



Animal Health in Minnesota

Annual Report of the Minnesota Veterinary
Diagnostic Laboratory — 1989

Department of Veterinary Diagnostic Investigation
College of Veterinary Medicine

Cooperating with the Minnesota Board of Animal Health



Miscellaneous Report 61-1990
Minnesota Agricultural Experiment Station
University of Minnesota

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University of Minnesota**

St. Paul, Minnesota

The University of Minnesota, including the Minnesota Agricultural Experiment Station, is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status, or sexual orientation.

**Department of Veterinary Diagnostic Investigation
College of Veterinary Medicine
University of Minnesota**

DEPARTMENTAL MISSION

The faculty and staff of the Department have the following responsibilities ranked in order of priority.

1. Help reduce loss from disease in Minnesota's livestock, poultry, wildlife, and companion animals and help protect the public health by providing accurate and timely discipline-related animal health diagnostic services through the Minnesota Veterinary Diagnostic Laboratory, and by providing official laboratory services for the Minnesota Board of Animal Health and the Minnesota Racing Commission.
2. Teach veterinary students the principles of diagnostic medicine and prepare them to utilize the Diagnostic Laboratory as a resource for diagnostic assistance and continuing education throughout their professional careers.
3. Advance knowledge in veterinary medicine by conducting animal health research and communicating the results through publications in scientific journals and presentations at scientific meetings.
4. Provide continuing education for veterinary practitioners and animal owners by consultation, diagnostic investigation, and participation in continuing education programs of professional organizations and the College of Veterinary Medicine.
5. Prepare students for a career in diagnostic medicine through residency and graduate training programs.
6. Support other programs of the University by providing various laboratory services for the Veterinary Teaching Hospital, research projects, and other University departments.
7. Serve the veterinary profession by participating in local, state, national, and international professional organizations and by providing consultation to local, state and federal governments.
8. Serve the University community through committees and other activities.

Approved by the VDI faculty December 19, 1985

FOREWORD

This report is a summary of activities of the Minnesota Veterinary Diagnostic Laboratory for July 1, 1988 - June 30, 1989. Its main purpose is to provide a record of the animal diseases for which diagnostic lab assistance was requested by veterinary practitioners and animal owners. The information presented here in brief summary is maintained in a computer-based data system, which enables analysis of the information to monitor changing patterns of animal disease and to detect new animal health problems as they emerge spontaneously or in concert with technological change in animal production and care.

The Veterinary Diagnostic Laboratory was established in 1904 in the Agricultural Experiment Station of the University of Minnesota to satisfy the need for accurate diagnosis of animal diseases that threaten Minnesota's livestock and poultry industries and human health. As the official laboratory of the Minnesota Board of Animal Health, it provides laboratory support to the state's animal disease control programs.

The laboratory was integrated with the College of Veterinary Medicine in 1947. In 1982, the Department of Veterinary Diagnostic Investigation was established in the College. The faculty and staff of the department maintain a diagnostic medical program that is focused on public service, but with an appropriate balance of research and other academic activities. The department also has provided analytical services for the Minnesota Racing Commission since 1985.

Many people from all departments of the college participate in the diagnostic laboratory program. Among the contributions of collaborating faculty and staff are clinical chemistry, cytology, hematology, endocrinology, cytogenetics, immunopathology, urolith analysis, dermatopathology, parasitology, avian microbiology, avian health consultation and porcine microbiology.

Acknowledgement is given to Dr. James Collins, Mary Thurn and Dr. Debora Johnson for recording and compiling the data for this report, and to Larry Etkin of the Educational Development System for assistance designing this publication.

Martin E. Bergeland
Director

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Personnel

Martin E. Bergeland, DVM, PhD (ACVP)	Director, Department Chairman
Donald M. Barnes, DVM, PhD (ACVP)	Professor
Harold J. Kurtz, DVM, PhD (ACVP)	Professor
Glen H. Nelson, DVM	Professor
Ronald E. Werdin, DVM, PhD	Professor
James E. Collins, DVM, PhD (ACVP)	Associate Professor
Sagar M. Goyal, BVSc, PhD (SM-AAM)	Associate Professor
George R. Ruth, DVM, PhD (ACVP)	Assistant Professor
Lawrence J. Felice, MS, PhD	Assistant Professor
Michael J. Murphy, DVM, PhD (ABVT)	Assistant Professor
Daniel P. Shaw, DVM, PhD (ACVP)	Assistant Professor
Ashok K. Singh, MS, PhD	Research Associate
M. Rao Mannava, PhD	Vet. Med. Assoc./Research Assistant
Rodney K. Frank, DVM	Research Assistant
George W. Griesgraber, BS	Research Assistant
Sanjay Kapil, MVSc	Research Assistant
S. Maheshkumar, MS	Research Assistant
Khalid Naeem, DVM, MS	Senior Scientist
Lance Buoen, BA	Scientist
Diane Cook, DVM, MS	Scientist
Kem Pomeroy, BS, PhD	Sr. Med. Tech./Sr. Cl. Lab. Tech.
Jerome Fahrman, BS	Sr. Med. Tech./Sr. Cl. Lab. Tech.
Mildred Hakomaki, BS, MT (ASCP)	Med. Tech./C. Lab. Tech.
Mary Ito, BS, MT (ASCP)	Junior Scientist
Tom Arendt, BS	Junior Scientist
Pin King, BS, MS	Principal Laboratory Technician
Modupe Alabi, BS	Principal Laboratory Technician
Dzintra Dombrovskis, BS	Principal Laboratory Technician
Elizabeth Ellert, CLA	Principal Laboratory Technician
Sara Holmes, BS	Principal Laboratory Technician
Christine Johnston, HT	Principal Laboratory Technician
Londa Kroone, CLA	Principal Laboratory Technician
Cynthia Lindeman, BS	Principal Laboratory Technician
Beth Moore, BA	Principal Laboratory Technician
Karen Olsen, BS	Principal Laboratory Technician
Karen Roy, BS	Principal Laboratory Technician
Christopher Thurn, BA	Principal Laboratory Technician
Todd Wade, BA	Principal Laboratory Technician
Judith Brees	Senior Laboratory Technician
Alan Ducommun, BA	Senior Laboratory Technician
Tanda Gretz, BA	Senior Laboratory Technician
Traci Laughlin, BS	Senior Laboratory Technician
Usha Mishra, BS, MS	Senior Laboratory Technician
Kathy Targos, LAT	Senior Laboratory Technician
Debra Bell	Laboratory Technician
Rebecca White, BA	Laboratory Technician
Yin Jiang, BS, MS	Junior Laboratory Technician
Weining Gu, BS, MS	Junior Laboratory Technician
Anita Franson, AHT	Laboratory Animal Care Technician
Ron Joki, BA	Laboratory Animal Care Technician
Richard Roback, AA	Laboratory Animal Care Technician
Connie Strand, BS, MA	Accounts Supervisor
Jean Paavala	Accounts Specialist
Terrie Campbell-Mahmoodi, BA	Senior Accounts Assistant
Blanche Washington	Senior Accounts Assistant
Gayle Anderson	Accounts Assistant
Mary Thurn	Executive Secretary
Jeri Walseth, BS	Senior Secretary
Mary Peltier	Secretary
Janelle Gerlach	Senior Word Processing Operator
Laurene Rehnblom	Senior Word Processing Operator
Kimberly Ashton	Word Processing Operator

Personnel (continued)

Thomas Stemper
Patricia Smith, AA
Dorene Coles

Word Processing Operator
Office Specialist
Office Assistant

Student Assistants:

Nisha Agarwal
Muhammed Ashraf
Bart Cuderman
Mark Debner
Katie Dettman-Jones
Steven Dritz
Tracy Fuelleman
Jane Goggin
Kae Granley
Samantha Heffron
Janet Helms
Stephen Horton
Edward Howe
Debora Johnson
Daniel Keil
Brian Keller
Patricia Keyes
Tammy Koskela
Dennis Lange
Rekiyatu Lawal
Luanne Lenzmeier
Scott Likely
Brent Megarry
Khalid Naeem
Robert Orr
Cindy Pham
Debbie Randall
Gurdial Randhawa
Mark Schendel
David Stagg
Gussie Tessier
Meili Xu

Student Laboratory Technician
Student Laboratory Technician
Student Laboratory Attendant
Student Laboratory Technician
Student Senior Laboratory Technician
Student Laboratory Attendant
Student Laboratory Technician
Student Laboratory Technician
Student Laboratory Technician
Student Laboratory Attendant
Student Laboratory Technician
Student Laboratory Attendant
Student Laboratory Technician
Student Office Assistant
Student Laboratory Technician
Student Laboratory Technician
Student Office Assistant
Student Laboratory Technician
Student Laboratory Animal Technician
Student Laboratory Attendant
Student Laboratory Attendant
Student Laboratory Attendant
Student Laboratory Technician
Student Laboratory Attendant
Student Laboratory Animal Technician
High School Apprentice
Student Laboratory Attendant
Student Laboratory Attendant
Student Laboratory Technician
Student Office Assistant
Student Laboratory Technician
Student Laboratory Technician

Accessions by Month

<u>July</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
2,774	3,315	2,794	2,756	2,557	2,315
<u>Jan</u>	<u>Feb</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>
2,635	2,580	3,487	3,093	3,258	3,669
<u>FY 89</u>					
<u>TOTAL</u>					
35,233					

Accessions - Prior Fiscal Years

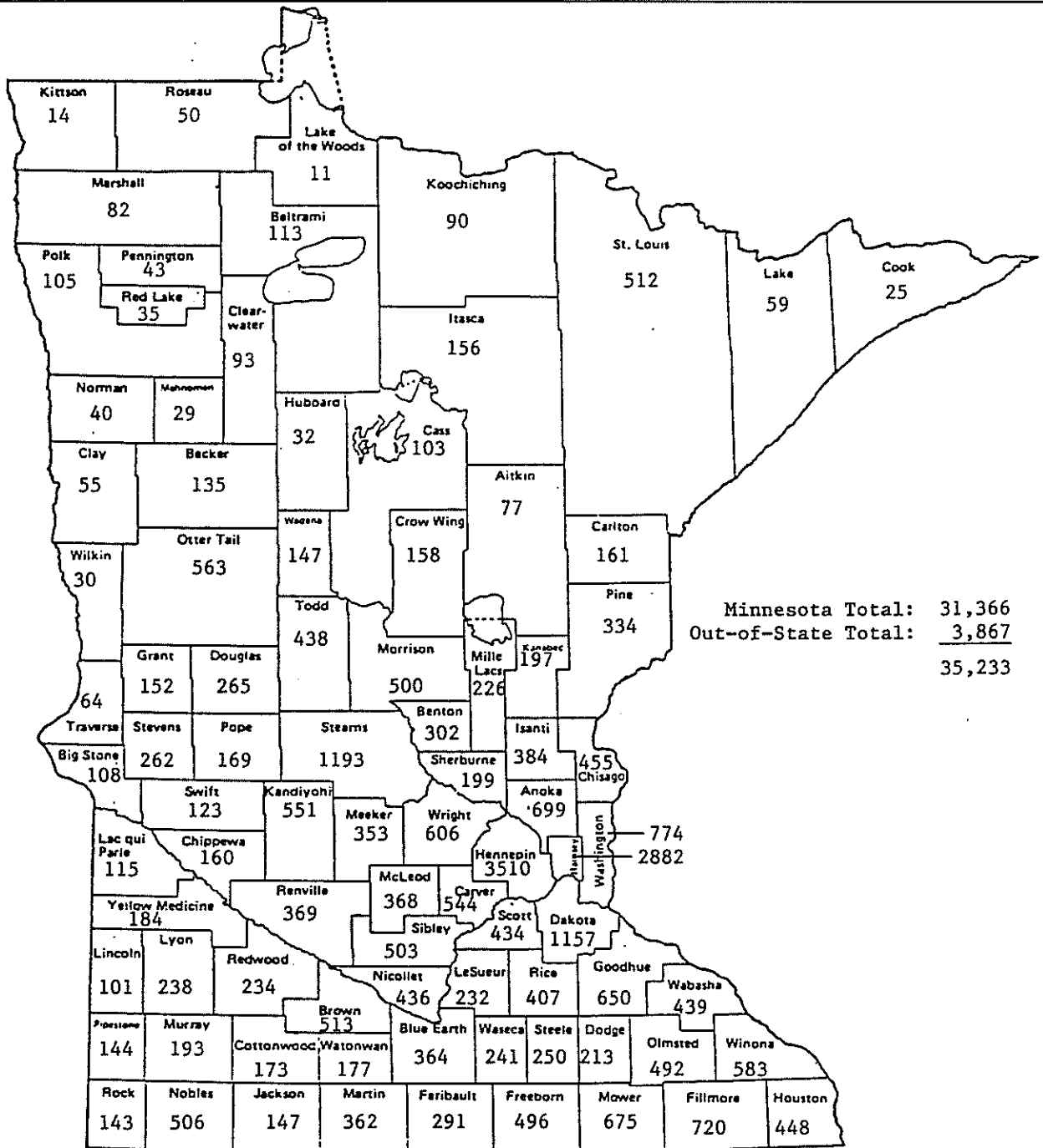
<u>FY 60</u>	<u>FY 61</u>	<u>FY 62</u>	<u>FY 63</u>	<u>FY 64</u>	<u>FY 65</u>
3,277	3,450	3,285	2,635	4,225	2,635
<u>FY 66</u>	<u>FY 67</u>	<u>FY 68</u>	<u>FY 69</u>	<u>FY 70</u>	<u>FY 71</u>
3,166	3,680	4,581	5,552	6,451	6,926
<u>FY 72</u>	<u>FY 73</u>	<u>FY 74</u>	<u>FY 75</u>	<u>FY 76</u>	<u>FY 77</u>
7,951	10,527	8,365	7,593	8,782	8,953
<u>FY 78</u>	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>
10,591	12,803	14,668	15,580	18,064	20,668
<u>FY 84</u>	<u>FY 85</u>	<u>FY 86</u>	<u>FY 87</u>	<u>FY 88</u>	
20,184	22,836	21,748	24,390	30,899	

Accessions by Species by Month

Species	July	Aug	Sept	Oct	Nov	Dec	Jan
Misc. Avian	42	48	52	48	50	44	60
Bovine	468	711	613	561	656	590	710
Canine	653	747	689	839	743	662	660
Caprine	13	20	19	1	1	9	7
Chicken	8	16	14	5	5	12	17
Equine	171	214	200	154	96	80	120
Feline	159	183	160	181	194	142	165
Ovine	25	29	23	8	18	10	26
Porcine	1,064	1,127	867	774	683	662	740
Turkey	16	30	36	24	22	23	39
Wildlife	61	89	58	4	12	24	20
Zoo/Exotic	9	15	10	10	4	10	18
Other	78	76	45	141	71	43	52
Not Specified	7	10	8	6	2	4	1
TOTAL	2,774	3,315	2,794	2,756	2,557	2,315	2,635

Species	Feb	March	April	May	June	Total	Percent Total
Misc. Avian	33	53	54	43	40	567	1.6
Bovine	707	910	574	581	577	7,658	21.7
Canine	647	801	816	885	1,016	9,158	26.0
Caprine	5	8	16	24	19	142	0.4
Chicken	5	25	13	31	17	168	0.5
Equine	106	211	211	246	239	2,048	5.8
Feline	141	173	141	183	191	2,013	5.7
Ovine	37	42	40	30	19	307	0.9
Porcine	770	1,117	1,109	1,085	1,310	11,308	32.1
Turkey	41	41	25	28	31	356	1.0
Wildlife	18	14	8	25	91	424	1.2
Zoo/Exotic	16	17	5	16	31	161	0.5
Other	54	75	81	81	88	885	2.5
Not Specified	—	—	—	—	—	38	0.1
TOTAL	2,580	3,487	3,093	3,258	3,669	35,233	100.0

Accessions by County



Minnesota Total: 31,366
 Out-of-State Total: 3,867
 35,233

Alabama	2	Iowa	540	Nevada	18	South Dakota	143
Alaska	10	Kansas	26	New Hampshire	32	Tennessee	5
Arizona	11	Kentucky	2	New Jersey	1	Texas	6
Arkansas	5	Louisiana	3	New York	6	Utah	4
California	16	Maine	1	North Carolina	5	Vermont	95
Connecticut	2	Maryland	9	North Dakota	67	Virginia	40
Colorado	27	Massachusetts	9	Ohio	46	West Virginia	7
Delaware	1	Michigan	83	Oklahoma	65	Washington	6
Florida	11	Mississippi	1	Oregon	1	Wyoming	2
Georgia	43	Missouri	20	Pennsylvania	23	Wisconsin	2217
Illinois	164	Montana	9	Rhode Island	1	Canada	20
Indiana	39	Nebraska	23				

Disease Diagnoses by Animal Species

Diagnoses for each animal species are listed in alphabetical order under various organ systems, which are arranged as follows in accordance with *Standard International Veterinary Nomenclature*:

- 0 Body as a Whole (multisystemic diseases and all toxicoses)
 - 1 Integumentary (including mammary gland)
 - 2 Musculoskeletal
 - 3 Respiratory (including nasal passages)
 - 4 Cardiovascular
 - 5 Hemic and Lymphatic
 - 6 Digestive (including lip, oral structures, liver, and pancreas)
 - 7 Urogenital (including prepuce, scrotum, and vulva)
 - 8 Endocrine
 - 9 Nervous
 - X Special Senses (including eyelid and pinna)
-

AVIAN													
CHICKEN	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>0 Body as a Whole</u>													
Ascites	2	-	1	-	-	-	-	-	-	-	-	1	-
Dehydration	1	-	-	-	1	-	-	-	-	-	-	-	-
Emaciation	1	-	-	-	-	1	-	-	-	-	-	-	-
Gout	9	-	-	1	1	-	1	2	-	1	2	-	1
Health Evaluation	5	-	-	1	-	-	-	1	1	-	-	-	2
Increased Mortality	4	-	-	1	-	-	-	-	1	1	-	1	-
Marek's Disease	27	-	1	3	1	-	1	1	1	4	3	11	1
Neoplasm, Carcinoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Omphalitis	1	-	-	-	-	-	-	1	-	-	-	-	-
Paralysis	1	-	-	1	-	-	-	-	-	-	-	-	-
Peritonitis	9	-	1	-	1	1	1	4	-	-	-	1	-
Peritonitis, Egg Yolk	11	-	-	2	-	2	-	1	-	-	2	2	2
Polyserositis	1	-	-	-	-	-	-	-	-	1	-	-	-
Septicemia, Bacterial	1	-	-	-	-	-	-	-	-	1	-	-	-
Septicemia, Erysipelothrix	1	-	-	-	1	-	-	-	-	-	-	-	-
Septicemia, <i>E. coli</i>	3	-	-	-	-	2	-	-	-	-	-	-	1
Septicemia, <i>Pasteurella hemolytica</i>	20	-	-	2	-	3	3	-	-	4	1	5	2
Septicemia, <i>Pasteurella multocida</i>	2	-	1	-	-	-	-	1	-	-	-	-	-
Septicemia, Salmonella	4	-	-	2	-	-	-	-	-	-	-	2	-
Septicemia, Staphylococcus	6	2	-	-	-	1	-	-	-	2	-	-	1
Starvation	1	-	-	-	-	-	-	-	-	1	-	-	-
Sudden Death, Idiopathic	2	-	1	-	-	-	-	-	-	-	-	-	1
Weakness	1	-	-	-	-	-	-	-	-	-	-	-	1
Yolk Sac Infection	2	-	-	-	-	1	-	-	-	-	1	-	-
<u>1 Integumentary</u>													
Abscess	1	-	-	-	-	-	-	-	-	1	-	-	-
Cellulitis	3	-	-	-	1	1	-	1	-	-	-	-	-
Dermatitis, Focal	3	-	-	-	-	-	1	-	-	-	-	-	2
Dermatitis, Staphylococcus	1	-	-	-	-	-	-	-	-	-	-	1	-
Feather Loss	1	-	-	-	-	-	-	1	-	-	-	-	-
<u>2 Musculoskeletal</u>													
Arthritis, Non-suppurative	1	-	-	-	-	-	-	-	-	1	-	-	-
Fracture	1	-	-	-	-	-	1	-	-	-	-	-	-
Lameness	1	-	-	-	-	-	-	-	-	-	-	1	-
Osteodystrophy	2	-	-	-	-	-	-	-	-	1	1	-	-
Osteomalacia	10	-	1	-	-	-	1	1	-	1	2	2	2
Osteomyelitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Snyovitis	1	-	-	-	-	-	-	-	-	-	-	-	-
<u>3 Respiratory</u>													
Airsacculitis, Candida	1	-	-	-	-	-	1	-	-	-	-	-	-
Airsacculitis Complex	1	-	-	-	-	-	-	-	-	-	-	-	1
Larynx-Laryngitis	1	-	-	-	-	-	-	-	-	1	-	-	-

CHICKEN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Lung-Pneumonia	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Bordetella sp.</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho (Idiopathic)	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella hemolytica</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Sinusitis	2	1	-	-	-	-	-	-	-	-	-	-	1
Trachea-Tracheitis	18	2	-	-	2	-	-	-	-	4	3	7	-
5 Hemic and Lymphatic													
Hemorrhage, Focal	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Lymphoid Leukosis	6	-	1	-	1	-	3	1	-	-	-	-	-
6 Digestive													
Feces-Microbiologic Exam	2	-	-	-	-	-	-	-	-	-	1	-	1
Intestine-Enteritis, Total Cases	6	-	-	-	-	-	1	1	-	1	1	2	-
Intestine-Enteritis, Idiopathic	2	-	1	-	-	-	-	-	-	1	-	-	-
Intestine-Enteritis, Rotavirus	3	-	-	-	-	-	-	-	-	-	1	2	-
Intestine-Enteritis, Salmonella	2	1	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	11	1	2	5	-	1	1	1	-	-	-	-	-
Intestine-Parasitism, Nematode	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Rupture	1	-	-	-	-	-	-	-	-	-	-	-	1
Liver-Hepatitis	2	-	-	-	-	-	-	-	1	-	-	1	-
Liver-Lipidosis	5	-	-	-	-	1	1	-	-	-	1	1	1
Liver-Neoplasm	1	-	-	-	1	-	-	-	-	-	-	-	-
Oral-Stomatitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Pancreas-Pancreatitis	2	-	-	-	-	-	-	1	-	1	-	-	-
7 Urogenital													
Blow out	1	-	-	-	-	-	-	-	-	-	-	1	-
Egg Production Decreased	1	-	-	-	1	-	-	-	-	-	-	-	-
Kidney-Nephritis	3	-	-	1	-	-	1	-	-	1	-	-	-
Kidney-Nephrosis	15	-	1	3	-	1	1	3	-	1	1	1	3
9 Neurological													
Encephalitis, Non-suppurative	3	-	-	-	-	-	1	1	-	1	-	-	-
Encephalomalacia	3	1	-	-	-	-	1	-	-	1	-	-	-
Neurological Disorder-Idiopathic	1	-	-	-	-	-	-	1	-	-	-	-	-
X Special Senses													
Eye-Conjunctivitis	3	-	-	-	1	-	-	-	-	2	-	-	-
TURKEY													
0 Body as a Whole													
Adenovirus Infection	6	-	1	-	1	-	-	-	1	-	1	-	2
Botulism	1	-	1	-	-	-	-	-	-	-	-	-	-
Gout	1	-	1	-	-	-	-	-	-	-	-	-	-
Growth Retardation	3	1	-	-	-	-	1	1	-	-	-	-	-
Health Evaluation	6	-	2	-	-	-	-	-	1	-	-	1	2
Increased Mortality, Idiopathic	4	-	1	1	-	-	-	1	-	-	-	-	1

TURKEY (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Parasitism, <i>Histomonas</i>	3	-	-	-	-	2	-	-	-	-	-	-	1
Peritonitis	20	1	-	3	2	1	7	3	2	1	-	-	-
Peritonitis, Egg Yolk	3	-	-	-	-	-	-	1	-	-	-	-	2
Pleural Effusion	1	-	-	-	-	-	-	-	-	1	-	-	-
Polyserositis	3	1	-	-	-	1	-	-	-	-	-	1	-
Septicemia, Bacterial	3	1	1	-	-	-	-	-	-	1	-	-	-
Septicemia, <i>Erysipelothrix</i>	5	1	-	-	-	-	1	2	-	1	-	-	-
Septicemia, <i>E. coli</i>	27	2	4	3	7	1	-	-	1	1	4	1	3
Septicemia, <i>Klebsiella</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Septicemia, <i>Pasteurella multocida</i>	14	1	3	4	-	1	1	1	2	-	1	-	-
Septicemia, <i>Salmonella</i>	14	1	1	1	1	-	1	-	-	1	4	3	1
Septicemia, <i>Staphylococcus</i>	2	-	-	-	1	1	-	-	-	-	-	-	-
Starvation	4	-	-	-	-	-	-	-	-	-	2	-	2
Sudden Death, Idiopathic	1	-	-	-	-	-	-	1	-	-	-	-	-
Yolk Sac Infection	1	-	-	-	-	-	-	-	-	-	-	-	1
1 Integumentary													
Abscess	1	-	-	-	-	-	-	-	-	-	-	-	1
Cellulitis	1	-	-	-	-	-	-	1	-	-	-	-	-
Dermatitis, Podo	1	-	-	-	-	-	-	-	-	1	-	-	-
2 Musculoskeletal													
Pox	1	-	-	-	1	-	-	-	-	-	-	-	-
Arthritis	1	-	1	-	-	-	-	-	-	-	-	-	-
Arthritis, Non-suppurative	1	-	-	1	-	-	-	-	-	-	-	-	-
Arthritis, <i>Staphylococcus aureus</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Arthritis, Suppurative	2	-	1	1	-	-	-	-	-	-	-	-	-
Fracture	2	-	-	-	-	-	2	-	-	-	-	-	-
Lameness	1	-	-	1	-	-	-	-	-	-	-	-	-
Muscle-Myopathy	1	-	1	-	-	-	-	-	-	-	-	-	-
Osteomalacia	6	-	-	-	1	1	-	1	-	-	1	2	-
Osteomyelitis	10	-	2	4	1	-	1	-	-	-	1	-	1
Perosis	1	-	-	1	-	-	-	-	-	-	-	-	-
Tibial Dyschondroplasia	5	-	-	2	-	-	2	-	-	-	-	-	1
Tibia-Malformation	1	-	-	-	-	-	-	-	-	-	-	1	-
3 Respiratory													
Airsacculitis Complex	15	1	-	2	1	3	4	1	-	1	1	-	1
Aspergillosis	5	1	-	1	1	-	-	1	-	-	-	-	1
Lung-Pneumonia	2	-	-	-	-	-	-	-	-	-	-	1	1
Lung-Pneumonia, <i>Pasteurella multocida</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
Sinusitis	10	2	-	2	1	2	-	-	-	1	2	-	-
Trachea-Tracheitis	18	1	1	6	2	1	3	1	-	-	1	1	1
4 Cardiovascular													
Heart-Myocardial Degeneration	2	-	2	-	-	-	-	-	-	-	-	-	-
Heart-Pericarditis	3	-	-	-	-	-	1	-	1	-	-	-	1
Hypertensive Angiopathy	9	-	-	2	3	-	-	1	-	-	-	1	2

