

**Annual Report of the Minnesota Veterinary
Diagnostic Laboratory – 1990**

Animal Health in Minnesota



**Department of Veterinary Diagnostic Investigation
College of Veterinary Medicine
and the Minnesota Board of Animal Health**

**Miscellaneous Publication 69 – 1990
Minnesota Agricultural Experiment Station
University of Minnesota**

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St. Paul, Minnesota

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FOREWORD

This report is a summary of activities of the Minnesota Veterinary Diagnostic Laboratory for July 1, 1989 - June 30, 1990. Its main purpose is to provide a record of the animal diseases for which diagnostic 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, wildlife 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 education. The department also has provided diagnostic services for the Minnesota Racing Commission since 1985.

Many people from all departments of the college participate in the diagnostic medical 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.

The 1990 Minnesota Legislature authorized \$7.9 million to construct a new addition to the Laboratory. The Regents of the University approved the schematic drawings for this facility in June, 1990. The completed project will meet essential health and safety requirements and allow the program to be evaluated for full accreditation by the American Association of Veterinary Laboratory Diagnosticians.

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

Martin E. Bergeland
Director

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CONTENTS

Personnel	1
Accessions by Month	3
Accessions by Species by Month	4
Accessions by County	5
Disease Diagnoses by Animal Species	6
Avian	7
Chicken	7
Turkey	9
Miscellaneous Avian Species	11
Bovine	19
Canine	25
Caprine	34
Equine	35
Feline	38
Fish, Amphibians and Reptiles	44
Miscellaneous Mammals	45
Ovine	51
Porcine	54
Miscellaneous Specimens	60
Laboratory Procedures Summary	61
Necropsies	62
Tissue Accessions	63
Positive Rabies Cases	63
Rabies Examinations	64
Cytology Laboratory Summary	65
Hematology Laboratory Summary	65
Histotechnique Laboratory Summary	65
Bacterial Cultures/Susceptibilities	66
Bacterial Cultures - Special Procedures	66
Bacterial Immunofluorescence in Tissues	67
Clostridia	67
<i>Escherichia coli</i> Pilus Antigens	67
Chlamydia, Leptospira and Mycoplasma	67
Bovine Mastitis Cultures	68
Bacterial Serotyping	70
<i>Actinobacillus pleuropneumoniae</i> Serotyping	70
<i>Pasteurella multocida</i> Serotyping	70
<i>Salmonella sp.</i> Serotyping	71
Streptococcus suis Serotyping	72

In Vitro Antimicrobial Drug Susceptibility Tests	73
Avian (Chicken and Turkey)	73
Bovine	74
Canine and Feline	75
Equine	77
Ovine	78
Porcine	79
Mycology (Specimens Cultured)	81
Immunology	81
Serology Summary	82
Serology by Species	83
Foreign Export Testing	84
Leptospirosis Serology - Summary	84
Leptospirosis Serology - Positive Results by Microscopic Agglutination Test	84
Lyme Disease	85
Toxoplasmosis	85
Viral Diseases	86
Bovine-Infectious Bovine Rhinotracheitis	86
Bovine-Parainfluenza-3	86
Bovine-Respiratory Syncytial Virus	86
Bovine-Bovine Viral Diarrhea	86
Equine-Rhinopneumonitis Virus	86
Porcine-Encephalomyocarditis Virus	86
Porcine-Parvovirus	86
Porcine-Swine Influenza Virus	86
Porcine-Transmissible Gastroenteritis	86
Porcine-Pseudorabies	87
Analytical Toxicology	88
Clinical Chemistry	89
Endocrinology	90
Viral Immunofluorescence in Tissues	91
Electron Microscopy	93
Virus Isolation	94
Appendix	95
Minnesota Racing Analytical Laboratory	97
Minnesota Brucella Testing Laboratory	98
Minnesota Poultry Testing Laboratory	99
Courses	100
Research	102
Publications	103
Continuing Education and Presentations	106
Awards and Citations	108
Professional Organizations	109
University Committees	111
Departmental Income	112
Administration	113

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)	Associate 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	Assistant Professor
Rodney K. Frank, DVM	Vet. Med. Assoc./Research Assistant
Sanjay Kapil, MVSc	Research Assistant
Khalid Naeem, DVM, MS	Research Assistant
Lance Buoen, BA	Senior Scientist
Diane Cook, DVM, MS	Scientist
Kem Pomeroy, BS, PhD	Scientist
Jerome Fahrman, BS	Sr. Med. Tech./Sr. Cl. Lab. Tech.
Mildred Hakomaki, BS, MT (ASCP)	Sr. Med. Tech./Sr. Cl. Lab. Tech.
Mary Ito, BS, MT (ASCP)	Med. Tech./C. Lab. Tech.
Tom Arendt, BS	Junior Scientist
Pin King, BS, MS	Junior Scientist
Usha Mishra, BS, MS	Assistant Scientist
Douglas Chech, CLT	Principal Laboratory Technician
Dzintra Dombrovskis, BS	Principal Laboratory Technician
Elizabeth Ellert, CLA	Principal Laboratory Technician
Christine Johnston, HT	Principal Laboratory Technician
Londa Kroone, CLA	Principal Laboratory Technician
Traci Laughlin, BS	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
Judith Brees	Senior Laboratory Technician
Alan Dacomman, BA	Senior Laboratory Technician
Tanda Gretz, BA	Senior Laboratory Technician
Cheryl Oeljenbruns, BS	Senior Laboratory Technician
Aan Pohl, CVT	Senior Laboratory Technician
Debra Bell	Laboratory Technician
Sharon Dreifus	Laboratory Technician
Kae Granley	Laboratory Technician
Rebecca White, BA	Laboratory Technician
Yin Jiang, BS, MS	Junior Laboratory Technician
Anita Franson, AHT	Laboratory Animal Care Technician
Ron Jeki, BA	Laboratory Animal Care Technician
Richard Kockback, AA	Laboratory Animal Care Technician
Connie Strand, BS, MA	Accounts Supervisor
Jean Paavala	Senior Accounts Specialist
Blandie Washington	Senior Accounts Assistant
Gayle Anderson	Senior Accounts Assistant
Mary Thurn	Executive Secretary
Alicia Collins	Senior Secretary
Janelle Gerlach	Senior Secretary

Personnel (continued)

Bonnie Gagne	Senior Secretary
Jeri Walseth, BS	Senior Secretary
Mary Peltier	Secretary
Thomas Stemper	Word Processing Operator
Patricia Smith, AA	Office Specialist
Dorene Coles	Senior Office Assistant
Toni Adams	Office Assistant
Deb Johnson	Office Assistant

Student Assistants

Nisha Agarwal	Student Laboratory Technician
Muhammed Ashraf	Student Laboratory Technician
Lois Bichler	Student Laboratory Technician
Xiaoqin Chen	Student Junior App. Programmer
Erik Danley	Student Office Assistant
Mark Debner	Student Laboratory Technician
Trisha Delhamer	Student Laboratory Technician
Katie Dettman-Jones	Student Senior Laboratory Technician
Steven Dritz	Student Laboratory Attendant
Shawn Eliason	Student Laboratory Technician
Jane Goggin	Student Laboratory Technician
Samantha Heffron	Student Laboratory Attendant
Janet Helms	Student Laboratory Technician
Esther Hope	Student Senior Laboratory Technician
Debora Johnson	Student Junior App. Programmer
Daniel Keil	Student Laboratory Technician
Brian Keller	Student Laboratory Animal Technician
Patricia Keyes	Student Office Assistant
Tammy Koskela	Student Laboratory Technician
Alison Krinke	Student Laboratory Attendant
Luanne Lenzmeier	Student Laboratory Attendant
Scott Likely	Student Laboratory Attendant
Brent Megarry	Student Laboratory Technician
Robert Orr	Student Laboratory Animal Technician
Cindy Pham	High School Apprentice
Debbie Randall	Student Laboratory Attendant
Gurdial Randhawa	Student Laboratory Attendant
David Stagg	Student Office Assistant
Li-Ping Tang	Student Senior Laboratory Technician
Gussie Tessier	Student Laboratory Technician
Lisa Udland	Student Laboratory Attendant
Thomas White	Student Laboratory Technician
Tingqing Zhang	Student Senior Laboratory Technician

