> genotyping (PCR)	4	<i>Leptospira</i> sp. (IHC)	1
Congo Red Stain	2	Leptospirosis (FA)	8
<i>Cryptosporidium</i> (IFA)	2	Masson's Trichrome Stain	3
Cytology	26	Melanin Bleach	1
Decalcify Tissue	4	Modified McMaster's	374
Eastern equine encephalitis (PCR)	86	<i>Mycoplasma</i> spp. Culture	1
Eastern Equine Encephalitis Virus (IHC)	9	Organ Pluck	8
Equine Herpes Virus 1 (IHC)	4	Outsource Test	18
Equine Infectious Anemia (AGID)	9,425	PAS Stain	5
Equine Infectious Anemia (ELISA)	228	PAX 5 (IHC)	1
FA, <i>Clostridium chauvoei</i>	1	Prussian Blue Stain	1
FA, <i>Clostridium novyi</i>	1	PTAH Stain	1
FA, <i>Clostridium septicum</i>	1	Rabies - Outsource	62
FA, <i>Clostridium sordellii</i>	1	Recut Wet Tissue	44
Fecal Examination - Flotation	191	Recut/re-embed	2
Feline Herpes Virus 1 (IHC)	1	Recut-H&E Diagnostic	15
Fites Stain	5	<i>Salmonella</i> spp. Culture	71
Flourescent Antibody Test (FATST)	13	<i>Taylorella equigenitalis</i> (CEM) culture	93
Fungal Culture	12	Toxicology - Outsource	3
<i>Giardia</i> (IFA)	2	Virus Isolation (cell culture)	24
GMS Stain	12	Warthin Starry Stain	4
Gram Stain (Histopathology)	18	West Nile Virus (IHC)	6
Gross Exam Large Companion	174	West Nile Virus (PCR)	86
		TOTAL	13,774

Feline Test Procedures

Acid Fast Stain (Histopathology)	6	GMS Stain	25
Additional Fixation Required	2	Gram Stain (Histopathology)	40
Aerobic Culture	869	Gross Exam Small Companion	290
Alcian Blue Stain	1	Histopathology H & E	4,469
Anaerobic Culture	17	Leptospirosis (FA)	1
Antimicrobial Susceptibility	170	Masson's Trichrome Stain	8
<i>Bartonella spp. culture</i>	8	Melan A (IHC)	1
<i>Campylobacter spp. culture</i>	4	Mucicarmine Stain	2
Caprine Arthritis Encephalitis (cELISA)	1	<i>Mycoplasma spp. Culture</i>	8
CD3 (IHC)	3	Organ Pluck	3
<i>Chlamydia (ELISA)</i>	8	Outsource Test	1
CKIT (IHC)	2	Pancytokeratin AE1/AE3 (IHC)	2
<i>Clostridium perfringens culture</i>	6	PAS Stain	26
<i>Clostridium perfringens genotyping (PCR)</i>	2	PAX 5 (IHC)	2
Congo Red Stain	4	PTAH Stain	1
Copper Stain (Rhodamine)	1	Rabies - Outsource	89
<i>Cryptosporidium (IFA)</i>	6	Recut Wet Tissue	35
Cytology	216	Recut/re-embed	3
Decalcify Tissue	55	Recut/unstained/charged slides (IHC)	1
Diffquik stain	1	Recut-H&E Diagnostic	66
<i>E. coli genotyping (PCR)</i>	1	Recut-H&E referral	3
Electron microscopy - negative stain	14	<i>Salmonella Serotyping</i>	1
Fecal Examination - Direct Smear	1	<i>Salmonella spp. Culture</i>	73
Fecal Examination - Flotation	47	Toluidine Blue Stain	9
Feline Coronavirus (IHC)	55	Toxicology - Outsource	3
Feline Herpes Virus 1 (IHC)	14	<i>Toxoplasma gondii (IHC)</i>	4
Feline Leukemia Virus (IHC)	28	<i>Tritrichomonas exam</i>	6
Feline Panleukopenia (IHC)	17	Vimentin (IHC)	1
Fites Stain	14	Virus Isolation (cell culture)	27
Flourescent Antibody Test (FATST)	14	Von Kossa Stain	9
Fungal Culture	43	<i>Yersinia spp. Culture</i>	1
<i>Giardia (IFA)</i>	9		
Giemsa Stain (Histopathology)	3	TOTAL	6,852

Porcine Test Procedures

Aerobic Culture	344
Anaerobic Culture	16
Antimicrobial Susceptibility	52
<i>Brachyspira spp. Culture</i>	4
<i>Brucella abortus (BAPA) (Plate)</i>	821
<i>Brucella spp. Culture</i>	3
Classical Swine Fever (PCR)	821
<i>Clostridium difficile toxin assay</i>	12
<i>Clostridium perfringens culture</i>	12
<i>Clostridium perfringens genotyping (PCR)</i>	4
<i>Coccidia (AO)</i>	2
Copper Stain (Rhodamine)	1
Cytology	1
Decalcify Tissue	3
<i>E. coli genotyping (PCR)</i>	22
Electron microscopy - negative stain	24

Porcine Test Procedures Cont'

Fecal Examination - Flotation	36
Fites Stain	1
Flourescent Antibody Test (FATST)	16
Foot and Mouth Disease (PCR)	32
Gram Stain (Histopathology)	4
Gross Exam Production/Wildlife	80
Gross Exam Small Companion	5
Histopathology H & E	876
<i>L. bratislava</i> (MAT)	97
<i>L. canicola</i> (MAT)	97
<i>L. grippotyphosa</i> (MAT)	97
<i>L. hardjo</i> (MAT)	97
<i>L. icterohaemorrhagiae</i> (MAT)	97
<i>L. pomona</i> (MAT)	97
<i>Lawsonia</i> (PCR)	6
<i>Leptospira sp.</i> (IHC)	3
Leptospirosis (FA) test	3
<i>Mycoplasma hyopneumoniae</i> (ELISA)	51
<i>Mycoplasma spp.</i> Culture	1
NAHLN influenza matrix (PCR)	106
Organ Pluck	2
Outsource Test	112
Porcine Circovirus II (IHC)	12
Porcine circovirus-2 (ELISA)	326
Porcine Coronavirus-TGE (IHC)	10
Porcine Epidemic Diarrhea Virus (PCR)	8
Porcine Parvovirus (HI)	81
Porcine Reproductive & Respiratory Syndrome Virus (ELISA)	582
Porcine Reproductive & Respiratory Syndrome Virus (IHC)	9
Porcine Reproductive & Respiratory Syndrome Virus European (PCR)	208
Porcine Reproductive & Respiratory Syndrome Virus North American (PCR)	209
Prussian Blue Stain	2
Pseudorabies Virus g1 (ELISA)	5
Pseudorabies Virus gB (ELISA)	4,289
Rabies - Outsource	4
Recut Wet Tissue	11
Recut-H&E Diagnostic	34
Rollins Virology Referral	1
<i>Salmonella spp.</i> Culture	71
Swine Influenza Virus - (NP PCR)	258
Swine Influenza Virus Beta H1N1 (reassortant) (HI)	122
Swine Influenza Virus Delta H1N1 (human-like) (HI)	5
Swine Influenza Virus H3N2 (HI)	122
Swine Influenza Virus subtyping (PCR)	2
Toxicology - Outsource	3
Transmissible Gastroenteritis TGE/Porcine Respiratory Coronavirus PRCV (PCR)	33
Virus Isolation (cell culture)	165
Virus Isolation (egg inoculation)	2
Von Kossa Stain	1
Warthin Starry Stain	2
TOTAL	10,635