TURKEY (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Round Heart Disease	5	-	-	-	1	-	-	-	-	-	2	2	-
Vasculitis	1	-	1	-	-	-	-	-	-	-	-	-	-
6 Digestive													
Crop-Ingluvitis, Mycotic	2	-	-	-	-	-	-	-	-	-	1	-	1
Intestine-Enteritis, Adenovirus	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	3	-	-	1	-	-	-	1	-	1	-	-	-
Intestine-Enteritis, Necrotic	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Enteritis, Rotavirus	27	4	3	3	3	1	3	-	-	-	1	6	3
Intestine-Enteritis, Salmonella	17	2	2	2	-	-	5	1	1	-	1	1	2
Intestine-Enteritis, Specimen Unsuitable	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Ascaris	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	9	2	1	4	-	-	-	-	-	-	1	-	1
Intestine-Parasitism, Cryptosporidia	2	-	1	-	-	-	-	-	-	-	-	1	-
Intestine-Parasitism, Nematode	3	-	2	1	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	3	-	-	-	-	-	-	1	-	-	-	1	1
Liver-Hepatositis	5	1	1	-	-	-	-	-	-	1	-	-	2
7 Urogenital													
Kidney-Nephrosis	4	-	-	-	-	-	-	-	-	1	-	1	2
9 Neurological													
Encephalitis, Granulomatous	2	2	-	-	-	-	-	-	-	-	-	-	-
Encephalitis, Non-suppurative	1	-	1	-	-	-	-	-	-	-	-	-	-
Encephalitis, Suppurative	2	-	-	2	-	-	-	-	-	-	-	-	-
Encephalomalacia	5	1	-	1	-	-	-	-	-	-	-	-	3
Meningitis, Suppurative	1	-	-	-	-	-	1	-	-	-	-	-	-
X Special Senses													
Eye-Conjunctivitis	1	-	-	-	-	-	-	1	-	-	-	-	-
Eye-Lens, Cataract	2	-	-	-	-	-	-	2	-	-	-	-	-
MISCELLANEOUS AVIAN SPECIES													
<u>Budgerigar</u>													
Gout	1	-	1	-	-	-	-	-	-	-	-	-	-
Health Evaluation	1	-	-	-	1	-	-	-	-	-	-	-	-
Papovavirus Infection	5	-	-	2	1	-	-	1	-	1	-	-	-
Toxicosis, Lead	1	-	-	-	-	-	-	-	-	-	-	1	-
Muscle-Myopathy	1	-	-	-	-	-	-	1	-	-	-	-	-
Airsacculitis, Candida	1	-	-	-	-	-	-	1	-	-	-	-	-
Aspergillosis	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, Foreign Body	2	-	-	-	-	-	-	1	-	-	1	-	-
Blood Vessel Disorder	1	-	-	-	-	-	-	-	-	-	1	-	-
Heart-Epicarditis	1	-	-	-	-	-	-	-	-	1	-	-	-
Heart-Myocarditis	1	-	-	-	-	-	-	-	-	1	-	-	-
Anemia	1	-	-	-	-	-	-	-	-	-	-	1	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>Budgerigar (cont.)</u>													
Spleen-Neoplasm	1	-	-	-	-	-	-	-	-	-	1	-	-
Crop-Impaction	1	-	-	-	1	-	-	-	-	-	-	-	-
Crop-Ingluvitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	2	1	-	-	-	1	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	5	-	-	-	-	-	-	-	-	2	3	-	-
Liver-Hepatosi	1	-	-	-	-	-	-	-	-	1	-	-	-
Liver-Lipidosis	2	-	-	-	-	-	1	1	-	-	-	-	-
Kidney-Nephrosi	1	-	1	-	-	-	-	-	-	-	-	-	-
Thyroid-Goiter	1	-	-	-	-	-	-	-	-	-	1	-	-
Thyroid-Neoplasm, Adenoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Brain-Neoplasm	1	-	1	-	-	-	-	-	-	-	-	-	-
<u>Canary</u>													
Chlamydiosis	1	-	-	-	-	-	-	-	-	1	-	-	-
Emaciation	1	-	-	-	-	-	-	-	-	1	-	-	-
Paralysis	1	-	-	1	-	-	-	-	-	-	-	-	-
Sudden Death, Idiopathic	1	-	-	1	-	-	-	-	-	-	-	-	-
Feather Loss	1	-	-	-	-	-	-	-	1	-	-	-	-
Lung-Edema	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Hemorrhage	1	-	1	-	-	-	-	-	-	-	-	-	-
Heart-Myocarditis	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm, Lymphosarcoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Liver-Lipidosis	1	-	-	1	-	-	-	-	-	-	-	-	-
Kidney-Nephritis	1	-	-	-	-	-	-	-	1	-	-	-	-
<u>Cockatiel</u>													
Chlamydiosis	1	-	-	1	-	-	-	-	-	-	-	-	-
Emaciation	1	-	-	-	-	-	-	1	-	-	-	-	-
Gout	1	-	-	-	-	-	-	-	1	-	-	-	-
Neoplasm, Carcinoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Neoplasm, Sarcoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Papovavirus Infection	5	1	-	-	-	-	1	1	-	-	1	-	1
Peritonitis, Egg Yolk	1	1	-	-	-	-	-	-	-	-	-	-	-
Sudden Death, Idiopathic	2	-	-	-	1	-	-	1	-	-	-	-	-
Feather Loss	1	-	-	-	-	-	-	-	-	-	-	1	-
Neoplasm, Fibroma	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm, Lipoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Muscle-Myositis	1	-	-	-	-	-	-	1	-	-	-	-	-
Airsacculitis Complex	1	-	1	-	-	-	-	-	-	-	-	-	-
Aspergillosis	2	-	-	1	-	-	-	-	-	-	-	1	-
Lung-Bronchitis	2	-	-	-	-	-	-	1	-	-	-	1	-
Lung-Hemorrhage	2	-	-	-	-	1	-	-	-	-	1	-	-
Lung-Pneumonia, Broncho	3	-	-	-	-	1	-	1	-	-	1	-	-
Sinusitis	1	-	-	-	-	-	-	1	-	-	-	-	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>Cockatiel (cont.)</u>													
Heart-Cardiomyopathy	2	-	-	1	-	-	1	-	-	-	-	-	-
Heart-Epicarditis	1	-	1	-	-	-	-	-	-	-	-	-	-
Crop Impaction	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	1	-
Liver-Neoplasm, Bile Duct	1	-	-	-	-	-	-	-	1	-	-	-	-
Liver-Cirrhosis	1	-	-	-	-	-	-	1	-	-	-	-	-
Liver-Hepatitis	5	1	-	2	-	-	1	-	-	1	-	-	-
Liver-Hepatosi	3	-	-	-	-	-	1	-	1	-	1	-	-
Liver-Lipidosis	3	-	-	-	-	2	-	-	-	-	-	1	-
Kidney-Nephritis	2	-	-	-	-	1	-	-	-	-	1	-	-
Kidney-Nephrosi	2	-	-	-	-	-	-	-	1	1	-	-	-
Pituitary-Neoplasm	1	-	-	-	-	-	-	-	-	-	-	-	1
Encephalomalacia	1	-	-	1	-	-	-	-	-	-	-	-	-
<u>Cockatoo</u>													
Hemosiderosis	1	-	-	-	-	-	-	-	-	-	1	-	-
Herpesvirus Infection	1	-	-	-	-	-	-	-	-	1	-	-	-
Papovavirus Infection	1	1	-	-	-	-	-	-	-	-	-	-	-
Psittacine Wasting Disease	6	-	1	-	-	-	-	-	1	1	2	1	-
Dermatitis, Granulomatous	1	-	-	-	-	-	-	-	-	-	-	1	-
Aspergillosis	3	-	1	-	-	-	-	-	-	1	1	-	-
Lung-Pneumonia, Foreign Body	2	-	-	-	-	-	-	1	-	1	-	-	-
Lung-Pneumonia, Interstitial	1	-	-	-	-	-	-	1	-	-	-	-	-
Heart-Epicarditis	2	-	-	-	-	-	-	1	-	-	-	-	-
Heart-Myocarditis	2	-	-	-	-	-	-	1	-	1	-	-	-
Crop-Ingluvitis, Mycotic	1	1	-	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	4	-	1	1	1	1	-	-	-	-	-	-	-
Intestine-Enteritis, Atrophic	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Cryptosporidia	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Hemosiderosis	1	-	-	1	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	2	1	-	-	1	-	-	-	-	-	-	-	-
Liver-Hepatosi	1	-	-	-	1	-	-	-	-	-	-	-	-
Kidney-Nephritis	1	-	-	-	-	-	-	1	-	-	-	-	-
Encephalitis, Non-suppurative	1	-	-	-	-	-	-	-	-	1	-	-	-
<u>Conur</u>													
Herpesvirus Infection	1	-	-	-	-	-	-	-	-	1	-	-	-
Septicemia, Bacterial	1	-	-	-	-	-	1	-	-	-	-	-	-
Dermatitis, Focal	1	1	-	-	-	-	-	-	-	-	-	-	-
Airsacculitis Complex	1	-	-	-	-	-	-	-	-	-	-	-	1
Feces-Microbiologic Exam	1	-	-	-	-	-	-	1	-	-	-	-	-
Liver-Neoplasm, Adenocarcinoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Pancreas-Pancreatitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Encephalitis, Non-suppurative	1	-	1	-	-	-	-	-	-	-	-	-	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>Duck</u>													
Gout	1	-	-	-	-	-	-	1	-	-	-	-	-
Septicemia, <i>E. coli</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Septicemia, <i>Pasteurella multocida</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Septicemia, <i>Salmonella</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Sudden Death, Idiopathic	2	-	-	-	-	1	-	1	-	-	-	-	-
Toxicosis, Lead	2	-	-	-	-	-	1	-	-	-	-	-	1
Toxicosis, Organophosphate	1	-	-	-	-	-	-	-	-	-	-	1	-
Trauma	1	-	-	-	-	-	-	-	-	1	-	-	-
Tuberculosis	1	-	-	-	-	1	-	-	-	-	-	-	-
Osteomalacia	1	-	-	-	-	-	-	-	-	-	-	-	1
Aortic Rupture	1	-	-	-	-	-	-	-	-	1	-	-	-
Feces-Microbiologic Exam	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, Necrotic	1	-	-	-	-	-	-	-	-	-	-	1	-
Liver-Hepatitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Liver-Lipidosis	1	-	-	-	-	-	-	-	1	-	-	-	-
Neurological Disorder-Idiopathic	2	-	1	-	-	-	-	-	-	-	-	1	-
<u>Eagle</u>													
Lung-Hemorrhage	1	-	-	-	-	1	-	-	-	-	-	-	-
Crop-Ingluvitis, Mycotic	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, Necrotic	1	-	-	-	-	-	-	1	-	-	-	-	-
Liver-Hepatositis	1	-	-	-	-	1	-	-	-	-	-	-	-
Kidney-Nephritis	1	-	-	-	-	-	-	1	-	-	-	-	-
<u>Falcon</u>													
Septicemia, <i>Clostridium septicum</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Toxicosis, Lead	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Podo	1	-	-	-	-	-	-	-	-	-	-	1	-
Airsacculitis Complex	2	-	1	1	-	-	-	-	-	-	-	-	-
Lung-Congestion	1	1	-	-	-	-	-	-	-	-	-	-	-
Atherosclerosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Blood Vessel Disorder	2	1	-	-	-	-	-	-	-	-	-	1	-
Spleen-Splenitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Hepatositis	2	1	-	1	-	-	-	-	-	-	-	-	-
Kidney-Nephritis	1	-	1	-	-	-	-	-	-	-	-	-	-
Kidney-Nephrosis	1	-	-	1	-	-	-	-	-	-	-	-	-
<u>Finch</u>													
Gout	1	-	-	-	-	-	-	-	-	-	-	1	-
Peritonitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Septicemia, Bacterial	1	-	-	-	-	1	-	-	-	-	-	-	-
Sudden Death, Idiopathic	4	-	-	1	1	-	-	-	-	2	-	-	-
Kidney-Nephrosis	2	-	-	-	-	-	1	-	-	-	-	1	-
<u>Flamingo</u>													
Sudden Death, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	1	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>Goose</u>													
Peritonitis, Egg Yolk	1	-	-	-	-	-	-	-	-	-	-	-	1
Septicemia, <i>Pasteurella hemolytica</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Sudden Death, Idiopathic	2	-	-	-	-	-	-	-	-	-	-	1	1
Toxicosis, Lead	2	-	-	-	-	-	-	-	-	1	-	1	-
Trachea-Tracheitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Enteritis, Necrotic	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Enteritis, Salmonella	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	2	-	2	-	-	-	-	-	-	-	-	-	-
Liver-Lipidosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Kidney-Nephritis, Glomerulo	1	-	-	-	-	-	-	-	-	-	-	-	1
<u>Grouse</u>													
Aspergillosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Kidney-Nephrosis	2	-	-	-	1	-	-	1	-	-	-	-	-
<u>Hawk</u>													
Dermatitis, Granulomatous	1	-	-	-	-	-	-	-	-	1	-	-	-
Leukocytozoonosis	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Nephritis	1	-	-	-	-	-	-	-	-	1	-	-	-
<u>Lovebird</u>													
Sudden Death, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	-	1
Feces-Microbiologic Exam	1	-	-	-	-	-	-	-	-	1	-	-	-
<u>Macaw</u>													
Chlamydiosis	2	-	-	1	-	-	-	-	-	-	-	1	-
Gout	1	-	-	1	-	-	-	-	-	-	-	-	-
Mineralization, Generalized	1	-	-	-	-	-	-	-	-	1	-	-	-
Papovavirus Infection	3	1	-	2	-	-	-	-	-	-	-	-	-
Peritonitis, Egg Yolk	1	-	-	-	-	-	-	-	-	-	-	1	-
Septicemia, Bacterial	1	-	-	-	-	1	-	-	-	-	-	-	-
Sudden Death, Idiopathic	2	-	-	-	-	-	-	-	-	1	1	-	-
Yolk Sac Infection	1	-	1	-	-	-	-	-	-	-	-	-	-
Airsacculitis, Candida	1	-	-	-	-	-	-	-	1	-	-	-	-
Airsacculitis Complex	1	-	-	-	-	-	-	-	-	-	-	1	-
Aspergillosis	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, Foreign Body	1	-	-	-	-	-	-	-	-	1	-	-	-
Heart-Myocarditis	1	-	-	-	-	1	-	-	-	-	-	-	-
Heart-Myocardial Degeneration	1	-	1	-	-	-	-	-	-	-	-	-	-
Spleen-Splenitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Feces-Microbiologic Exam	2	1	-	-	-	1	-	-	-	-	-	-	-
Liver-Hepatitis	3	-	-	-	-	1	-	-	1	-	-	1	-
Liver-Hepatosi	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Lipidosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Genital-Bacteriologic Examination	1	-	-	1	-	-	-	-	-	-	-	-	-
Kidney-Neoplasm	1	1	-	-	-	-	-	-	-	-	-	-	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>Macaw (continued)</u>													
Kidney-Nephritis, Glomerulo	1	-	1	-	-	-	-	-	-	-	-	-	-
Kidney-Nephrosis	1	-	-	-	-	-	-	-	-	1	-	-	-
Thyroid-Atrophy	2	-	-	-	-	2	-	-	-	-	-	-	-
Encephalitis, Non-suppurative	1	-	-	-	-	-	-	1	-	-	-	-	-
<u>Mynah Bird</u>													
Trauma	1	-	-	-	-	-	-	1	-	-	-	-	-
<u>Parrot</u>													
Chlamydiosis	4	1	1	1	-	-	-	-	-	1	-	-	-
Gout	1	-	-	-	-	-	-	-	-	-	-	-	1
Herpesvirus Infection	1	1	-	-	-	-	-	-	-	-	-	-	-
Papovavirus Infection	4	-	1	1	1	-	-	-	-	-	-	-	1
Psittacine Wasting Disease	5	-	-	1	1	-	-	-	-	-	-	-	3
Sudden Death, Idiopathic	3	-	-	-	-	-	-	-	-	-	2	1	-
Trauma	1	-	-	-	-	-	-	-	-	-	-	-	1
Tuberculosis	2	-	-	-	-	-	-	-	-	-	-	1	1
Dermatitis, Podo	1	-	-	-	-	-	-	-	1	-	-	-	-
Granulation Tissue (Skin)	1	-	-	-	-	-	-	-	-	-	-	-	1
Airsacculitis Complex	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho	1	1	-	-	-	-	-	-	-	-	-	-	-
Sinusitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Blood Vessel Disorder	1	-	-	-	-	-	-	-	-	-	-	-	1
Hemorrhage, Generalized	1	-	-	-	-	-	-	1	-	-	-	-	-
Crop-Ingluvitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Esophagitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Feces-Microbiologic Exam	4	-	1	-	-	2	-	1	-	-	-	-	-
Intestine-Enteritis, Idiopathic	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Neoplasm	2	-	1	-	-	-	-	-	-	-	-	-	1
Liver-Neoplasm, Bile Duct	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	3	-	-	1	-	1	1	-	-	-	-	-	-
Liver-Hepatositis	2	-	-	-	-	-	-	-	-	1	-	-	1
Liver-Lipidosis	1	-	-	-	-	-	-	-	-	-	-	1	-
Kidney-Neoplasm, Carcinoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Kidney-Nephritis	1	-	-	-	-	1	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Nephrosis	5	1	1	1	-	1	-	-	-	-	-	-	1
<u>Peacock</u>													
Dermatitis, Granulomatous	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho	1	-	-	-	-	-	-	-	-	-	1	-	-
Kidney-Nephritis	1	-	-	1	-	-	-	-	-	-	-	-	-
Encephalitis, Non-suppurative	1	-	-	1	-	-	-	-	-	-	-	-	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>Pelican</u>													
Muscle-Myodegeneration	1	-	-	-	-	-	-	-	-	-	1	-	-
Liver-Hepatitis	1	-	-	-	-	-	-	-	-	-	1	-	-
<u>Pheasant</u>													
Septicemia, Erysipelothrix	2	-	1	-	-	-	-	-	-	-	1	-	-
Septicemia, <i>E. coli</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Sudden Death, Idiopathic	1	1	-	-	-	-	-	-	-	-	-	-	-
Trauma	2	-	2	-	-	-	-	-	-	-	-	-	-
Weakness	1	-	1	-	-	-	-	-	-	-	-	-	-
Lameness	1	-	-	-	-	-	-	-	-	-	-	-	1
Perosis	1	-	-	1	-	-	-	-	-	-	-	-	-
Sinusitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Trachea-Tracheitis	1	-	-	-	-	1	-	-	-	-	-	-	-
Crop-Ingluvitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Crop-Ingluvitis, Mycotic	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Parasitism, Ascaris	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	5	-	2	2	-	-	-	-	-	-	-	-	1
Intestine-Parasitism, Nematode	4	-	2	-	-	-	-	-	1	-	1	-	-
Kidney-Nephrosis	1	-	1	-	-	-	-	-	-	-	-	-	-
Brain-Vasculitis	1	-	-	-	-	1	-	-	-	-	-	-	-
Eye-Conjunctivitis	1	-	-	-	-	1	-	-	-	-	-	-	-
<u>Pigeon</u>													
Herpesvirus Infection	2	-	-	1	-	-	-	-	-	-	1	-	-
Septicemia, Salmonella	3	-	-	2	-	-	-	-	1	-	-	-	-
Septicemia, Streptococcus	1	-	-	-	-	1	-	-	-	-	-	-	-
Starvation	1	-	-	-	-	-	1	-	-	-	-	-	-
Sudden Death, Idiopathic	3	-	1	-	1	-	-	-	-	-	-	-	1
Toxicosis, Lead	1	-	-	-	-	1	-	-	-	-	-	-	-
Pox	1	-	-	-	1	-	-	-	-	-	-	-	-
Xanthoma, Cutaneous	1	-	-	-	-	-	1	-	-	-	-	-	-
Airsacculitis, Candida	1	-	-	-	-	1	-	-	-	-	-	-	-
Trachea, Tracheitis	2	-	-	-	-	2	-	-	-	-	-	-	-
Heart-Myocarditis	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, Hemorrhagic	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	6	-	-	1	2	2	-	-	-	-	1	-	-
Liver-Lipidosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Oral-Stomatitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Pancreas-Pancreatitis	3	-	-	-	3	-	-	-	-	-	-	-	-
Kidney-Nephritis	6	-	-	1	1	3	-	-	1	-	-	-	-
Kidney-Nephrosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Encephalitis, Non-suppurative	6	-	-	-	1	2	1	2	-	-	-	-	-
Meningitis, Non-suppurative	1	-	-	-	-	1	-	-	-	-	-	-	-
Neurological Disorder-Idiopathic	2	-	-	-	2	-	-	-	-	-	-	-	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>Quail</u>													
Intestine-Enteritis, Ulcerative/ <i>C. colinum</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
<u>Sparrow</u>													
Sudden Death, Idiopathic	1	-	-	1	-	-	-	-	-	-	-	-	-
<u>Swan</u>													
Abscess	1	-	-	-	-	-	-	-	-	1	-	-	-
Amyloidosis	4	-	-	-	1	-	1	-	-	2	-	-	-
Gout	2	-	-	-	-	-	-	1	-	1	-	-	-
Neoplasm	1	-	-	-	-	-	1	-	-	-	-	-	-
Peritonitis	2	-	-	-	-	-	1	1	-	-	-	-	-
Toxicosis, Lead	28	-	-	-	1	2	8	13	3	1	-	-	-
Arthritis, <i>Staphylococcus aureus</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Arthritis, Suppurative	1	-	-	1	-	-	-	-	-	-	-	-	-
Aspergillosis	4	1	-	-	1	-	-	1	-	1	-	-	-
Heart-Epicarditis	1	-	-	-	-	-	-	-	-	1	-	-	-
Spleen-Splenitis	1	-	-	-	-	-	-	1	-	-	-	-	-
Alimentary-Erosions	1	-	-	-	-	-	-	1	-	-	-	-	-
Feces-Microbiologic Exam	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, <i>Clostridium perfringens</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Enteritis, Necrotic	3	-	-	-	-	-	1	-	1	-	1	-	-
Liver-Hepatositis	1	-	-	-	-	-	-	-	-	-	1	-	-
Pancreas-Pancreatitis	1	-	-	-	-	-	-	-	-	-	1	-	-
Kidney-Nephrosis	3	-	-	-	-	-	1	1	-	1	-	-	-
<u>Thrush</u>													
Lung-Pneumonia, Broncho	1	-	-	-	-	-	-	-	-	-	1	-	-
<u>Unidentified Avian Species</u>													
Amyloidosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Chlamydiosis	5	1	-	-	-	-	-	2	-	-	2	-	-
Emaciation	1	-	1	-	-	-	-	-	-	-	-	-	-
Papovavirus Infection	1	-	-	-	-	-	-	-	-	-	-	-	1
Peritonitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Septicemia, Bacterial	2	1	-	-	-	-	-	1	-	-	-	-	-
Septicemia, <i>Pasteurella hemolytica</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Sudden Death, Idiopathic	6	-	1	-	-	1	-	-	-	-	2	1	1
Toxicosis, Lead	2	-	-	-	1	-	1	-	-	-	-	-	-
Tuberculosis	2	-	-	1	-	-	-	1	-	-	-	-	-
Yolk Sac Infection	1	-	-	-	-	-	-	-	-	-	1	-	-
Cyst, Apocrine	1	-	-	-	-	-	1	-	-	-	-	-	-
Dermatitis, Focal	1	-	-	-	-	-	-	-	-	1	-	-	-
Neoplasm, Papilloma	1	-	-	-	-	-	-	-	1	-	-	-	-
Muscle-Myopathy	1	-	-	-	-	-	-	-	-	1	-	-	-
Osteomalacia	1	-	-	-	-	-	-	-	-	-	1	-	-
Perosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Aspergillosis	1	-	-	-	-	-	-	-	-	-	1	-	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>Unidentified Avian Species (cont.)</u>													
Lung-Edema	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia	2	-	1	-	1	-	-	-	-	-	-	-	-
Trachea-Parasitism, <i>Syngamus trachei</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Heart-Cardiomyopathy	2	-	-	-	-	-	1	-	-	-	-	-	1
Hemorrhage, Focal	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm, Lymphosarcoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Spleen-Splenitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	5	-	-	-	-	2	-	-	-	1	1	-	1
Intestine-Enteritis, Necrotic	2	1	-	-	-	-	-	-	1	-	-	-	-
Intestine-Parasitism, Cestode	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Nematode	1	-	-	-	-	-	-	1	-	-	-	-	-
Liver-Hepatitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Liver-Hepatosi	3	-	-	-	-	1	-	-	-	1	-	1	-
Liver-Lipidosis	1	1	-	-	-	-	-	-	-	-	-	-	-
Oral-Stomatitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Pancreas-Neoplasm	1	-	-	1	-	-	-	-	-	-	-	-	-
Stomach-Ventriculitis	2	1	-	-	-	-	-	-	-	1	-	-	-
Kidney-Nephritis	1	-	-	-	1	-	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	2	-	-	1	-	-	-	-	-	-	-	-	1
Kidney-Nephrosis	2	-	-	-	-	-	1	-	-	1	-	-	-
Thyroid-Neoplasm, Adenoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Encephalitis, Non-suppurative	1	-	-	-	-	-	-	-	-	-	-	1	-
Encephalopathy	1	-	-	-	-	-	1	-	-	-	-	-	-
Meningitis, Non-suppurative	1	-	-	-	-	-	-	-	1	-	-	-	-
Neurological Disorder-Idiopathic	1	-	1	-	-	-	-	-	-	-	-	-	-

BOVINE

0 Body as a Whole

Abscess	2	1	-	-	-	-	-	1	-	-	-	-	-
Anomaly	6	-	-	2	-	-	-	1	-	-	1	-	2
Bovine Viral Diarrhea	62	6	3	6	1	7	6	12	6	2	5	5	3
Copper Deficiency	6	-	1	1	-	-	-	-	-	1	1	1	1
Dehydration	1	1	-	-	-	-	-	-	-	-	-	-	-
Downer Cow Syndrome	5	1	1	1	-	-	-	-	-	1	1	-	-
Emaciation	16	1	-	1	5	1	1	2	1	1	1	-	2
Grain Overload	11	-	1	1	1	1	2	-	1	2	-	2	-
Health Evaluation	1	-	1	-	-	-	-	-	-	-	-	-	-
Hernia	1	-	-	-	-	-	-	1	-	-	-	-	-
Herpesvirus Infection	1	-	-	-	-	-	-	1	-	-	-	-	-
Icterus	2	-	1	-	-	-	-	-	-	1	-	-	-
Infectious Bovine Rhinotracheitis	2	-	-	-	1	-	-	1	-	-	-	-	-
Malignant Catarrhal Fever	2	-	-	-	-	1	-	1	-	-	-	-	-
Mycosis, Systemic	1	-	-	-	-	-	-	-	-	-	-	1	-

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Neonatal Death	9	-	-	-	-	-	1	-	-	2	6	-	-
Neonatal Weakness	15	-	1	-	-	-	1	2	4	5	2	-	-
Neoplasm, Carcinoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Omphalitis	11	1	1	-	-	-	-	1	-	3	3	2	-
Peritonitis	8	-	-	1	-	2	1	-	1	-	2	1	-
Pleural Effusion	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Actinomyces pyogenes</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Septicemia, Bacterial	4	-	-	-	-	-	-	1	1	2	-	-	-
Septicemia, <i>Clostridium chauvoei</i>	13	1	-	3	1	3	-	-	-	1	-	4	-
Septicemia, <i>Clostridium hemolyticum</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
Septicemia, <i>Clostridium novyi</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Septicemia, <i>Clostridium septicum</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Septicemia, <i>E. coli</i>	20	1	1	3	2	1	1	3	2	1	4	-	1
Septicemia, Klebsiella	1	-	-	1	-	-	-	-	-	-	-	-	-
Septicemia, Leptospira	1	-	1	-	-	-	-	-	-	-	-	-	-
Septicemia, Listeria	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Pasteurella hemolytica</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Septicemia, <i>Pasteurella multocida</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Septicemia, Salmonella	12	-	2	-	2	2	-	1	1	2	-	2	-
Septicemia, Streptococcus	1	-	-	-	-	-	-	-	1	-	-	-	-
Serum Electrolytes, Imbalanced	1	-	-	1	-	-	-	-	-	-	-	-	-
Starvation	31	-	-	2	1	5	4	7	4	5	2	-	1
Sudden Death, Idiopathic	75	9	5	3	2	7	9	9	7	7	8	7	2
Toxicosis, Arsenic	2	-	1	-	-	-	-	-	-	-	-	-	1
Toxicosis, Ionophore	1	-	-	-	-	-	-	-	-	-	-	1	-
Toxicosis, Lead	19	2	-	2	-	1	-	-	-	-	-	5	9
Toxicosis, Nitrate	5	-	2	1	-	1	-	-	1	-	-	-	-
Toxicosis, Organophosphate	6	1	1	1	1	-	-	-	-	-	-	2	-
Toxicosis, Sulfonamide	1	-	-	-	-	-	-	-	-	1	-	-	-
Toxicosis, Urea	1	-	-	-	-	-	-	-	1	-	-	-	-
Trauma	2	-	1	-	-	-	1	-	-	-	-	-	-
Weakness	1	-	-	-	-	-	-	1	-	-	-	-	-
1 Integumentary													
Dermatitis, Bacterial	2	1	-	-	-	-	-	-	1	-	-	-	-
Dermatitis, Eosinophilic	2	-	-	-	-	-	2	-	-	-	-	-	-
Dermatitis, Mycotic	1	-	-	-	-	-	-	1	-	-	-	-	-
Dermatitis, Podo	2	-	1	-	-	-	-	-	-	-	1	-	-
Dermatitis, Ulcerative	1	-	-	-	-	-	-	-	-	-	-	-	1
Mammary-Mammalitis	7	-	-	-	1	1	2	1	-	1	1	-	-
Mammary-Mastitis	94	1	1	2	3	5	3	5	11	18	20	11	14
Milk-Bulk Tank, Bacteriologic Exam	199	15	17	15	10	7	14	13	19	33	20	25	11
Neoplasm, Hemangiosarcoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Melanoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Neoplasm, Schwannoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Parasitism, Lice	1	-	-	-	-	1	-	-	-	-	-	-	-
Parasitism, Mites	1	-	-	-	-	-	-	-	-	-	-	1	-

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
2 Musculoskeletal													
Actinomycosis	1	-	-	1	-	-	-	-	-	-	-	-	-
Arthritis, <i>Actinomyces pyogenes</i>	11	1	1	1	-	-	-	1	-	2	2	-	3
Arthritis, Non-suppurative	1	-	-	-	-	-	-	-	-	1	-	-	-
Fracture	1	-	-	-	-	-	-	-	1	-	-	-	-
Muscle-Myodegeneration	3	-	-	-	-	-	-	-	-	-	-	2	1
Muscle-Myositis	11	1	3	-	3	-	-	1	1	1	1	-	-
3 Respiratory													
Respiratory Disorders, Total Cases	421	20	25	23	41	55	61	51	31	41	35	26	12
Lung-Bronchitis	3	-	-	-	1	-	-	-	1	1	-	-	-
Lung-Congestion	2	-	1	-	-	-	-	-	-	-	1	-	-
Lung-Edema	25	3	3	-	-	3	4	3	1	2	-	5	1
Lung-Emphysema	5	-	2	-	-	-	-	-	-	2	-	-	1
Lung-Hemorrhage	2	-	-	1	-	-	-	-	-	-	-	-	1
Lung-Pneumonia	2	-	-	1	-	-	1	-	-	-	-	-	-
Lung-Pneumonia, <i>Actinomyces pyogenes</i>	20	-	-	-	2	3	-	1	5	3	5	1	1
Lung-Pneumonia, Atypical Interstitial	12	-	3	1	2	-	1	-	-	2	3	-	-
Lung-Pneumonia, BRSV	52	2	2	3	4	4	11	13	3	2	3	3	2
Lung-Pneumonia, Broncho	83	1	7	4	7	11	14	6	8	11	7	5	2
Lung-Pneumonia, <i>E. coli</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Foreign Body	11	4	-	1	1	-	-	1	1	2	1	-	-
Lung-Pneumonia, <i>Hemophilus somnus</i>	35	2	2	3	4	4	8	7	2	-	1	2	-
Lung-Pneumonia, IBR	6	-	-	1	-	3	-	-	-	1	-	1	-
Lung-Pneumonia, Interstitial	12	-	-	1	3	1	4	2	-	1	-	-	-
Lung-Pneumonia, <i>Moraxella</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella hemolytica</i>	82	5	1	5	11	11	11	11	9	7	6	5	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	79	4	3	3	8	10	10	7	6	6	11	6	5
Lung-Pneumonia, <i>Salmonella</i>	3	-	-	-	-	1	-	-	-	2	-	-	-
Lung-Pneumonia, <i>Streptococcus</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung-Pneumonia, <i>Streptococcus suis</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Thrombosis	3	-	-	-	1	-	-	2	-	-	-	-	-
Pleuritis	2	-	1	-	-	-	-	1	-	-	-	-	-
Respiratory Infection, <i>Hemophilus somnus</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Respiratory Nasal Swab negative	31	2	-	1	4	7	4	4	-	4	1	3	1
Respiratory Nasal Swab, <i>H. somnus</i>	4	1	1	-	-	-	-	1	-	1	-	-	-
Respiratory Nasal Swab, <i>P. hemolytica</i>	4	-	1	-	-	-	1	-	1	-	-	1	-
Respiratory Nasal Swab, <i>P. multocida</i>	9	1	2	-	1	4	1	-	-	-	-	-	-
Trachea-Tracheitis	1	-	-	-	-	1	-	-	-	-	-	-	-
4 Cardiovascular													
Blood Vessel Disorder	3	-	1	1	-	-	-	1	-	-	-	-	-
Heart-Cardiomyopathy	3	-	-	-	-	-	-	-	-	-	-	-	3
Heart-Endocarditis	2	1	1	-	-	-	-	-	-	-	-	-	-
Heart-Epicarditis	1	-	-	-	-	-	-	-	1	-	-	-	-
Heart-Myocarditis	7	1	1	1	1	-	-	1	-	1	-	1	-
Heart-Myocardial Degeneration	6	1	1	-	-	-	-	-	-	2	-	1	1

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Heart-Pericarditis	1	-	-	-	-	-	-	-	1	-	-	-	-
Heart Failure, Acute	2	-	1	-	1	-	-	1	-	-	-	-	-
Heart Failure, Chronic	2	-	-	-	-	-	1	-	-	-	1	-	-
Hemopericardium	1	-	-	-	-	-	-	-	-	1	-	-	-
Vasculitis	1	-	-	-	-	-	-	-	-	-	-	1	-
5 Hemic and Lymphatic													
Anaplasmosis	1	-	1	-	-	-	-	-	-	-	-	-	-
Anemia	2	-	-	1	-	-	-	1	-	-	-	-	-
Anemia, Hemolytic	4	-	1	1	-	-	-	-	-	1	-	1	-
Coagulation Disorder	4	1	-	-	-	-	2	-	-	1	-	-	-
Hemorrhage, Generalized	1	-	-	-	-	-	-	-	-	-	-	-	1
Hypogammaglobulinemia	3	-	1	-	-	-	-	2	-	-	-	-	-
Lymph Node-Hyperplasia	1	-	-	-	-	1	-	-	-	-	-	-	-
Neoplasm, Lymphosarcoma	9	1	1	-	1	1	-	1	-	1	2	1	-
Neoplasm, Myeloproliferative Disease	1	-	-	-	-	-	-	-	-	-	1	-	-
Protoporphyrria	2	-	-	-	-	-	1	-	-	-	-	-	1
Spleen-Splenitis	1	-	1	-	-	-	-	-	-	-	-	-	-
6 Digestive													
Alimentary-Erosions	5	-	1	-	1	-	1	-	-	1	1	-	-
Esophagitis	1	-	-	-	-	-	-	1	-	-	-	-	-
Feces-Microbiologic Exam	190	10	11	11	8	21	15	24	25	26	9	13	17
Intestine-Colitis	4	-	-	-	1	-	1	2	-	-	-	-	-
Intestine-Enteritis, Total Cases	960	50	40	62	43	84	115	132	109	117	80	81	47
Intestine-Enteritis, Adenovirus	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, Atrophic	8	2	-	-	3	-	-	1	2	-	-	-	-
Intesine-Enteritis, BVD	37	5	-	3	4	2	5	3	4	2	1	5	3
Intestine-Enteritis, <i>C. perfringens</i> Type C	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Enteritis, Coronavirus	149	5	1	5	5	17	24	18	12	21	22	16	3
Intestine-Enteritis, Enterovirus	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Enteritis, <i>E. coli</i>	60	6	3	7	1	2	6	11	6	6	5	2	4
Intestine-Enteritis, Hemorrhagic	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	44	1	5	4	2	2	5	8	5	5	6	1	-
Intestine-Enteritis, <i>M. paratuberculosis</i>	22	-	-	1	4	2	1	5	1	-	2	4	2
Intestine-Enteritis, Necrotic	41	2	1	5	1	3	5	5	9	5	1	2	2
Intestine-Enteritis, Rotavirus	246	9	5	11	12	23	37	38	21	38	26	20	6
Intestine-Enteritis, Salmonella	81	5	9	12	9	13	7	9	5	3	3	3	3
Intestine-Enteritis, Specimen Unsuitable	37	3	2	2	1	4	3	5	5	7	1	4	-
Intestine-Enteritis, Streptococcus	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Hemorrhage	2	-	-	-	1	-	-	-	-	1	-	-	-
Intestine-Infarction	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Intussusception	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Obstruction	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Parasitism, Coccidia	39	5	4	3	2	5	3	2	2	1	1	6	5
Intestine-Parasitism, Cryptosporidia	343	15	12	18	22	30	59	51	33	45	27	22	9
Intestine-Parasitism, Nematode	2	-	-	-	-	-	-	1	1	-	-	-	-

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Intestine-Parasitism, Nematodirus	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Strongyles Unidentified	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Parasitism, Strongyloides	2	-	-	1	-	-	1	-	-	-	-	-	-
Intestine-Parasitism, Trichostrongyle	11	-	-	2	1	1	1	3	-	2	1	-	-
Intestine-Parasitism-Trichuris	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Rupture	2	-	-	1	-	-	-	-	-	-	-	-	1
Intestine-Volvulus	2	-	-	-	-	-	-	-	-	-	2	-	-
Liver-Abscess	1	-	-	-	1	-	-	-	-	-	-	-	-
Liver-Cirrhosis	3	-	-	-	1	-	-	-	-	1	-	1	-
Liver-Hepatitis	6	1	-	-	1	-	-	-	-	-	-	2	2
Liver-Hepatositis	11	-	2	2	-	1	1	2	-	-	2	1	-
Liver-Lipidosis	20	3	-	1	-	1	2	2	1	-	2	4	4
Liver-Parasitism, Fascioloides	2	-	1	-	1	-	-	-	-	-	-	-	-
Oral-Stomatitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Stomach-Abomasitis	25	1	1	-	1	3	6	2	1	4	4	1	1
Stomach-Abomasal Ulcer	2	-	-	1	1	-	-	-	-	-	-	-	-
Stomach-Abomasal Volvulus	1	-	-	-	-	-	1	-	-	-	-	-	-
Stomach-Parasitism, Ostertagia	1	-	-	-	-	-	-	-	-	-	-	-	1
Stomach-Rumenitis	11	-	-	-	-	2	-	3	-	2	3	1	-
Stomach-Rumen Tympany (Bloat)	7	-	-	-	1	2	1	1	1	-	1	-	-
Stomach-Traumatic Reticulitis	2	-	-	-	-	-	-	-	-	1	-	1	-
Stomach-Ulcer	2	1	-	-	-	-	1	-	-	-	-	-	-
7 Urogenital													
Abortions, Total Cases	506	36	41	30	38	34	38	46	47	57	41	47	51
Abortion, Anomaly	7	1	-	-	-	-	-	1	-	1	2	2	-
Abortion, Bacterial	3	-	-	-	-	-	-	1	-	-	1	1	-
Abortion, Bacterial, <i>A. pyogenes</i>	27	1	1	-	6	2	3	4	2	5	1	-	2
Abortion, Bacterial, <i>Bacillus sp.</i>	10	2	-	-	2	1	-	3	1	-	-	1	-
Abortion, Bacterial, <i>Campylobacter sp.</i>	2	-	-	-	-	-	-	-	-	-	-	1	1
Abortion, Bacterial, <i>E. coli</i>	4	-	-	-	1	-	-	2	1	-	-	-	-
Abortion, Bacterial, <i>Leptospira sp.</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Abortion, Bacterial, <i>Listeria</i>	8	-	-	-	-	2	-	3	2	-	-	1	-
Abortion, Bacterial, <i>Pasteurella hemolytica</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Abortion, Bacterial, <i>Pasteurella multocida</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Abortion, Bacterial, <i>Staphylococcus</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Abortion, Bacterial, <i>Staphylococcus aureus</i>	3	1	-	-	-	-	-	1	1	-	-	-	-
Abortion, Bacterial, <i>Streptococcus</i>	2	1	-	-	-	-	-	-	-	-	-	1	-
Abortion, Circulatory Failure	4	2	-	-	-	-	1	1	-	-	-	-	-
Abortion, Encephalitis	2	-	-	-	-	-	-	1	-	-	1	-	-
Abortion, Hepatitis	5	-	-	-	-	1	-	-	1	1	-	2	-
Abortion, Hepatositis	3	-	-	-	-	-	-	-	-	1	1	-	1
Abortion, Idiopathic	264	18	20	19	18	17	21	19	23	30	20	25	34
Abortion, Mummified Fetus	9	-	-	-	1	1	1	-	-	3	2	-	1
Abortion, Mycotic Placentitis	14	-	3	3	-	3	-	1	2	-	1	1	-
Abortion, Myocarditis	30	1	4	2	3	-	4	3	2	5	2	2	2
Abortion, Parasitism, <i>Toxoplasma</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Abortion, Placentitis	38	2	5	4	3	4	2	3	3	3	4	1	4