Accessions by Month

July	2,988	February	2,886
August	3,501	March	3,613
September	2,881	April	3,457
October	2,781	May	3,489
November	2,587	June	3,354
December	2,461		
January	3,095	FY 1990 Total	37,093

Accessions - Prior Fiscal Years

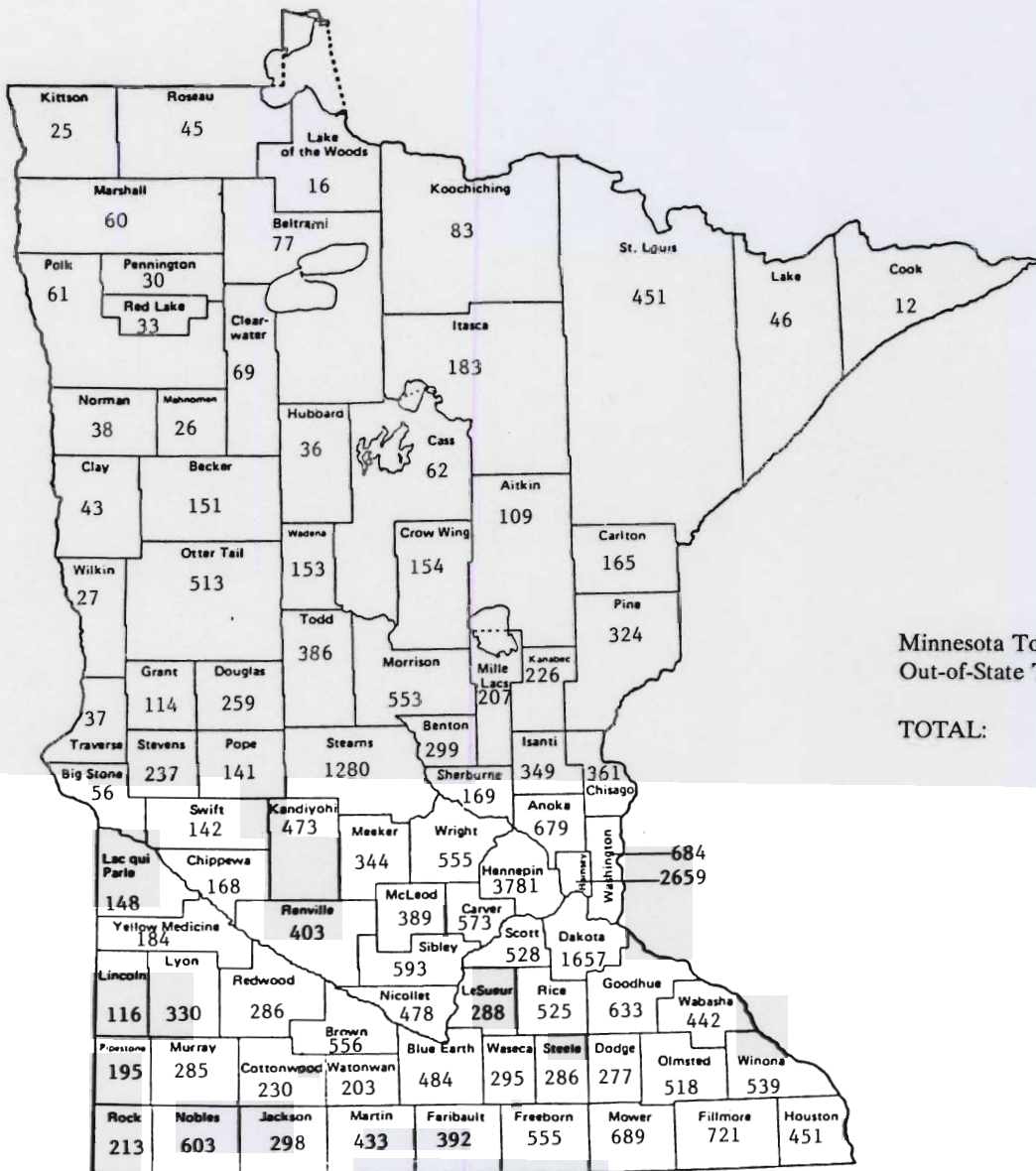
1960	3,277	1975	7,593
1961	3,450	1976	8,782
1962	3,285	1977	8,953
1963	2,635	1978	10,591
1964	4,225	1979	12,803
1965	2,635	1980	14,668
1966	3,166	1981	15,580
1967	3,680	1982	18,064
1968	4,581	1983	20,668
1969	5,552	1984	20,184
1970	6,451	1985	22,836
1971	6,926	1986	21,748
1972	7,951	1987	24,390
1973	10,527	1988	30,899
1974	8,365	1989	35,233

Accessions by Species by Month

Species	July	August	September	October	November	December	January
Avian- Chicken	13	13	12	20	28	14	22
Avian- Miscellaneous	46	49	49	53	50	45	44
Avian- Turkey	28	26	22	31	22	14	23
Bovine	417	648	687	543	598	571	715
Canine	880	918	726	878	783	648	749
Caprine	24	13	13	10	9	11	14
Equine	179	215	170	157	78	61	122
Feline	197	213	167	205	150	146	157
Fish-Amphibian-Reptile	2	2	4	4	7	4	5
Miscellaneous Mammal	116	153	99	97	76	71	96
Miscellaneous Specimen	16	8	9	9	7	5	6
Ovine	20	31	19	13	13	17	32
Porcine	1,050	1,212	904	761	766	854	1,110
TOTAL	2,988	3,501	2,881	2,781	2,587	2,461	3,095

Species	February	March	April	May	June	Total	Percent Total
Avian- Chicken	22	18	16	18	21	217	0.6
Avian- Miscellaneous	31	53	44	47	56	567	1.5
Avian- Turkey	30	31	19	13	11	270	0.7
Bovine	655	808	606	625	586	7,459	20.1
Canine	666	778	854	873	913	9,666	26.0
Caprine	17	11	17	14	20	173	0.5
Equine	122	209	225	269	170	1,977	5.3
Feline	147	171	144	189	203	2,089	5.6
Fish-Amphibian-Reptile	4	10	3	8	7	60	0.2
Miscellaneous Mammal	86	118	83	114	113	1,222	3.3
Miscellaneous Specimen	12	5	6	7	11	101	0.3
Ovine	41	47	35	22	22	312	0.8
Porcine	1,053	1,354	1,405	1,290	1,221	12,980	35.1
TOTAL	2,886	3,613	3,457	3,489	3,354	37,093	100.0

Accessions by County



Minnesota Total 32,947
 Out-of-State Total 4,146
TOTAL: 37,093

OUT OF STATE:

Alabama	2	Illinois	146	Nebraska	31	South Dakota	197
Alaska	22	Indiana	87	New Hampshire	36	Tennessee	5
Arizona	1	Iowa	816	New York	9	Texas	7
Arkansas	5	Kansas	14	North Carolina	11	Utah	8
California	25	Maine	12	North Dakota	72	Vermont	89
Colorado	25	Maryland	1	Ohio	56	Virginia	14
Connecticut	4	Massachusetts	1	Oklahoma	55	Washington	1
Florida	2	Michigan	54	Oregon	1	West Virginia	4
Georgia	3	Mississippi	1	Pennsylvania	21	Wisconsin	2,201
Hawaii	3	Missouri	58	Rhode Island	2	Wyoming	3
Idaho	2	Montana	3	South Carolina	1		
INTERNATIONAL:		Australia	1	Canada	34		

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>													
Anomaly	1	-	-	-	-	-	-	-	-	-	-	-	1
Ascites	2	-	-	-	-	-	-	-	-	-	-	1	1
Botulism	1	-	1	-	-	-	-	-	-	-	-	-	-
Bumble Foot	1	-	-	-	-	-	-	-	-	-	-	1	-
Cannibalism	2	-	-	-	-	-	-	-	-	1	-	-	1
Dehydration	1	-	-	-	-	-	-	1	-	-	-	-	-
Emaciation	2	-	-	-	-	-	-	-	-	1	-	-	1
Gout	12	-	1	2	-	1	-	1	2	3	1	-	1
Health Evaluation	6	-	-	-	1	1	-	2	-	-	1	1	-
Increased Mortality	5	1	-	1	1	-	-	1	-	-	1	-	-
Marek's Disease	12	1	-	2	1	1	2	2	-	3	-	-	-
Neonatal Death	1	-	-	-	-	-	-	-	-	1	-	-	-
Obesity	1	-	-	-	-	-	-	-	-	1	-	-	-
Peritonitis	2	-	-	-	-	1	-	-	-	-	-	1	-
Peritonitis, Egg Yolk	13	1	1	3	-	1	2	1	1	-	2	1	-
Septicemia, Bacterial	1	-	-	-	1	-	-	-	-	-	-	-	-
Septicemia, <i>E. coli</i>	3	-	-	-	1	-	1	-	-	-	-	-	1
Septicemia, <i>Pasteurella hemolytica</i>	15	2	-	-	2	4	2	2	-	1	1	1	-
Septicemia, <i>Pasteurella multocida</i>	2	-	-	-	1	1	-	-	-	-	-	-	-
Septicemia, Salmonella	16	-	1	2	3	1	3	1	1	-	1	1	2
Starvation	4	-	-	-	-	-	-	-	-	1	-	2	1
Trauma	1	-	-	-	-	-	-	-	-	-	-	1	-
Yolk Sac Infection	9	1	-	-	-	1	-	3	1	2	-	-	1
<u>1 Integumentary</u>													
Cellulitis	2	-	1	-	-	-	1	-	-	-	-	-	-
Dermatitis, Podo	1	-	-	-	-	-	1	-	-	-	-	-	-
Dermatitis, Staphylococcus	1	-	-	-	-	-	1	-	-	-	-	-	-
<u>2 Musculoskeletal</u>													
Arthritis	1	-	-	-	-	-	1	-	-	-	-	-	-
Arthritis, Suppurative	1	-	1	-	-	-	-	-	-	-	-	-	-
Neoplasm, Osteosarcoma	3	-	-	-	-	-	-	-	2	1	-	-	-
Osteomalacia	17	3	1	3	2	2	-	4	1	-	-	-	1
Osteomyelitis	2	-	1	1	-	-	-	-	-	-	-	-	-
Perosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Synovitis	3	1	-	-	-	-	-	-	-	1	-	1	-

CHICKEN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
3 Respiratory													
Airsacculitis Complex	1	-	-	-	-	-	-	-	-	-	-	1	-
Infectious Laryngotracheitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung-Pneumonia	1	-	-	-	-	-	1	-	-	-	-	-	-
Sinusitis	2	-	-	-	-	1	-	-	-	-	1	-	-
Trachea-Tracheitis	18	2	1	-	2	6	1	2	2	1	-	1	-
4 Cardiovascular													
Aortic Rupture	1	-	-	-	1	-	-	-	-	-	-	-	-
Heart-Myocarditis	1	-	-	-	-	-	-	-	-	-	1	-	-
5 Hemic and Lymphatic													
Neoplasm, Lymphoid Leukosis	5	-	-	-	1	-	-	1	2	1	-	-	-
Neoplasm, Lymphosarcoma	2	-	-	-	-	-	-	-	-	1	1	-	-
Spleen-Splenitis	1	-	-	-	-	-	-	-	-	-	-	1	-
6 Digestive													
Crop-Ingluvitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Feces-Microbiologic Exam	2	-	-	-	2	-	-	-	-	-	-	-	-
Intestine-Enteritis, Campylobacter	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	2	-	-	-	-	1	-	-	-	-	1	-	-
Intestine-Enteritis, Necrotic	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Enteritis, Rotavirus	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Enteritis, Salmonella	3	-	-	-	-	-	-	-	2	-	-	1	-
Intestine-Intussusception	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Obstruction	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Parasitism, Coccidia	9	1	2	1	-	1	1	-	2	-	1	-	-
Intestine-Parasitism, Nematode	1	-	-	-	-	-	-	-	-	-	-	-	1
Liver-Hepatitis	6	-	1	-	-	1	-	-	-	-	2	2	-
Liver-Lipidosis	6	-	-	1	1	2	-	-	-	1	-	-	1
Oral-Stomatitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Pancreas-Pancreatitis	1	-	-	-	-	-	-	-	-	-	1	-	-
7 Urogenital													
Blow Out	2	-	-	1	-	-	-	1	-	-	-	-	-
Kidney-Nephritis	2	-	-	-	-	1	-	-	-	-	1	-	-
Kidney-Nephrosis	26	-	-	2	1	3	2	3	5	4	2	3	1
Oviduct-Impaction	1	-	-	-	-	-	-	-	-	1	-	-	-
Urocyst-Urolithiasis	2	-	-	-	1	-	1	-	-	-	-	-	-
X Special Senses													
Eye-Conjunctivitis	1	-	-	-	-	-	-	1	-	-	-	-	-

TURKEY	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>0 Body as a Whole</u>													
Adenovirus Infection	7	-	1	1	1	-	1	-	1	-	1	-	1
Cannibalism	1	-	-	-	-	-	-	-	-	1	-	-	-
Dehydration	1	-	-	1	-	-	-	-	-	-	-	-	-
Gout	2	1	-	-	1	-	-	-	-	-	-	-	-
Growth Retardation	1	-	-	-	-	-	-	-	-	1	-	-	-
Health Evaluation	3	-	-	-	-	-	-	-	1	1	-	1	-
Increased Mortality	1	-	1	-	-	-	-	-	-	-	-	-	-
Parasitism, Histomonas	2	-	-	-	1	-	1	-	-	-	-	-	-
Peritonitis	8	-	1	1	-	2	1	-	-	2	1	-	-
Peritonitis, Egg Yolk	1	-	-	-	-	-	-	-	1	-	-	-	-
Pick-Outs	1	-	-	-	-	-	-	-	1	-	-	-	-
Polyserositis	2	1	-	-	1	-	-	-	-	-	-	-	-
Septicemia, Erysipelothrix	2	-	-	1	-	-	-	-	-	-	-	-	1
Septicemia, <i>E. coli</i>	21	3	4	4	4	1	-	2	-	1	2	-	-
Septicemia, <i>Pasteurella hemolytica</i>	2	-	-	-	2	-	-	-	-	-	-	-	-
Septicemia, <i>Pasteurella multocida</i>	9	2	-	1	1	1	1	-	1	-	1	-	1
Septicemia, Pseudomonas	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, Salmonella	22	2	2	2	3	2	2	1	-	-	3	3	2
Septicemia, Staphylococcus	1	-	-	-	-	-	-	1	-	-	-	-	-
Starvation	2	-	-	-	-	-	-	-	-	-	1	-	1
Sudden Death	3	1	-	-	-	1	-	-	-	-	-	1	-
Trauma	1	-	-	-	-	-	-	-	1	-	-	-	-
Yolk Sac Infection	2	-	-	-	-	-	-	-	-	-	1	1	-
<u>1 Integumentary</u>													
Cellulitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Dermatitis, Podo	1	-	1	-	-	-	-	-	-	-	-	-	-
<u>2 Musculoskeletal</u>													
Arthritis	2	-	-	-	-	1	-	-	1	-	-	-	-
Fracture	4	-	1	-	-	-	-	-	-	3	-	-	-
Osteomalacia	2	-	-	-	2	-	-	-	-	-	-	-	-
Osteomyelitis	12	1	-	-	-	-	-	-	6	4	-	1	-
Synovitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Tibial Dyschondroplasia	14	2	-	-	-	-	-	-	3	6	1	1	1
<u>3 Respiratory</u>													
Airsacculitis, Candida	1	-	-	-	-	-	-	1	-	-	-	-	-
Airsacculitis Complex	14	2	1	3	1	2	1	1	1	2	-	-	-
Aspergillosis	3	-	1	-	1	-	1	-	-	-	-	-	-

TURKEY (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Lung-Pneumonia	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho (Idiopathic)	2	-	-	1	-	-	-	-	-	1	-	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung-Pneumonia, <i>Staphylococcus</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Respiratory Infection	1	-	-	-	1	-	-	-	-	-	-	-	-
Sinusitis	2	-	-	-	-	1	-	1	-	-	-	-	-
Trachea-Tracheitis	4	-	-	1	-	3	-	-	-	-	-	-	-
4 Cardiovascular													
Heart-Cardiomyopathy	1	-	-	-	-	-	-	1	-	-	-	-	-
Heart-Myocardial Degeneration	1	-	-	-	-	-	-	1	-	-	-	-	-
Heart-Pericarditis	9	2	-	3	1	2	-	-	-	-	1	-	-
Hypertensive Angiopathy	14	-	-	2	-	1	-	3	4	3	1	-	-
Round Heart Disease	3	1	-	-	-	-	-	-	-	1	-	1	-
5 Hemic and Lymphatic													
Hemorrhage, Generalized	1	1	-	-	-	-	-	-	-	-	-	-	-
6 Digestive													
Feces-Microbiologic Exam	2	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Total Cases	11	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Adenovirus	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, Atrophic	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, Coronavirus	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Enteritis, Idiopathic	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, Rotavirus	16	-	3	-	4	-	1	2	1	2	1	2	-
Intestine-Enteritis, Salmonella	16	3	1	-	2	-	-	2	2	5	1	-	-
Intestine-Parasitism, Coccidia	3	-	-	-	1	-	-	-	-	1	1	-	-
Intestine-Parasitism, Cryptosporidia	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Volvulus	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Abscess	1	-	-	-	1	-	-	-	-	-	-	-	-
Liver-Hepatitis	2	-	-	-	-	1	-	-	-	-	-	-	1
Liver-Hepatosi	1	-	-	-	-	-	-	-	-	-	1	-	-
7 Urogenital													
Kidney-Nephritis	1	-	-	-	-	1	-	-	-	-	-	-	-
Kidney-Nephrosi	1	-	-	-	-	-	-	-	-	-	1	-	-
9 Nervous													
Encephaliti, Granulomatous	1	1	-	-	-	-	-	-	-	-	-	-	-
Encephaliti, Non-suppurative	1	-	-	-	-	1	-	-	-	-	-	-	-
Encephalomalacia	2	-	-	-	-	-	-	2	-	-	-	-	-