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Abortion, Pneumonia	19	2	-	1	2	1	1	1	1	3	2	2	3
Abortion, Twins	12	1	2	-	1	2	3	-	-	-	1	1	1
Abortion, Viral, BVD	18	2	3	1	1	-	-	-	1	3	2	4	1
Abortion, Viral, IBR	17	1	1	-	-	-	2	2	7	2	-	2	-
Genital-Anomaly, Freemartin	2	-	-	-	1	-	-	-	1	-	-	-	-
Genital-Bacteriologic Examination	56	5	9	7	1	6	3	8	5	6	5	1	-
Kidney-Infarction	2	-	1	-	-	-	-	-	-	1	-	-	-
Kidney-Nephritis	12	-	1	-	1	1	1	-	-	2	2	3	1
Kidney-Nephrosis	2	-	-	1	-	-	-	-	-	-	1	-	-
Stillbirth, Idiopathic	11	-	-	-	1	2	2	-	1	3	1	1	-
Urinary Bacteriologic Exam	5	-	-	-	-	-	-	3	-	1	1	-	-
Urocyst-Urolithiasis	1	-	-	-	-	-	-	-	-	-	-	1	-
Uterus-Endometrial Biopsy	1	-	-	-	-	-	-	-	1	-	-	-	-
Uterus-Metritis	5	1	-	-	-	-	-	-	-	1	-	2	1
Uterus-Torsion	1	-	-	-	-	-	-	-	-	-	-	-	1
Vas Deferens-Normal	2	-	-	1	-	-	-	-	-	-	-	1	-
8 Endocrine													
Pituitary-Abscess	1	-	1	-	-	-	-	-	-	-	-	-	-
Thyroid-Goiter	1	-	-	1	-	-	-	-	-	-	-	-	-
9 Neurological													
Neurological Disorders, Total Cases	65	6	8	-	4	4	4	5	8	7	7	9	3
Brain-Hemorrhage	1	-	-	-	-	-	-	1	-	-	-	-	-
Brain-Vasculitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Encephalitis, Listeria	10	-	1	-	-	1	-	-	2	2	1	2	1
Encephalitis, Rabies	13	1	3	-	1	1	1	1	-	2	2	1	-
Encephalomalacia	2	1	-	-	-	-	-	-	1	-	-	-	-
Meningitis, <i>E. coli</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Meningitis, Suppurative	7	-	3	-	-	1	-	-	-	-	2	1	-
Myelitis, Non-suppurative	1	-	-	-	-	-	-	-	-	-	-	1	-
Neurological Disorder-Idiopathic	24	1	-	-	2	2	3	3	4	2	3	3	1
Polioencephalomalacia	10	3	1	-	1	-	1	-	-	2	-	1	1
X Special Senses													
Eye-Conjunctivitis	5	-	2	-	-	-	-	1	-	-	-	2	-
Eye-Keratitis	1	-	-	-	-	-	-	1	-	-	-	-	-

CANINE

0 Body as a Whole													
Abscess	1	-	-	-	-	-	-	-	1	-	-	-	-
Amyloidosis	7	-	1	-	-	2	-	1	2	-	1	-	-
Anomaly	6	1	-	2	2	1	-	-	-	-	-	-	-
Chylothorax	1	-	1	-	-	-	-	-	-	-	-	-	-
Heat Exhaustion/Stroke	3	2	-	-	-	-	-	-	-	-	1	-	-
Hernia, Diaphragmatic	2	-	-	-	-	1	-	-	-	-	1	-	-
Herpesvirus Infection	1	-	-	-	1	-	-	-	-	-	-	-	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Icterus	2	-	-	-	-	-	1	-	-	-	-	1	-
Mineralization	4	-	-	-	-	-	-	1	1	2	-	-	-
Mycosis, Systemic, Blastomyces	7	1	2	-	-	-	-	2	-	-	-	1	1
Neonatal Death	6	-	-	1	1	-	-	-	1	1	1	1	-
Neonatal Weakness	5	-	-	-	1	-	1	-	1	1	-	-	1
Neoplasm, Anaplastic, Metastatic	3	-	2	1	-	-	-	-	-	-	-	-	-
Neoplasm, Carcinoma, Metastatic	5	-	-	1	2	-	-	1	-	-	-	-	1
Neoplasm, Fibrosarcoma, Metastatic	1	-	-	-	-	-	-	-	-	-	-	-	1
Neoplasm, Hemangiosarcoma, Metastatic	4	-	-	-	-	-	-	2	-	1	-	1	-
Neoplasm, Mastocytoma, Metastatic	1	-	-	-	-	-	1	-	-	-	-	-	-
Neoplasm, Melanoma, Metastatic	1	-	-	-	-	-	-	-	-	-	-	-	1
Neoplasm, Sarcoma, Metastatic	4	-	2	-	-	-	-	-	-	1	-	1	-
Peritonitis	4	1	1	-	-	1	1	-	-	-	-	-	-
Pleural Effusion	2	1	-	-	-	-	1	-	-	-	-	-	-
Pseudorabies, Total Cases	2	-	-	-	-	-	1	-	-	1	-	-	-
Pyothorax	1	-	-	-	-	-	-	-	-	-	-	-	1
Septicemia, Bacterial	1	-	-	-	-	1	-	-	-	-	-	-	-
Septicemia, <i>E. coli</i>	2	-	-	-	-	1	-	1	-	-	-	-	-
Septicemia, Klebsiella	1	-	-	-	-	1	-	-	-	-	-	-	-
Septicemia, <i>Pasteurella multocida</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Septicemia, Salmonella	1	-	-	-	-	-	-	-	-	-	-	-	1
Septicemia, Streptococcus	1	-	-	1	-	-	-	-	-	-	-	-	-
Starvation	6	-	1	-	-	1	-	-	1	3	-	-	-
Steatitis	1	-	-	-	-	-	-	-	-	-	1	-	-
Sudden Death, Idiopathic	42	6	4	1	1	1	4	4	1	7	4	5	4
Toxicosis, Ethylene Glycol	6	-	-	-	-	-	-	-	-	1	1	2	2
Toxicosis, Miscellaneous	4	-	-	-	-	-	-	-	1	1	1	1	-
Toxicosis, Strychnine	15	3	2	1	-	2	2	2	-	1	-	1	1
Trauma	14	3	1	1	-	-	3	-	2	2	2	-	-
1 <u>Integumentary</u>													
Abscess	7	1	3	-	-	-	-	-	-	1	-	2	-
Alopecia	1	1	-	-	-	-	-	-	-	-	-	-	-
Anomaly	1	-	-	-	-	1	-	-	-	-	-	-	-
Calcinosis Circumscripta	2	-	1	-	-	1	-	-	-	-	-	-	-
Cellulitis	26	4	2	2	2	5	2	3	3	-	-	3	-
Cyst, Adnexal	83	7	8	9	5	8	7	16	8	6	4	4	1
Dermal Fibrosis	23	2	-	1	5	3	2	3	3	2	1	-	1
Dermatitis, Allergic/Atopic	31	1	6	2	3	7	1	-	1	3	2	-	5
Dermatitis, Bacterial	16	3	2	-	2	1	2	-	-	2	-	3	1
Dermatitis, Diffuse	19	4	-	2	-	-	-	3	2	1	2	1	4
Dermatitis, Eosinophilic	5	1	1	-	-	-	-	2	-	-	-	1	-
Dermatitis, Eosinophilic Granuloma	2	-	-	-	-	-	-	-	-	-	-	-	2
Dermatitis, Focal	85	3	3	4	6	15	11	8	2	4	7	10	12
Dermatitis, Folliculitis	3	-	-	-	1	1	-	-	-	-	-	1	-
Dermatitis, Granulomatous	81	2	6	3	7	9	10	7	6	10	5	11	5

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Dermatitis, Lupus Erythematosus	7	-	-	-	-	-	-	1	-	1	-	2	3
Dermatitis, Mycotic	4	-	1	-	-	1	1	-	1	-	-	-	-
Dermatitis, Pemphigus	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Podo	10	-	1	3	1	-	-	-	-	-	1	2	2
Dermatosis, Endocrine	18	2	2	2	-	1	-	-	2	3	3	-	3
Granulation Tissue	15	1	1	1	1	3	-	2	-	1	3	1	1
Hematoma	6	-	-	1	-	1	-	2	-	-	-	-	2
Mammary-Duct Ectasia	6	-	1	-	1	-	1	-	-	1	2	-	-
Mammary-Hyperplasia	7	-	1	1	1	1	2	-	-	-	1	-	-
Mammary-Mammalitis	3	-	-	-	2	-	1	-	-	-	-	-	-
Mammary-Mastitis	3	1	-	-	1	-	1	-	-	-	-	-	-
Mammary-Mastitis, <i>Staphylococcus aureus</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Mammary-Neoplasm, Anaplastic	3	1	-	-	-	2	-	-	-	-	-	-	-
Mammary-Neoplasm, Adenoma	35	4	3	4	2	1	7	2	-	3	2	5	2
Mammary-Neoplasm, Adenocarcinoma	114	5	8	10	9	8	9	14	12	11	15	6	7
Mammary-Neoplasm, Mixed Tumor-Benign	36	1	1	2	4	6	3	4	-	2	1	4	8
Mammary-Neoplasm, Mixed Tumor-Malignant	24	3	2	-	3	4	3	2	1	1	2	3	-
Mammary-Neoplasm, Osteosarcoma	5	-	1	-	-	-	-	2	-	-	-	1	1
Mammary-Neoplasm, Sarcoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Mammary-Neoplasm, Squamous Cell Carcinoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Nail Bed-Neoplasm	3	-	2	1	-	-	-	-	-	-	-	-	-
Neoplasm, Anaplastic	7	-	1	1	-	-	-	-	1	1	1	2	-
Neoplasm, Adenocarcinoma	2	-	1	1	-	-	-	-	-	-	-	-	-
Neoplasm, Adenoma	3	-	-	1	-	-	-	-	-	-	1	-	1
Neoplasm, Anal Sac Carcinoma	7	-	1	-	-	1	1	2	1	1	-	-	-
Neoplasm, Apocrine Adenocarcinoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Neoplasm, Apocrine Adenoma	4	-	2	-	-	-	-	-	2	-	-	-	-
Neoplasm, Basal Cell Tumor	41	2	3	3	4	4	2	-	4	2	6	4	7
Neoplasm, Carcinoma	6	-	1	-	-	-	-	-	2	1	1	1	-
Neoplasm, Fibroma	32	2	1	4	3	2	-	3	4	-	3	7	3
Neoplasm, Fibropapilloma	2	-	-	-	-	-	-	1	1	-	-	-	-
Neoplasm, Fibrosarcoma	27	3	4	3	-	3	2	2	5	-	2	2	1
Neoplasm, Hemangioma	46	-	5	4	3	7	2	8	-	7	2	2	6
Neoplasm, Hemangiopericytoma	43	2	5	4	2	5	5	4	5	3	6	1	1
Neoplasm, Hemangiosarcoma	5	-	-	1	-	2	-	1	-	-	1	-	-
Neoplasm, Histiocytoma	138	5	3	16	7	12	11	15	11	17	16	6	19
Neoplasm, Intracutaneous Cornifying Epithelioma	17	2	4	1	2	2	1	1	1	-	-	2	1
Neoplasm, Leiomyoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Lipoma	91	3	7	8	7	7	9	10	8	8	7	9	8
Neoplasm, Liposarcoma	4	1	-	-	-	-	1	1	-	-	1	-	-
Neoplasm, Lymphangioma	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Lymphangiosarcoma	2	1	-	-	-	1	-	-	-	-	-	-	-
Neoplasm, Lymphosarcoma	2	2	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Mastocytoma	129	9	11	12	10	10	8	15	10	9	8	15	12
Neoplasm, Melanoma	44	4	2	5	3	-	5	4	5	4	2	5	5

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Neoplasm, Myxosarcoma	3	1	-	-	-	-	1	-	-	-	-	1	-
Neoplasm, Papilloma	24	2	1	4	-	1	-	2	2	1	6	2	3
Neoplasm, Perianal Gland Adenoma	71	5	11	3	12	8	6	2	4	4	4	6	6
Neoplasm, Perianal Gland Carcinoma	11	-	1	1	-	-	2	1	-	2	1	-	3
Neoplasm, Pilomatixoma	18	-	1	3	-	3	3	-	2	1	1	-	4
Neoplasm, Sarcoma, Anaplastic	29	2	5	2	4	1	3	4	-	4	-	3	1
Neoplasm, Schwannoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Neoplasm, Sebaceous Gland Adenoma	71	6	5	10	-	7	6	2	62	3	11	3	12
Neoplasm, Squamous Cell Carcinoma	16	-	1	-	-	-	2	1	3	3	3	2	1
Neoplasm, Trichoepithelioma	22	1	2	3	2	-	1	3	-	4	3	-	3
Parakeratosis	1	-	-	-	-	-	1	-	-	-	-	-	-
Parasitism, Fleas	1	-	-	-	-	1	-	-	-	-	-	-	-
Parasitism, Mites	3	-	-	-	1	1	-	1	-	-	-	-	-
Steatitis	15	2	-	1	1	1	-	2	1	3	2	-	2
2 Musculoskeletal													
Arthritis, Suppurative	1	1	-	-	-	-	-	-	-	-	-	-	-
Muscle-Atrophy	1	-	-	-	1	-	-	-	-	-	-	-	-
Muscle-Myopathy	2	-	-	-	-	-	-	-	1	1	-	-	-
Muscle-Myositis	3	-	-	-	-	-	-	1	-	1	1	-	-
Muscle-Neoplasm, Rhabdomyosarcoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Skeletal-Neoplasm, Unclassified	5	-	-	1	2	1	-	-	-	1	-	-	-
Skeletal-Neoplasm, Chondrosarcoma	3	-	-	-	1	-	-	-	1	1	-	-	-
Skeletal-Neoplasm, Osteosarcoma	16	1	1	-	2	1	-	4	4	-	-	1	2
Skeletal-Neoplasm, Sarcoma	2	-	-	-	-	-	1	-	-	1	-	-	-
Skeletal-Osteodystrophy	1	-	-	-	-	-	1	-	-	-	-	-	-
3 Respiratory													
Respiratory Disorders, Total Cases	48	5	3	4	4	2	7	3	4	5	5	3	3
Lung-Edema	6	2	1	-	1	-	-	-	1	1	-	-	-
Lung-Emphysema	4	1	1	-	-	-	-	1	-	1	-	-	-
Lung-Hemorrhage	3	-	-	1	-	-	1	-	1	-	-	-	-
Lung-Infarction	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Neoplasm, Adenocarcinoma	2	-	-	-	-	-	2	-	-	-	-	-	-
Lung-Pneumonia	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, <i>Bordetella sp.</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung-Pneumonia, Broncho	9	1	-	3	-	1	1	-	-	-	-	1	2
Lung-Pneumonia, <i>E. coli</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Lung-Pneumonia, Foreign Body	2	1	-	-	1	-	-	-	-	-	-	-	-
Lung-Pneumonia, Interstitial	2	-	-	-	1	-	1	-	-	-	-	-	-
Lung-Pneumonia, Klebsiella	2	-	-	-	-	-	1	-	-	-	1	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, Staphylococcus	3	-	-	-	1	-	-	-	2	-	-	-	-
Nasal-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Nasal-Rhinitis	2	-	-	-	-	-	-	-	-	-	-	1	1
Pleuritis	2	-	-	-	-	-	-	1	-	-	1	-	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Respiratory Nasal Swab (Negative)	4	-	-	-	-	-	-	-	-	2	1	1	-
Respiratory Nasal Swab <i>P. multocida</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Trachea-Collapse	1	-	-	-	-	-	1	-	-	-	-	-	-
4 Cardiovascular													
Atherosclerosis	2	1	-	1	-	-	-	-	-	-	-	-	-
Heart-Anomaly	2	1	-	-	-	-	-	-	-	-	-	1	-
Heart-Cardiomyopathy	6	1	1	1	1	1	-	-	-	1	-	-	-
Heart-Endocardiosis	10	3	2	-	-	1	-	1	-	1	-	1	1
Heart-Endocarditis	1	-	-	-	-	-	-	-	-	-	1	-	-
Heart-Myocarditis	3	-	1	-	-	-	-	-	-	-	-	-	2
Heart-Myocardial Degeneration	2	1	-	-	-	-	-	1	-	-	-	-	-
Heart-Neoplasm	2	-	1	-	-	-	-	-	-	1	-	-	-
Heart-Neoplasm, Hemangiosarcoma	4	1	1	-	-	1	-	-	1	-	-	-	-
Heart Failure, Acute	8	-	2	-	-	1	-	-	1	1	1	1	1
Heart Failure, Chronic	4	1	1	1	-	-	-	1	-	-	-	-	-
Hemopericardium	1	-	-	-	-	-	-	-	-	1	-	-	-
Parasitism, Dirofilaria	6	2	1	1	-	-	-	-	-	-	2	-	-
5 Hemic and Lymphatic													
Anemia	2	-	-	1	-	-	-	-	-	-	-	1	-
Anemia, Hemolytic	4	-	-	1	-	-	-	-	-	1	-	-	2
Coagulation Disorder	9	-	-	2	1	-	1	4	-	-	-	-	1
Hemorrhage, Generalized	10	-	-	2	-	1	-	1	-	2	2	1	1
Lymph Node-Hyperplasia	7	1	1	-	1	1	-	1	-	1	-	-	1
Lymph Node-Lymphadenitis	4	1	-	-	-	-	1	1	1	-	-	-	-
Neoplasm, Lymphosarcoma	87	6	6	4	3	11	4	6	8	10	7	7	15
Neoplasm, Myeloproliferative Disease	3	-	2	-	-	-	-	1	-	-	-	-	-
Spleen-Hematoma	8	-	-	-	-	-	1	1	2	1	1	1	1
Spleen-Infarction	7	-	1	1	1	-	-	-	1	-	3	-	-
Spleen-Neoplasm, Anaplastic	3	1	-	1	-	-	-	1	-	-	-	-	-
Spleen-Neoplasm, Hemangiosarcoma	8	1	-	-	-	-	1	3	-	2	1	-	-
Spleen-Siderotic Plaque	1	-	-	-	-	-	-	-	-	1	-	-	-
Spleen-Splenitis	3	1	-	-	-	-	1	-	-	-	-	1	-
Thymus-Hypoplasia	1	-	-	-	-	1	-	-	-	-	-	-	-
6 Digestive													
Feces-Microbiologic Exam	130	11	18	20	8	3	10	11	10	11	5	12	11
Intestine-Colitis	4	-	-	-	-	1	1	-	1	-	-	-	1
Intestine-Enteritis, Atrophic	2	-	-	1	-	-	-	-	1	-	-	-	-
Intestine-Enteritis, Coronavirus	10	-	-	-	-	-	2	2	1	1	3	-	1
Intestine-Enteritis, Eosinophilic	2	-	-	-	-	-	-	-	-	-	1	1	-
Intestine-Enteritis, <i>E. coli</i>	2	-	-	-	-	-	-	1	1	-	-	-	-
Intestine-Enteritis, Hemorrhagic	2	-	-	-	-	-	-	1	-	-	1	-	-
Intestine-Enteritis, Idiopathic	21	3	2	2	4	2	2	-	2	2	1	1	-
Intestine-Enteritis, Necrotic	5	-	-	2	1	-	1	-	1	-	-	-	-
Intestine-Enteritis, Parvovirus	129	16	17	9	13	8	9	18	12	4	8	7	8
Intestine-Enteritis, Salmonella	6	2	-	-	-	-	1	1	-	-	-	2	-
Intestine-Hemorrhage	1	-	-	1	-	-	-	-	-	-	-	-	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Intestine-Intussusception	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Obstruction	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Neoplasm, Anaplastic	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Neoplasm, Carcinoma	4	-	1	-	-	-	1	-	2	-	-	-	-
Intestine-Neoplasm, Leiomyoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Neoplasm, Leiomyosarcoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Neoplasm, Rectal Polyp	2	-	-	-	1	-	-	-	-	1	-	-	-
Intestine-Parasitism, Ancylostoma	2	-	1	-	-	-	-	-	-	-	1	-	-
Intestine-Parasitism, Ascaris	11	1	2	1	1	-	-	1	-	1	2	1	1
Intestine-Parasitism, Cestode	3	-	2	-	-	-	-	1	-	-	-	-	-
Intestine-Parasitism, Coccidia	13	1	2	-	1	4	-	2	-	1	-	2	-
Intestine-Parasitism, Giardia	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Strongyloides	2	-	-	-	-	-	-	-	-	2	-	-	-
Intestine-Volvulus	5	-	1	2	-	-	-	-	-	1	1	-	-
Lip-Chelitis	5	1	-	-	1	-	-	1	-	-	-	1	1
Lip-Neoplasm, Anaplastic	3	-	-	-	-	-	-	1	1	1	-	-	-
Lip-Neoplasm, Fibroma	1	-	-	-	1	-	-	-	-	-	-	-	-
Lip-Neoplasm, Fibrosarcoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Lip-Neoplasm, Histiocytoma	11	-	-	-	1	2	-	1	1	3	1	2	-
Lip-Neoplasm, Mastocytoma	2	-	-	-	1	-	-	-	-	-	-	1	-
Lip-Neoplasm, Melanoma	6	1	-	-	-	-	-	-	1	-	1	2	1
Lip-Neoplasm, Sarcoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Lip-Neoplasm, Squamous Cell Carcinoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Liver-Cirrhosis	1	-	-	-	-	-	-	-	-	1	-	-	-
Liver-Hepatitis	11	-	-	1	1	-	2	-	-	3	2	-	2
Liver-Hepatositis	27	3	1	2	5	3	2	-	1	2	1	3	4
Liver-Lipidosis	14	-	5	1	1	-	1	2	1	1	-	-	2
Liver-Neoplasm, Anaplastic	2	-	-	-	-	-	-	-	2	-	-	-	-
Liver-Neoplasm, Adenocarcinoma	4	1	1	-	1	-	-	-	-	-	1	-	-
Liver-Neoplasm, Hepatoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Oral-Cyst	2	-	-	-	-	-	-	-	-	2	-	-	-
Oral-Gingivitis	12	2	-	2	1	-	1	-	2	1	1	2	-
Oral-Glossitis	2	-	-	-	1	-	-	-	1	-	-	-	-
Oral-Neoplasm, Unidentified	7	1	-	1	1	1	1	-	-	-	-	1	1
Oral-Neoplasm, Carcinoma	2	1	-	-	-	-	-	1	-	-	-	-	-
Oral-Neoplasm, Epulis	56	6	4	5	6	5	3	3	5	3	8	3	5
Oral-Neoplasm, Fibroma	2	-	-	-	1	-	-	-	-	-	-	1	-
Oral-Neoplasm, Fibrosarcoma	3	-	-	-	-	-	-	-	1	-	-	1	1
Oral-Neoplasm, Hemangiosarcoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Oral-Neoplasm, Mastocytoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Oral-Neoplasm, Melanoma	20	2	-	1	3	2	1	3	1	4	2	-	1
Oral-Neoplasm, Odontoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Oral-Neoplasm, Osteosarcoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Oral-Neoplasm, Papilloma	11	2	-	-	1	1	1	1	-	-	1	1	3
Oral-Neoplasm, Sarcoma	5	-	1	-	-	-	1	1	1	-	-	-	1

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Oral-Neoplasm, Squamous Cell Carcinoma	20	-	1	2	-	1	4	-	1	2	4	3	2
Oral-Stomatitis	5	-	-	1	-	-	1	-	-	1	2	-	-
Pancreas-Neoplasm, Adenoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Pancreas-Neoplasm, Adenocarcinoma	2	-	-	1	-	-	-	-	1	-	-	-	-
Pancreas-Pancreatitis	7	-	1	1	1	-	1	1	-	1	-	-	1
Salivary-Cyst	2	-	-	1	1	-	-	-	-	-	-	-	-
Salivary Gland	1	-	-	-	-	-	1	-	-	-	-	-	-
Stomach-Gastritis	3	-	1	-	1	-	-	1	-	-	-	-	-
Stomach-Foreign Body	1	-	-	-	-	1	-	-	-	-	-	-	-
Stomach-Neoplasm, Unidentified	1	-	-	-	-	-	-	1	-	-	-	-	-
Stomach-Neoplasm, Adenocarcinoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Stomach-Ulcer	2	-	1	-	-	-	-	-	-	1	-	-	-
Stomach-Volvulus	2	-	1	-	-	-	-	1	-	-	-	-	-
7 Urogenital													
Abortion, Bacterial	1	-	-	-	-	-	1	-	-	-	-	-	-
Abortion, Idiopathic	5	-	-	2	-	1	-	-	1	-	1	-	-
Abortion, Placentitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Genital-Anomaly	3	-	-	-	-	-	2	-	-	1	-	-	-
Genital-Bacteriologic Examination	149	11	4	16	9	13	16	21	17	17	10	7	8
Kidney-Cyst	1	-	-	-	-	-	-	-	-	-	-	-	1
Kidney-Dysplasia	1	-	-	-	-	1	-	-	-	-	-	-	-
Kidney-Hypoplasia	2	-	-	-	-	-	1	-	1	-	-	-	-
Kidney-Infarction	2	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Neoplasm, Carcinoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Kidney-Neoplasm, Sarcoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Kidney-Nephritis	12	2	-	1	2	1	1	1	-	2	1	1	-
Kidney-Nephritis, Glomerulo	20	4	1	2	-	1	1	2	2	2	2	2	1
Kidney-Nephritis, Interstitial	1	-	-	-	-	-	-	-	-	1	-	-	-
Kidney-Nephrosis	18	2	1	1	1	1	2	2	1	1	1	2	3
Ovary-Cyst	1	-	-	-	-	1	-	-	-	-	-	-	-
Ovary-Neoplasm	4	-	-	1	-	-	-	-	-	1	-	-	2
Penis-Neoplasm, Papilloma	1	-	-	-	-	-	-	-	-	-	-	-	1
Prepuce-Neoplasm	3	1	-	1	1	-	-	-	-	-	-	-	-
Prepuce-Posthitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Prostate-Hyperplasia	1	1	-	-	-	-	-	-	-	-	-	-	-
Prostate-Neoplasm	2	-	-	-	-	-	1	-	1	-	-	-	-
Prostate-Prostatitis	6	1	2	1	-	-	-	-	1	-	1	-	-
Stillbirth, Idiopathic	4	-	-	2	-	-	-	-	1	-	-	1	-
Testis-Atrophy	3	-	-	-	-	-	-	-	1	2	-	-	-
Testis-Neoplasm, Interstitial Cell Tumor	12	2	1	-	2	1	2	1	1	-	-	1	1
Testis-Neoplasm, Seminoma	13	1	-	-	-	-	2	1	2	1	-	5	1
Testis-Neoplasm, Sertoli Cell Tumor	9	1	-	1	-	1	-	2	1	2	1	-	-
Testis-Orchitis	3	1	-	-	-	1	-	-	-	-	1	-	-
Urinary Bacteriologic Exam	497	32	41	43	40	45	47	48	33	52	51	28	37

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Urocyt-Neoplasm, Unclassified	4	2	1	-	1	-	-	-	-	-	-	-	-
Urocyt-Neoplasm, Polyp	2	-	1	-	-	-	-	-	1	-	-	-	-
Urocyt-Neoplasm, Transitional Cell Carcinoma	5	-	-	1	-	-	1	1	1	-	-	-	1
Urocyt-Urocystitis	14	-	2	1	1	1	1	-	1	5	1	1	-
Urocyt-Urolithiasis	1	-	1	-	-	-	-	-	-	-	-	-	-
Uterus-Metritis	3	1	-	-	1	-	-	-	1	-	-	-	-
Uterus-Neoplasm	1	-	-	-	1	-	-	-	-	-	-	-	-
Vagina-Neoplasm	1	-	-	1	-	-	-	-	-	-	-	-	-
Vagina-Neoplasm, Carcinoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Vagina-Neoplasm, Fibroleiomyoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Vagina-Neoplasm, Leiomyoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Vas Deferens-Normal	1	-	-	-	1	-	-	-	-	-	-	-	-
8 Endocrine													
Adrenal-Adrenatitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Adrenal-Necrosis	1	-	1	-	-	-	-	-	-	-	-	-	-
Adrenal-Neoplasm, Carcinoma	2	-	-	-	-	-	1	-	-	-	1	-	-
Adrenal-Neoplasm, Pheochromocytoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Thyroid-Atrophy	2	-	-	-	-	-	-	-	-	-	1	-	1
Thyroid-Goiter	1	-	-	-	-	1	-	-	-	-	-	-	-
Thyroid-Hypothyroidism	1	-	-	-	-	-	-	-	-	-	-	-	1
Thyroid-Neoplasm, Carcinoma	10	-	1	-	-	1	4	1	1	2	-	-	-
Thyroid-Thyroiditis	1	-	-	-	-	-	-	-	-	-	-	1	-
9 Neurological													
Neurological Disorders, Total Cases	61	3	5	7	6	4	10	3	3	4	11	3	2
Brain-Anomaly	3	-	-	-	-	-	1	-	-	-	2	-	-
Brain-Neoplasm, Meningioma	1	-	-	-	-	1	-	-	-	-	-	-	-
Encephalitis, Distemper	13	-	-	1	4	-	1	1	2	1	2	-	1
Encephalitis, Granulomatous	2	-	-	1	-	-	1	-	-	-	-	-	-
Encephalitis, Non-suppurative	4	-	-	1	-	1	-	-	-	1	1	-	-
Encephalitis, Pseudorabies	2	-	-	-	-	-	1	-	-	1	-	-	-
Encephalitis, Rabies	6	-	1	-	-	-	-	2	-	-	1	2	-
Encephalomalacia	2	-	1	-	-	1	-	-	-	-	-	-	-
Encephalopathy	6	1	-	1	1	1	-	1	-	-	1	-	-
Meningitis, Suppurative	1	-	-	-	1	-	-	-	-	-	-	-	-
Neurological Disorder-Idiopathic	24	2	3	3	-	-	5	1	1	2	4	2	1
X Special Senses													
Ear-Dermatitis	3	-	-	-	-	2	1	-	-	-	-	-	-
Ear-Neoplasm, Unclassified	5	-	-	-	-	-	-	-	-	3	1	1	-
Ear-Neoplasm, Basal Cell Tumor	1	-	-	-	-	-	1	-	-	-	-	-	-
Ear-Neoplasm, Carcinoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Ear-Neoplasm, Ceruminous Gland Carcinoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Ear-Neoplasm, Hemangioma	1	-	-	-	-	-	-	-	-	1	-	-	-
Ear-Neoplasm, Histiocytoma	26	2	1	2	1	2	3	3	2	2	2	2	4
Ear-Neoplasm, Mastocytoma	3	-	-	-	1	1	1	-	-	-	-	-	-
Ear-Neoplasm, Melanoma	1	-	-	-	-	-	-	-	-	1	-	-	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Ear-Neoplasm, Papilloma	4	1	-	-	-	-	-	-	1	1	1	-	-
Ear-Neoplasm, Sarcoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Ear-Neoplasm, Sebaceous Adenoma	2	1	1	-	-	-	-	-	-	-	-	-	-
Ear-Otitis	112	12	10	9	10	11	5	8	15	13	7	8	4
Eye-Conjunctivitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Eye-Keratitis	2	-	-	-	-	1	1	-	-	-	-	-	-
Eye-Neoplasm, Anaplastic	1	-	-	-	-	-	-	-	-	-	-	1	-
Eye-Neoplasm, Melanoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Eyelid-Blepharitis	3	1	1	1	-	-	-	-	-	-	-	-	-
Eyelid-Neoplasm, Histiocytoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Eyelid-Neoplasm, Unclassified	1	-	-	-	-	-	-	-	1	-	-	-	-
Eyelid-Neoplasm, Melanoma	8	-	3	1	-	-	1	-	-	-	1	2	-
Eyelid-Neoplasm, Papilloma	1	-	-	-	-	-	-	-	1	-	-	-	-
Eyelid-Neoplasm, Sebaceous Adenoma	12	2	2	-	-	1	-	1	1	-	1	-	4

CAPRINE

0 Body as a Whole

Caseous Lymphadenitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Starvation	1	-	-	-	-	-	-	-	-	1	-	-	-

1 Integumentary

Mammary-Mastitis	2	-	-	-	-	-	-	-	-	-	-	2	-
Mammary-Mastitis, Idiopathic	1	-	1	-	-	-	-	-	-	-	-	-	-
Parasitism, Lice	2	-	-	2	-	-	-	-	-	-	-	-	-

2 Musculoskeletal

Arthritis	1	-	-	-	-	-	1	-	-	-	-	-	-
White Muscle Disease	1	1	-	-	-	-	-	-	-	-	-	-	-

3 Respiratory

Respiratory Disorders, Total Cases	3	1	1	-	-	-	-	1	-	-	-	-	-
Lung-Edema	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho	1	-	-	-	-	-	-	1	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella hemolytica</i>	1	-	1	-	-	-	-	-	-	-	-	-	-

4 Cardiovascular

Heart-Myocardial Degeneration	1	-	-	-	-	-	-	-	1	-	-	-	-
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6 Digestive

Intestine-Enteritis, Rotavirus	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Parasitism, Coccidia	5	2	-	1	-	-	1	-	-	-	-	1	-
Intestine-Parasitism, Trichostrongyle	1	-	-	-	-	-	1	-	-	-	-	-	-
Lip-Chelitis	2	-	-	-	-	1	-	-	1	-	-	-	-
Liver-Hepatitis	1	-	-	-	-	-	-	-	-	1	-	-	-

CAPRINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
7 Urogenital													
Abortion, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	1	-
Genital-Bacteriologic Examination	1	-	-	-	-	-	-	-	-	-	1	-	-
Kidney-Nephritis, Pyelo	1	-	-	-	-	-	-	-	-	-	-	1	-
Urinary Bacteriologic Exam	2	-	1	-	-	1	-	-	-	-	-	-	-
8 Endocrine													
Thyroid-Goiter	1	-	-	-	-	-	-	-	-	-	-	-	1
9 Neurological													
Neurological Disorders, Total Cases	4	1	1	1	-	1	-	-	-	-	-	-	-
Brain-Anomaly	1	-	1	-	-	-	-	-	-	-	-	-	-
Encephalitis, Rabies	1	-	-	-	-	1	-	-	-	-	-	-	-
Neurologic Disorder-Idiopathic	1	-	-	1	-	-	-	-	-	-	-	-	-
Polioencephalomalacia	1	1	-	-	-	-	-	-	-	-	-	-	-
EQUINE													
0 Body as a Whole													
Abscess	1	-	-	-	-	1	-	-	-	-	-	-	-
Ehrlichiosis	1	1	-	-	-	-	-	-	-	-	-	-	-
Hernia, Diaphragmatic	1	-	-	-	-	-	-	-	1	-	-	-	-
Peritonitis	2	-	1	-	-	-	-	-	-	-	-	1	-
Septicemia, <i>Actinobacillus sp.</i>	2	1	-	-	-	-	-	-	-	-	-	-	1
Septicemia, <i>Actinobacillus equuli</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Septicemia, <i>Bacillus piliformis</i>	2	-	-	-	-	-	-	-	-	1	-	1	-
Septicemia, Bacterial	2	1	-	-	-	-	-	-	-	1	-	-	-
Septicemia, <i>Clostridium perfringens</i>	2	-	-	-	1	-	-	-	-	1	-	-	-
Septicemia, <i>E. coli</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Septicemia, Salmonella	3	-	1	-	-	-	-	-	-	1	-	1	-
Septicemia, Staphylococcus	1	-	-	-	-	-	-	-	-	-	-	-	1
Septicemia, Streptococcus	2	-	-	-	-	-	-	-	-	-	-	1	1
Serum, Electrolytes, Imbalanced	1	-	1	-	-	-	-	-	-	-	-	-	-
Sudden Death, Idiopathic	5	1	1	1	-	-	1	-	-	-	-	-	1
Tetanus	2	-	-	-	-	-	-	-	-	2	-	-	-
Toxicosis, Plant	2	-	-	1	-	-	-	-	-	-	-	-	1
Trauma	3	-	-	-	-	-	-	-	1	1	-	1	-
1 Integumentary													
Abscess	1	-	-	-	-	1	-	-	-	-	-	-	-
Cyst, Adnexal	3	-	-	-	-	2	-	-	-	-	-	1	-
Dermal Fibrosis	3	-	-	-	1	-	-	-	-	1	-	1	-
Dermatitis, Bacterial	1	-	-	-	-	-	-	-	-	1	-	-	-
Dermatitis, Eosinophilic	2	-	1	-	-	-	-	-	-	-	-	1	-
Dermatitis, Focal	3	-	1	-	-	-	-	-	-	-	-	-	2

EQUINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Dermatitis, Granulomatous	1	1	-	-	-	-	-	-	-	-	-	-	-
Dermatitis, Pemphigus	2	-	-	1	-	-	-	-	-	-	-	1	-
Dermatitis, Staphylococcus	3	-	-	-	-	-	-	-	-	-	-	1	2
Granulation Tissue	1	-	-	-	1	-	-	-	-	-	-	-	-
Mammary-Mastitis, Streptococcus	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Fibroma	1	-	-	-	-	-	-	-	-	1	-	-	-
Neoplasm, Mastocytoma	4	-	-	-	-	2	-	-	-	-	-	1	1
Neoplasm, Melanoma	5	-	-	1	-	1	-	-	-	1	1	1	-
Neoplasm, Papilloma	2	-	-	-	-	-	-	1	-	-	-	-	1
Neoplasm, Sarcoid	18	4	1	2	2	-	1	2	1	2	-	-	3
Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Nodular Necrobiosis	6	1	-	1	-	1	-	-	1	-	1	-	1
Parasitism, Tick	1	-	-	-	-	-	-	-	-	-	-	1	-
Skin-Microbiologic Exam	1	1	-	-	-	-	-	-	-	-	-	-	-
Steatitis	1	1	-	-	-	-	-	-	-	-	-	-	-
2 Musculoskeletal													
Arthritis, <i>Staphylococcus aureus</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Arthritis, Suppurative	1	-	-	-	-	-	-	-	-	-	-	1	-
Fracture	1	-	-	-	-	-	-	-	-	1	-	-	-
Muscle-Myodegeneration	1	-	-	-	-	-	-	-	-	-	-	-	1
Osteomyelitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Vertebral Malformation-Wobbler	1	1	-	-	-	-	-	-	-	-	-	-	-
3 Respiratory													
Respiratory Disorders, Total Cases	23	4	1	-	-	2	-	-	3	2	2	3	6
Lung-Bronchitis	2	-	-	-	-	1	-	-	-	-	-	-	1
Lung-Edema	4	-	-	-	-	1	-	-	1	-	1	1	-
Lung-Hemorrhage	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, Actinobacillus	3	-	-	-	-	-	-	-	-	1	1	-	1
Lung-Pneumonia, Adenovirus	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho	3	-	-	-	-	-	-	-	1	-	-	-	2
Lung-Pneumonia, Rhinopneumonitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Equine Viral													
Lung-Pneumonia, <i>Rhodococcus equi</i>	5	3	-	-	-	-	-	-	-	-	-	-	2
Lung-Pneumonia, Streptococcus	2	-	-	-	-	-	-	-	-	1	-	-	1
Pleuritis	1	1	-	-	-	-	-	-	-	-	-	-	-
Respiratory Nasal Swab (Negative)	2	-	1	-	-	-	-	-	1	-	-	-	-
4 Cardiovascular													
Arteritis, Verminous	1	-	-	-	-	-	-	-	1	-	-	-	-
Atherosclerosis	1	-	-	-	-	1	-	-	-	-	-	-	-
Blood Vessel Disorder	2	-	-	-	-	-	-	-	1	-	1	-	-
Heart-Anomaly	1	-	-	-	-	-	-	-	-	-	-	1	-
Heart-Myocarditis	1	-	-	-	-	-	-	-	1	-	-	-	-
Heart-Myocardial Degeneration	1	-	-	-	-	-	-	-	1	-	-	-	-

EQUINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
5 Hemic and Lymphatic													
Coagulation Disorder	1	1	-	-	-	-	-	-	-	-	-	-	-
Hemorrhage, Generalized	2	-	-	-	1	-	-	-	-	-	-	1	-
Neoplasm, Lymphosarcoma	1	-	-	-	-	-	-	-	-	-	-	1	-
6 Digestive													
Esophagitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Feces-Microbiologic Exam	94	11	24	11	11	1	9	10	1	1	1	2	12
Intestine-Colitis	3	1	-	1	-	-	-	-	-	-	-	1	-
Intestine-Enteritis, Idiopathic	2	1	1	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Necrotic	3	2	-	-	-	-	-	-	-	-	-	-	1
Intestine-Enteritis, Rotavirus	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Enteritis, Salmonella	12	2	6	3	-	-	-	-	-	-	-	1	-
Intestine-Hemorrhage	2	-	-	-	-	-	-	-	-	1	-	1	-
Intestine-Infarction	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Ascaris	2	-	1	-	-	-	-	1	-	-	-	-	-
Intestine-Parasitism, Nematode	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Parascaris	2	-	-	1	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Strongyles	3	-	-	1	-	1	-	-	-	-	-	1	-
Intestine-Parasitism, Strongyloides	2	-	-	1	-	-	1	-	-	-	-	-	-
Intestine-Rupture	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Volvulus	3	-	-	-	-	1	-	1	-	-	1	-	-
Lip-Chelitis	1	-	-	-	-	-	-	1	-	-	-	-	-
Lip-Neoplasm, Unclassified	1	-	-	-	-	-	-	-	-	-	1	-	-
Lip-Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Liver-Hepatitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Liver-Hepatosi	2	-	-	-	-	-	-	-	-	-	1	1	-
Oral-Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Stomach-Rupture	4	-	-	1	-	-	-	-	1	1	-	1	-
Stomach-Ulcer	4	1	1	-	-	-	-	-	-	-	-	-	2
7 Urogenital													
Abortions, Total Cases	48	-	-	2	1	14	8	10	5	4	2	1	1
Abortion, Anomaly	1	-	-	-	-	-	-	-	1	-	-	-	-
Abortion, Bacterial, <i>E. coli</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Abortion, Bacterial, <i>Listeria</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Abortion, Bacterial, <i>Streptococcus</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Abortion, Idiopathic	35	-	-	2	1	8	7	8	2	3	2	1	1
Abortion, Rhinopneumonitis, Equine Viral	2	-	-	-	-	-	-	1	-	1	-	-	-
Abortion, Twins	1	-	-	-	-	1	-	-	-	-	-	-	-
Abortion, Umbilical Cord Torsion	1	-	-	-	-	-	-	-	1	-	-	-	-
Abortion, Viral	5	-	-	-	-	3	1	1	-	-	-	-	-
Genital-Bacteriologic Examination	68	4	4	6	7	2	3	5	4	11	13	5	4
Kidney-Nephritis	3	-	-	-	-	3	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	1	-	-	-	-	1	-	-	-	-	-	-	-
Kidney-Nephrosis	2	-	-	-	-	-	-	-	-	1	-	-	1
Ovary-Neoplasm, Granulosa Cell Tumor	1	-	-	-	-	-	-	1	-	-	-	-	-

EQUINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Penis-Neoplasm, Squamous Cell Carcinoma	3	-	1	-	-	1	-	-	-	-	-	-	1
Penis-Balanitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Stillbirth, Idiopathic	4	-	-	-	-	-	-	-	2	1	-	1	-
Testis-Atrophy	1	-	-	-	-	-	-	-	-	-	-	1	-
Urinary Bacteriologic Exam	5	-	2	1	-	-	-	-	-	1	-	-	1
Uterus-Endometrial Biopsy	6	-	1	1	-	-	-	-	-	-	2	2	-
8 Endocrine													
Adrenal-Necrosis	1	-	-	-	-	1	-	-	-	-	-	-	-
Thyroid-Goiter	1	-	-	-	-	1	-	-	-	-	-	-	-
9 Neurological													
Neurological Disorders, Total Cases	11	-	2	2	-	1	1	-	-	-	2	2	1
Brain-Abscess	1	-	1	-	-	-	-	-	-	-	-	-	-
Encephalitis, Listeria	1	-	-	-	-	-	-	-	-	-	-	-	1
Encephalitis, Non-suppurative	3	-	-	2	-	-	-	-	-	-	1	-	-
Encephalitis, Rabies	4	-	-	-	-	-	1	-	-	-	1	1	1
Encephalopathy	3	-	-	-	-	-	1	-	-	-	1	1	-
Neurological Disorder-Idiopathic	1	-	1	-	-	-	-	-	-	-	-	-	-
X Special Senses													
Ear-Otitis	2	1	-	-	1	-	-	-	-	-	-	-	-
Eye-Conjunctivitis	2	1	-	-	-	-	-	-	-	-	-	1	-
Eyelid-Neoplasm, Sarcoid	3	-	1	2	-	-	-	-	-	-	-	-	-
Eyelid-Neoplasm, Squamous Cell Carcinoma	2	-	-	-	-	-	-	1	-	-	1	-	-
FELINE													
0 Body as a Whole													
Amyloidosis	3	1	-	-	-	-	-	1	-	-	-	1	-
Anomaly	2	-	2	-	-	-	-	-	-	-	-	-	-
Chlamydiosis	2	1	-	-	-	1	-	-	-	-	-	-	-
Emaciation	5	-	-	-	1	1	-	-	-	-	-	-	3
Feline Infectious Peritonitis	24	2	-	2	1	2	6	2	2	3	2	-	2
Feline Leukemia	1	-	-	-	-	-	-	-	-	-	-	-	1
Hernia	1	-	-	-	-	-	-	-	-	-	-	1	-
Icterus	1	1	-	-	-	-	-	-	-	-	-	-	-
Infectious Feline Panleukopenia	20	4	4	2	3	4	-	-	-	-	-	1	2
Mycosis, Systemic	1	-	-	-	-	-	-	-	-	1	-	-	-
Mycosis, Systemic, Cryptococcus	3	-	-	-	-	1	-	-	2	-	-	-	-
Neonatal Weakness	1	-	-	-	-	1	-	-	-	-	-	-	-
Neoplasm, Metastatic	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Carcinoma	3	-	-	-	-	1	1	-	-	-	-	1	-
Neoplasm, Fibrosarcoma	1	-	-	-	-	1	-	-	-	-	-	-	-

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Neoplasm, Mastocytoma, Metastatic	1	-	-	1	-	-	-	-	-	-	-	-	-
Peritonitis	5	-	1	-	-	-	-	1	1	1	-	1	-
Pleural Effusion	5	-	-	1	1	-	-	1	1	-	1	-	-
Polyserositis	1	1	-	-	-	-	-	-	-	-	-	-	-
Pseudorabies, Total Cases	2	1	-	-	1	-	-	-	-	-	-	-	-
Septicemia, Bacterial	2	1	-	-	1	-	-	-	-	-	-	-	-
Septicemia, <i>E. coli</i>	2	-	1	-	1	-	-	-	-	-	-	-	-
Septicemia, <i>Pseudomonas</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Septicemia, <i>Salmonella</i>	3	-	-	-	-	-	1	-	-	1	1	-	-
Serum Electrolytes, Imbalanced	1	-	-	1	-	-	-	-	-	-	-	-	-
Sudden Death, Idiopathic	14	1	-	-	2	-	1	-	1	3	2	1	3
Toxicosis, Arsenic	1	-	-	-	-	-	-	-	-	-	-	1	-
Toxicosis, Ethylene Glycol	6	-	-	1	2	1	1	1	-	-	-	-	-
Toxoplasmosis	1	-	-	-	-	-	1	-	-	-	-	-	-
Trauma	7	-	2	1	2	-	-	-	-	-	-	2	-
1 Integumentary													
Abscess	1	-	-	1	-	-	-	-	-	-	-	-	-
Alopecia	1	-	-	-	-	-	-	-	-	1	-	-	-
Cellulitis	2	-	1	1	-	-	-	-	-	-	-	-	-
Cyst, Adnexal	6	2	1	-	1	-	-	-	-	-	1	-	1
Dermatitis, Allergic/Atopic	5	-	-	1	-	1	1	1	-	-	-	-	1
Dermatitis, Diffuse	5	1	-	1	-	-	-	-	-	-	1	1	1
Dermatitis, Eosinophilic	5	-	1	-	-	-	-	1	1	1	-	1	-
Dermatitis, Eosinophilic Granuloma	14	1	4	1	1	-	-	-	-	6	1	-	-
Dermatitis, Focal	20	-	1	4	2	2	2	3	4	-	-	-	2
Dermatitis, Folliculitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Dermatitis, Granulomatous	3	1	-	-	-	-	1	1	-	-	-	-	-
Dermatitis, Linear Granuloma	4	-	-	-	1	-	-	-	-	3	-	-	-
Dermatitis, Lupus Erythematosus	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Mycotic	2	-	-	-	-	-	-	-	-	-	-	1	1
Dermatitis, Podo	2	-	-	-	-	-	-	1	-	1	-	-	-
Dermatitis, Staphylococcus	1	-	-	-	-	-	-	-	-	1	-	-	-
Dermatosis, Endocrine	2	-	-	-	-	-	-	1	-	1	-	-	-
Granulation Tissue	3	1	1	-	-	1	-	-	-	-	-	-	-
Mammary-Duct Ectasia	1	-	-	-	-	-	-	-	-	-	-	1	-
Mammary-Hyperplasia	1	-	-	-	-	-	-	-	-	-	-	1	-
Mammary-Neoplasm, Adenoma	2	-	-	-	1	-	-	-	-	-	-	-	1
Mammary-Neoplasm, Adenocarcinoma	22	1	2	2	1	2	1	3	1	1	4	1	3
Mammary-Neoplasm, Mastocytoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Neoplasm, Anaplastic	2	-	-	-	-	1	-	-	-	-	-	1	-
Neoplasm, Adenocarcinoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Basal Cell Tumor	18	-	2	2	1	1	-	4	2	3	-	1	2
Neoplasm, Carcinoma	3	-	-	-	-	-	-	-	-	1	1	1	-
Neoplasm, Fibroma	4	-	1	-	-	-	2	-	1	-	-	-	-
Neoplasm, Fibrosarcoma	9	1	1	3	-	1	-	-	-	2	-	-	1
Neoplasm, Lipoma	7	-	-	-	1	-	3	-	2	-	-	1	-

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Neoplasm, Mastocytoma	22	2	-	-	3	2	-	2	1	3	5	4	-
Neoplasm, Melanoma	4	2	-	-	-	-	-	-	1	1	-	-	-
Neoplasm, Papilloma	1	-	-	-	-	-	-	-	-	-	-	1	-
Neoplasm, Pilomatrixoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm, Sarcoma, Anaplastic	6	-	1	-	-	-	1	2	-	1	-	-	1
Neoplasm, Sebaceous Gland Adenocarcinoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Neoplasm, Sebaceous Gland Adenoma	2	-	-	-	-	-	-	-	1	-	1	-	-
Neoplasm, Squamous Cell Carcinoma	4	-	-	-	1	1	-	-	2	-	-	-	-
Parasitism, Fleas	2	1	-	-	1	-	-	-	-	-	-	-	-
Parasitism, Mites	1	-	-	-	-	1	-	-	-	-	-	-	-
Skin-Microbiologic Exam	3	3	-	-	-	-	-	-	-	-	-	-	-
Steatitis	5	-	1	-	-	-	1	1	1	1	-	-	-
2 Musculoskeletal													
Fracture	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Osteosarcoma	5	-	-	-	-	1	-	-	-	1	-	1	2
Neoplasm, Sarcoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Synovitis	1	-	-	-	-	-	-	-	-	-	-	-	1
3 Respiratory													
Respiratory Disorders, Total Cases	37	4	4	-	4	3	6	6	2	-	1	1	6
Chlamydiosis	2	1	-	-	-	1	-	-	-	-	-	-	-
Lung-Edema	6	1	2	-	-	1	1	-	-	-	-	-	1
Lung-Hemorrhage	1	-	-	-	-	-	-	1	-	-	-	-	-
Lung-Neoplasm, Carcinoma	2	-	-	-	-	-	1	-	-	-	-	-	1
Lung-Neoplasm, Carcinoma, Metastatic	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Bordetella sp.</i>	3	-	-	-	-	-	-	1	1	-	1	-	-
Lung-Pneumonia, Broncho (Idiopathic)	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, Calicivirus	3	1	-	-	1	-	-	-	-	-	-	-	1
Lung-Pneumonia <i>E. coli</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, Foreign Body	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Granulomatous	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung-Pneumonia, Interstitial	2	-	-	-	2	-	-	-	-	-	-	-	-
Lung-Pneumonia, Pasteurella	1	-	-	-	-	-	-	-	1	-	-	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	5	1	-	-	-	-	2	2	-	-	-	-	-
Lung-Pneumonia, Streptococcus	2	-	-	-	-	-	-	1	-	-	-	-	1
Respiratory Nasal Swab (Negative)	4	-	-	-	-	2	1	-	-	-	-	1	-
Respiratory Nasal Swab, <i>P. multocida</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Rhinotracheitis, Feline Viral	4	1	-	-	1	-	1	1	-	-	-	-	-
4 Cardiovascular													
Blood Vessel Disorder	3	-	-	-	-	-	1	1	-	-	-	1	-
Heart-Cardiomyopathy	25	3	-	3	4	4	2	2	2	-	3	-	2
Heart-Myocarditis	1	1	-	-	-	-	-	-	-	-	-	-	-
Heart-Myocardial Degeneration	2	-	-	-	1	-	1	-	-	-	-	-	-
Heart Failure, Chronic	1	-	-	-	-	-	1	-	-	-	-	-	-
Parasitism, Dirofilaria	2	-	-	-	-	-	-	1	-	-	1	-	-

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
5 Hemic and Lymphatic													
Anemia, Regenerative	1	1	-	-	-	-	-	-	-	-	-	-	-
Coagulation Disorder	1	-	-	-	-	1	-	-	-	-	-	-	-
Hemorrhage, Generalized	2	-	-	-	1	-	-	-	-	-	-	-	1
Lymph Node-Hyperplasia	2	2	-	-	-	-	-	-	-	-	-	-	-
Lymph Node-Lymphadenitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Neoplasm, Lymphosarcoma	16	-	2	-	1	1	3	1	1	2	1	2	1
Neoplasm, Myeloproliferative Disease	3	-	-	1	-	-	-	1	-	-	-	-	1
6 Digestive													
Bile Duct-Neoplasm	1	-	-	-	-	-	-	1	-	-	-	-	-
Feces-Microbiologic Exam	30	1	2	4	3	4	1	1	2	3	1	2	6
Intestine-Colitis	3	-	1	1	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, Enterovirus	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Enteritis, Eosinophilic	2	-	-	-	-	-	2	-	-	-	-	-	-
Intestine-Enteritis, Granulomatous	1	-	-	-	-	-	1	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	2	-	-	-	-	1	-	-	-	-	1	-	-
Intestine-Enteritis, Necrotic	2	1	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, Parvovirus	20	4	4	2	3	4	-	-	-	-	-	1	2
Intestine-Enteritis, Rotavirus	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Enteritis, Salmonella	4	-	-	-	-	1	-	-	-	2	-	-	1
Intestine-Intussusception	2	-	-	-	1	-	-	-	1	-	-	-	-
Intestine-Obstruction	3	-	-	-	-	-	-	-	-	3	-	-	-
Intestine-Neoplasm, Carcinoma	2	-	-	1	-	-	-	-	-	-	1	-	-
Intestine-Parasitism, Ancylostoma	2	-	1	1	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Ascaris	2	1	-	-	-	-	-	-	1	-	-	-	-
Intestine-Parasitism, Cryptosporidia	2	-	-	-	-	-	-	1	1	-	-	-	-
Intestine-Parasitism, Toxocara	2	-	-	-	1	-	-	1	-	-	-	-	-
Lip-Neoplasm, Unclassified	2	1	-	-	-	1	-	-	-	-	-	-	-
Lip-Neoplasm, Squamous Cell Carcinoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Cholecystitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Cirrhosis	3	-	-	-	1	-	-	-	1	-	-	1	-
Liver-Cyst	1	-	-	-	-	-	-	1	-	-	-	-	-
Liver-Hepatitis	3	-	-	-	-	-	1	-	-	-	-	2	-
Liver-Hepatositis	12	3	-	1	1	-	1	1	1	1	-	1	2
Liver-Lipidosis	13	1	-	1	-	1	1	-	1	1	3	4	-
Liver-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Oral-Cyst	1	-	-	-	-	-	-	-	-	-	-	-	1
Oral-Gingivitis	3	1	-	-	-	-	-	-	-	-	1	1	-
Oral-Neoplasm, Carcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Oral-Neoplasm, Epulis	1	-	-	-	-	1	-	-	-	-	-	-	-
Oral-Neoplasm, Fibrosarcoma	2	-	-	-	-	-	-	-	1	-	-	-	1
Oral-Neoplasm, Hemangioma	1	1	-	-	-	-	-	-	-	-	-	-	-
Oral-Neoplasm, Mastocytoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Oral-Neoplasm, Papilloma	1	-	-	1	-	-	-	-	-	-	-	-	-
Oral-Neoplasm, Squamous Cell Carcinoma	14	1	2	-	2	1	2	1	2	2	-	-	1

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Oral-Stomatitis	2	-	-	-	-	-	-	1	1	-	-	-	-
Pancreas-Neoplasm	1	-	-	-	-	-	-	-	-	1	-	-	-
Pancreas-Pancreatitis	2	1	-	-	-	1	-	-	-	-	-	-	-
Salivary-Cyst	1	-	-	-	-	-	-	-	-	-	-	-	1
Stomach-Foreign Body	2	1	-	-	-	-	-	-	-	-	-	-	1
7 Urogenital													
Abortion, Anomaly	1	-	-	-	-	-	1	-	-	-	-	-	-
Abortion, Placentitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Abortion, Pneumonia	2	-	-	-	-	-	-	-	-	-	-	1	1
Genital-Bacteriologic Examination	2	-	-	-	-	-	-	-	1	-	-	1	-
Kidney-Dysplasia	1	-	-	-	-	-	-	-	-	-	-	1	-
Kidney-Neoplasm, Carcinoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Kidney-Nephritis	4	1	1	-	-	-	1	-	-	-	-	1	-
Kidney-Nephritis, Glomerulo	5	-	-	1	2	-	-	1	-	-	-	-	1
Kidney-Nephritis, Pyelo	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Nephrosis	8	-	-	-	1	-	1	2	1	1	1	1	-
Testis-Atrophy	3	-	-	-	-	-	-	-	3	-	-	-	-
Urinary Bacteriologic Exam	152	13	18	18	8	14	6	12	11	14	8	17	13
Urocyst-Neoplasm, Unclassified	2	-	-	-	-	-	-	-	-	-	1	1	-
Urocyst-Neoplasm, Transitional Cell Carcinoma	2	-	-	-	-	-	-	-	-	-	1	-	1
Urocyst-Urocystitis	11	-	3	1	-	1	1	2	-	2	-	-	1
Urocyst-Urolithiasis	4	-	1	-	-	-	-	-	-	-	2	-	1
Uterus-Metritis	3	1	-	-	-	-	-	-	-	-	1	-	1
Uterus-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Vagina-Neoplasm, Carcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
8 Endocrine													
Adrenal-Neoplasm, Carcinoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Thyroid-Neoplasm, Adenoma	2	-	1	-	-	-	-	1	-	-	-	-	-
9 Neurological													
Neurological Disorders, Total Cases	21	5	1	1	5	-	2	-	3	1	1	2	-
Brain-Neoplasm	1	-	-	-	-	-	1	-	-	-	-	-	-
Brain-Vasculitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Encephalitis, Non-suppurative	1	1	-	-	-	-	-	-	-	-	-	-	-
Encephalitis, Rabies	11	-	-	-	5	-	1	2	-	1	-	2	-
Encephalomalacia	2	1	-	-	-	-	1	-	-	-	-	-	-
Encephalopathy	2	-	1	1	-	-	-	-	-	-	-	-	-
Meningitis, Non-suppurative	2	1	-	-	-	-	-	-	-	-	1	-	-
Meningitis, Streptococcus	1	-	-	-	1	-	-	-	-	-	-	-	-
Meningitis, Suppurative	2	1	-	-	-	-	-	-	1	-	-	-	-
Myelitis, Non-suppurative	1	-	-	-	-	-	-	-	1	-	-	-	-
Neurological Disorder-Idiopathic	6	1	-	-	3	-	-	-	-	1	-	1	-
Polioencephalomalacia	1	-	-	-	-	-	-	-	-	-	-	1	-

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
10 Special Senses													
Ear-Neoplasm, Unclassified	2	-	1	-	1	-	-	-	-	-	-	-	-
Ear-Neoplasm, Carcinoma	5	-	-	-	-	1	1	-	1	1	-	-	1
Ear-Neoplasm, Ceruminous Gland Carcinoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Ear-Otitis	13	2	1	1	3	-	4	1	-	1	-	-	-
Eye-Conjunctivitis	7	1	-	1	1	1	-	1	1	-	-	1	-
Eye-Keratitis	2	-	-	-	-	-	1	-	1	-	-	-	-

FISH & REPTILES

FISH

Septicemia, Bacterial	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Nematode	1	-	-	-	-	-	-	1	-	-	-	-	-

REPTILES

Gout	4	1	1	-	1	-	-	-	-	-	-	-	1
Septicemia, Bacterial	1	-	-	-	-	-	-	-	-	-	-	1	-
Septicemia, Salmonella	4	-	1	-	-	-	1	-	-	1	-	-	1
Cellulitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Bacterial	1	-	-	-	-	-	-	-	-	1	-	-	-
Dermatitis, Focal	1	-	-	-	-	-	-	-	-	-	1	-	-
Dermatitis, Mycotic	1	-	-	-	-	-	-	-	-	1	-	-	-
Neoplasm, Lipoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Osteodystrophy	1	-	-	-	-	-	1	-	-	-	-	-	-
Osteomyelitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, Granulomatous	1	-	-	-	1	-	-	-	-	-	-	-	-
Heart-Myocarditis	2	-	-	-	1	-	-	-	-	1	-	-	-
Intestine-Colitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, Necrotic	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, Salmonella	2	-	-	-	-	1	-	-	-	1	-	-	-
Liver-Hepatitis	2	-	-	-	1	-	-	-	1	-	-	-	-
Liver-Hepatositis	1	-	-	-	-	-	-	-	-	1	-	-	-
Kidney-Nephritis, Glomerulo	1	-	-	-	-	-	-	-	-	-	1	-	-
Kidney-Nephrosis	3	1	-	-	-	-	-	1	-	1	-	-	-
Encephalitis, Suppurative	1	-	-	-	-	-	-	-	-	1	-	-	-
Myelitis, Suppurative	1	-	-	-	-	-	-	-	-	-	-	-	1

MISCELLANEOUS MAMMALS

ANTELOPE

Peritonitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho	1	-	-	-	-	-	-	-	1	-	-	-	-
Lung-Pneumonia, Foreign Body	1	-	1	-	-	-	-	-	-	-	-	-	-
Neoplasm, Myeloproliferative Disease	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Parasitism, Cryptosporidia	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Rupture	1	-	1	-	-	-	-	-	-	-	-	-	-

MISC. MAMMALS (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
BAT													
Encephalitis, Rabies	7	1	4	-	-	-	-	-	-	-	1	-	1
BEAR													
Sudden Death, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Focal	1	-	-	-	-	-	-	-	-	-	-	1	-
Neoplasm, Fibroma	1	-	-	-	1	-	-	-	-	-	-	-	-
BISON													
Feces-Microbiologic Exam	1	-	-	-	-	1	-	-	-	-	-	-	-
CAMEL													
Feces-Microbiologic Exam	1	-	-	-	-	-	-	-	-	-	-	1	-
Abortion, Idiopathic	1	1	-	-	-	-	-	-	-	-	-	-	-
CHINCHILLA													
Septicemia, Pseudomonas	1	-	-	-	-	-	-	1	-	-	-	-	-
Coagulation Disorder	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Colitis	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, <i>E. coli</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	1	-	-	-	-	-	-	1	-	-	-	-	-
Liver-Lipidosis	2	1	-	1	-	-	-	-	-	-	-	-	-
Kidney-Nephritis	1	-	-	-	-	-	-	1	-	-	-	-	-
DEER													
Malignant Catarrhal Fever	2	-	-	-	1	1	-	-	-	-	-	-	-
Neonatal Weakness	1	-	-	-	-	-	-	-	-	-	-	-	1
Peritonitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Serum Electrolytes, Imbalanced	1	1	-	-	-	-	-	-	-	-	-	-	-
Starvation	1	-	-	-	-	-	-	-	-	-	1	-	-
Sudden Death, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	-	1
Trauma	1	-	-	-	-	-	-	-	-	-	1	-	-
Muscle-Myodegeneration	1	-	-	-	-	-	-	-	1	-	-	-	-
Lung-Edema	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung-Parasitism	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>A. pyogenes</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, <i>P. multocida</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	1	-	-	-	-	-	-	-	-	-	-	-	1
Neurological Disorder-Idiopathic	1	-	-	-	-	-	-	-	-	-	-	-	1
ELK													
Liver-Lipidosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Prepuce-Posthitis	1	-	-	-	-	1	-	-	-	-	-	-	-
ERMINE													
Neoplasm, Lymphosarcoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Liver-Lipidosis	1	-	-	-	1	-	-	-	-	-	-	-	-

MISC. MAMMALS (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
FERRET													
Peritonitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Pleural Effusion	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, Bacterial	1	-	-	-	-	-	-	-	1	-	-	-	-
Neoplasm, Mastocytoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Heart-Endocarditis	1	-	-	-	-	-	-	1	-	-	-	-	-
Lymph Node-Hyperplasia	1	-	-	-	-	-	-	-	-	1	-	-	-
Neoplasm, Lymphosarcoma	2	-	-	-	-	-	-	-	1	1	-	-	-
Spleen-Neoplasm	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Obstruction	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Cholecystitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Lipidosis	1	-	-	-	-	-	1	-	-	-	-	-	-
Pancreas-Neoplasm	2	-	2	-	-	-	-	-	-	-	-	-	-
Pancreas-Pancreatitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	1	-	-	-	-	-	-	1	-	-	-	-	-
Kidney-Nephritis, Pyelo	1	-	-	-	-	-	-	-	-	-	-	1	-
Kidney-Nephrosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Pituitary-Neoplasm	1	-	-	-	-	-	-	-	-	-	-	1	-
Neurological Disorder-Idiopathic	1	-	-	-	-	-	-	1	-	-	-	-	-
FOX													
Sudden Death, Idiopathic	1	-	-	1	-	-	-	-	-	-	-	-	-
Toxicosis, Organophosphate	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	1	-	1	-	-	-	-	-	-	-	-	-	-
Stomach-Ulcer	1	-	1	-	-	-	-	-	-	-	-	-	-
Encephalitis, Rabies	2	1	-	-	-	-	-	-	-	-	-	-	1
Neurological Disorder-Idiopathic	1	-	-	-	-	1	-	-	-	-	-	-	-
GERBIL													
Starvation	1	-	-	-	-	1	-	-	-	-	-	-	-
Trauma	1	1	-	-	-	-	-	-	-	-	-	-	-
Heart-Myocardial Degeneration	1	-	-	-	-	-	-	-	-	-	-	-	1
Feces-Microbiologic Exam	1	-	-	-	-	-	1	-	-	-	-	-	-
Liver-Hepatitis	1	-	-	-	-	-	-	-	-	-	-	-	1
GUINEA PIG													
Lung-Pneumonia, Broncho	2	-	-	-	1	-	-	-	-	-	-	1	-
Intestine-Enteritis, Necrotic	1	1	-	-	-	-	-	-	-	-	-	-	-
HAMSTER													
Peritonitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Sudden Death, Idiopathic	1	-	-	-	-	-	1	-	-	-	-	-	-
LEOPARD													
Neonatal Death	2	-	-	-	-	-	-	-	1	-	1	-	-

MISC. MAMMALS (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
LLAMA													
Peritonitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Arthritis, Streptococcus	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho	3	-	-	1	-	-	-	-	-	1	-	1	-
Anemia	1	-	-	-	1	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	2	-	-	-	-	-	1	-	-	1	-	-	-
Intestine-Parasitism, Trichuris	1	-	-	-	-	-	-	-	-	-	-	1	-
Abortion, Idiopathic	2	-	1	-	-	-	-	-	-	-	1	-	-
Genital-Bacteriologic Examination	4	-	-	-	2	-	1	-	-	-	-	1	-
Stillbirth, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	1	-
Urocyst-Urocystitis	1	-	1	-	-	-	-	-	-	-	-	-	-
MINK													
Abscess	1	-	-	-	1	-	-	-	-	-	-	-	-
Amyloidosis	2	-	-	-	-	-	-	-	-	-	1	1	-
Copper Deficiency	1	-	-	1	-	-	-	-	-	-	-	-	-
Infectious Canine Distemper	3	-	-	2	1	-	-	-	-	-	-	-	-
Neonatal Death	1	-	1	-	-	-	-	-	-	-	-	-	-
Pyothorax	1	-	1	-	-	-	-	-	-	-	-	-	-
Septicemia, <i>E. coli</i>	3	1	-	-	-	1	-	-	-	-	-	-	1
Septicemia, Salmonella	2	2	-	-	-	-	-	-	-	-	-	-	-
Serum Electrolytes, Imbalanced	1	-	-	-	-	-	-	-	-	-	-	-	1
Sudden Death, Idiopathic	3	-	1	1	1	-	-	-	-	-	-	-	-
Toxicosis, Sodium (water depriv.)	1	-	-	-	-	-	-	-	-	-	-	-	1
Toxicosis, Zinc Phosphide	1	-	-	1	-	-	-	-	-	-	-	-	-
Cellulitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Mammary-Mastitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, Broncho	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Foreign Body	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, Klebsiella	1	-	1	-	-	-	-	-	-	-	-	-	-
Trachea-Tracheitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Heart-Cardiomyopathy	2	-	-	-	-	-	1	-	-	-	-	1	-
Feces-Microbiologic Exam	4	-	-	2	2	-	-	-	-	-	-	-	-
Intestine-Enteritis, Campylobacter	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Coronavirus	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, <i>E. coli</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	3	-	1	-	-	-	1	-	-	-	-	-	1
Intestine-Enteritis, Necrotic	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Parvovirus	13	-	5	4	1	1	-	-	-	-	2	-	-
Intestine-Enteritis, Salmonella	5	-	-	2	1	1	-	-	-	-	-	-	1
Intestine-Parasitism, Coccidia	3	-	3	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	2	-	-	-	1	-	-	-	-	-	-	-	1
Liver-Lipidosis	7	-	-	-	2	-	1	1	-	-	1	2	-
Kidney-Nephritis	4	1	-	-	3	-	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	1	-	-	-	-	-	-	-	-	-	-	1	-
Kidney-Nephrosis	2	-	-	-	1	-	-	-	-	-	-	-	1