TURKEY (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
X Special Senses													
Eyelid-Blepharitis	1	-	-	-	-	-	-	-	1	-	-	-	-
MISCELLANEOUS AVIAN SPECIES													
<u>Budgerigar</u>													
Mineralization	1	-	-	-	1	-	-	-	-	-	-	-	-
Sudden Death	4	-	-	-	-	2	1	1	-	-	-	-	-
Neoplasm, Lipoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Airsacculitis Complex	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung-Bronchitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung-Edema	1	-	-	-	-	-	-	1	-	-	-	-	-
Lung-Pneumonia, Interstitial	1	-	-	-	1	-	-	-	-	-	-	-	-
Neoplasm, Lymphoid Leukosis	1	-	-	-	-	-	-	-	-	1	-	-	-
Liver-Lipidosis	2	1	-	1	-	-	-	-	-	-	-	-	-
Blow Out	1	-	-	-	1	-	-	-	-	-	-	-	-
Kidney-Neoplasm, Carcinoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Thyroid-Atrophy	1	1	-	-	-	-	-	-	-	-	-	-	-
<u>Canary</u>													
Septicemia, Staphylococcus	1	-	-	-	-	-	-	1	-	-	-	-	-
Sudden Death	1	-	-	-	-	-	-	-	-	-	-	1	-
Heart-Myocarditis	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	1	-	-	-	-	1	-	-	-	-	-	-	-
Eye-Lens, Cataract	1	1	-	-	-	-	-	-	-	-	-	-	-
<u>Cockatiel</u>													
Chlamydiosis	2	-	-	-	-	-	-	1	1	-	-	-	-
Emaciation	2	-	-	-	-	-	1	-	-	-	-	1	-
Gout	2	-	-	1	-	-	-	-	-	1	-	-	-
Peritonitis, Egg Yolk	1	-	-	-	-	-	1	-	-	-	-	-	-
Septicemia, Klebsiella	1	-	1	-	-	-	-	-	-	-	-	-	-
Septicemia, Pseudomonas	1	-	1	-	-	-	-	-	-	-	-	-	-
Sudden Death	5	2	-	-	-	-	-	2	-	-	1	-	-
Neoplasia	1	-	-	-	-	-	-	-	1	-	-	-	-
Neoplasm, Liposarcoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Xanthoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Osteomalacia	2	-	-	-	-	-	1	-	1	-	-	-	-
Airsacculitis Complex	3	1	-	1	-	-	-	1	-	-	-	-	-
Lung-Bronchitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Congestion	1	-	-	-	-	-	-	1	-	-	-	-	-
Lung-Pneumonia, <i>Bordetella sp.</i>	1	-	-	-	1	-	-	-	-	-	-	-	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Cockatiel (cont.)													
Lung-Pneumonia, <i>Bordetella sp.</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho (Idiopathic)	1	-	-	-	-	-	-	-	-	-	-	1	-
Psittacine Wasting Disease	1	-	-	-	-	-	-	-	-	-	-	1	-
Sinusitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Trachea-Tracheitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Heart-Myocardial Degeneration	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Lymphosarcoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Spleen-Splenitis	1	-	-	-	-	-	-	1	-	-	-	-	-
Crop-Ingluvitis, Mycotic	2	-	-	-	-	-	-	-	1	1	-	-	-
Liver-Hepatitis	3	-	-	1	-	-	-	2	-	-	-	-	-
Liver-Hepatositis	1	-	1	-	-	-	-	-	-	-	-	-	-
Stomach-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Stomach-Ulcer	1	-	-	-	-	-	1	-	-	-	-	-	-
Kidney-Nephritis	3	1	-	-	-	-	-	2	-	-	-	-	-
Kidney-Nephrosis	3	-	-	1	-	-	-	-	-	-	1	1	-
Testis-Neoplasm, Seminoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Thyroid-Neoplasm, Carcinoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Encephalitis, Non-suppurative	1	-	-	-	-	-	-	1	-	-	-	-	-
Meningitis, Non-suppurative	1	-	-	-	-	-	-	-	-	1	-	-	-
Cockatoo													
Amyloidosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Emaciation	2	-	-	-	-	-	-	-	-	1	1	-	-
Gout	1	-	-	-	-	-	-	-	-	-	-	-	1
Herpesvirus Infection	1	-	-	-	1	-	-	-	-	-	-	-	-
Papovavirus Infection	1	-	-	-	-	-	-	1	-	-	-	-	-
Peritonitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Psittacine Wasting Disease	8	1	1	2	-	1	1	-	-	-	-	1	1
Septicemia, Bacterial	2	-	-	-	-	-	-	-	-	1	-	1	-
Dermatitis, Granulomatous	1	1	-	-	-	-	-	-	-	-	-	-	-
Airsacculitis Complex	3	1	-	-	-	1	1	-	-	-	-	-	-
Respiratory Nasal Swab (Idiopathic)	1	-	-	-	-	-	-	1	-	-	-	-	-
Heart-Myocarditis	1	-	-	-	-	-	-	-	-	-	-	1	-
Heart-Myocardial Degeneration	1	-	-	-	-	-	-	-	-	-	-	-	1
Feces-Microbiologic Exam	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Parasitism, Cestode	1	-	-	-	-	-	-	-	-	-	1	-	-
Liver-Hemosiderosis	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	2	-	-	-	-	1	-	-	-	-	-	1	-
Kidney-Nephritis	2	1	-	-	1	-	-	-	-	-	-	-	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Cockatoo (cont.)													
Urocyt-Urolithiasis	1	-	-	-	-	-	-	-	-	-	-	1	-
Encephalitis, Non-suppurative	2	1	-	-	-	-	-	-	-	-	-	1	-
Encephalomalacia	1	-	-	-	-	-	1	-	-	-	-	-	-
Conur													
Papovavirus Infection	1	-	1	-	-	-	-	-	-	-	-	-	-
Psittacine Wasting Disease	2	-	-	-	1	-	-	1	-	-	-	-	-
Airsacculitis Complex	2	-	1	1	-	-	-	-	-	-	-	-	-
Sinusitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Feces-Microbiologic Exam	1	-	-	-	-	-	1	-	-	-	-	-	-
Stomach-Ventriculitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Duck													
Amyloidosis	2	-	-	-	-	-	2	-	-	-	-	-	-
Dehydration	1	-	-	1	-	-	-	-	-	-	-	-	-
Gout	1	-	-	-	-	-	1	-	-	-	-	-	-
Health Evaluation	1	-	-	-	-	-	-	-	-	-	-	-	1
Septicemia, <i>Pasteurella anatipestifer</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Starvation	1	-	-	1	-	-	-	-	-	-	-	-	-
Sudden Death	1	1	-	-	-	-	-	-	-	-	-	-	-
Toxicosis, Lead	1	-	-	-	-	-	-	-	1	-	-	-	-
Trauma	1	-	-	-	-	-	1	-	-	-	-	-	-
Yolk Sac Infection	1	-	-	1	-	-	-	-	-	-	-	-	-
Lameness	1	-	-	-	-	-	-	-	-	-	-	-	1
Muscle-Myodegeneration	1	-	-	-	-	-	1	-	-	-	-	-	-
Airsacculitis Complex	2	-	1	-	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, Broncho (Idiopathic)	1	-	-	-	-	1	-	-	-	-	-	-	-
Leukocytozoonosis	1	1	-	-	-	-	-	-	-	-	-	-	-
Crop-Ingluvitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Adenovirus	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Parasitism, Coccidia	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Nematode	1	-	-	-	-	-	-	-	1	-	-	-	-
Liver-Lipidosis	1	-	-	-	-	-	-	-	1	-	-	-	-
Kidney-Nephrosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Encephalopathy	1	-	-	-	-	-	1	-	-	-	-	-	-
Eye-Ophthalmitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Eagle													
Emaciation	1	-	-	-	-	-	-	-	-	1	-	-	-
Septicemia, Klebsiella	1	-	-	-	-	1	-	-	-	-	-	-	-
Toxicosis, Organophosphate	1	-	-	-	1	-	-	-	-	-	-	-	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>Eagle (cont.)</u>													
Cellulitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Arthritis, <i>Staphylococcus aureus</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Pleuritis	1	-	-	-	-	1	-	-	-	-	-	-	-
Heart-Pericarditis	1	-	-	1	-	-	-	-	-	-	-	-	-
<u>Falcon</u>													
Gout	1	-	-	-	-	-	1	-	-	-	-	-	-
Herpesvirus Infection	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Salmonella</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Toxicosis, Organophosphate	1	-	-	-	-	-	1	-	-	-	-	-	-
Trachea-Tracheitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	6	2	-	-	4	-	-	-	-	-	-	-	-
Liver-Hepatitis	1	-	-	-	-	1	-	-	-	-	-	-	-
Liver-Hepatosi	1	1	-	-	-	-	-	-	-	-	-	-	-
<u>Finch</u>													
Amyloidosis	1	1	-	-	-	-	-	-	-	-	-	-	-
Mycosis, Systemic	1	1	-	-	-	-	-	-	-	-	-	-	-
Sudden Death	4	-	1	-	1	-	-	-	-	2	-	-	-
Intestine-Parasitism, Coccidia	1	-	-	-	-	-	-	-	-	-	-	1	-
Neurological Disorder-Idiopathic	1	-	-	1	-	-	-	-	-	-	-	-	-
<u>Goose</u>													
Amyloidosis	1	-	-	-	-	-	-	-	-	-	1	-	-
Septicemia, <i>Pasteurella multocida</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
Lameness	1	-	-	-	-	-	-	-	-	-	-	-	1
Feces-Microbiologic Exam	1	-	-	-	-	-	-	-	1	-	-	-	-
Kidney-Nephritis	1	-	-	-	-	-	-	-	-	-	1	-	-
Encephalomalacia	1	-	-	-	-	-	-	-	-	-	1	-	-
<u>Hawk</u>													
Chlamydiosis	1	-	-	-	-	-	-	-	-	-	1	-	-
Neoplasm, Fibroma	1	-	-	-	-	-	1	-	-	-	-	-	-
Feces-Microbiologic Exam	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Enteritis, Necrotic	1	-	-	-	-	-	-	-	-	-	-	-	1
Oral-Stomatitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Encephalopathy	1	-	-	-	1	-	-	-	-	-	-	-	-
<u>Lovebird</u>													
Sudden Death	2	1	-	-	-	-	-	-	-	-	1	-	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Macaw													
Herpesvirus Infection	1	-	-	-	-	-	-	-	-	1	-	-	-
Papovavirus Infection	1	-	-	1	-	-	-	-	-	-	-	-	-
Psittacine Wasting Disease	3	-	-	1	-	-	-	1	-	1	-	-	-
Airsacculitis Complex	1	-	-	-	-	1	-	-	-	-	-	-	-
Aspergillosis	2	1	-	-	1	-	-	-	-	-	-	-	-
Lung-Bronchitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Nasal-Rhinitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Heart-Myocarditis	1	-	-	-	-	-	-	-	-	-	-	1	-
Coagulation Disorder	1	-	-	-	-	-	-	-	-	-	-	-	1
Feces-Microbiologic Exam	6	-	1	2	-	-	-	-	-	-	-	2	1
Liver-Hepatitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Kidney-Nephritis	1	-	-	-	-	-	-	-	-	-	-	1	-
Kidney-Nephritis, Glomerulo	2	-	-	1	-	-	-	-	-	-	-	-	1
Brain-Infarction	1	-	-	-	-	1	-	-	-	-	-	-	-
Owl													
Heart-Cardiomyopathy	1	-	-	-	1	-	-	-	-	-	-	-	-
Liver-Lipidosis	1	-	-	-	-	-	-	-	-	1	-	-	-
Parrot													
Amyloidosis	1	-	-	-	-	-	-	-	-	1	-	-	-
Chlamydiosis	2	-	-	-	-	2	-	-	-	-	-	-	-
Gout	2	-	-	-	-	-	-	1	-	1	-	-	-
Herpesvirus Infection	5	-	3	-	-	-	-	-	-	2	-	-	-
Neoplasm, Carcinoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Papovavirus Infection	1	-	-	-	1	-	-	-	-	-	-	-	-
Septicemia, Bacterial	1	-	1	-	-	-	-	-	-	-	-	-	-
Septicemia, Salmonella	3	-	1	-	-	-	-	-	-	-	-	-	2
Sudden Death	3	-	-	-	-	-	-	-	-	1	1	-	1
Trauma	1	-	1	-	-	-	-	-	-	-	-	-	-
Tuberculosis	2	-	-	-	1	-	-	-	-	-	-	-	1
Psittacine Wasting Disease	5	-	-	2	-	1	-	1	-	-	1	-	-
Cyst, Adnexal	1	-	-	-	-	-	-	-	-	1	-	-	-
Dermatitis, Staphylococcus	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Fibroma	1	-	-	-	-	1	-	-	-	-	-	-	-
Neoplasm, Lipoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, Broncho (Idiopathic)	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung-Pneumonia, Foreign Body	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Mycotic	1	-	-	-	-	-	-	-	-	-	1	-	-
Respiratory Nasal Swab (Idiopathic)	1	-	-	1	-	-	-	-	-	-	-	-	-
Sinusitis	7	-	-	3	1	1	1	-	-	-	-	1	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>Parrot (cont.)</u>													
Heart-Epicarditis	1	1	-	-	-	-	-	-	-	-	-	-	-
Anemia	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm, Myeloproliferative Disease	1	-	-	-	-	-	-	-	-	-	-	-	1
Crop-Ingluvitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	17	-	1	-	-	1	-	1	1	1	-	3	9
Intestine-Enteritis, Salmonella	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Neoplasm, Adenocarcinoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Liver-Cirrhosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Liver-Hepatitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Nephritis	2	1	1	-	-	-	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	1	-	-	-	-	-	-	-	-	-	-	-	1
Kidney-Nephrosis	2	-	-	1	-	1	-	-	-	-	-	-	-
Encephalitis, Non-suppurative	1	-	-	-	-	1	-	-	-	-	-	-	-
<u>Partridge</u>													
Septicemia, <i>E. coli</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Pneumonia	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	1	-	-	1	-	-	-	-	-	-	-	-	-
<u>Peacock</u>													
Peritonitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia	1	-	-	-	-	-	-	1	-	-	-	-	-
<u>Pelican</u>													
Liver-Lipidosis	1	-	-	-	-	-	-	-	-	-	1	-	-
<u>Pheasant</u>													
Adenovirus Infection	1	-	-	-	1	-	-	-	-	-	-	-	-
Dehydration	1	-	1	-	-	-	-	-	-	-	-	-	-
Emaciation	1	-	1	-	-	-	-	-	-	-	-	-	-
Increased Mortality	2	-	-	-	-	-	1	-	-	-	-	1	-
Septicemia, <i>E. coli</i>	3	1	-	-	-	-	-	-	-	-	-	2	-
Septicemia, <i>Pasteurella multocida</i>	2	1	-	-	-	-	-	-	-	-	1	-	-
Septicemia, <i>Pseudomonas</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Septicemia, <i>Salmonella</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Starvation	1	-	-	-	-	-	-	-	-	-	-	-	1
Sudden Death	1	-	-	-	1	-	-	-	-	-	-	-	-
Arthritis, <i>Staphylococcus aureus</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Osteomyelitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Infectious Laryngotracheitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Sinusitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Gizzard Impaction	2	-	-	-	-	-	-	-	-	-	-	2	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>Pheasant (cont.)</u>													
Intestine-Parasitism, Ascaris	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Parasitism, Nematode	2	-	-	1	-	-	-	-	-	-	1	-	-
Kidney-Nephrosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Thyroid Goiter	1	-	1	-	-	-	-	-	-	-	-	-	-
Brain-Vasculitis	1	-	1	-	-	-	-	-	-	-	-	-	-
<u>Pigeon</u>													
Septicemia, Salmonella	4	1	-	-	-	-	-	-	-	-	-	-	3
Sudden Death	3	1	-	-	-	-	-	-	-	-	2	-	-
Arthritis, Non-suppurative	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm, Lymphoid Leukosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Nematode	1	-	-	-	-	-	-	-	-	-	1	-	-
Liver-Hepatitis	3	-	1	-	-	1	-	-	-	-	-	1	-
Stomach-Ulcer	1	-	-	-	1	-	-	-	-	-	-	-	-
Kidney-Nephritis	2	-	1	-	-	-	-	-	-	-	-	1	-
Ovary-Neoplasm	1	-	1	-	-	-	-	-	-	-	-	-	-
Encephalitis, Suppurative	1	-	-	-	-	-	-	-	-	-	-	-	1
Meningitis, Suppurative	1	-	-	-	-	-	-	-	-	-	-	1	-
<u>Quail</u>													
Emaciation	1	-	-	1	-	-	-	-	-	-	-	-	-
Health Evaluation	1	-	1	-	-	-	-	-	-	-	-	-	-
Airsacculitis Complex	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Enteritis, Ulcerative/ <i>C. colinum</i>	2	-	-	1	-	-	-	-	-	-	-	1	-
<u>Sparrow</u>													
Neoplasm, Lymphoid Leukosis	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	1	-	1	-	-	-	-	-	-	-	-	-	-
<u>Starling</u>													
Lung-Edema	1	-	-	-	1	-	-	-	-	-	-	-	-
Liver-Hepatitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Liver-Hepatositis	1	-	-	-	-	-	-	-	-	-	-	1	-
Kidney-Nephrosis	1	-	-	-	1	-	-	-	-	-	-	-	-
<u>Swan</u>													
Amyloidosis	3	-	-	-	-	-	-	-	-	-	2	1	-
Septicemia, Bacterial	1	-	-	-	-	-	-	-	-	-	-	1	-
Septicemia, Staphylococcus	1	-	-	-	-	-	-	-	-	-	-	1	-

MISCELLANEOUS AVIAN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Swan (cont.)													
Sudden Death	2	-	1	-	-	-	-	-	-	-	-	1	-
Toxicosis, Lead	11	-	-	1	1	4	3	1	-	-	1	-	-
Airsacculitis Complex	1	-	1	-	-	-	-	-	-	-	-	-	-
Aspergillosis	2	-	-	-	-	1	1	-	-	-	-	-	-
Lung-Pneumonia, Broncho (Idiopathic)	1	-	-	-	-	1	-	-	-	-	-	-	-
Trachea-Tracheitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Heart-Cardiomyopathy	1	-	-	-	1	-	-	-	-	-	-	-	-
Heart-Myocarditis	1	-	-	-	-	-	-	-	-	-	1	-	-
Pancreas-Pancreatitis	1	-	-	-	-	-	-	-	-	-	1	-	-
Kidney-Nephritis	1	-	-	-	-	-	-	-	-	-	1	-	-
Thrush													
Sudden Death	1	-	-	-	1	-	-	-	-	-	-	-	-
Heart-Epicarditis	1	-	-	1	-	-	-	-	-	-	-	-	-
Kidney-Nephrosis	1	-	-	1	-	-	-	-	-	-	-	-	-
Unidentified Avian Species													
Chlamydiosis	1	-	-	1	-	-	-	-	-	-	-	-	-
Emaciation	1	-	-	1	-	-	-	-	-	-	-	-	-
Herpesvirus Infection	1	-	-	-	-	-	-	-	-	-	1	-	-
Septicemia, Bacterial	1	-	-	-	-	-	-	-	-	-	-	-	1
Septicemia, <i>Pasteurella hemolytica</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Starvation	1	-	-	-	1	-	-	-	-	-	-	-	-
Sudden Death	6	-	1	1	1	1	-	-	-	-	-	2	-
Toxicosis, Lead	3	1	-	-	-	1	-	-	-	-	1	-	-
Neoplasm, Fibrosarcoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Airsacculitis Complex	3	-	1	1	-	1	-	-	-	-	-	-	-
Aspergillosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Respiratory Nasal Swab (Idiopathic)	1	-	-	-	-	-	1	-	-	-	-	-	-
Heart-Pericarditis	1	1	-	-	-	-	-	-	-	-	-	-	-
Lymph Node-Lymphadenitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	3	1	-	-	-	-	-	-	-	1	-	-	1
Intestine-Enteritis, Necrotic	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Intussusception	1	-	-	-	-	1	-	-	-	-	-	-	-
Liver-Hepatitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Hepatositis	1	-	-	-	-	1	-	-	-	-	-	-	-
Liver-Lipidosis	3	-	-	-	1	-	-	-	-	-	1	1	-
Oral-Stomatitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Kidney-Nephrosis	6	-	-	2	-	1	-	1	-	-	1	1	-
Brain-Vasculitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Encephalomalacia	1	-	-	-	-	-	-	-	-	1	-	-	-