MISC. MAMMALS (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
MINK (continued)													
Urocyst-Urocystitis	1	-	-	-	-	1	-	-	-	-	-	-	-
Urocyst-Urolithiasis	3	-	1	-	2	-	-	-	-	-	-	-	-
Encephalitis, Distemper	3	-	-	1	1	-	-	1	-	-	-	-	-
MONKEY													
Emaciation	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, Interstitial	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Enteritis, Salmonella	1	-	-	-	-	-	-	-	-	-	-	-	1
MOUSE													
Sudden Death, Idiopathic	2	-	-	-	-	-	-	-	-	-	-	-	2
Neoplasm, Basal Cell Tumor	1	-	-	-	-	-	-	-	1	-	-	-	-
Neoplasm, Carcinoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Heart-Myocardial Degeneration	1	-	-	-	-	-	-	-	-	1	-	-	-
Liver-Hepatitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Kidney-Nephritis	1	-	-	-	-	-	-	-	-	1	-	-	-
Uterus-Metritis	1	-	-	-	-	-	1	-	-	-	-	-	-
Eye-Keratitis	1	-	-	-	-	-	-	-	-	-	-	1	-
OPOSSUM													
Lung-Neoplasm	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Cirrhosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Liver-Hepatitis	1	-	1	-	-	-	-	-	-	-	-	-	-
OTTER													
Intestine-Enteritis, Salmonella	6	-	-	1	1	1	2	1	-	-	-	-	-
Oral-Neoplasm, Epulis	1	-	-	-	-	-	1	-	-	-	-	-	-
Urocyst-Urolithiasis	1	-	-	-	-	-	-	1	-	-	-	-	-
RABBIT													
Abscess	1	-	-	-	-	1	-	-	-	-	-	-	-
Emaciation	2	1	-	-	-	-	-	-	-	-	-	1	-
Neonatal Death	1	-	-	-	-	1	-	-	-	-	-	-	-
Septicemia, <i>Pasteurella multocida</i>	5	1	2	-	1	1	-	-	-	-	-	-	-
Sudden Death, Idiopathic	4	-	-	2	1	-	-	-	-	-	-	1	-
Trauma	1	-	-	1	-	-	-	-	-	-	-	-	-
Dermatitis, Diffuse	1	1	-	-	-	-	-	-	-	-	-	-	-
Dermatitis, Focal	1	1	-	-	-	-	-	-	-	-	-	-	-
Dermatitis, Podo	1	-	-	-	-	-	-	-	-	1	-	-	-
Mammary-Neoplasm, Adenocarcinoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Neoplasm, Papilloma	3	1	-	-	1	-	-	-	-	-	-	1	-
Fracture	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung-Bronchitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Edema	1	-	-	-	-	-	-	-	-	1	-	-	-
Lung-Pneumonia, Actinobacillus	1	-	-	-	-	-	-	-	-	1	-	-	-
Lung-Pneumonia, Foreign Body	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Pasteurella	1	-	-	-	-	-	-	-	-	1	-	-	-
Lung-Pneumonia, <i>P. multocida</i>	2	1	-	-	-	-	-	-	-	-	-	1	-

MISC. MAMMALS (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
RABBIT (continued)													
Heart-Myocardial Degeneration	1	1	-	-	-	-	-	-	-	-	-	-	-
Coagulation Disorder	1	-	1	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	4	-	1	-	1	-	1	-	-	1	-	-	-
Intestine-Colitis	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, Total Cases	4	-	-	-	-	-	-	-	1	2	-	-	1
Intestine-Enteritis, Rotavirus	3	-	-	-	-	-	-	-	1	1	-	-	1
Intestine-Enteritis, Specimen Unsuitable	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Parasitism, Coccidia	2	2	-	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Hepatositis	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Lipidosis	4	2	1	-	-	-	-	-	-	-	1	-	-
Liver-Parasitism	1	-	-	1	-	-	-	-	-	-	-	-	-
Stomach-Rupture	1	-	1	-	-	-	-	-	-	-	-	-	-
Kidney-Nephritis	7	-	1	-	1	-	-	-	-	1	-	4	-
Ovary-Neoplasm	1	-	-	-	-	-	-	1	-	-	-	-	-
Urinary Bacteriologic Exam	1	-	-	-	-	-	-	-	-	-	-	1	-
Uterus-Metritis	8	7	-	-	-	-	-	-	1	-	-	-	-
Uterus-Neoplasm, Adenocarcinoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Encephalitis, Granulomatous	3	-	-	-	1	1	-	-	-	-	-	1	-
Encephalitis, Non-suppurative	1	1	-	-	-	-	-	-	-	-	-	-	-
Ear-Neoplasm, Papilloma	1	-	-	-	-	-	1	-	-	-	-	-	-
Ear-Otitis	2	-	-	1	-	-	-	-	-	-	-	-	1
Eye-Conjunctivitis	1	-	1	-	-	-	-	-	-	-	-	-	-
RACCOON													
Emaciation	1	1	-	-	-	-	-	-	-	-	-	-	-
Infectious Canine Distemper	2	-	1	-	-	1	-	-	-	-	-	-	-
Parvovirus Infection	2	1	1	-	-	-	-	-	-	-	-	-	-
Pseudorabies	2	-	-	-	-	-	-	-	-	1	1	-	-
Toxicosis, Ethylene Glycol	1	-	-	-	1	-	-	-	-	-	-	-	-
Trauma	1	-	-	1	-	-	-	-	-	-	-	-	-
Fracture	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Pneumonia	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Interstitial	1	-	1	-	-	-	-	-	-	-	-	-	-
Heart-Cardiomyopathy	1	-	1	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Parvovirus	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Salmonella	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Nephrosis	1	-	1	-	-	-	-	-	-	-	-	-	-
Encephalitis, Distemper	2	-	-	1	-	-	-	-	1	-	-	-	-
Myelitis, Non-suppurative	1	-	-	-	-	-	1	-	-	-	-	-	-
RAT													
Septicemia, Bacterial	1	-	-	-	1	-	-	-	-	-	-	-	-
Sudden Death, Idiopathic	1	-	-	-	-	-	-	1	-	-	-	-	-
Dermatitis, Staphylococcus	1	-	-	-	-	-	-	-	-	-	-	-	1

MISC. MAMMALS (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
RAT (continued)													
Mammary-Neoplasm, Adenoma	2	-	-	-	-	-	-	-	-	-	1	-	1
Neoplasm, Sarcoma, Anaplastic	1	-	-	-	-	-	-	-	1	-	-	-	-
Lung-Bronchitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, Interstitial	1	-	-	-	-	-	-	-	-	-	-	1	-
Heart-Myocardial Degeneration	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Kidney-Nephrosis	2	-	-	-	-	-	-	-	-	1	-	1	-
SKUNK													
Kidney-Nephritis, Pyelo	1	-	-	-	-	-	-	-	-	-	-	1	-
Encephalitis, Distemper	1	-	1	-	-	-	-	-	-	-	-	-	-
Encephalitis, Pseudorabies	1	-	-	-	-	-	-	-	-	1	-	-	-
Encephalitis, Rabies	74	5	3	6	10	9	6	7	7	8	2	4	7
Meningitis	1	-	-	-	-	-	-	-	-	1	-	-	-
SQUIRREL													
Trauma	1	1	-	-	-	-	-	-	-	-	-	-	-
Encephalitis, Eosinophilic	1	-	-	-	-	-	1	-	-	-	-	-	-
Eyelid-Neoplasm	1	-	-	1	-	-	-	-	-	-	-	-	-
TIGER													
Dermatitis, Folliculitis	1	-	-	-	1	-	-	-	-	-	-	-	-
WOLF													
Lung-Pneumonia, Interstitial	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Parvovirus	2	-	-	2	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Salmonella	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Obstruction	1	1	-	-	-	-	-	-	-	-	-	-	-
Testis-Atrophy	1	1	-	-	-	-	-	-	-	-	-	-	-
Brain-Anomaly	1	1	-	-	-	-	-	-	-	-	-	-	-
Myelomalacia	1	1	-	-	-	-	-	-	-	-	-	-	-
WOODCHUK													
Abscess	1	-	-	-	-	-	-	-	-	1	-	-	-
Oral-Neoplasm	1	-	-	-	-	-	-	-	1	-	-	-	-
Kidney-Nephritis, Glomerulo	4	2	-	-	-	-	-	-	1	1	-	-	-
UNIDENTIFIED MAMMALIAN SPECIES													
Growth Retardation	1	-	-	-	-	-	-	-	-	-	1	-	-
Septicemia, Salmonella	1	-	-	1	-	-	-	-	-	-	-	-	-
Starvation	1	-	-	-	-	-	-	-	1	-	-	-	-
Trauma	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermal, Fibrosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Mammary-Mastitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Mammary-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Neoplasm, Myxosarcoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm, Sarcoid	1	1	-	-	-	-	-	-	-	-	-	-	-

MISC. MAMMALS (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
UNIDENTIFIED MAMMALS (cont.)													
Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Parasitism, Tick	2	-	-	-	-	-	-	-	1	1	-	-	-
Fracture	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Osteosarcoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Lung-Pneumonia, Broncho (Idiopathic)	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, Foreign Body	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Heart-Myocarditis	1	-	-	-	-	-	1	-	-	-	-	-	-
Lymph Node-Lymphadenitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Feces-Microbiologic Exam	4	-	1	-	-	2	-	-	1	-	-	-	-
Intestine-Colitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Enteritis, Necrotic	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Enteritis, Salmonella	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Parasitism, Cestode	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Parasitism, Nematode	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Nematodirus	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Parasitism, Strongyloides	2	-	-	-	1	-	-	-	-	-	-	-	1
Intestine-Parasitism, Trichostrongyle	1	-	-	-	-	-	-	-	-	-	-	-	1
Liver-Hepatitis	1	-	-	-	-	1	-	-	-	-	-	-	-
Liver-Parasitism	1	-	-	-	-	-	-	-	1	-	-	-	-
Liver-Parasitism, Fascioloides	1	-	-	-	-	-	-	-	-	1	-	-	-
Oral-Stomatitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Abortion, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	-	1
Genital-Bacteriologic Examination	1	-	-	-	-	1	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	1	-	-	-	-	-	-	-	-	-	-	1	-
Kidney-Nephrosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Stillbirth, Idiopathic	1	1	-	-	-	-	-	-	-	-	-	-	-
Testis-Neoplasm, Interstitial Cell Tumor	1	-	-	-	-	-	-	-	-	-	-	1	-
Vas Deferens-Normal	1	-	-	-	-	-	1	-	-	-	-	-	-
Meningitis, Suppurative	1	-	1	-	-	-	-	-	-	-	-	-	-
OVINE													
0 Body as a Whole													
Abscess	1	-	-	-	-	-	1	-	-	-	-	-	-
Border Disease (BVD)	1	1	-	-	-	-	-	-	-	-	-	-	-
Caseous Lymphadenitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Contagious Ecthyma	3	1	-	-	-	-	-	-	-	-	1	1	-
Copper Deficiency	1	-	-	-	-	-	1	-	-	-	-	-	-
Grain Overload	5	-	-	1	-	-	-	1	-	-	1	2	-
Neonatal Death	1	-	-	-	-	-	-	-	1	-	-	-	-
Neonatal Weakness	2	-	-	-	-	-	-	-	-	1	1	-	-
Paralysis	1	1	-	-	-	-	-	-	-	-	-	-	-

OVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Peritonitis	1	-	-	-	-	-	-	-	-	-	1	-	-
Pregnancy Toxemia	1	-	-	-	-	-	-	1	-	-	-	-	-
Pseudorabies	1	-	-	-	-	-	-	-	-	-	1	-	-
Pyothorax	1	-	-	-	-	-	-	-	-	-	1	-	-
Septicemia, <i>Clostridium perfringens</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Septicemia, <i>Pasteurella multocida</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Septicemia, Salmonella	1	-	-	-	-	-	-	-	-	-	-	1	-
Starvation	2	-	1	-	-	-	-	-	-	1	-	-	-
Sudden Death, Idiopathic	8	-	-	1	1	1	-	-	2	1	-	2	-
Toxicosis, Copper	7	3	-	2	-	-	-	1	1	-	-	-	-
Toxicosis, Selenium	1	-	-	-	-	-	-	-	-	1	-	-	-
Trauma	1	-	-	-	-	-	-	-	-	1	-	-	-
1 Integumentary													
Dermatitis, Diffuse	1	-	-	-	-	-	-	-	-	-	-	-	1
Mammary-Mastitis	2	1	-	-	-	-	-	-	-	-	1	-	-
Mammary-Mastitis, <i>S. aureus</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
2 Musculoskeletal													
Muscle-Myodegeneration	1	-	-	-	-	-	-	-	-	-	-	-	1
Muscle-Myositis	1	1	-	-	-	-	-	-	-	-	-	-	-
White Muscle Disease	1	-	-	-	-	-	-	-	-	-	1	-	-
3 Respiratory													
Respiratory Disorders, Total Cases	35	4	8	2	2	-	-	-	3	6	3	4	3
Lung-Bronchitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Lung-Edema	7	-	-	2	1	-	-	-	1	1	-	1	1
Lung-Hemorrhage	1	-	-	-	-	-	-	-	-	1	-	-	-
Lung-Pneumonia	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, Broncho	7	-	3	-	-	-	-	-	1	2	-	-	1
Lung-Pneumonia, Foreign Body	2	1	-	-	-	-	-	-	-	1	-	-	-
Lung-Pneumonia, Ovine Progressive	2	-	1	-	1	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>P. hemolytica</i>	6	-	3	-	-	-	-	-	-	1	-	1	1
Lung-Pneumonia, <i>P. multocida</i>	10	3	2	-	1	-	-	-	-	-	2	2	-
Lung-Pneumonia, Staphylococcus	1	-	-	-	-	-	-	-	-	-	1	-	-
Nasal-Neoplasm	1	-	-	-	1	-	-	-	-	-	-	-	-
4 Cardiovascular													
Blood Vessel Disorder	1	-	-	-	-	-	-	1	-	-	-	-	-
Heart-Anomaly	1	-	-	-	-	-	-	-	-	1	-	-	-
Heart-Endocarditis	1	-	-	-	-	-	-	1	-	-	-	-	-
Heart-Myocarditis	1	-	-	-	-	1	-	-	-	-	-	-	-
Heart-Myocardial Degeneration	1	-	-	-	-	-	-	-	-	-	1	-	-
Heart-Pericarditis	1	-	-	-	-	-	-	-	-	1	-	-	-
Heart Failure, Chronic	1	-	-	-	-	-	-	-	-	-	-	-	1
5 Hemic and Lymphatic													
Anemia	1	-	1	-	-	-	-	-	-	-	-	-	-
Coagulation Disorder	1	-	-	-	-	1	-	-	-	-	-	-	-
Lymph Node-Lymphadenitis	1	-	-	-	-	-	-	-	-	-	1	-	-

OVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
6 Digestive													
Feces-Microbiologic Exam	2	1	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, Atrophic	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Enteritis, Idiopathic	2	-	-	-	-	-	-	-	-	2	-	-	-
Intestine-Enteritis, Rotavirus	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, Salmonella	2	-	-	-	-	-	-	-	1	-	-	1	-
Intestine-Enteritis, Specimen Unsuitable	2	-	-	-	-	-	-	-	-	1	1	-	-
Intestine-Parasite, Cestode	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	13	2	1	-	2	1	-	-	-	-	3	3	1
Intestine-Parasitism, Nematodirus	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Trichostrongyle	2	-	-	-	1	-	-	-	-	1	-	-	-
Intestine-Parasitism, Trichuris	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	1	-	-	-	-	1	-	-	-	-	-	-	-
Liver-Hepatositis	2	-	-	-	-	-	-	-	-	-	1	1	-
Liver-Lipidosis	1	-	-	-	-	-	-	1	-	-	-	-	-
Liver-Parasitism, Fascioloides	1	-	-	-	1	-	-	-	-	-	-	-	-
Stomach-Abomasitis	2	-	-	-	-	-	-	-	1	1	-	-	-
Stomach-Rumenitis	1	-	-	-	-	-	-	-	-	-	-	1	-
7 Urogenital													
Abortions, Total Cases	37	-	-	-	-	1	1	10	14	4	6	1	-
Abortion, Anomaly	1	-	-	-	-	-	-	-	-	-	1	-	-
Abortion, Bacterial	1	-	-	-	-	-	-	-	1	-	-	-	-
Abortion, Bacterial, <i>A. pyogenes</i>	2	-	-	-	-	-	1	-	-	-	1	-	-
Abortion, Bacterial, <i>Campylobacter sp.</i>	2	-	-	-	-	-	-	1	1	-	-	-	-
Abortion, Bacterial, Salmonella	1	-	-	-	-	-	-	-	-	1	-	-	-
Abortion, Goiter	1	-	-	-	-	-	-	-	-	-	1	-	-
Abortion, Idiopathic	19	-	-	-	-	1	-	5	8	3	2	-	-
Abortion, Mummified Fetus	2	-	-	-	-	-	-	-	1	1	-	-	-
Abortion, Mycotic Placentitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Abortion, Myocarditis	1	-	-	-	-	-	-	-	1	-	-	-	-
Abortion, Parasitism, Toxoplasma	1	-	-	-	-	-	-	1	-	-	-	-	-
Abortion, Placentitis	2	-	-	-	-	-	-	1	1	-	-	-	-
Abortion, Pneumonia	2	-	-	-	-	-	-	1	-	-	1	-	-
Abortion, Viral, Border Disease	1	-	-	-	-	-	-	-	-	-	-	1	-
Kidney-Infarction	1	-	-	-	-	-	-	1	-	-	-	-	-
Kidney-Nephritis	1	-	-	-	-	1	-	-	-	-	-	-	-
Kidney-Nephrosis	1	-	-	-	-	-	-	-	-	-	-	1	-
Stillbirth, Idiopathic	5	-	-	-	-	-	-	1	3	1	-	-	-
Urocyst-Urolithiasis	1	-	-	-	-	1	-	-	-	-	-	-	-
Vas Deferens-Normal	3	-	1	1	-	-	-	-	-	-	1	-	-
8 Endocrine													
Thyroid-Goiter	4	-	-	-	-	-	-	-	1	1	1	1	-

OVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
9 Neurological													
Neurological Disorders, Total Cases	18	1	1	1	1	1	-	1	1	4	2	3	2
Brain-Vasculitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Encephalitis, Listeria	4	-	-	-	-	-	-	-	-	1	-	2	1
Encephalitis, Pseudorabies	1	-	-	-	-	-	-	-	-	-	1	-	-
Leukoencephalomalacia	1	-	-	-	1	-	-	-	-	-	-	-	-
Meningitis, Suppurative	1	-	-	-	-	-	-	-	1	-	-	-	-
Neurological Disorder-Idiopathic	5	1	-	-	-	-	-	-	-	1	1	1	1
Polioencephalomalacia	3	-	1	-	-	-	-	-	-	2	-	-	-
PORCINE													
0 Body as a Whole													
Abscess	4	-	-	-	1	-	1	1	-	-	-	1	-
Anomaly	4	1	-	-	-	-	1	1	-	-	1	-	-
Edema Disease	39	4	3	6	3	2	5	3	-	3	4	6	-
Emaciation	3	-	1	-	1	-	-	-	-	1	-	-	-
Growth Retardation	3	-	-	-	1	-	-	-	-	1	-	-	1
Health Evaluation	2	-	1	-	-	-	-	-	-	-	-	-	1
Hernia, Inguinal	1	-	-	-	-	-	-	-	-	-	-	-	1
Hernia, Umbilical	1	-	-	-	-	-	-	-	-	1	-	-	-
Hypoglycemia	4	-	1	-	-	-	1	2	-	-	-	-	-
Icterus	1	-	-	-	-	-	-	-	-	-	-	-	1
Neonatal Death	5	1	-	-	-	1	-	-	1	2	-	-	-
Neonatal Weakness	15	-	1	1	-	2	3	2	2	4	-	-	-
Omphalitis	9	1	1	-	-	1	-	1	1	-	2	1	1
Peritonitis	8	-	-	-	-	1	1	-	-	2	3	1	-
Polyserositis	18	1	1	2	1	-	-	1	1	8	1	2	-
Porcine Stress Syndrome	6	-	-	-	-	-	-	1	-	-	-	-	5
Pseudorabies, Total Cases	33	2	1	2	1	2	2	4	2	5	1	8	3
Septicemia, <i>Actinobacillus sp.</i>	2	1	-	-	-	-	-	1	-	-	-	-	-
Septicemia, <i>Actinobacillus equuli</i>	3	-	-	1	-	1	-	-	-	-	-	-	1
Septicemia, <i>Actinomyces pyogenes</i>	3	-	-	-	-	-	-	1	1	-	-	1	-
Septicemia, Bacterial	5	-	-	-	2	-	-	1	1	-	-	-	1
Septicemia, Erysipelothrix	9	1	1	1	2	1	-	1	-	1	-	-	1
Septicemia, <i>E. coli</i>	28	3	1	3	2	2	1	3	3	5	1	1	3
Septicemia, <i>Hemophilus parasuis</i>	8	-	-	-	-	1	1	-	2	2	1	1	-
Septicemia, Klebsiella	1	-	1	-	-	-	-	-	-	-	-	-	-
Septicemia, <i>Pasteurella multocida</i>	2	-	-	-	-	1	-	-	-	-	1	-	-
Septicemia, Salmonella	47	2	9	9	2	2	3	4	2	4	3	6	1
Septicemia, Staphylococcus	1	-	-	-	-	-	-	-	-	-	1	-	-
Septicemia, Streptococcus	5	-	1	1	2	-	-	-	-	1	-	-	-
Septicemia, <i>Streptococcus suis</i>	32	2	1	5	1	5	2	1	3	2	4	5	1
Starvation	3	2	-	-	-	-	-	1	-	-	-	-	-
Sudden Death, Idiopathic	63	8	2	7	6	8	2	4	3	5	6	6	6
Toxicosis, Miscellaneous	1	-	-	-	-	1	-	-	-	-	-	-	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Toxicosis, Sodium (water depriv.)	6	2	-	-	-	1	1	1	1	-	-	-	-
Toxicosis, Sulfonamide	1	-	-	-	-	-	1	-	-	-	-	-	-
Trauma	5	1	-	1	-	1	-	1	1	-	-	-	-
Weakness	2	-	-	-	-	-	-	1	1	-	-	-	-
1 Integumentary													
Abscess	3	-	-	-	1	-	-	-	-	-	1	1	-
Cellulitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Dermatitis, Diffuse	3	-	-	1	-	1	-	1	-	-	-	-	-
Dermatitis, Focal	3	-	-	1	-	1	-	-	-	1	-	-	-
Dermatitis, Mycotic	1	-	-	-	-	-	-	-	1	-	-	-	-
Dermatitis, Podo	1	-	1	-	-	-	-	-	-	-	-	-	-
Dermatitis, Staphylococcus	1	-	-	-	1	-	-	-	-	-	-	-	-
Exudative Epidermitis	18	-	1	1	3	1	1	1	2	2	2	2	2
Mammary-Mastitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Mammary-Mastitis, Bacillus	1	-	-	1	-	-	-	-	-	-	-	-	-
Mammary-Mastitis, Staphylococcus	1	-	-	1	-	-	-	-	-	-	-	-	-
Mammary-Mastitis, Streptococcus	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Mastocytoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Neoplasm, Trichoepithelioma	1	-	-	-	1	-	-	-	-	-	-	-	-
Parakeratosis	1	-	-	-	-	-	1	-	-	-	-	-	-
Parasitism, Lice	1	1	-	-	-	-	-	-	-	-	-	-	-
Pox	1	-	-	-	-	1	-	-	-	-	-	-	-
2 Musculoskeletal													
Arthritis	2	-	-	-	-	-	-	-	-	-	2	-	-
Arthritis, <i>Actinomyces pyogenes</i>	8	1	-	1	-	1	-	1	-	-	3	-	1
Arthritis, <i>E. coli</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Arthritis, Non-suppurative	5	-	-	-	1	-	2	-	2	-	-	-	-
Arthritis, Staphylococcus	4	-	2	-	-	-	1	-	-	-	1	-	-
Arthritis, <i>Staphylococcus aureus</i>	2	-	-	1	1	-	-	-	-	-	-	-	-
Arthritis, Streptococcus	9	-	2	1	-	1	2	-	-	1	1	-	1
Arthritis, Suppurative	4	-	-	-	1	1	1	-	-	-	-	1	-
Fracture	1	1	-	-	-	-	-	-	-	-	-	-	-
Hyperostosis, Congenital	1	-	-	-	-	-	-	1	-	-	-	-	-
Lameness	1	-	-	-	-	-	-	-	-	-	1	-	-
Muscle-Myodegeneration	1	-	-	-	-	-	-	-	-	-	1	-	-
Muscle-Myositis	3	1	-	-	-	-	-	1	-	-	1	-	-
Osteochondrosis	2	-	-	1	-	-	-	-	1	-	-	-	-
Osteomalacia	1	-	-	-	-	-	-	-	-	-	-	-	1
Osteomyelitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Splayleg, Congenital	1	-	-	-	-	-	-	-	1	-	-	-	-
Synovitis	2	-	1	-	1	-	-	-	-	-	-	-	-
3 Respiratory													
Respiratory Disorders, Total Cases	773	42	50	61	73	57	84	74	72	80	73	51	56
Lung-Bronchitis	17	2	1	1	3	1	6	-	-	1	2	-	-
Lung-Edema	18	-	2	1	2	1	1	2	-	5	1	1	2

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Lung-Emphysema	2	-	-	2	-	-	-	-	-	-	-	-	-
Lung-Hemorrhage	3	-	-	-	-	-	-	-	1	1	-	-	1
Lung-Parasitism, Ascaris (Larvae)	1	-	-	-	-	-	-	-	-	1	-	-	-
Lung-Pneumonia	2	-	-	-	1	-	-	-	-	1	-	-	-
Lung-Pneumonia, <i>Actinobacillus suis</i>	5	-	-	-	-	1	1	2	-	1	-	-	-
Lung-Pneumonia, <i>A. pleuropneumoniae</i>	153	6	9	14	18	13	18	13	10	14	14	14	10
Lung-Pneumonia, <i>Actinomyces pyogenes</i>	58	1	6	4	6	2	7	10	5	4	4	4	5
Lung-Pneumonia, <i>Bordetella sp.</i>	12	-	-	-	1	-	1	1	4	2	-	1	2
Lung-Pneumonia, Broncho	71	6	6	7	1	5	9	4	7	9	8	4	5
Lung-Pneumonia, <i>Corynebacterium pseudotuberculosis</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Hemophilus parasuis</i>	50	3	1	1	5	2	9	8	7	3	5	2	4
Lung-Pneumonia, <i>Hemophilus sp.</i>	4	-	-	-	-	-	1	-	1	2	-	-	-
Lung-Pneumonia, Swine Influenza	33	1	1	1	3	5	3	6	3	-	2	1	7
Lung-Pneumonia, Interstitial	31	1	1	6	1	2	2	1	2	2	3	6	4
Lung-Pneumonia, Klebsiella	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Mycoplasma hyopneumoniae</i>	26	2	1	3	1	2	-	2	5	4	-	1	5
Lung-Pneumonia, <i>Pasteurella hemolytica</i>	2	-	-	1	1	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>P. multocida</i>	267	13	17	18	21	24	28	29	33	27	27	16	14
Lung-Pneumonia, Salmonella	46	3	2	1	7	6	7	5	2	3	3	3	4
Lung-Pneumonia, Staphylococcus	2	-	-	-	-	-	-	1	1	-	-	-	-
Lung-Pneumonia, <i>Streptococcus sp.</i>	42	-	4	-	10	1	3	4	2	1	10	3	4
Lung-Pneumonia, <i>Streptococcus suis</i>	224	8	11	14	21	12	12	28	30	30	23	14	21
Lung-Thrombosis	1	-	-	1	-	-	-	-	-	-	-	-	-
Nasal-Rhinitis	10	-	-	-	1	-	-	-	1	1	5	1	1
Nasal-Rhinitis, Atrophic	11	2	-	-	1	-	-	1	1	3	1	1	1
Nasal-Rhinitis, Bordetella	3	-	1	1	-	-	-	-	-	-	-	-	1
Nasal-Rhinitis, Cytomegalovirus	12	-	-	-	1	3	-	1	3	-	2	-	2
Nasal-Rhinitis, Idiopathic	3	-	1	1	-	1	-	-	-	-	-	-	-
Nasal-Rhinitis, <i>Pasteurella multocida</i>	17	1	-	-	1	2	1	2	-	2	5	1	2
Nasal-Rhinitis, Streptococcus	10	-	1	-	1	3	-	-	-	-	3	1	1
Pleuritis	4	-	-	-	-	-	1	-	2	-	-	1	-
Respiratory Nasal Swab (Negative)	3	2	-	-	-	-	-	-	-	1	-	-	-
Respiratory Nasal Swab, <i>P. multocida</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Trachea, Tracheitis	1	-	-	-	-	-	-	-	1	-	-	-	-
4 Cardiovascular													
Arteritis	1	-	-	-	-	-	-	-	1	-	-	-	-
Heart-Cardiomyopathy	6	1	2	-	-	-	1	-	1	-	-	-	1
Heart-Endocarditis	2	-	-	-	-	-	1	-	1	-	-	-	-
Heart-Epicarditis	5	-	1	-	-	1	-	1	-	-	-	2	-
Heart-Myocarditis	14	-	1	2	-	-	-	1	4	3	-	-	3
Heart-Myocardial Degeneration	11	-	1	-	-	1	-	4	1	-	-	1	3
Heart-Pericarditis	6	-	-	1	-	-	-	2	1	-	-	-	2
Heart Failure, Chronic	1	-	-	-	1	-	-	-	-	-	-	-	-
Mulberry Heart Disease	42	3	4	3	7	1	6	2	3	2	5	4	2
Vasculitis	1	-	-	1	-	-	-	-	-	-	-	-	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
5 Hemic and Lymphatic													
Anemia	10	1	1	1	1	1	2	2	-	1	-	-	-
Anemia, Hemolytic	1	-	-	-	-	1	-	-	-	-	-	-	-
Coagulation Disorder	6	-	1	-	-	-	3	1	-	1	-	-	-
Hemorrhage, Generalized	3	-	-	2	-	-	-	-	-	-	-	1	-
Lymph Node-Lymphadenitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Neoplasm, Lymphosarcoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Neoplasm, Myeloproliferative Disease	1	-	-	-	-	-	-	-	-	-	1	-	-
Spleen-Splenitis	1	-	-	-	-	-	-	1	-	-	-	-	-
6 Digestive													
Feces-Microbiologic Exam	25	3	3	1	3	-	4	6	1	-	1	1	2
Intestine-Colitis	33	2	3	3	1	3	6	-	3	6	4	1	1
Intestine-Enteritis, Prewearing, Total Cases	621	48	72	68	44	49	44	39	51	89	50	34	33
Intestine-Enteritis, Postweaning, Total Cases	429	24	31	36	31	26	34	42	31	63	40	40	31
Intestine-Enteritis, Adenovirus	7	-	-	-	1	-	-	1	1	1	1	1	1
Intestine-Enteritis, Atrophic	71	5	7	12	6	4	4	4	3	12	4	5	5
Intestine-Enteritis, <i>C. perfringens</i>	4	-	-	-	-	1	-	-	1	-	-	1	1
Intestine-Enteritis, <i>C. perfringens</i> Type C	21	-	2	-	1	-	-	3	2	4	6	2	1
Intestine-Enteritis, <i>E. coli</i> , Prewearing	208	16	26	23	15	18	14	10	18	25	17	14	12
Intestine-Enteritis, <i>E. coli</i> , Postweaning	110	5	9	13	5	8	10	9	9	17	12	11	2
Intestine-Enteritis, Hemorrhagic	3	-	-	1	-	-	-	1	1	-	-	-	-
Intestine-Enteritis, Idiopathic	70	2	7	5	6	3	4	5	3	15	9	4	7
Intestine-Enteritis, Necrotic	38	4	3	4	2	5	5	2	4	3	1	4	1
Intestine-Enteritis, Parvovirus	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Porcine Proliferative	49	6	7	2	4	2	5	1	2	8	1	7	4
Intestine-Enteritis, Rotavirus	174	6	12	12	13	12	8	23	16	28	19	14	11
Intestine-Enteritis, Salmonella	37	3	3	7	2	5	3	4	4	4	1	1	-
Intestine-Enteritis, Specimen Unsuitable	53	7	8	4	6	3	2	3	5	8	1	2	4
Intestine-Enteritis, Swine Dysentery	49	3	3	2	7	3	4	5	1	6	4	3	8
Intestine-Enteritis, Transmissible Gastroenteritis	84	4	3	6	6	3	7	7	10	17	13	5	3
Intestine-Enteritis, Viral	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Hemorrhage Syndrome	14	1	1	-	2	3	2	-	-	1	-	3	1
Intestine-Parasitism, Ascaris	4	-	1	-	-	-	1	1	-	-	1	-	-
Intestine-Parasitism, Coccidia (Isospora)	92	8	22	16	6	5	7	8	2	8	4	2	4
Intestine-Parasitism, Cryptosporidia	12	-	2	1	-	-	1	1	4	-	1	1	1
Intestine-Parasitism, Esophagostomum	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Trichuris	3	-	-	-	-	-	1	-	-	-	-	-	2
Intestine-Rectal Stricture	2	1	-	-	-	1	-	-	-	-	-	-	-
Intestine-Volvulus	5	1	1	-	-	1	-	1	-	-	1	-	-
Liver-Hemosiderosis	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	4	1	-	-	-	-	-	-	1	1	-	1	-
Liver-Hepatositis	11	1	2	2	-	-	1	-	2	1	-	1	1
Liver-Lipidosis	2	-	-	-	-	1	-	-	1	-	-	-	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Liver-Parasitism, Ascaris	9	5	1	1	1	-	1	-	-	-	-	-	-
Oral-Stomatitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Stomach-Gastritis, Mycotic	2	-	-	1	-	-	-	1	-	-	-	-	-
Stomach-Ulcer	16	3	2	-	4	-	1	1	-	3	2	-	-
7 Urogenital													
Abortion, Total Cases	356	22	40	51	38	24	23	33	25	30	21	22	27
Abortion, Anomaly	1	-	-	-	-	-	1	-	-	-	-	-	-
Abortion, Bacterial	2	-	-	-	-	1	-	-	-	1	-	-	-
Abortion, Bacterial, <i>Actinobacillus sp.</i>	7	1	1	1	-	-	-	-	1	1	1	1	-
Abortion, Bacterial, <i>Actinomyces pyogenes</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Abortion, Bacterial, <i>Bacillus sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Abortion, Bacterial, <i>Campylobacter sp.</i>	2	-	1	-	-	-	-	-	-	1	-	-	-
Abortion, Bacterial, <i>E. coli</i>	3	-	-	-	-	2	-	-	-	-	-	-	1
Abortion, Bacterial, <i>Leptospira sp.</i>	2	-	-	-	-	-	-	2	-	-	-	-	-
Abortion, Bacterial, <i>P. multocida</i>	2	-	-	-	-	-	-	-	1	-	1	-	-
Abortion, Bacterial, Staphylococcus	2	1	-	-	-	-	-	-	-	-	-	-	1
Abortion, Bacterial, <i>S. aureus</i>	3	-	1	1	-	-	-	-	-	-	-	1	-
Abortion, Bacterial, Streptococcus	13	1	1	1	2	1	-	-	2	-	1	1	3
Abortion, Emphysema	1	-	-	-	-	-	-	-	-	-	-	-	1
Abortion, Encephalitis	2	1	-	1	-	-	-	-	-	-	-	-	-
Abortion, Goiter	1	-	-	-	1	-	-	-	-	-	-	-	-
Abortion, Hepatitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Abortion, Idiopathic	191	7	17	34	17	12	17	21	13	19	12	9	13
Abortion, Mummified Fetus	59	5	4	6	5	3	5	3	7	4	5	6	6
Abortion, Myocarditis	19	2	2	-	8	3	-	-	1	3	-	-	-
Abortion, Placentitis	6	-	1	-	1	-	-	2	-	1	-	1	-
Abortion, Pneumonia	7	2	3	-	-	-	-	1	-	-	1	-	-
Abortion, Viral, BVD	1	-	-	-	-	-	-	1	-	-	-	-	-
Abortion, Viral, Parvovirus	27	1	9	5	4	2	-	2	-	-	-	2	2
Abortion, Viral, Pseudorabies	2	-	-	1	-	-	-	1	-	-	-	-	-
Genital-Bacteriologic Examination	10	3	-	1	-	-	-	-	2	3	1	-	-
Genital-Infertility	7	-	-	1	1	-	-	2	-	1	1	-	1
Kidney-Nephritis	8	-	2	-	1	1	-	1	-	-	1	-	2
Kidney-Nephritis, Glomerulo	4	-	-	1	-	-	1	1	1	-	-	-	-
Kidney-Nephritis, Pyelo	8	-	1	-	-	1	1	1	1	-	1	-	2
Kidney-Nephrosis	9	1	-	1	-	1	1	-	1	-	2	2	-
Stillbirth, Idiopathic	60	6	2	5	10	4	3	11	10	3	2	2	2
Urocyst-Urocystitis	7	1	-	-	2	-	2	-	1	1	-	-	-
Uterus-Metritis	19	1	1	1	2	4	3	2	1	-	3	-	1
8 Endocrine													
Thyroid-Goiter	1	-	-	-	-	-	-	-	-	-	-	1	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
9 Neurological													
Neurological Disorders, Total Cases	194	17	13	13	19	15	19	18	11	23	12	21	13
Brain-Abscess	1	-	-	-	-	-	-	-	-	-	1	-	-
Brain-Vasculitis	7	2	-	-	1	-	-	-	1	2	-	-	1
Edema Disease	24	-	3	4	2	1	3	1	2	3	1	4	-
Encephalitis, Non-suppurative	18	-	1	3	1	5	1	3	1	1	1	-	1
Encephalitis, Pseudorabies	12	1	1	1	1	-	2	-	-	1	-	4	1
Encephalitis, Suppurative	1	-	-	-	-	-	-	-	-	-	-	-	1
Encephalopathy	2	-	-	1	-	-	-	1	-	-	-	-	-
Meningitis	3	-	-	-	-	-	1	2	-	-	-	-	-
Meningitis, <i>E. coli</i>	7	2	-	-	-	1	1	2	-	1	-	-	-
Meningitis, <i>Hemophilus parasuis</i>	6	-	-	-	-	-	1	-	-	2	1	2	-
Meningitis, Non-suppurative	6	-	-	-	4	1	-	-	-	-	-	1	-
Meningitis, Streptococcus	6	1	-	-	1	-	-	-	1	1	1	1	-
Meningitis, <i>Streptococcus suis</i>	39	2	3	-	5	3	2	4	1	6	3	6	4
Meningitis, Suppurative	25	3	3	2	2	-	1	2	-	2	2	4	4
Myelitis, Suppurative	2	-	-	1	-	-	1	-	-	-	-	-	-
Neurological Disorder-Idiopathic	30	4	2	1	2	2	5	3	4	3	2	1	1
Toxicosis, Sodium (water depriv.)	6	2	-	-	-	1	1	1	1	-	-	-	-
X Special Senses													
Ear-Necrosis	5	1	-	-	1	1	-	2	-	-	-	-	-
Ear-Otitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Eye Conjunctivitis	1	-	-	-	-	-	-	1	-	-	-	-	-
MISCELLANEOUS SPECIMENS													
FEED													
Mycotoxin, Zearalenone	2	2	-	-	-	-	-	-	-	-	-	-	-
Toxicosis, Ionophore	2	-	-	-	-	-	-	-	-	-	-	2	-
Toxicosis, Miscellaneous	4	-	-	-	-	-	-	-	1	1	-	2	-
Toxicosis, Nitrate	11	5	3	-	-	-	1	1	1	-	-	-	-
Toxicosis, Strychnine	1	-	-	-	-	-	-	-	-	-	-	1	-