BOVINE

BOVINE	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
O <u>Body as a Whole</u>													
Abscess	2	-	-	-	-	-	1	-	1	-	-	-	-
Anomaly	7	-	-	-	-	-	-	-	1	4	2	-	-
Ascites	1	-	-	-	-	-	-	-	-	-	1	-	-
Bovine Viral Diarrhea	61	1	2	3	5	6	6	8	8	7	7	4	4
Copper Deficiency	2	-	1	-	1	-	-	-	-	-	-	-	-
Downer Cow Syndrome	4	1	-	-	-	-	-	-	-	1	-	1	1
Emaciation	23	1	1	-	-	3	2	8	2	2	2	1	1
Grain Overload	8	1	-	1	-	1	-	2	1	-	-	-	2
Icterus	1	-	-	1	-	-	-	-	-	-	-	-	-
Infectious Bovine Rhinotracheitis	2	-	-	-	-	2	-	-	-	-	-	-	-
Malignant Catarrhal Fever	1	-	-	-	-	-	1	-	-	-	-	-	-
Mycosis, Systemic	1	-	-	-	-	-	1	-	-	-	-	-	-
Neonatal Death	11	-	-	1	1	2	1	-	2	3	-	1	-
Neonatal Weakness	3	1	-	-	-	-	-	1	-	1	-	-	-
Neoplasm	1	-	-	-	-	-	1	-	-	-	-	-	-
Omphalitis	8	-	-	-	-	-	1	-	1	2	1	1	2
Peritonitis	12	-	-	-	-	-	3	1	2	1	1	1	3
Polyserositis	1	-	-	-	1	-	-	-	-	-	-	-	-
Pseudorabies	4	-	-	-	-	-	1	-	1	1	1	-	-
Septicemia, <i>Acinobacillus</i> sp.		-	-	-	-	-	-	1	-	1	-	-	-
Septicemia, <i>Actinomyces pyogenes</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Septicemia, Bacterial	8	-	-	1	3	1	-	1	-	-	1	-	1
Septicemia, <i>Clostridium chauvoei</i>	10	1	-	-	1	-	3	-	-	1	-	-	4
Septicemia, <i>Clostridium novyi</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Septicemia, <i>Clostridium perfringens</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
Septicemia, <i>Clostridium septicum</i>	5	1	-	-	1	-	-	-	-	-	1	1	1
Septicemia, <i>E. coli</i>	8	-	1	1	-	2	-	-	-	-	3	1	-
Septicemia, Klebsiella	1	-	-	-	-	-	-	-	-	-	1	-	-
Septicemia, Listeria	1	-	-	-	-	1	-	-	-	-	-	-	-
Septicemia, Salmonella	27	1	1	5	-	4	4	3	-	2	1	2	4
Septicemia, Streptococcus	1	-	-	1	-	-	-	-	-	-	-	-	-
Starvation	16	-	1	1	-	3	7	2	1	1	-	-	-
Sudder Death	97	7	5	9	7	6	9	8	11	12	8	7	8
Tetanus	2	-	-	-	-	-	-	-	-	2	-	-	-
Toxicosis, Copper	1	-	-	1	-	-	-	-	-	-	-	-	-
Toxicosis, Ionophore	1	-	-	-	-	-	-	-	1	-	-	-	-

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Toxicosis, Lead	24	2	1	2	-	-	-	-	2	1	3	5	8
Toxicosis, Miscellaneous	1	-	-	-	-	-	1	-	-	-	-	-	-
Toxicosis, Nitrate	6	-	-	1	4	-	-	-	1	-	-	-	-
Toxicosis, Organophosphate	2	-	-	-	1	-	-	-	-	-	-	-	1
Toxicosis, Plant	2	-	1	-	-	1	-	-	-	-	-	-	-
Toxicosis, Urea	2	-	-	-	-	-	-	-	-	-	-	1	1
Weakness	1	-	-	-	-	-	-	-	-	-	-	1	-
1 Integumentary													
Abscess	2	-	-	-	-	-	-	-	1	-	-	-	1
Cellulitis	3	-	-	-	-	-	-	-	-	1	-	1	1
Dermatitis, Allergic/Atopic	1	-	-	-	-	-	-	1	-	-	-	-	-
Dermatitis, Focal	3	-	-	-	-	-	1	-	-	-	1	-	1
Dermatitis, Granulomatous	1	-	-	-	1	-	-	-	-	-	-	-	-
Dermatitis, Mycotic	2	-	-	1	-	1	-	-	-	-	-	-	-
Dermatitis, Podo	1	-	-	-	-	-	-	1	-	-	-	-	-
Dermatitis, Staphylococcus	2	-	1	-	-	-	-	-	1	-	-	-	-
Granulation Tissue	1	-	-	-	-	-	-	-	-	-	1	-	-
Mammary-Mammallitis	5	-	-	1	-	-	2	-	-	-	-	2	-
Mammary-Mastitis	193	10	12	13	10	13	13	14	25	20	28	23	12
Milk-Bulk Tank, Bacteriologic Exam	259	8	15	15	19	23	10	16	22	40	40	27	24
Neoplasm, Fibroma	1	-	-	-	-	-	1	-	-	-	-	-	-
Neoplasm, Fibrosarcoma	2	-	-	-	-	-	-	1	-	-	-	-	1
Neoplasm, Lipoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Neoplasm, Mastocytoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Neoplasm, Melanoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Neoplasm, Papilloma	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Squamous Cell Carcinoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Skin-Microbiologic Exam	1	-	-	1	-	-	-	-	-	-	-	-	-
Steatitis	2	-	-	-	-	1	-	-	-	-	1	-	-
2 Musculoskeletal													
Actinomycosis	1	-	-	-	-	-	-	-	-	-	-	1	-
Arthritis	1	-	-	-	-	-	-	1	-	-	-	-	-
Arthritis, <i>Actinomyces pyogenes</i>	2	-	-	-	-	1	-	-	-	1	-	-	-
Arthritis, Non-suppurative	1	-	-	-	-	-	-	-	-	-	1	-	-
Fracture	1	-	-	-	-	-	-	-	1	-	-	-	-
Muscle-Myodegeneration	3	-	-	-	1	-	1	-	-	-	1	-	-
Muscle-Myositis	3	-	-	1	-	2	-	-	-	-	-	-	-
Osteochondrosis	1	-	-	-	-	-	-	-	-	-	-	1	-
Osteodystrophy	1	-	-	-	-	-	-	-	-	-	-	1	-