Laboratory Procedures Summary

I. Pathology	
A. Necropsies (whole animals)	6,482
B. Tissues from field necropsies (accessions)	5,200
C. Formalin-fixed tissues (surgical or necropsy)	2,851
D. Cytology (accessions)	403
E. Electron Microscopy (thin sections)	18
F. Hematology (specimens)	186
G. Histopathology	
1) Tissue Sections - H & E stain	62,318
2) Tissue Sections - special stain	1,453
H. Rabies (specimens)	<u>1,983</u>
Sub-total	80,894
II. Bacteriology/Mycology	
A. Specimens cultured (aerobic)	23,772
B. Specimens cultured (anaerobic)	891
C. Specimens cultured (special procedures)	
1) Campylobacter	204
2) Milk - quarter samples	1,832
3) Milk - bulk tank	199
4) <i>Mycobacterium paratuberculosis</i>	637
D. Direct tissue examinations	
1) Darkfield/phase contrast (specimens)	621
2) Immunofluorescence - Chlamydia	60
3) Immunofluorescence - <i>Clostridium sp.</i>	69
4) Immunofluorescence - <i>E. coli</i> pili	2,821
5) Immunofluorescence - <i>Leptospira</i>	858
6) Immunofluorescence - <i>Mycoplasma</i>	723
E. Microbial susceptibility (cultures = 5,286; drugs = 63,432)	5,286
F. Mycology (specimens)	2,110
G. Serotyping	
1) <i>Actinobacillus pleuropneumoniae</i> (cultures)	175
2) <i>Pasteurella multocida</i> (cultures)	37
3) <i>Salmonella spp.</i> (cultures)	<u>333</u>
Sub-total	40,628
III. Immunology/Serology	
A. Immunology (specimens)	223
B. Serology (tests)	<u>237,425</u>
Sub-total	237,648
IV. Toxicology/Clinical Chemistry/Endocrinology	
A. Analytical toxicology (analyses)	2,012
B. Clinical chemistry (specimens)	610
C. Endocrinology (specimens)	<u>1,952</u>
Sub-total	4,574
V. Virology	
A. Electron microscopy (fecal/tissue specimens)	2,963
B. Tissue immunofluorescence (tests)	32,246
C. Virus isolation (specimens)	<u>4,315</u>
Sub-total	39,524
Total Laboratory Procedures	403,268

Necropsies/Whole Animals (Accessions/Animals)

Species	July	Aug	Sept	Oct	Nov	Dec	(continued below)
Misc. Avian	11/17	20/47	16/51	13/40	14/53	8/17	
Bovine	35/36	35/36	31/33	40/45	46/49	56/67	
Canine	39/39	30/33	27/34	31/48	28/29	31/31	
Chicken	7/20	7/104	13/86	4/12	5/34	9/61	
Equine	7/7	5/5	4/4	2/2	17/19	10/10	
Feline	18/21	14/14	10/10	20/20	14/14	22/23	
Ovine	3/4	4/4	4/4	4/4	3/3	2/3	
Porcine	59/110	74/157	93/208	68/175	44/74	53/134	
Turkey	9/125	20/102	25/146	11/64	11/74	18/124	
Other	27/50	24/63	22/41	20/49	11/24	11/36	
TOTAL	215/429	233/565	245/617	213/459	193/373	220/506	

Species	Jan	Feb	March	April	May	June	Total
Misc. Avian	9/10	7/8	14/29	12/22	13/23	15/22	152/339
Bovine	53/65	59/69	64/72	58/74	53/60	38/38	568/644
Canine	26/28	18/18	30/30	26/28	21/24	21/21	328/363
Chicken	13/85	3/53	18/154	9/59	23/136	13/122	124/926
Equine	8/8	13/14	9/9	7/7	12/12	7/7	101/104
Feline	11/11	11/11	18/18	14/19	11/12	15/16	178/189
Ovine	9/10	15/23	17/29	11/17	6/10	1/1	79/112
Porcine	74/295	62/179	66/154	49/117	35/77	55/137	732/1817
Turkey	28/153	23/203	24/210	20/151	16/99	18/99	223/1550
Other	8/10	6/9	14/31	20/32	25/46	20/47	208/438
TOTAL	239/675	217/587	274/736	226/526	215/499	203/510	2693/6482

Tissue Accessions

Species	Tissues from Field Necropsies	Formalin Fixed Tissues Only (Surgical or Necropsy)
Misc. Avian	68	141
Bovine	2,009	39
Canine	502	2,050
Caprine	15	2
Chicken	28	7
Equine	84	91
Feline	146	322
Ovine	93	5
Porcine	2,023	51
Turkey	64	15
Wildlife	27	18
Zoo/Exotic	36	33
Other	99	64
Unspecified	6	13
TOTAL	5,200	2,851

Positive Rabies Cases

Species	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn	Total	Percent Total
Bat	1	4	--	--	--	--	--	--	--	1	--	1	7	6.0
Bovine	1	3	--	1	1	1	1	--	2	2	1	--	13	12.0
Canine	--	1	--	--	--	--	2	--	--	1	2	--	6	5.0
Caprine	--	--	--	--	1	--	--	--	--	--	--	--	1	1.0
Equine	--	--	--	--	--	1	--	--	--	1	1	1	4	3.0
Feline	--	--	--	5	--	1	2	--	1	--	2	--	11	9.0
Fox	1	--	--	--	--	--	--	--	--	--	--	1	2	2.0
Skunk	5	3	6	10	9	6	7	7	8	2	4	7	74	63.0
TOTAL	8	11	6	16	11	9	12	7	11	7	10	10	118	100.0

Rabies Examinations*

Species	Human Exposure				Non-Human Exposure				Total
	Pos	Neg	No Test	Total	Pos	Neg	No Test	Total	
Bat	7	84	2	93	—	49	1	50	143
Beaver	—	—	—	—	—	2	—	2	2
Bovine	10	46	—	56	3	62	—	65	121
Canine	4	486	2	492	2	63	—	65	557
Caprine	—	—	—	—	1	3	—	3	4
Chipmunk	—	4	—	4	—	—	—	—	4
Deer	—	1	—	1	—	1	—	1	2
Equine	3	12	—	15	1	9	—	10	25
Feline	11	582	2	595	—	86	—	86	681
Ferret	—	22	—	22	—	2	—	2	24
Fox	1	17	—	18	1	15	—	16	34
Gerbil	—	3	—	3	—	1	—	1	4
Gopher	—	6	—	6	—	—	—	—	6
Hamster	—	9	—	9	—	1	—	1	10
Llama	—	1	—	1	—	—	—	—	1
Mink	—	3	—	3	—	4	—	4	7
Mole	—	1	—	1	—	—	—	—	1
Monkey	—	1	—	1	—	—	—	—	1
Mouse	—	11	—	11	—	—	—	—	11
Muskrat	—	4	—	4	—	1	—	1	5
Opossum	—	—	1	1	—	—	—	—	1
Ovine	—	—	—	—	—	9	—	9	9
Porcine	—	—	—	—	—	2	—	2	2
Rabbit	—	11	—	11	—	5	—	5	16
Raccoon	—	57	1	58	—	38	—	38	96
Rat	—	3	—	3	—	—	—	—	3
Shrew	—	2	—	2	—	—	—	—	2
Skunk	8	9	—	17	66	41	1	108	125
Squirrel	—	42	1	43	—	8	—	8	51
Weasel	—	3	—	3	—	1	—	1	4
Wolf	—	4	1	5	—	3	—	3	8
Woodchuck	—	10	—	10	—	13	—	13	23
TOTAL	44	1435	9	1488	74	419	2	495	1983

*Fluorescent antibody testing performed by the Minnesota Department of Health.

Cytology Laboratory Summary*

Species	Specimens
Misc. Avian	6
Bovine	21
Canine	256
Equine	8
Feline	101
Porcine	7
Other	4
TOTAL	403

*Dr. Doug Weiss, Laboratory Supervisor

Hematology Laboratory Summary*

Species	CBC	Differential Only	Coagulation Profile
Bovine	41	2	—
Canine	66	4	1
Equine	29	—	—
Feline	10	3	—
Llama	10	—	—
Ovine	1	—	—
Porcine	16	—	—
Other	3	—	—
TOTAL	176	9	1

*Dr. Doug Weiss, Laboratory Supervisor

Histotechnique Laboratory Summary

Tissue Sections (H&E Stain)	Slides (H&E Stain)	Special Stains (Slides)	Recut Blocks	Decalcification	Eyes
62,318	22,199	1,453	286	128	29

Bacterial Cultures/Susceptibilities

Species	Accessions	Aerobic Cultures	Anaerobic Cultures	Microbial Susceptibility
Avian	204	552	39	90
Bovine	2,826	5,706	48	918
Canine	2,046	2,514	510	1,338
Caprine	24	36	—	12
Equine	606	1,008	66	222
Feline	636	810	150	246
Fur Bearing	78	282	—	36
Ovine	132	378	—	24
Porcine	2,490	8,172	54	1,926
Chicken/Turkey	504	3,558	—	276
Other	336	756	24	198
TOTAL	9,882	23,772	891	5,286

Bacterial Cultures - Special Procedures

Species	<i>Campylobacter spp.</i>	<i>Mycobacterium paratuberculosis</i>	
	Accessions	Specimens	Positive
Bovine	83	637	75
Canine	72	—	—
Equine	3	—	—
Feline	18	—	—
Fur Bearing	9	—	—
Porcine	0	—	—
Ovine	19	—	—
TOTAL	204	637	75

Bacterial Immunofluorescence in Tissues* - Clostridia

Species	Accessions	Specimens	<i>C. chauvoei</i> Positive	<i>C. septicum</i> Positive	<i>C. novyi</i> Positive	<i>C. cordelli</i> Positive
Bovine	66	66	12	11	16	3
Other	3	3	0	2	0	0
TOTAL	69	69	12	13	16	3

*Frozen Section or Tissue Imprints

Bacterial Immunofluorescence in Tissues* - *Escherichia coli* Pilus Antigens

Species	Accessions	K88		K99		987P	
		Tests	Positive	Tests	Positive	Tests	Positive
Bovine	468	0	0	468	56	0	0
Porcine	980	980	295	684	22	682	26
Other	7	0	0	7	0	0	0
TOTAL	1,455	980	295	1,159	78	682	26

*Frozen Section or Tissue Imprints

Bacterial Immunofluorescence in Tissues* - Chlamydia, Leptospira and Mycoplasma

Species	<i>Chlamydia psittaci</i>			<i>Leptospira sp.</i>			<i>Mycoplasma hyopneumoniae</i>		
	Positive	Negative	Total	Positive	Negative	Total	Positive	Negative	Total
Avian	0	9	9	-	-	-	-	-	-
Bovine	-	-	-	0	35	35	-	-	-
Equine	-	-	-	0	2	2	-	-	-
Feline	0	49	49	-	-	-	-	-	-
Ovine	0	2	2	0	3	3	-	-	-
Porcine	0	4	4	1	816	817	48	675	723
Turkey	0	7	7	-	-	-	-	-	-
Other	-	-	-	0	1	1	-	-	-
TOTAL	0	60	60	1	857	858	48	675	723

*Frozen Section or Tissue Imprints

Bovine Mastitis Cultures

Total: 1832

Number with significant isolates: 977 (53%)

Number with no growth: 855 (47%)

Number of Bulk Tank Samples: 199

Isolate	Number of Isolates	Percent Susceptible					
		Amikacin	Ampicillin	Cephalothin	Cloxacillin	Erythromycin	Gentamicin
<i>Staphylococcus aureus</i>	254	98	68	100	99	99	99
<i>Staphylococcus sp. (coag. neg.)</i>	187	98	65	100	99	99	99
<i>Streptococcus uberis</i>	110	37	91	99	--	79	52
<i>Streptococcus agalactiae</i>	107	--	99	99	--	99	--
<i>Streptococcus bovis</i>	60	30	94	96	--	94	48
<i>Streptococcus dysgalactiae</i>	59	32	99	99	--	73	73
<i>Escherichia coli</i>	52	100	76	71	--	18	100
<i>Enterococcus sp.</i>	45	21	81	65	--	77	46
<i>Streptococcus sp. Group G</i>	20	38	100	100	--	100	38
<i>Corynebacterium sp.</i>	16	100	100	100	--	100	100
Miscellaneous coliforms	14	100	7	36	--	0	100
<i>Actinomyces pyogenes</i>	12	--	100	100	--	100	--
<i>Klebsiella sp.</i>	11	100	18	82	--	0	100
<i>Pseudomonas sp.</i>	11	100	9	0	--	0	100
Yeast	10	--	--	--	--	--	--
<i>Pasteurella multocida</i>	8	100	100	100	--	75	100
<i>Bacillus sp.</i>	3	100	0	0	--	100	100
<i>Nocardia sp.</i>	3	--	--	--	--	--	--

Isolate	Percent Susceptible						
	Neomycin	Novobiocin	Penicillin	Streptomycin	Sulfachloro-pyridazine	Tetracycline	Triple Sulfa
<i>Staphylococcus aureus</i>	99	86	67	79	78	94	74
<i>Staphylococcus sp. (coag. neg.)</i>	98	72	65	80	74	79	60
<i>Streptococcus uberis</i>	30	18	88	17	17	53	22
<i>Streptococcus agalactiae</i>	--	--	99	--	--	--	--
<i>Streptococcus bovis</i>	38	42	88	17	17	42	18
<i>Streptococcus dysgalactiae</i>	35	21	92	10	54	33	37
<i>Escherichia coli</i>	82	0	0	63	90	75	75
<i>Enterococcus sp.</i>	27	19	62	0	35	35	35
<i>Streptococcus sp. Group G</i>	0	25	100	0	100	88	100
<i>Corynebacterium sp.</i>	100	100	100	100	100	100	100
Miscellaneous coliforms	100	0	0	71	64	50	79
<i>Actinomyces pyogenes</i>	--	100	100	--	--	--	--
<i>Klebsiella sp.</i>	91	0	0	36	91	73	82
<i>Pseudomonas sp.</i>	82	0	0	64	36	55	73
Yeast	--	--	--	--	--	--	--
<i>Pasteurella multocida</i>	75	75	88	75	63	100	25
<i>Bacillus sp.</i>	100	33	0	100	67	100	67
<i>Nocardia sp.</i>	--	--	--	--	--	--	--

Actinobacillus pleuropneumoniae Serotyping*

Type	Accessions	Percent
1	118	67.5
4	3	1.7
5	41	23.4
7	9	5.1
Untypable	4	2.3
TOTAL	175	100.0

*Serotyping conducted by Dr. Carlos Pijoan

Pasteurella multocida Serotyping*

Type	Avian	Chicken	Porcine	Turkey
A	-	-	11	-
1	1	1	-	1
1x7	-	-	-	-
1x7x9	-	-	-	-
3	-	1	-	7
3x4	-	-	-	6
3x4x12	-	-	-	-
3x13	-	-	-	-
4	-	-	-	-
12	-	-	-	-
Untypable	1	-	-	1
D	-	-	7	-
TOTAL	2	2	18	15

*Serotyping conducted by Dr. Sam Maheswaren

Salmonella Serotyping

Serotype	Misc.										Total
	Avian	Bovine	Canine	Chicken	Equine	Feline	Ovine	Porcine	Turkey	Species	
agona	--	3	1	1	--	--	--	8	2	4	19
albany	--	--	2	--	--	--	--	--	1	--	3
anatum	1	--	1	--	--	--	--	1	2	--	5
arizona 4, 12:1, 240-7	--	1	--	--	--	--	--	--	--	--	1
arizona 18:L, V-2	--	--	--	--	--	--	--	--	--	1	1
arizona 18:74, 732	--	--	--	--	--	--	--	--	6	2	8
arizona 61:1, 5-6	--	--	--	--	--	--	--	--	--	6	6
arizona 65:1, V-2	--	--	--	--	--	--	--	--	--	1	1
bardo	--	--	--	--	1	--	--	--	--	--	1
bareilly	--	1	--	--	--	--	--	--	--	--	1
blockley	--	1	--	--	--	--	--	--	--	--	1
braenderup	--	--	--	--	--	--	--	1	--	1	2
brandenberg	--	1	1	--	--	--	--	1	2	--	5
bredney	--	--	--	--	2	--	--	4	2	--	8
cerro	--	--	--	--	--	--	--	--	--	1	1
chameleon	--	--	--	--	--	--	--	--	--	1	1
cholerasuis/kunzendorf	--	2	--	--	--	--	--	87	--	--	89
cubana	--	1	--	--	--	--	--	--	--	--	1
derby	--	--	--	--	--	--	--	7	--	7	14
dublin	--	5	--	--	--	--	--	--	--	--	5
enteriditis	--	6	--	1	--	--	--	--	--	--	7
hadar	--	1	1	--	--	--	--	1	2	--	5
heidelberg	--	--	--	3	--	--	--	2	--	1	6
infantis	--	1	--	2	--	--	--	2	--	1	6
kentucky	--	--	--	--	--	--	--	--	--	1	1
krefeld	--	--	--	--	1	--	--	--	--	--	1
litchfield	--	--	--	--	1	--	--	--	--	--	1
m. bandaha	--	3	1	--	--	--	--	2	--	--	6
montevideo	--	1	--	--	--	--	--	--	--	--	1
muenster	--	1	--	--	--	--	--	--	--	--	1
newington	--	2	--	--	--	--	--	--	--	--	2
newport	--	--	--	--	--	--	--	--	--	1	1
oranianberg	--	1	--	--	--	--	--	--	--	--	1
orion	--	1	--	--	--	--	--	--	--	--	1
reading	--	--	--	--	--	--	--	--	4	--	4
st. paul	--	1	--	--	--	--	--	1	5	--	7
seftenberg	--	--	--	--	--	--	--	1	8	--	9
thompson	--	2	--	--	2	--	--	--	--	--	4
typhimurium	--	30	1	--	1	1	--	4	--	3	40
typhimurium/copenhagen	1	23	1	--	2	1	--	6	--	6	40
welteureden	--	--	--	--	--	--	--	--	--	1	1
worthington	--	--	--	--	--	--	--	--	--	1	1
Multiple serotypes	--	--	--	--	--	--	--	--	2	--	2
Salmonella 9,12 non-motile	--	7	1	--	--	--	--	--	--	--	8
Untypable	--	1	--	--	--	1	--	3	--	--	5
TOTAL	2	96	9	7	10	3	--	131	37	38	334

In Vitro Antimicrobial Drug Susceptibility Tests: Avian (Chicken and Turkey)

Isolate	Number of Isolates	Percent Susceptible					
		Bacitracin	Erythromycin	Gentamicin	Lincomycin	Neomycin	Nitrofurantoin
<i>Bordetella sp.</i>	14	0	79	93	0	79	36
<i>Enterobacter sp.</i>	5	0	0	80	0	60	80
<i>Escherichia coli</i>	100	0	0	94	0	58	86
<i>Klebsiella sp.</i>	5	0	0	100	0	100	80
<i>Pasteurella hemolytica</i>	52	0	79	100	0	72	100
<i>Pasteurella multocida</i>	20	10	85	90	0	70	100
<i>Pasteurella sp.</i>	2	0	100	100	0	100	100
<i>Pseudomonas sp.</i>	6	0	0	83	0	33	0
<i>Salmonella sp.</i>	65	0	0	80	0	68	97
<i>Staphylococcus aureus</i>	14	93	64	100	71	100	100
<i>Staphylococcus sp. (coag. neg.)</i>	32	91	86	97	62	79	88
<i>Streptococcus sp. (alpha)</i>	5	100	100	100	100	0	100

Isolate	Percent Susceptible						
	Novobiocin	Penicillin	Streptomycin	Sulfachloro-pyridazine	Tetracycline Doxycycline	Trimethoprim Sulfa	Triple Sulfa
<i>Bordetella sp.</i>	14	57	43	64	86	79	71
<i>Enterobacter sp.</i>	0	0	0	0	60	60	0
<i>Escherichia coli</i>	0	0	30	63	17	90	27
<i>Klebsiella sp.</i>	0	0	20	20	60	80	20
<i>Pasteurella hemolytica</i>	0	69	77	72	2	100	47
<i>Pasteurella multocida</i>	80	95	60	65	95	100	40
<i>Pasteurella sp.</i>	50	50	50	50	50	50	50
<i>Pseudomonas sp.</i>	0	0	0	20	0	0	0
<i>Salmonella sp.</i>	0	0	40	51	52	97	49
<i>Staphylococcus aureus</i>	100	79	93	100	57	100	93
<i>Staphylococcus sp. (coag. neg.)</i>	94	63	90	86	36	100	75
<i>Streptococcus sp. (alpha)</i>	20	100	0	0	20	100	0

In Vitro Antimicrobial Drug Susceptibility Tests: Bovine

Isolate	Number of Isolates	Percent Susceptible				
		Amikacin	Ampicillin	Apramycin	Ceftiofur	Cephalothin
<i>Actinomyces pyogenes</i>	6	--	100	--	80	83
<i>Bordetella sp.</i>	2	--	100	100	100	100
<i>Escherichia coli</i>	542	--	34	91	99	73
<i>Enterobacter sp.</i>	3	--	0	100	100	68
<i>Haemophilus sp.</i>	29	--	86	--	91	93
<i>Klebsiella sp.</i>	11	--	0	91	100	82
<i>Moraxella bovis</i>	4	--	100	--	100	100
<i>Pasteurella haemolytica</i>	91	--	47	--	100	95
<i>Pasteurella multocida</i>	88	--	85	--	100	98
<i>Pasteurella sp.</i>	3	--	100	--	100	100
<i>Proteus sp.</i>	3	--	33	100	100	33
<i>Pseudomonas sp.</i>	10	80	30	50	60	10
<i>Salmonella sp.</i>	98	--	30	97	100	93
<i>Staphylococcus sp.</i> (coag. pos.)	2	--	100	--	100	100
<i>Staphylococcus sp.</i> (coag. neg.)	12	--	82	--	50	92
<i>Streptococcus sp.</i> (alpha)	8	--	88	--	100	88
<i>Streptococcus sp.</i> (beta)	2	--	100	--	100	100

Isolate	Percent Susceptible						
	Erythromycin	Gentamicin	Kanamycin	Lincomycin	Neomycin	Nitrofurantoin	Novobiocin
<i>Actinomyces pyogenes</i>	83	100	83	83	--	--	100
<i>Bordetella sp.</i>	--	100	100	--	100	100	100
<i>Escherichia coli</i>	--	83	19	--	19	96	--
<i>Enterobacter sp.</i>	--	100	68	--	68	68	--
<i>Haemophilus sp.</i>	88	89	59	37	--	--	67
<i>Klebsiella sp.</i>	--	73	55	--	55	44	--
<i>Moraxella bovis</i>	100	100	100	25	100	--	100
<i>Pasteurella haemolytica</i>	61	97	83	3	--	--	3
<i>Pasteurella multocida</i>	88	100	80	2	--	--	69
<i>Pasteurella sp.</i>	100	100	100	0	--	--	0
<i>Proteus sp.</i>	--	100	68	--	68	0	--
<i>Pseudomonas sp.</i>	--	80	20	--	20	0	--
<i>Salmonella sp.</i>	--	94	31	--	34	97	--
<i>Staphylococcus sp.</i> (coag. pos.)	100	100	100	100	--	--	100
<i>Staphylococcus sp.</i> (coag. neg.)	82	92	75	78	--	--	82
<i>Streptococcus sp.</i> (alpha)	100	75	50	75	--	--	75
<i>Streptococcus sp.</i> (beta)	100	50	50	100	--	--	50

In Vitro Antimicrobial Drug Susceptibility Tests: Bovine (continued)

Isolate	Percent Susceptible						
	Oxacillin	Penicillin	Spectinomycin	Sulfachloro- pyridazine	Tetracycline	Trimethoprim Sulfa	Triple Sulfa
<i>Actinomyces pyogenes</i>	--	100	100	50	33	83	33
<i>Bordetella sp.</i>	--	0	100	100	50	100	100
<i>Escherichia coli</i>	--	--	61	35	8	73	15
<i>Enterobacter sp.</i>	--	--	100	69	33	68	68
<i>Haemophilus sp.</i>	--	76	76	52	76	72	28
<i>Klebsiella sp.</i>	--	--	55	55	19	73	55
<i>Moraxella bovis</i>	--	100	100	100	100	100	100
<i>Pasteurella haemolytica</i>	--	44	89	59	37	99	24
<i>Pasteurella multocida</i>	--	83	88	71	78	98	36
<i>Pasteurella sp.</i>	--	100	100	100	33	100	68
<i>Proteus sp.</i>	--	--	100	68	0	100	68
<i>Pseudomonas sp.</i>	--	--	40	20	40	20	20
<i>Salmonella sp.</i>	--	--	49	29	23	97	23
<i>Staphylococcus sp.</i> (coag. pos.)	100	100	0	100	100	100	100
<i>Staphylococcus sp.</i> (coag. neg.)	100	75	58	92	68	100	75
<i>Streptococcus sp.</i> (alpha)	--	75	75	38	25	100	38
<i>Streptococcus sp.</i> (beta)	--	100	100	50	50	50	100

In Vitro Antimicrobial Drug Susceptibility Tests: Canine and Feline

Isolate	Number of Isolates	Percent Susceptible				
		Amikacin	Ampicillin	Amoxicillin/ Clavulanic Acid	Bacitracin	Cefataxime
<i>Bordetella sp.</i>	10	--	40	100	--	50
<i>Enterobacter sp.</i>	3	100	33	33	0	100
<i>Escherichia coli</i>	65	95	65	88	0	95
<i>Klebsiella sp.</i>	8	100	0	83	0	100
<i>Pasteurella multocida</i>	19	--	100	100	0	100
<i>Proteus sp.</i>	17	100	59	71	0	82
<i>Pseudomonas sp.</i>	28	91	4	8	0	53
<i>Salmonella sp.</i>	12	100	58	83	--	100
<i>Staphylococcus sp.</i> (coag. pos.)	45	--	33	100	95	100
<i>Staphylococcus sp.</i> (coag. neg.)	58	--	28	98	92	100
<i>Streptococcus sp.</i> (alpha)	20	--	95	100	100	85
<i>Streptococcus sp.</i> (beta)	36	--	94	100	100	100

In Vitro Antimicrobial Drug Susceptibility Tests: Canine and Feline (continued)

Isolate	Percent Susceptible						
	Cephalothin	Chloramphenicol	Clindamycin	Erythromycin	Gentamicin	Neomycin	Nitrofurantoin
<i>Bordetella sp.</i>	90	100	0	100	100	--	--
<i>Enterobacter sp.</i>	0	100	--	--	100	--	100
<i>Escherichia coli</i>	29	89	--	--	95	90	95
<i>Klebsiella sp.</i>	38	88	--	--	100	75	50
<i>Pasteurella multocida</i>	100	100	5	100	95	--	--
<i>Proteus sp.</i>	88	76	--	--	100	76	6
<i>Pseudomonas sp.</i>	0	19	--	--	61	14	0
<i>Salmonella sp.</i>	100	88	--	--	92	--	100
<i>Staphylococcus sp.</i> (coag. pos.)	100	100	76	82	95	80	--
<i>Staphylococcus sp.</i> (coag. neg.)	98	96	78	100	100	96	--
<i>Streptococcus sp.</i> (alpha)	70	100	65	80	80	0	--
<i>Streptococcus sp.</i> (beta)	94	100	86	94	94	0	--

Isolate	Percent Susceptible						
	Oxacillin	Penicillin	Polymyxin	Tetracycline	Ticarcillin	Tobramycin	Trimethoprim Sulfa
<i>Bordetella sp.</i>	--	0	--	100	--	--	50
<i>Enterobacter sp.</i>	--	--	--	67	100	100	100
<i>Escherichia coli</i>	--	--	71	74	68	95	96
<i>Klebsiella sp.</i>	--	--	--	50	0	100	88
<i>Pasteurella multocida</i>	--	89	--	90	--	--	100
<i>Proteus sp.</i>	--	--	0	6	59	100	94
<i>Pseudomonas sp.</i>	--	--	86	25	71	90	23
<i>Salmonella sp.</i>	--	--	--	58	57	80	83
<i>Staphylococcus sp.</i> (coag. pos.)	93	36	89	62	--	--	91
<i>Staphylococcus sp.</i> (coag. neg.)	96	24	88	59	--	--	75
<i>Streptococcus sp.</i> (alpha)	--	70	5	30	--	--	95
<i>Streptococcus sp.</i> (beta)	--	94	9	28	--	--	100

In Vitro Antimicrobial Drug Susceptibility Tests: Equine

Isolate	Number of Isolates	Percent Susceptible			
		Amikacin	Ampicillin	Carbenicillin	Ceftiofur
<i>Actinobacillus sp.</i>	13	--	69	--	92
<i>Escherichia coli</i>	14	100	71	83	100
<i>Klebsiella sp.</i>	6	100	0	33	100
<i>Pseudomonas sp.</i>	5	80	0	80	100
<i>Rhodococcus equi</i>	6	--	0	--	50
<i>Staphylococcus sp.</i> (coag. pos.)	6	--	50	--	100
<i>Staphylococcus sp.</i> (coag. neg.)	3	--	67	--	100
<i>Streptococcus sp.</i> (alpha)	5	--	80	--	100
<i>Streptococcus sp.</i> (beta)	30	--	100	--	100

In Vitro Antimicrobial Drug Susceptibility Tests: Equine (continued)

Isolate	Percent Susceptible				
	Cephalothin	Chloramphenicol	Erythromycin	Gentamicin	Kanamycin
<i>Actinobacillus sp.</i>	92	100	92	92	62
<i>Escherichia coli</i>	86	93	—	100	71
<i>Klebsiella sp.</i>	68	83	—	83	68
<i>Pseudomonas sp.</i>	0	0	—	60	20
<i>Rhodococcus equi</i>	0	83	100	100	100
<i>Staphylococcus sp.</i> (coag. pos.)	100	100	83	100	—
<i>Staphylococcus sp.</i> (coag. neg.)	100	100	100	100	100
<i>Streptococcus sp.</i> (alpha)	100	100	100	60	0
<i>Streptococcus sp.</i> (beta)	100	100	100	68	13

Isolate	Percent Susceptible					
	Nitrofurantoin	Novobiocin	Penicillin	Piperacillin	Polymyxin	Rifampin
<i>Actinobacillus sp.</i>	85	8	54	—	—	69
<i>Escherichia coli</i>	100	—	—	86	100	—
<i>Klebsiella sp.</i>	68	—	—	33	100	—
<i>Pseudomonas sp.</i>	0	—	—	60	100	—
<i>Rhodococcus sp.</i>	0	0	0	—	0	100
<i>Staphylococcus sp.</i> (coag. pos.)	—	100	50	—	—	100
<i>Staphylococcus sp.</i> (coag. neg.)	—	68	68	—	—	100
<i>Streptococcus sp.</i> (alpha)	40	0	60	—	—	100
<i>Streptococcus sp.</i> (beta)	100	23	100	—	—	100

Isolate	Percent Susceptible					
	Spectinomycin	Sulfachloro- pyridazine	Tetracycline	Ticarcillin	Trimethoprim Sulfa	Triple Sulfa
<i>Actinobacillus sp.</i>	77	100	100	—	100	92
<i>Escherichia coli</i>	86	71	64	86	100	57
<i>Klebsiella sp.</i>	83	33	100	0	100	50
<i>Pseudomonas sp.</i>	60	0	0	40	0	0
<i>Rhodococcus sp.</i>	100	68	33	—	83	68
<i>Staphylococcus sp.</i> (coag. pos.)	33	68	83	—	83	50
<i>Staphylococcus sp.</i> (coag. neg.)	68	100	100	—	100	100
<i>Streptococcus sp.</i> (alpha)	80	80	100	—	100	80
<i>Streptococcus sp.</i> (beta)	90	47	50	—	93	20

In Vitro Antimicrobial Drug Susceptibility Tests: Ovine

Isolate	Number of Isolates	Percent Susceptible				
		Ampicillin	Apramycin	Ceftiofur	Cephalothin	Erythromycin
<i>Escherichia coli</i>	5	60	60	100	80	--
<i>Pasteurella hemolytica</i>	5	100	--	--	100	80
<i>Pasteurella multocida</i>	8	100	--	--	100	100
<i>Salmonella sp.</i>	2	100	100	100	100	--

Isolate	Percent Susceptible					
	Gentamicin	Kanamycin	Lincomycin	Neomycin	Nitrofurantoin	Novobiocin
<i>Escherichia coli</i>	80	40	--	40	100	--
<i>Pasteurella hemolytica</i>	100	100	0	--	--	0
<i>Pasteurella multocida</i>	100	100	0	--	--	50
<i>Salmonella sp.</i>	100	100	--	100	100	--

Isolate	Percent Susceptible					
	Penicillin	Spectinomycin	Sulfachloro-pyridizine	Tetracycline	Trimethoprim Sulfa	Triple Sulfa
<i>Escherichia coli</i>	--	80	60	20	80	60
<i>Pasteurella hemolytica</i>	100	100	100	60	100	80
<i>Pasteurella multocida</i>	100	100	75	88	100	50
<i>Salmonella sp.</i>	--	100	100	100	100	100

In Vitro Antimicrobial Drug Susceptibility Tests: Porcine

Isolate	Number of Isolates	Percent Susceptible			
		Amikacin	Ampicillin	Apramycin	Ceftiofur
<i>Actinobacillus pleuropneumoniae</i>	151	--	52	--	100
<i>Actinobacillus sp.</i>	24	--	67	--	100
<i>Actinomyces pyogenes</i>	9	--	100	--	100
<i>Bordetella sp.</i>	17	--	35	--	58
<i>Enterobacter sp.</i>	12	--	25	89	100
<i>Escherichia coli</i>	865	97	57	66	99
<i>Haemophilus sp.</i>	52	--	94	--	100
<i>Klebsiella sp.</i>	15	--	13	67	100
<i>Pasteurella multocida</i>	310	--	98	--	100
<i>Salmonella sp.</i>	153	--	80	77	100
<i>Staphylococcus hyicus</i>	31	--	16	--	100
<i>Staphylococcus sp. (coag. neg.)</i>	22	--	36	--	100
<i>Streptococcus suis</i>	287	--	98	--	99
<i>Streptococcus sp. (alpha)</i>	146	--	94	--	93
<i>Streptococcus sp. (beta)</i>	44	--	89	--	100

In Vitro Antimicrobial Drug Susceptibility Tests: Porcine (continued)

Isolate	Percent Susceptible						
	Cephalothin	Erythromycin	Gentamicin	Kanamycin	Lincomycin	Neomycin	Nitrofurantoin
<i>Actinobacillus pleuropneumoniae</i>	98	85	89	78	5	--	--
<i>Actinobacillus sp.</i>	96	75	100	70	8	--	--
<i>Actinomyces pyogenes</i>	100	78	100	100	89	--	--
<i>Bordetella sp.</i>	47	94	100	88	--	--	--
<i>Enterobacter sp.</i>	83	--	92	68	--	75	83
<i>Escherichia coli</i>	77	--	69	36	--	40	82
<i>Haemophilus sp.</i>	100	100	92	82	63	--	--
<i>Klebsiella sp.</i>	87	--	68	60	--	73	27
<i>Pasteurella multocida</i>	100	88	100	96	2	--	--
<i>Salmonella sp.</i>	97	--	72	62	--	70	97
<i>Staphylococcus hyicus</i>	100	33	100	97	32	--	--
<i>Staphylococcus sp. (coag. neg.)</i>	100	62	100	95	60	--	--
<i>Streptococcus suis</i>	98	47	79	13	4	--	--
<i>Streptococcus sp. (alpha)</i>	92	40	88	21	22	--	--
<i>Streptococcus sp. (beta)</i>	93	48	81	23	39	--	--

Isolate	Percent Susceptible						
	Novobiocin	Penicillin	Spectinomycin	Sulfachloro-pyridazine	Tetracycline	Trimethoprim Sulfa	Triple Sulfa
<i>Actinobacillus pleuropneumoniae</i>	8	39	95	94	48	89	5
<i>Actinobacillus sp.</i>	22	62	100	71	42	96	33
<i>Actinomyces pyogenes</i>	89	100	100	78	68	89	38
<i>Bordetella sp.</i>	47	12	18	6	88	47	12
<i>Enterobacter sp.</i>	--	--	83	75	33	83	58
<i>Escherichia coli</i>	--	--	64	39	4	93	18
<i>Haemophilus sp.</i>	86	88	100	75	90	84	20
<i>Klebsiella sp.</i>	--	--	60	47	20	73	47
<i>Pasteurella multocida</i>	78	97	98	71	85	99	36
<i>Salmonella sp.</i>	--	--	78	33	34	98	21
<i>Staphylococcus hyicus</i>	100	13	33	94	41	100	84
<i>Staphylococcus sp. (coag. neg.)</i>	81	35	43	73	9	100	64
<i>Streptococcus suis</i>	23	93	92	36	4	99	38
<i>Streptococcus sp. (alpha)</i>	31	79	76	42	4	97	34
<i>Streptococcus sp. (beta)</i>	20	93	74	71	5	98	48

Mycology (Specimens Cultured)

Species	Total Cultures	Species	Total Cultures
Misc. Avian	128	Feline	91
Bovine	586	Ovine	61
Canine	432	Porcine	425
Chicken/Turkey	154	Other	32
Equine	201		
		TOTAL	2,110

Immunology

Species	Autoimmune Dermatitis (IgG, C ₃)	Total Serum IgG	Coombs	Crossmatch	FANA	LE Clot	Rheumatoid Factor
Bovine	--	33	--	--	--	--	--
Canine	34	--	30	1	31	22	5
Caprine	--	7	--	--	--	--	--
Equine	--	13	1	--	--	--	--
Feline	5	--	2	--	2	2	--
Porcine	--	9	--	--	--	--	--
Zoo/Exotic	--	24	--	--	--	--	--
Other	--	1	--	1	--	--	--
TOTAL	39	87	33	2	33	24	5

Serology Summary

Disease	Positive	Suspect	Negative	No Test/ Toxic	Total Sera	Percent Positive
Aleutian Disease (CIEP)	926	--	6,680	14	7,800	11.9
Anaplasmosis (CF)	172	197	16,810	64	17,243	1.0
Blue Tongue (AGID)	68	6	7,714	1	7,789	0.9
Bovine Adenovirus (SN)	36	--	4	--	40	90.0
Bovine Herpesvirus DN599 (IFA)	39	--	54	--	93	41.9
Bovine Leukosis (AGID)	1,936	12	9,462	2	11,412	17.0
Bovine Respiratory Syncytial Virus (SN)	752	--	306	20	1,078	69.8
Bovine Viral Diarrhea (SN)	3,513	--	1,001	179	4,693	74.9
<i>Brucella abortus</i> (CF)	7	47	6,961	400	7,415	0.1
<i>Brucella canis</i> (Rapid Slide/Tube Agg.)	5	--	100	--	105	4.8
Canine Parvovirus (HAI)	13	--	--	--	13	100.0
Caprine Arthritis Encephalitis Virus (AGID)	114	7	333	7	461	24.7
Chlamydia (CF)	75	29	534	1	639	11.7
Encephalomyocarditis Virus (SN)	26	610	1,268	102	2,006	1.3
Equine Infectious Anemia (AGID)	2	--	1,871	--	1,873	0.1
Equine Viral Rhinopneumonitis Virus (SN)	62	--	32	3	97	63.9
Eperythrozoonosis (HA)	86	225	1,000	--	1,311	6.6
Feline Leukemia (ELISA)	7	--	25	--	32	21.8
Infectious Bovine Rhinotracheitis (SN)	12,171	--	2,419	179	14,769	82.4
Leptospira (MA-6 serovars)	3,762	--	3,773	--	7,535	49.9
Lyme Disease (IFA)	489	1,499	284	--	2,272	21.5
<i>Mycobacterium paratuberculosis</i> (AGID)	175	14	555	--	744	23.5
<i>Mycobacterium paratuberculosis</i> (CF)	8	10	992	--	1,010	6.8
Ovine Progressive Pneumonia (AGID)	498	19	1,815	--	2,332	21.4
Parainfluenza-3 (HI)	1,590	--	295	--	1,885	84.4
Parvovirus (HAI)	2,579	--	350	19	2,948	87.5
Pseudorabies (ELISA)	6,823	--	115,885	--	122,708	5.6
Pseudorabies (GPX)	652	--	3,909	--	4,561	14.3
Pseudorabies (LAT)	97	--	548	--	645	15.0
Pseudorabies (SN)	4,631	--	3,644	32	8,307	55.7
Swine Influenza Virus (HI)	98	--	49	--	147	66.7
Toxoplasma (IHA)	18	--	115	--	133	13.5
Transmissible Gastroenteritis (SN)	844	--	1,847	9	270	31.3
Vesicular Stomatitis (CF)	--	--	21	--	21	0.0
Vesicular Stomatitis - Indiana (SN)	--	--	1,519	--	1,519	0.0
Vesicular Stomatitis - New Jersey (SN)	--	--	1,519	--	1,519	0.0
TOTAL	42,274	2,675	193,874	1,032	237,425	

Serology by Species (Accessions/Animals)

Species	July	Aug	Sept	Oct	Nov	Dec	(continues below)
Misc. Avian	3/8	7/15	9/18	13/23	6/16	9/10	
Bovine	248/1724	444/2193	373/4677	301/2969	339/5682	223/2138	
Canine	129/131	135/140	115/122	266/285	174/182	128/128	
Caprine	10/46	18/181	14/131	0/0	0/0	6/17	
Chicken	0/0	0/0	0/0	0/0	0/0	0/0	
Equine	75/126	94/196	125/271	97/251	47/107	25/74	
Feline	4/4	7/7	4/4	7/7	3/3	6/6	
Ovine	9/85	13/160	12/188	4/112	9/142	5/316	
Porcine	867/12194	867/10772	575/8013	531/8966	462/7537	353/5685	
Turkey	0/0	0/0	2/46	6/34	8/268	2/7	
Wildlife	0/0	0/0	2/6	0/0	0/0	2/2	
Zoo/Exotic	0/0	1/2	2/2	1/4	0/0	0/0	
Other	1/4	2/2	0/0	11/88	3/3	7/12	
Not Specified	0/0	0/0	0/0	0/0	1/2	0/0	
TOTAL	1346/14322	1588/13668	1233/13478	1237/12739	1052/13942	766/8395	

Species	Jan	Feb	March	April	May	June	Total
Misc. Avian	4/5	4/5	10/18	4/5	6/18	2/16	77/157
Bovine	327/1750	385/2368	483/5157	235/2148	256/1580	360/1674	3974/34060
Canine	85/93	80/80	108/110	144/147	251/257	326/338	1941/2013
Caprine	6/28	2/9	6/16	6/49	18/183	7/41	93/701
Chicken	2/109	1/34	3/13	0/0	0/0	2/4	8/160
Equine	60/123	59/242	138/294	135/233	159/307	140/289	1154/2513
Feline	3/3	3/3	2/2	6/6	8/8	4/4	57/57
Ovine	11/247	10/179	12/433	14/188	8/210	8/51	115/2311
Porcine	472/7052	531/9201	785/12181	879/13384	884/13279	1112/16122	8318/124386
Turkey	3/188	3/45	8/110	2/191	6/690	5/425	45/2004
Wildlife	0/0	2/4	2/4	2/3	2/16	0/0	12/35
Zoo/Exotic	0/0	5/8	3/9	0/0	6/38	2/2	20/65
Other	5/10	6/6	0/0	1/1	3/8	0/0	39/134
Not Specified	0/0	0/0	0/0	0/0	0/0	0/0	1/2
TOTAL	978/9608	1091/12184	1560/18347	1428/16355	1607/16594	1968/18966	15854/168598

Foreign Export Testing

Disease	Accessions	Samples
Anaplasma (CF)	83	384
Bluetongue (AGID)	280	8,579
<i>Brucella abortus</i> (CF)	44	6,842
Caprine Arthritis Encephalitis (AGID)	6	113
<i>Mycobacterium paratuberculosis</i> (CF)	154	1,202
Bovine Leukosis (AGID)	153	10,343
Ovine Progressive Pneumonia (AGID)	—	—
Vesicular Stomatitis (CF)	8	20
Vesicular Stomatitis - New Jersey (SN)	154	1,519
Vesicular Stomatitis - Indiana (SN)	154	1,519

Leptospirosis Serology - Summary

Species	Herds				Animals			
	Number Tested	Number Negative	Number Positive	Percent Positive	Number Tested	Number Negative	Number Positive	Percent Positive
Bovine	1,348	769	579	42.9	3,119	2,010	1,109	35.5
Canine	13	6	7	53.8	15	7	8	53.3
Caprine	9	4	5	55.5	52	39	13	25.0
Equine	99	12	87	87.8	301	77	224	74.4
Ovine	11	10	1	9.0	18	17	1	5.5
Porcine	784	355	429	54.7	4,229	1,680	2,549	60.2
Misc. Species	8	3	5	48.9	25	11	14	56.0
TOTAL	2,272	1,159	1,113	48.9	7,759	3,841	3,918	50.4

Leptospirosis Serology - Positive Results by Microscopic Agglutination Test

Species	Bratislava	Canicola	Grippotyphosa	Hardjo	Icterohemorrhagica	Pomona
Bovine	156	686	150	582	586	441
Canine	2	8	2	0	5	2
Caprine	8	4	0	1	0	0
Equine	173	112	20	69	101	53
Ovine	0	0	0	0	0	1
Porcine	2,090	953	341	751	1,079	469
Misc. Species	1	6	3	11	5	1
TOTAL	2,430	1,769	516	1,414	1,776	967

Lyme Disease Serology

Canine			Bovine			Equine			Feline			Miscellaneous		
<1:10	10-160	≥320	<1:10	10-160	≥320	<1:10	10-160	≥320	<1:10	10-160	≥320	<1:10	10-160	≥320
269	1,091	455	3	224	16	4	173	18	7	9	0	1	2	0

Toxoplasmosis Serology (Indirect Hemagglutination)

Species	Accessions	Samples	Negative	Positive Titers							
				32	128	256	512	1024	2048	4096	
Bovine	4	9	8	0	1	0	0	0	0	0	0
Canine	11	11	9	0	1	0	1	0	0	0	0
Caprine	2	4	4	0	0	0	0	0	0	0	0
Deer	1	1	1	0	0	0	0	0	0	0	0
Equine	1	1	1	0	0	0	0	0	0	0	0
Feline	38	38	32	0	0	0	2	2	0	0	2
Ovine	27	48	40	0	2	1	3	0	1	1	1
Porcine	6	21	20	1	0	0	0	0	0	0	0
TOTAL	90	133	115	1	4	1	6	2	1	3	

Virus Serology

Bovine Infectious Bovine Rhinotracheitis (Serum Neutralization)

Accessions	Samples	Negative	1:4	1:8-1:32	≥ 1:64	Toxic
1,708	14,833	2,419	2,231	6,921	3,019	179

Bovine Parainfluenza-3 (Hemagglutination Inhibition)

Accessions	Samples	Negative	1:10-20	1:40-80	≥ 1:160	Toxic
850	1,941	295	390	897	303	N/A

Bovine Respiratory Syncytial Virus (Serum Neutralization)

Accessions	Samples	Negative	1:4	1:8-64	≥ 1:128	Toxic
366	1,080	306	142	542	68	20

Virus Serology (continued)

Bovine Viral Diarrhea (Serum Neutralization)

Accessions	Samples	Negative	1:4	1:8-128	$\geq 1:256$	Toxic
1,690	4,820	1,001	403	1,850	1,260	179

Equine Rhinopneumonitis Virus (Serum Neutralization)

Accessions	Samples	Negative	1:4	1:8-64	$\geq 1:128$	Toxic
61	97	32	18	44	0	3

Porcine Encephalomyocarditis Virus (Serum Neutralization)

Accessions	Samples	Negative	$\leq 1:16$	$\geq 1:16$	Toxic
484	2,006	1,268	610	26	102

Porcine Parvovirus (Hemagglutination Inhibition)

Accessions	Samples		Negative		1:8-64		1:128-512		1:1024-2048		$\geq 1:4096$		No Test	
	Sera	FTF*	Sera	FTF	Sera	FTF	Sera	FTF	Sera	FTF	Sera	FTF		
781	2,950	623	3,573	350	535	472	46	628	21	1,103	13	376	6	21

*Fetal Thoracic Fluid

Porcine Swine Influenza Virus (Hemagglutination Inhibition)

Accessions	Samples	Negative	1:10-20	1:40	$\geq 1:80$
20	147	49	32	28	38

Porcine Transmissible Gastroenteritis (Serum Neutralization)

Accessions	Samples	Negative	1:4	1:8-32	$\geq 1:64$	Toxic
193	2,704	1,847	241	437	166	9

Virus Serology - Porcine Pseudorabies

Month	ELISA Screening				ELISA - GPX			
	Accessions	Samples	Negative	Positive	Accessions	Samples	Negative	Positive
July	911	13,376	12,819	709	—	—	—	—
August	851	11,000	10,304	696	—	—	—	—
September	575	7,654	7,354	300	7	286	277	9
October	490	8,188	7,793	395	19	546	524	22
November	329	5,404	5,035	369	11	364	337	27
December	422	6,497	6,029	468	22	546	469	77
January	490	7,565	7,037	528	24	422	355	67
February	435	11,975	11,514	461	15	275	234	41
March	702	11,036	10,307	729	20	462	366	96
April	824	12,282	11,482	800	34	615	461	154
May	817	11,837	11,020	628	25	408	327	81
June	1,124	15,931	15,191	740	43	637	559	78
TOTAL	7,970	122,745	115,885	6,823	220	4,561	3,909	652

Month	Latex Agglutination				Serum Neutralization							
	Accessions	Samples	Negative	Positive	Accessions	Samples	Negative	1:2	≥1:4	≥1:32	Toxic	
July	—	—	—	—	227	1,039	672	72	188	100	7	
August	53	85	78	7	131	1,264	436	99	458	271	0	
September	12	49	15	34	68	348	118	30	148	52	0	
October	8	21	21	0	73	522	279	48	138	57	0	
November	14	42	42	0	60	410	102	72	176	60	0	
December	9	31	22	9	64	580	255	42	195	85	3	
January	7	19	9	10	76	463	86	52	244	79	2	
February	8	15	15	0	123	608	288	52	108	75	13	
March	26	44	33	11	145	778	304	86	260	126	2	
April	21	37	36	1	168	918	345	52	356	165	0	
May	115	201	186	15	133	646	419	54	149	24	0	
June	67	101	91	10	99	803	340	83	248	127	5	
TOTAL	340	645	548	97	1,367	8,379	3,644	742	2,668	1,221	32	

Analytical Toxicology (Accessions-Samples-Positive)

Analyses	Avian	Bovine	Canine	Caprine	Equine	Exotic
Alkaloids	4-7-0	1-1-0	79-81-18	--	1-1-0	1-1-0
Lead	121-153-44	167-181-16	166-167-5	4-4-1	15-16-0	18-24-0
Heavy Metals	6-6-0	121-130-2	71-72-1	3-3-0	9-10-0	13-15-0
Arsenic	1-2-0	7-7-2	2-2-0	1-1-0	--	--
Copper	4-23-0	51-90-5	8-8-2	--	--	4-8-0
Miscellaneous Metals	1-1-0	5-16-0	10-12-0	--	--	1-3-1
Nitrates	--	46-55-4	--	--	--	--
Sulfates	--	--	--	--	--	--
Salt	2-9-0	1-1-0	--	--	--	4-9-0
Mycotoxins	--	--	--	--	--	--
pH	--	23-26-7	--	--	--	--
Poison Plants	--	--	--	--	--	--
Cyanide	--	2-2-0	1-1-0	--	--	--
Ammonia	--	2-2-0	--	--	--	--
Urea	--	--	--	--	--	--
Drugs	--	--	2-2-0	--	--	1-1-0
Drossophila	1-1-0	--	6-6-0	--	--	--
Cholinesterase	6-14-3	22-35-8	20-20-2	--	2-2-0	2-3-1
Anticoagulants	--	--	8-8-2	--	--	--
IgG	--	18-33-4	--	1-7-0	12-12-3	19-24-5
Thallium	--	--	3-5-2	--	--	--
Zinc Phosphide	--	--	1-1-0	--	--	--
Metaldehyde	--	--	2-2-0	--	--	--
Monensin	--	--	--	--	2-2-0	--
Methemoglobin	--	9-14-1	1-1-0	--	--	--
Zinc	--	1-1-0	--	--	--	--
TOTAL	146-216-47	476-594-49	381-389-33	9-15-1	41-43-3	63-88-7

Analyses	Feline	Ovine	Porcine	Miscellaneous Non-Animal	Total
Alkaloids	12-12-0	--	--	--	11-11-1 109-114-19
Lead	51-51-2	17-20-0	9-12-0	--	6-12-3 574-640-71
Heavy Metals	24-24-1	14-16-0	6-7-0	--	11-12-1 278-295-5
Arsenic	2-2-2	--	--	--	1-1-0 14-15-4
Copper	--	26-28-5	5-11-0	--	4-5-0 102-173-12
Miscellaneous Metals	--	1-1-0	5-12-0	--	-- 23-45-1
Nitrates	--	4-5-0	1-1-0	--	85-147-13 136-208-17
Sulfates	--	--	--	--	6-6-1 6-6-1
Salt	--	--	9-11-1	--	3-7-0 19-37-1
Mycotoxins	--	--	--	--	116-161-14 116-161-14
pH	--	2-3-0	--	--	3-3-0 28-32-7
Poison Plants	--	--	--	--	5-7-0 5-7-0
Cyanide	--	1-1-0	--	--	7-10-0 11-14-0
Ammonia	--	--	--	--	1-1-0 3-3-0
Urea	--	--	--	--	2-2-1 2-2-1
Drugs	--	--	--	--	-- 3-3-0
Drossophila	1-1-0	--	2-4-0	--	9-12-0 19-24-0
Cholinesterase	9-9-2	1-1-0	6-7-1	1-9-0	-- 69-100-17
Anticoagulants	1-1-0	--	--	--	2-2-0 11-11-2
IgG	--	--	4-9-3	--	-- 54-85-15
Thallium	--	--	--	--	1-1-1 4-6-3
Zinc Phosphide	--	--	--	--	1-1-0 2-2-0
Metaldehyde	--	--	--	--	-- 2-2-0
Monensin	--	--	--	--	6-6-1 8-8-1
Methemoglobin	1-1-1	--	--	--	-- 11-16-2
Zinc	--	--	1-1-0	--	-- 2-2-0
TOTAL	101-101-8	66-75-5	48-75-5	1-9-0	280-407-36 1612-2012-194

Clinical Chemistry* (Number of Tests)

Species	Albumin	Alkaline Phosphatase	Ammonia	Bile Acid	BSP
Avian	--	--	--	--	--
Bovine	--	--	--	--	--
Canine	1	1	2	50	3
Equine	--	--	--	--	--
Feline	--	--	--	6	2
Porcine	4	--	--	--	--
Other	--	--	--	--	--
TOTAL	5	1	2	56	5

Species	BUN	Calcium	Creatinine	Glucose	Lipase
Avian	--	--	--	--	--
Bovine	11	--	--	--	--
Canine	1	3	9	7	11
Equine	--	--	--	--	--
Feline	--	--	--	--	--
Porcine	7	--	--	--	--
Other	--	--	--	--	--
TOTAL	19	3	9	7	11

Species	Magnesium	Phenobarbitol	Phosphate	Urinalysis	Urine Creatinine
Avian	--	--	--	--	--
Bovine	11	--	9	2	--
Canine	--	46	--	9	4
Equine	--	--	--	1	--
Feline	--	--	--	--	2
Porcine	--	--	--	--	--
Other	--	--	--	--	--
TOTAL	11	46	9	12	6

Species	Urine Protein	Serum Profile			
		Full	2-4	5-8	9-12
Avian	--	10	--	--	--
Bovine	--	58	24	19	--
Canine	4	170	7	7	2
Equine	--	39	--	1	--
Feline	2	32	2	1	2
Porcine	--	5	4	--	--
Other	--	19	--	--	--
TOTAL	6	333	37	28	4

*Dr. Doug Weiss, Laboratory Supervisor

Endocrinology* (Number of Tests)

Species	Cortisol	Digoxin	Estradiol	Estrone Sulfate	Growth Hormone	Insulin
Avian	--	--	--	--	--	--
Bovine	--	--	--	--	--	--
Canine	229	3	95	--	1	66
Equine	--	--	4	20	--	--
Feline	--	--	10	--	--	--
Llama	--	--	7	--	--	--
Porcine	--	--	1	--	--	--
Other	2	--	6	--	--	1
TOTAL	231	3	123	20	1	67

Species	Luteinizing Hormone	Mare Immuno-pregnancy	Progesterone	Parathyroid Hormone	Triiodo-thyronine	Thyroxine	Testosterone
Avian	--	--	--	--	1	1	--
Bovine	--	--	13	--	--	--	1
Canine	1	--	61	20	93	1,065	16
Equine	--	17	17	2	8	35	4
Feline	--	--	3	4	17	76	4
Llama	--	--	16	--	--	--	--
Porcine	--	--	24	--	--	--	--
Other	--	--	7	1	--	--	--
TOTAL	1	17	141	27	119	1,177	25

*Dr. Shirley Johnston, Laboratory Supervisor

Viral Immunofluorescence in Tissues (Frozen Sections or Tissue Imprints)

Species	Accessions	Samples	Canine Distemper		Equine Viral Rhinopneumon.		Parvovirus		Pseudorabies	
			Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
Bovine	1,592	3,081	--	--	--	--	3	138	0	1
Canine	41	57	0	29	--	--	--	--	--	--
Caprine	2	3	--	--	--	--	--	--	--	--
Chicken	6	21	--	--	--	--	--	--	--	--
Equine	72	150	--	--	3	147	--	--	--	--
Feline	20	41	--	--	--	--	--	--	0	2
Llama	7	14	--	--	0	6	--	--	--	--
Mink	21	63	4	59	--	--	--	--	--	--
Ovine	21	29	--	--	--	--	--	--	--	--
Porcine	2,576	5,264	--	--	--	--	15	913	31	1,128
Wildlife	30	90	0	7	--	--	--	--	0	8

Species	Swine Influenza Virus		Transmissible Gastroenteritis		Miscellaneous		Bovine Coronavirus		Bovine Herpes DN599		Bovine Resp. Syncytial Virus	
	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
Bovine	--	--	--	--	0	1	174	1,107	0	19	51	573
Canine	--	--	0	4	0	19	0	9	--	--	--	--
Caprine	--	--	--	--	--	--	0	2	--	--	--	--
Chicken	--	--	--	--	0	21	--	--	--	--	--	--
Equine	--	--	2	18	0	19	--	--	--	--	--	--
Feline	--	--	2	18	0	19	--	--	--	--	--	--
Llama	--	--	--	--	--	--	0	1	--	--	0	1
Mink	--	--	--	--	--	--	--	--	--	--	--	--
Ovine	--	--	--	--	0	13	0	1	--	--	0	12
Porcine	65	857	176	1,722	--	--	--	--	--	--	--	--
Wildlife	--	--	0	4	34	31	0	7	--	--	0	2

Species	Bovine Rotavirus		Bovine Viral Diarrhea		Infect. Bovine Rhinotracheitis		Bovine Para-influenza-3		Porcine Reovirus		Porcine Rotavirus	
	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
Bovine	39	1,242	59	2,978	30	1,726	0	1,618	--	--	--	--
Canine	--	--	--	--	--	--	--	--	--	--	--	--
Caprine	0	2	--	--	--	--	0	1	--	--	--	--
Chicken	--	--	--	--	--	--	--	--	--	--	--	--
Equine	--	--	--	--	--	--	--	--	--	--	--	--
Feline	--	--	--	--	--	--	--	--	--	--	--	--
Llama	0	1	0	8	0	7	0	6	--	--	--	--
Mink	--	--	--	--	--	--	--	--	--	--	--	--
Ovine	0	1	0	21	0	14	0	16	--	--	--	--
Porcine	--	--	--	--	--	--	--	--	0	1,891	35	1,856
Wildlife	0	1	0	14	0	8	0	8	--	--	--	--

Electron Microscopy (Fecal or Tissue Specimens)

Species	Accessions	Specimens	Negative	Positive	Adeno	Calici	Corona
Avian	194	218	158	60	10	--	--
Bovine	1,016	1,029	696	333	1	--	120
Canine	367	371	230	141	--	--	9
Caprine	3	3	2	1	--	--	--
Equine	20	20	19	1	--	--	--
Feline	92	92	64	28	--	3	--
Llama	5	5	5	0	--	--	--
Mink	53	110	70	40	--	--	1
Ovine	14	14	10	4	--	--	--
Porcine	1,025	1,044	803	241	7	--	29
Miscellaneous	50	57	49	8	--	--	--
TOTAL	2,839	2,963	2,106	857	18	3	159

Species	Entero	Herpes	Papilloma	Paramyxo	Parvo	Pox	Reo	Rota
Avian	--	--	--	--	--	2	1	45
Bovine	--	--	--	--	1	1	--	268
Canine	--	2	--	1	131	--	--	--
Caprine	--	--	--	--	--	--	--	1
Equine	--	--	--	--	--	--	--	1
Feline	1	7	1	--	16	--	--	1
Llama	--	--	--	--	--	--	--	--
Mink	--	--	--	--	39	--	--	--
Ovine	--	--	--	--	--	3	--	1
Porcine	1	1	--	--	5	1	--	199
Miscellaneous	--	--	--	--	4	--	--	4
TOTAL	2	10	1	1	196	7	1	520

Virus Isolation (Cell Culture)

Virus	Accessions	Positive
Bovine Herpesvirus DN599	22	1
Bovine Parainfluenza-3 Virus	2,542	0
Bovine Respiratory Syncytial Virus	3	0
Bovine Viral Diarrhea Virus	2,542	109*
Infectious Bovine Rhinotracheitis Virus	2,542	15
Canine Herpesvirus	23	0
Caprine Arthritis Encephalitis Virus	1	0
Deer Adenovirus	1	0
Equine Adenovirus	3	0
Equine Influenza Virus	1	0
Equine Rhinopneumonitis Virus	143	0
Feline Calici Virus	11	2
Feline Herpesvirus DN599	1	0
Feline Infectious Peritonitis Virus	1	0
Feline Rhinopneumonitis Virus	25	2
Llama Adenovirus	2	0
Mink Parvovirus	4	4
Miscellaneous Viruses	68	0
Pseudorabies Virus	1,460	36

*12 cytopathic and 97 non-cytopathic viruses

APPENDIX

Minnesota Racing Analytical Laboratory - Personnel

Martin E. Bergeland, DVM, PhD	Director
Michael J. Murphy, DVM, PhD	Toxicology Program Coordinator
Ashok K. Singh, PhD	Supervisor - Racing Laboratory
Lawrence J. Felice, PhD	Analytical Toxicologist (Collaborator)
M. Rao Mannava, PhD	Research Associate
Tom Arendt, BS	Junior Scientist (Collaborator)
Usha Mishra, MS	Junior Scientist
Dzintra Dombrovskis, MT	Principal Laboratory Technician
Constance Strand, MA	Accounts Supervisor
Mary Thurn	Executive Secretary
Muhammed Ashraf, DVM, MS	Student Laboratory Technician
Kae Granley	Laboratory Technician
Yin Jiang, MS	Junior Laboratory Technician
Nisha Agarwal	Student Laboratory Technician
Stephen Horton	Student Laboratory Attendant
Alison Krinke	Student Laboratory Attendant
Scott Likely	Student Laboratory Attendant
Debbi Randall	Student Laboratory Attendant

Research Project:

Sharon Dreifus, DVM	Laboratory Technician
Weining Gu, MS	Junior Laboratory Technician
Edward Howe	Student Laboratory Technician
Gussie Tessier	Student Laboratory Technician
Meilu Xu	Student Laboratory Technician

Minnesota Racing Analytical Laboratory - Laboratory Procedures Summary

Month	No. of Samples		No. of Analyses			Suspect Samples				Lasix Positive
	Urine	Blood	TLC	HPLC	RIA	TDX	ELISA	Column GC/MS		
July	663	687	7,293	687	3,315	-	-	-	38	269
August	567	592	6,237	592	2,835	-	-	-	53	234
September	626	648	6,886	648	3,130	-	-	-	65	243
October	326	234	3,586	234	1,630	-	-	-	13	94
April	89	96	1,602	96	-	89	28	623	17	28
May	647	669	11,646	669	-	647	190	4,529	155	190
June	603	618	10,854	618	-	251	87	1,757	11	87
TOTAL	3,521	3,544	48,104	3,544	10,910	987	305	6,909	352	1,145

Minnesota Brucella Testing Laboratory - Personnel

William Hartmann, DVM, MS	Supervisor
Robert Tiller	Technical Supervisor
Peter Cole	Agricultural Laboratory Technician
Betty Frank	Agricultural Laboratory Technician
Paula Mendenhall	Agricultural Laboratory Technician
Myron Parsons	Agricultural Laboratory Technician

Minnesota Brucella Testing Laboratory - Laboratory Tests

Cattle

a) Serum

On Farm	54,334
Market	<u>331,832</u>

Total 386,166

b) Ring Tests 61,968

Swine

On Farm	N/A
Stockyards	66
Swine from other states	<u>0</u>

Total N/A

Other Species

Sheep	85
Horses	215
Bison	46
Deer	17
Goats	1,442
Miscellaneous	<u>111</u>

Total 1,918

Minnesota Poultry Testing Laboratory - Personnel
Willmar, Minnesota

Dr. Dale C. Lauer	Supervisor
Lorraine E. Olson	Senior Laboratory Technician
Joanne B. Slagter	Senior Laboratory Technician
Vonna D. Laugen	Laboratory Assistant

Minnesota Poultry Testing Laboratory - Laboratory Procedures

	<u>Serology</u>	<u>Cultures</u>
1. Pullorum - Typhoid		
Turkeys	55,358	
Waterfowl and Game Exhibition	5,767	113
	<u>6,815</u>	
Total	68,040	
2. <i>Salmonella typhimurium</i>		
Turkeys	55,358	56,878
3. Minnesota/California Agreement		
Breeder flocks blood tested - 126		
Flocks monitored by culture - 118		
4. Mycoplasma		
<i>Mycoplasma gallisepticum</i> - Turkey	13,700	
<i>Mycoplasma megeagridis</i> - Turkey	51,070	
<i>Mycoplasma synoviae</i> - Turkey	56,120	
<i>Mycoplasma gallisepticum</i> - Chicken	12,175	
<i>Mycoplasma synoviae</i> - Chicken	<u>11,650</u>	
Total	144,715	
5. Avian Influenza - Turkey	30,852	

Departmental Courses

Course	Title	Lect/Lab Hours	Quarter	Credits	No. of Students	Instructor
VDI 8888	Doctoral Thesis		SS88	5	5	Goyal
VDI 5000	Diagnostic Medicine	0/132	SS88	2.0	23	Ruth Ruth*
VDI 5001	Clinical Toxicology	0/24	SS88	0.6	26	VDI Faculty Murphy
VDI 5521	Surgical Pathology	0/80	SS88	3.0	3	Barnes
VDI 5622	Problems in Diag. Virology	0/16	SS88	1.0	1	Goyal
VDI 8888	Doctoral Thesis		F88		5	Goyal
VDI 5000	Diagnostic Medicine	0/132	F88	2.0	25	Ruth Ruth*
VDI 5001	Clinical Toxicology	0/24	F88	0.6	25	VDI Faculty Murphy
VDI 5164	Tox. Poisonous Plants	24/0	F88	1.0	69	Murphy
VDI 5521	Surgical Pathology	0/50	F88	3.0	1	Barnes
VDI 5522	Diagnostic Pathology	0/160	F88	5.0	2	Barnes
VDI 8888	Doctoral Thesis		W89		6	Goyal
VDI 5000	Diagnostic Medicine	0/132	W89	2.0	26	Ruth Ruth*
VDI 5001	Clinical Toxicology	0/24	W89	0.6	26	VDI Faculty Murphy
VDI 5521	Surgical Pathology	0/100	W89	3.0	2	Barnes
VDI 5522	Diagnostic Pathology	0/60	W89	5.0	1	Barnes
VDI 5524	Problems in Diag. Pathology	0/40	W89	1.0	1	Barnes
VDI 8888	Doctoral Thesis		S89		6	Goyal
VDI 5165	Veterinary Toxicology	24/0	S89	2.0	68	Ruth Murphy*
VDI 5503	Diagnostic Pathology	32/0	S89	3.0	68	Felice Singh Werdin*
VDI 5521	Surgical Pathology	0/70	S89	3.0	1	Collins Hultgren
VDI 5524	Prob. Diag. Path.	0/40	S89	2.0	1	O'Brien
VDI 8503	Diagnostic Pathology	32/0	S89	4.0	1	O'Leary Ruth Shaw

*Course Coordinator

VDI Faculty Participation in Other Courses

Course	Title	Lect/Lab Hours	Quarter	Credits	No. of Students	Instructor
VDI 8888	Doctoral Thesis		SS88	5	5	Goyal
VPB 5000	Vet. Hosp. Necropsy	0/11	F88	2.0	4	Shaw
PubH 5171	Environ. Micro.	3/3	F88	4.0	10	Goyal
CVM 5100	Intro. to Vet. Med.	1/0	F88	2.0	64	Nelson
VPB 5502	Systemic Pathology	6/7	F88	6.0	66	Ruth Shaw
VPB 5502	Systemic Pathology	9/10	F88	6.0	65	Werdin
VPB 5000	Vet. Hosp. Necropsy	0/11	W89	2.0	4	Shaw
SACS 8299	Res. in Vet. Med.	0/5	W89	3.0	1	Felice
LACS 5570	Repro. Dis. Domes. An.	2/0	W89	5.0	76	Werdin
LACS 5671	Biohazard in Vet. Med.	10/0	W89	1.0	6	Goyal
LACS 5160	Large Animal Medicine	0/2	S89	6.0	68	Barnes Bergeland
LACS 5270	Law, Econ. & Ethics	2/0	S89	2.0	80	Nelson
LACS 5271	Law, Econ. & Ethics	1/0	S89	2.0	76	Ruth
CVM 5001	Clinical Toxicology	2/0	S89	0.6	68	Felice
VB 5402	Vet. Pharmacology	2/0	S89	3.0	64	Goyal
Biol 3980	Directed Studies	4/20	S89	5.0	1	Goyal
VPB 5501	Basic Vet. Pathology	0.3	S89	5.0	62	Shaw
VPB 5000	Vet. Hosp. Necropsy	0/11	S89	2.0	4	Shaw
LACS 5160	Large Animal Medicine	1/0	S89	6.0	68	Werdin

Residents/Graduate Students

Name	Program	Degree Sought	Degree Granted	Advisor
Rodney K. Frank	Pathology	Ph.D		Ruth
Sanjay Kapil	Microbiology	Ph.D		Goyal
S. Maheshkumar	Microbiology	Ph.D.		Goyal
K. Naeem	Microbiology	Ph.D.		Goyal
Nour-Said Tligui*	Pathology	Ph.D.		Ruth
Nourdine Bouchriti**	Microbiology	Ph.D.		Goyal

*Department of Pathobiology

**Department of HIDAOA, Institute Agronomique et Veterinaire Morocco

Research Projects (Principal or Co-Investigator)

- Ames, T.R., Maheswaran, S.K., Molitor, T., Johnson, D.W., Felice, L.J. and Werdin, R.E. 1988-89. Bovine respiratory disease: The role of *Pasteurella haemolytica* leukotoxin as a virulent determinant. MN Ag. Exp. Sta. \$150,333.
- Ames, T., Maheswaran, S.K., Olchow, T., Molitor, T. and Werdin, R. 1988-89. Bovine respiratory disease project. MN Ag. Exp. Sta. \$50,000.
- Ames, T., Olchow, T., Molitor, T. and Werdin, R.E. 1988-89. Pathogenesis of bovine respiratory syncytial virus. MN Ag. Exp. Sta. \$17,000.
- Bloomer, J., Ruth, G.R., and Straka, J. 1988. Care and maintenance of a herd of porphyric cattle. NIH. \$80,969.
- Faras, A., Ostrow, R. and Shaw, D.P. et al. 1988-89. A papillomavirus animal model for evaluation of experimental therapies. Nat. Inst. of Allergies Contract and Infectious Disease. Contract.
- Felice, L.J., Murphy, M.J. and Gordon, B. 1988-89. Incidence of equine cantharidiasis at U of M. MN Racing Commission. \$4,000.
- Goyal, S.M. 1988-89. Evaluation of a new pseudorabies elisa test kit. Upjohn. \$11,000.
- Goyal, S.M. 1988-89. Pathogens in dairy biomass. U.S.D.A. subcontract. \$16,900.
- Goyal, S.M. and Werdin, R.E. 1988-89. BHV-4 in bovine abortion. MN Agr. Exp. Sta. \$7,000.
- Halvorson, D.A., Newman, L. and Shaw, D.P. et al. 1988. Vaccine efficacy study. Jack Frost. \$5,000.
- Hornfeldt, C.S. and Collins, J.E. 1988. Determination of the toxicity of nightshade berries, *Solanum dulcomera*. American Association of Poison Control Centers. \$1000.
- Kannan, M.S., Weiss, D. and Felice, L.J. 1988-89. Role of platelet activating factor in pulmonary fascular injury in bovine pasteurellosis. MN Agr. Exp. Sta. \$48,912.
- Maheswaran, S.K., Felice, L.J. and Sivanandan, V. 1988-91. Avian pasteurellosis: 1) New immunoprophylactic approaches to control the disease in turkey breeders, 2) Definition of the role of *Pasteurella sideophore* as a virulent determinant. MN Agr. Exp. Sta. \$115,766.
- Maheswaran, S.K., Weiss, D.J., Kannan, M.S., Ames, T.R. and Felice, L.J. 1988-89. Mechanisms of pulmonary endothelial and epithelial cell injury in pasteurella pneumonia. U.S.D.A. Special Grants. \$142,022.
- Nagaraja, K.U., Zhang, C.L., Sivanandan, V., Newman, J.A., Shaw, D.P., and Felice, L.J. 1988-89. Effect of rotavirus on absorption of fat soluble vitamins. MN Turkey Research and Promotion Council. \$23,000.
- Singh, A.K., Murphy, M. and Felice, L. 1988-90. Analysis of fentanyl, etorphine, and sufentanyl in race horses. MRC. \$30,700.
- Ward, G.E., Murtaugh, M., Collins, J.E. and Goyal, S.M. 1988-89. Etiology and pathogenesis of porcine proliferative enteritis. MN Agr. Exp. Sta. \$30,000.
- Barnes, D.M., Bergeland, M.E., Collins, J.E., Felice, L.J., Goyal, S.M., Kurtz, H.J., Murphy, M.J., Nelson, G.H., Ruth, G.R., Shaw, D.S., Singh, A.K., and Werdin, R.E. 1989. Veterinary Diagnostic Investigation. MINV-65-006.
- Bloomer, J., Straka, J., and Ruth, G.R. 1989. Enzyme defects in disorders of protoporphyrin metabolism. NIH. \$172,653.
- Collins, J.E. 1989. The use of hypotheticodeductive reasoning in diagnostic medicine. Project Minnemac. \$3000.
- Gebhart, C.J., Murtaugh, M.P., Ward, G.E., Collins, J.E. and McOrist, S. 1989. The intracellular organism of swine proliferative enteritis. USDA Special Research Grants Program. \$81,000.
- Goyal, S.M. 1989. Lyme disease in wolves. U.S. Fish and Wildlife. \$7,500.
- Goyal, S.M. 1989. Training grant for N. Bouchriti. U.S.A.I.D. \$1,500.
- Goyal, S.M., Trent, A.M. and Kapil, S. 1989-90. Mucosal immunity in bovine enteric coronavirus. MN Agr. Exp. Sta. \$10,240.

Murphy, M.J. 1989. Tissue distribution and biological effects of 4-hydroxy coumarins. Univ. of MN Grant-In-Aid Program. \$11,044.

Newman, J.A., Halvorson, D.A. and Bergeland, M.E. 1989. Turkey hypertensive angiopathy. MN Turkey Research and Promotion Council.

Singh, A.K., Murphy, M.J. and Felice, L.J. 1989-90. Screening of furosemide in race horses. MRC. \$70,000.

Singh, A.K., Murphy, M.J. and Felice, L.J. 1989-90. Analysis of fentanyl, etorphine and sufentanyl in race horses. MRC. \$31,700.

Service and Research Contracts

Bergeland, M.E. 1988-89. Minnesota Poultry Testing Laboratory. MN Board of Animal Health. \$95,000.

Bergeland, M.E. 1988-89. Minnesota Racing Analytical Laboratory. MN Racing Commission. \$214,000.

Bergeland, M.E. 1988-89. Pseudorabies control program. MN Board of Animal Health. \$2.00/sample.

Bergeland, M.E. 1988-89. Diagnostic Services, Minnesota Zoological Garden. \$2,000.

Publications: Refereed Journals

Refereed Journals (July 1, 1988 - July 30, 1989)

Amundson, D., Lindholm, C., Goyal, S.M. and Robinson, R.A. 1988. Microbial pollution of well water in southeastern Minnesota. *J. Env. Hlth.* A23:453-468.

Collins, J.E., Bergeland, M.E., Lindeman, C.J., and Duimstra, J.R. 1988. *Enterococcus (Streptococcus) durans* adherence in the small intestine of a diarrheic pup. *Vet. Pathol.* 25:396-398.

Felice, L.J., Abdennebi, E.H. and Ashraf, M. 1988. Determination of thiamphenicol in bovine plasma by liquid chromatography. *J. Assoc. Off. Anal. Chem.* 71:1156-1157.

Frank, R.F. and Bergeland, M.E. 1988. Poliomyelomalacia, pancreatic necrosis and cerebellar malacia in turkey poult. *Avian Dis.* 32:574-582.

Gerba, C.P. and Goyal, S.M. 1988. Enteric virus: risk assessment of ocean disposal of sewage sludge. *Water Sci. Tech.* 20:25-31.

Goyal, S.M., Khan, M.A., McPherson, S.W., and Robinson, R.A. 1988. Prevalence of antibodies to seven selected viruses in a flock of ewes in Minnesota. *Am. J. Vet. Res.* 49:464-467.

Gunther, R., Felice, L.J., Nelson, R.K. and Franson, A.M. 1988. Toxicity of a vitamin D3 rodenticide to dogs. *JAVMA.* 193:211-214.

Igwe, O.J., Felice, L.J., Seybold, V.S. and Larson, A.A. 1988. Optimization of high performance liquid chromatography - radioimmunoassay protocols for the analysis of substance P and some of its metabolic fragments. *J. Chromatogr.* 423:113-126.

Muneer, M.A., Farah, I.O., Newman, J.A. and Goyal, S.M. 1988. Immunosuppression in animals. *Brit. Vet. J.* 144:288-301.

Naeem, K. and Goyal, S.M. 1988. Comparison of virus isolation, immunofluorescence and electron microscopy for the diagnosis of animal viruses. *Microbiologica.* 11:355-362.

Peterson, R.B. and Goyal, S.M. 1988. Propagation and quantitation of animal herpesviruses in eight cell culture systems. *Comp. Immunol. Microbiol. Infect. Dis.* 11:93-98.

Tehteh, E. and Goyal, S.M. 1988. Antibodies to parainfluenza virus type 3 in Minnesota swine. *Br. Vet. J.* 144:613-615.

Blackwell, T.E., Werdin, R.E., Eisenmenger, M. and Fitzsimmons, M. 1989. Congenital goiter in baby pigs induced by feeding sulfadimethoxine and ormetoprim to sows in late gestation. *JAVMA.* 194:519-523.

- Collins, J.E., Benfield, D.A. and Duimstra, J.R. 1989. Comparative virulence of two group A porcine rotavirus isolates in gnotobiotic pigs. *Am. J. Vet. Res.* 50:827-835.
- Duvall, M.D., Murphy, M.J., Ray, A.C. and Reagor, J.C. 1989. Case studies of second-generation anticoagulant rodenticide toxicities in non-target species. *J. Vet. Diagn. Invest.* 1(1):66-69.
- Felice, L.J. and Murphy, M.J. 1989. The determination of the anticoagulant rodenticide brodifacoum in blood serum by liquid chromatography with fluorescence detection. *J. Anal. Tox.* 13:229-231.
- Fradkin, L., Gerba, C.P., Goyal, S.M., Scarpino, P. and Stara, J.F. 1989. Potential public health concerns from pathogens in municipal wastewater sludge. *J. Env. Hlth.* 51:148-152.
- Hayden, D.W., Barnes, D.M. and Johnson, K.H. 1989. Morphologic changes in the mammary gland of megestrol acetate and untreated cats: A retrospective study. *Vet. Pathol.* 26:104-113.
- Janke, B.H., Francis, D.H., Collins, J.E., Libal, M.C., Zeman, D.H., Johnson, D.D. 1989. Attaching and effacing *Escherichia coli* in calves, pigs, lambs, and dogs. *J. Vet. Diagn. Invest.* 1(1):6-11.
- Kim, H.S., Joo, H.S. and Bergeland, M.E. 1989. Serologic, virologic, and histopathologic observations of encephalomyocarditis virus infection in mummified and stillborn pigs. *J. Vet. Diagn. Invest.* 1:101-104.
- Maheshkumar, S., Peterson, R.B. and Goyal, S.M. 1989. Temperature sensitive gel for virus concentration from urine. *J. Virol. Methods* 23:41-46.
- Maheshkumar, S., Peterson, R.B. and Goyal, S.M. 1989. Use of temperature sensitive gel for the concentration of *Escherichia coli* in milk. *J. Food Prot.* 52:62-64.
- Murphy, M.J., Ray, A.C., Reagor, J.C. and Bailey, E.M. 1989. A high performance liquid chromatography method for the detection of brodifacoum in serum. *Vet. and Human Tox.* 31(3):228-231.
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- Ray, A.C., Murphy, M.J., DuVall, M.D. and Reagor, J.C. 1989. Determination of 4-bromo-methyl-benzoate following chromic acid oxidation of liver extracts from rats treated with brodifacoum or bromadiolone. *AJVR.* 50(4):546-550.
- Schultheiss, P. and Kurtz, H.J. 1989. Retrospective study of *Campylobacter* species isolated from porcine diagnostic case material. *J. Vet. Diagn. Invest.* 1(2):181-182.
- Singh, A.K. and Ashraf, M. 1989. Neurotoxicity in rats sub-chronically exposed to low levels of lead. *Veterinary and Human Toxicology.* 31(1):21-25.
- Singh, A.K., Ashraf, M., Granley, K., Mishra, U. and M. Madhusudana Rao. 1989. Screening and Confirmation of Drugs in horse urine by using a simple column extraction procedure. *J. Chromatogr.* 473:215-226.
- Werdin, R.E., Ames, T.R., Goyal, S.M. and DeVries, G.P. 1989. Diagnostic investigation of bovine viral diarrhea infection in a Minnesota dairy herd. *J. Vet. Diagn. Invest.* 1:57-61.

Publications: Abstracts

- Ashraf, M., Stowe, C.M., and Singh, A.K. November 12-14, 1988. Effect of cimetidine on the pharmacokinetics of Thiamphenical. CRWAD, Chicago, IL.
- Collins, J.E., Bergeland, M.E., Bouley, D. and Doucommin, A.L. October 16, 1988. Enteritis associated with enterotoxigenic *Clostridium perfringens* type A in neonatal pigs. American Association of Veterinary Laboratory Diagnosticians, Little Rock, AR.
- Halvorson, D.A., Noll, S.L., Bergeland, M.E. and Cloud, H.A. 1988. Stray voltage in turkeys. *JAVMA.* 192:1785.
- Maheshkumar, S. and Goyal, S.M. November 14-15, 1988. Use of membrane filters for the detection of viruses in dairy effluent. 69th Conference Res. Workers in Avian Dis., Chicago, IL.
- Naeem, K., Goyal, S.M., Caywood, D. and Werdin, R.E. November 14-15, 1988. Evaluation of pregnant rabbit as a laboratory model for bovine herpesvirus type-4 infection. 69th Conf. Res. Workers in Avian Dis., Chicago, IL.

Shaw, D.P., Solorzano, R.F. and Morehouse, L.G. October 16, 1988. Serum neutralization test for porcine rotavirus infection. AAVLD Annual Meeting, Little Rock, AR.

Werdin, R.E., Ames, T.R. and Goyal, S.M. October 15-18, 1988. Detection and elimination of carrier animals in a dairy herd persistently infected with bovine viral diarrhea. 31st Annual Mtg. of the American Assn. of Vet. Lab. Diagn., Little Rock, AR.

Publications: Books, Book Chapters and Monographs

Goyal, S.M. 1989. Virus survival at sewage sludge disposal sites. In: Oceanic Processes in Marine Pollution, ed. Hood, D.W., Schoenen, A. and Park, P.K., pp. 57-64. Robert Krieger, Malabar, FL.

Publications: Proceedings

Joo, H.S., Kim, H.S. and Bergeland, M.E. 1988. Swine reproductive failure associated with encephalomyocarditis virus infection: serologic, virologic and histopathologic observations. Proc. 10th Congress. Intl. Pig Veterinary Soc., Rio de Janeiro, Brazil. p. 230.

Publications: Miscellaneous

Bergeland, M.E., Collins, J.E., Johnson, D.J. and Thurn, M.D. 1988. Annual Report - Minnesota Veterinary Diagnostic Laboratory. pp. 1-130.

Bergeland, M.E. 1988. Abstracts - 31st Annual Meeting, American Assoc. Vet. Lab. Diagnosticians. pp. 1-81.

Bergeland, M.E. 1988. Message of the incoming president of the AAVLD. Proc. 92nd Ann. Mtg. U.S. Animal Health Assoc. pp. 11-12.

Bergeland, M.E. 1989. Reviewer for: *Streptococcus suis* disease in pigs. National Pork Industry Handbook. Fact Sheet No. 118.

Bergeland, M.E. 1989. Consultant for: Is Clostridium headed your way? Pork '89. pp. 26-30.

Continuing Education Presentations

Bergeland, M.E. November 19, 1988. Slow viruses of sheep. Area Sheep Producers Meeting, Elk River, MN (1.5 hr).

Collins, J.E. September 25, 1988. Diagnostic pathology self assessment quiz. Swine Herd Health Programming Conference, St. Paul, MN (30 min).

Shaw, D.P. and Collins, J.E. September 25-27, 1988. Diagnostic self assessment test. Swine Herd Health Programming Conference, St. Paul, MN (1 hr).

Bergeland, M.E., Collins, J.E., Frank, R.L., Ruth, G.R., Shaw, D.P. and Werdin, R.E. February 2-5, 1989. What's your diagnosis? Case studies. MN Vet. Med. Assoc. - 92nd Annual Mtg., Bloomington, MN (2 hrs).

Bergeland, M.E. February 4, 1989. Using your diagnostic laboratory. MN Vet. Med. Assoc. - 92nd Annual Meeting, Bloomington, MN. (30 min)

Collins, J.E. January 11, 1989. Cryptosporidiosis in dairy calves. Purina Continuing Education Seminar, St. Cloud, MN (2 hr).

Collins, J.E. January 11, 1989. Effective use of your diagnostic laboratory. Purina Continuing Education Seminar, St. Cloud, MN (2 hr).

Collins, J.E. February 4, 1989. Diagnostic Pathology of Bovine Diseases. MN Vet. Med. Assoc. - 92nd Annual Mtg., Bloomington, MN (30 min).

Collins, J.E. March 22, 1989. Effective use of the Minnesota Veterinary Diagnostic Laboratory. Swine Program Agriculture In-Service Week, St. Paul, MN (36 min).

Lecture, Seminar and Workshop Presentations

Bergeland, M.E. November 14, 1988. Review of swine diseases. U of MN Veterinary Seniors (1.5 hr).

Maheshkumar, S., Economon, P. and Goyal, S.M. July 16-18, 1988. Evaluation of viradel method for the detection of infectious pancreatic necrosis in rainbow trout. 13th Annual Eastern Fish Hlth. Workshop, Orono, ME.

Shaw, D.P. September 22, 1988. Getting the most from a trip to the diagnostic laboratory. Poultry Service Workshop, St. Paul, MN.

Goyal, S.M. March 28-30, 1989. Viruses at sewage sludge disposal sites. Ocean Dumping Workshop 106-Mile Site, Ocean City, NJ.

Scientific Meeting Presentations

Choi, K.H., Maheswaran, S.K., Felice, L.J. and Sivanandan, V. November 15, 1988. Characterization of lipopolysaccharide extracted from *Pasteurella multocida*. Conf. Res. Workers in Animal Disease, Chicago, IL.

Choi, K.H., Maheswaran, S.K., Felice, L.J. and Sivanandan, V. November 15, 1988. Characterization of iron-regulated outer membrane proteins from *Pasteurella multocida*. Conf. Res. Workers in Animal Disease, Chicago, IL.

Collins, J.E., Bergeland, M.E., Bouley, D. and Doucommin, A.L. November 1, 1988. Enteritis associated with enterotoxigenic *Clostridium perfringens* type A in neonatal pigs. American College of Veterinary Pathologists, Kansas City, MO.

Goyal, S.M. September 21, 1988. Fecal contamination of dairy biomass. Biomass Advisory Committee Mtg., St. Louis, MO.

Ruth, G.R. October 16, 1988. Two case presentations. AAVLD Annual Meeting, Little Rock, AR.

Goyal, S.M. and Naeem, K. June 25-30, 1989. Role of bovid herpesvirus-4 in bovine abortion. 5th Int. Symp. World Assn. Vet. Lab. Diagn., Guelph, Ontario, Canada.

Murphy, M.J., Ray, A.C. and Reagor, J.C. February 27-March 3, 1989. The effects of phenobarbital induction on the toxicokinetics of brodifacoum in the dog. Annual Meeting of the Society of Toxicology, Atlanta, Georgia.

Singh, A.K., Ashraf, M., Mishra, U., and Granley, K. March 19-23, 1989. Analysis of lasix by HPLC and fluorescence detection. 41st Annual Mtg. of AORC, New Orleans, Louisiana.

Singh, A.K., Ashraf, M., Mishra, U., and Granley, K. March 19-23, 1989. Comparative metabolism of propranolol (long and short acting) in horses. 41st Annual Mtg. of AORC, New Orleans, Louisiana.

Singh, A.K., Ashraf, M., Mishra, U., Granley, K. and Gordon, B. March 19-23, 1989. Improved screening of drugs in horse urine by using a DAV column extraction procedure. 41st Annual Mtg. of AORC, New Orleans, Louisiana.

Awards and Citations

Civil Service:

Arendt, Thomas	Outstanding Civil Service
Ellert, Elisabeth	Civil Service Longevity (15 years)
King, Pin	Outstanding Civil Service
Kroone, Londa	Outstanding Civil Service
Moore, Beth	Outstanding Civil Service
Paavala, Jean	Outstanding Civil Service
Thurn, Christopher	Outstanding Civil Service Civil Service Longevity (15 years)

Faculty:

Collins, James E.	Certificate of recognition for volunteer work, Minnesota Governor Rudy Perpich, 1989
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Professional Organizations

Bergeland, Martin E.

American Association of Veterinary Laboratory Diagnosticians

President-Elect, 1988; President, 1989
 Executive Committee
 Executive Board
 Program Chairman
 Publications Committee, Chair
 AAVLD-USAHA Liaison Committee
 Animal Disease Reporting Committee
 Animal Disease Emergency Advisory Committee
 Laboratory Directors Committee

Minnesota Board of Animal Health

Pseudorabies Advisory Committee (Consultant)

Minnesota Turkey Growers Association

Health Subcommittee

Wisconsin Task Force on Veterinary Diagnostic Services

Consultant, February - June, 1989

World Association of Veterinary Laboratory Diagnosticians 5th Int'l Symposium

Pathology Section Moderator, Guelph, Ontario

Collins, James E.

American Association of Veterinary Laboratory Diagnosticians
Committee on Animal Disease Reporting
North Central Conference of Veterinary Laboratory Diagnosticians
Secretary - Treasurer

Felice, Lawrence J.

NCR-121 Safety of Foods and Feeds Related to Animal Production Committee
University of Minnesota Representative
Minnesota Chromatography Forum Education Committee
American Association of Veterinary Laboratory Diagnosticians
Mycotoxin Committee

Nelson, Glen H.

American Association of Veterinary Laboratory Diagnosticians
Mycotoxin Committee
Interpretive Serology Committee
Chair of Subcommittee
Minnesota Veterinary Medical Council
Executive Secretary
Nominating Committee, Chairman
Alumni Activities Committee, Co-Chairman
Budget Committee
Minnesota Veterinary Medical Alumni Association
Executive Board Member
Annual Meeting Chairman
Nominating Committee
Student Experience Committee
Minnesota Veterinary Medical Association
Board of Directors, Minnesota Veterinary Historical Museum
Government Affairs Committee
Nine State Veterinary Conference Group Leader

Ruth, George R.

American Association of Veterinary Laboratory Diagnosticians
Congenital and Inherited Diseases Committee, Chair

Werdin, Ronald E.

American Association of Veterinary Laboratory Diagnosticians
Histopathologic Procedures Committee
United States Animal Health Association
Infectious Diseases of Cattle Committee
Minnesota Veterinary Medical Association
Memorial and Historical Committee
Board of Directors, Minnesota Veterinary Historical Museum
Infectious Diseases Committee
Western Conference of Veterinary Diagnostic Pathologists
Minnesota Representative

University Committees

Barnes, Donald M.

Admissions and Scholastic Committees-CVM

Bergeland, Martin E.

Administrative Council-CVM
Legislative Committee-CVM
VDL Building Advisory Committee-U of M

Collins, James E.

Long Range Planning Committee-CVM
P.E.W. Steering Committee-CVM

Felice, Lawrence J.

Faculty Council-CVM
Library Committee-CVM
P.E.W. Task Force on Faculty Development-CVM
Search Committee, Dean - College of Veterinary Medicine-U of M

Goyal, Sagar M.

Electron Microscope Management Committee-CVM
OSHA Committee-CVM
Animal Care Committee-CVM
Civil Service Award Committee-CVM
Promotion and Tenure Committee-CVM
VDL Building Advisory Committee-U of M

Kurtz, Harold J.

International Programs Committee-CVM
Promotion and Tenure Committee-CVM

Murphy, Michael J.

Research Committee-CVM
Toxicology Graduate Program Committee-U of M

Nelson, Glen H.

Dean's Advisory Council-CVM
Admissions and Scholastic Standing Committee-CVM
Honors Committee-CVM
P.E.W. Task Force-CVM
Legislative Committee-CVM
Coordinator of Alumni and Public Affairs-CVM
St. Paul Campus Centennial Committee-U of M
President's Distinguished Faculty - Mentor Program-U of M
VDL Building Advisory Committee-U of M

Ruth, George R.

Single Quarter Leave Committee, Chair-CVM
P.E.W. Steering Committee-CVM
Health Sciences Tenure Review Committee-U of M

Shaw, Daniel P.

Research Committee (Alternate)-CVM
CSRS Review Committee-CVM
Curriculum Committee-CVM

Singh, Ashok, K.

Research Committee-CVM

Werdin, Ronald E.

Curriculum Committee-CVM

Department of Veterinary Diagnostic Investigation

Departmental Income

July 1, 1988 - June 30, 1989

1) Instruction

University Operations and Maintenance Fund

(a) Annual Budget

Salaries	\$ 79,185
Fringe Benefits	15,505
Supplies	<u>250</u>

Subtotal 94,940

(b) Supplements to Annual Budget 83,736

\$ 178,676

2) Research

(a) Agricultural Experiment Station 6,880

(b) Federal Contracts and Grants

(1) USDA 15,001

(c) Other

(1) Grants - Minnesota Racing Commission	105,240
(2) Graduate School/Research	11,044
(3) Indirect Cost Recovery	<u>66</u>

138,231

3) Services

(a) State Special Appropriation
Minnesota Veterinary Diagnostic Laboratory 1,322,762

(b) Laboratory User Fees

(1) Veterinary Diagnostic Laboratory	
a) Public	799,791
b) Other University Departments	72,275
(2) Histotechnique Laboratory	40,756
(3) Minnesota Racing Analytical Laboratory	<u>214,000</u>

2,449,584

4) Other

(a) Minnesota Poultry Testing Laboratory 95,000

(b) College of Veterinary Medicine Administration 274

(c) Private Gifts

(1) Fenstermacher Fund	12,812
(2) Research	<u>3,100</u>

111,186

\$ 2,877,677

Administration

Rudy G. Perpich, Governor

Marlene Johnson, Lieutenant Governor

University of Minnesota

David M. Lebedoff - Chairman, Board of Regents
Richard J. Sauer - Interim President (1988)
Nils Hasselmo - President (1989)
Neal A. Vanselow - Vice President, Health Sciences
Cherie R. Perlmutter - Associate Vice President, Health Sciences (1988-89)
- Interim Vice President, Health Sciences (1989)
Vilis Vikmanis - Assistant Vice President, Health Sciences
Robert H. Dunlop - Dean, College of Veterinary Medicine (1988)
David G. Thawley - Interim Dean, College of Veterinary Medicine (1988-89)

Board of Animal Health

Sharon I. Hurley - President
Jack G. Delaney - Vice President
Henry L. Banal
Theodore G. Huisinga
Allan Routh
Thomas J. Hagerty - Executive Secretary

University of Minnesota College of Veterinary Medicine Advisory Council

Executive and Legislative Committee Members

Peter Poss, Chairman
Earl B. Olson Farms, Inc.
Willmar, Minnesota

Robert Barton	Silver Lake Hatchery Silver Lake, Minnesota	Conrad Kvamme	Orbit Farms Dairy Little Falls, Minnesota
Dean Benker	Minn. Lamb & Wool Producers Assoc. Big Lake, Minnesota	Jim Lewis	Minnesota Pork Producers Welcome, Minnesota
Ellin Dunsworth	Minnesota Cat Fanciers Bloomington, Minnesota	Mike McMenemy	Metropolitan Animal Hospital Assoc. Minneapolis, Minnesota
Thomas Hagerty	Minnesota Board of Animal Health St. Paul, Minnesota	Ralph Molnau	Minn. Veterinary Medical Assoc. Waconia, Minnesota
Warren Hartman	Mixed Animal Practice Wadena, Minnesota	Frank Schiefelbein	National Cattlemen's Assoc. Kimball, Minnesota
John Hausladen	Minn. Turkey Growers Assoc. St. Paul, Minnesota	Bert Schwinghammer	Minn. Purebred Dairy Cattle Assoc. Albany, Minnesota