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Osteomalacia	1	-	-	-	-	-	-	-	-	1	-	-	-
Osteomyelitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Synovitis	1	-	-	-	-	1	-	-	-	-	-	-	-
3 Respiratory													
Respiratory Disorders, Total Cases	418	12	21	26	36	61	62	46	45	32	30	26	21
Lung-Bronchitis	4	-	-	-	-	-	1	-	1	2	-	-	-
Lung-Congestion	3	-	-	-	-	-	1	-	-	-	1	-	1
Lung-Edema	20	-	-	1	2	6	3	3	1	-	1	-	3
Lung-Emphysema	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Hemorrhage	2	-	-	-	-	-	-	1	-	-	-	1	-
Lung-Infarction	1	-	-	-	-	-	-	-	1	-	-	-	-
Lung-Pneumonia, <i>Actinomyces pyogenes</i>	18	1	-	-	1	1	2	2	2	2	3	2	2
Lung-Pneumonia, Atypical Interstitial	8	-	-	1	-	-	2	1	-	2	1	1	-
Lung-Pneumonia, Bovine Resp. Syn. Virus	50	2	1	-	7	10	11	6	6	1	-	3	3
Lung-Pneumonia, Broncho (Idiopathic)	75	6	7	6	6	6	8	5	7	7	7	4	6
Lung-Pneumonia, <i>E. coli</i>	2	-	-	-	1	-	-	1	-	-	-	-	-
Lung-Pneumonia, Foreign Body	10	-	2	1	1	-	2	1	2	1	-	-	-
Lung-Pneumonia, <i>Hemophilus somnus</i>	39	2	2	2	3	6	8	6	6	2	1	1	-
Lung-Pneumonia, IBR	5	-	-	1	-	3	1	-	-	-	-	-	-
Lung-Pneumonia, Interstitial	6	-	1	1	1	1	-	-	-	-	-	1	1
Lung-Pneumonia, <i>Pasteurella hemolytica</i>	92	-	3	8	7	21	13	13	9	4	7	5	2
Lung-Pneumonia, <i>Pasteurella multocida</i>	94	2	7	4	4	10	14	13	15	6	5	10	4
Lung-Pneumonia, Salmonella	3	-	-	2	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, Streptococcus	1	-	-	-	-	-	-	-	1	-	-	-	-
Lung-Thrombosis	3	-	-	-	-	1	-	-	-	-	-	1	1
Pleuritis	4	-	-	1	-	-	-	-	-	2	1	-	-
Respiratory Nasal Swab (Idiopathic)	31	-	-	1	5	4	2	5	3	4	5	1	1
Respiratory Nasal Swab, <i>Hemophilus somnus</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Respiratory Nasal Swab, <i>Pasteurella hemolytica</i>	3	-	-	-	-	-	1	-	-	1	1	-	-
Respiratory Nasal Swab, <i>Pasteurella multocida</i>	13	1	-	2	1	1	2	-	3	1	2	-	-
Trachea-Tracheitis	1	-	-	-	1	-	-	-	-	-	-	-	-
4 Cardiovascular													
Heart-Anomaly	2	-	-	-	-	-	-	-	-	-	-	1	1
Heart-Cardiomyopathy	2	-	-	-	-	-	-	-	-	-	1	1	-
Heart-Endocarditis	5	-	-	-	1	2	-	1	-	-	1	-	-
Heart-Epicarditis	4	-	1	2	-	-	-	-	-	-	-	-	1
Heart-Myocarditis	4	-	-	-	-	-	-	1	1	-	-	-	2
Heart-Myocardial Degeneration	8	1	1	2	1	-	2	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	-	-	-
Heart Failure, Chronic	2	-	-	-	-	-	-	-	1	-	-	1	-
5 Hemic/Lymphatic													
Anemia	1	-	-	1	-	-	-	-	-	-	-	-	-
Anemia, Hemolytic	3	-	-	1	1	-	-	-	-	-	-	-	1
Coagulation Disorder	4	-	-	-	1	1	1	-	-	1	-	-	-
Hemorrhage, Focal	1	-	-	1	-	-	-	-	-	-	-	-	-
Hemorrhage, Generalized	2	-	-	-	-	-	1	-	-	-	-	1	-
Hypogammaglobulinemia	4	-	-	-	1	1	-	-	-	-	1	-	1
Lymph Node-Hyperplasia	1	-	-	-	-	-	-	-	-	1	-	-	-
Lymph Node-Lymphadenitis	2	-	-	1	-	-	-	-	-	-	-	-	1
Neoplasm, Lymphosarcoma	5	-	1	-	1	-	1	-	-	-	-	-	2
6 Digestive													
Alimentary-Erosions	4	1	-	-	1	-	-	-	-	2	-	-	-
Feces-Microbiologic Exam	181	10	13	10	20	18	16	17	17	17	13	14	16
Intestine-Colitis	7	1	1	-	-	-	1	-	1	-	1	1	1
Intestine-Enteritis, Total Cases	955	43	50	67	74	87	118	126	93	88	78	76	55
Intestine-Enteritis, Atrophic	7	1	-	-	1	-	3	1	1	-	-	-	-
Intestine-Enteritis, BVD	38	3	1	3	4	-	3	4	7	6	2	4	1
Intestine-Enteritis, <i>Clostridium perfringens</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Enteritis, <i>C. perfringens</i> Type C	2	-	-	-	-	-	-	-	-	1	1	-	-
Intestine-Enteritis, Coronavirus	123	1	1	1	3	11	19	23	13	23	21	5	2
Intestine-Enteritis, Enterovirus	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, <i>E. coli</i>	60	2	6	7	7	6	2	6	6	8	4	4	2
Intestine-Enteritis, Idiopathic	48	5	2	7	2	3	10	4	2	-	4	3	6
Intestine-Enteritis, <i>M. paratuberculosis</i>	29	5	6	3	-	1	1	3	2	3	2	1	1
Intestine-Enteritis, Necrotic	43	1	2	7	3	6	4	4	4	2	1	5	4
Intestine-Enteritis, Parvovirus	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, Rotavirus	210	5	7	5	12	21	37	33	22	22	23	14	9
Intestine-Enteritis, Salmonella	75	6	10	11	10	10	4	6	6	4	3	3	2
Intestine-Enteritis, Specimen Unsuitable	33	3	1	1	1	3	4	5	3	3	3	4	2
Intestine-Hemorrhage	8	-	-	2	-	2	-	-	1	-	-	1	2
Intestine-Infarction	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Intussusception	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Obstruction	2	-	-	-	-	-	-	-	2	-	-	-	-
Intestine-Parasitism, Coccidia	37	4	5	6	3	2	4	1	1	1	-	5	4
Intestine-Parasitism, Cryptosporidia	239	4	8	16	18	25	58	46	29	23	21	27	13
Intestine-Parasitism, Esophagostomum	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Parasitism, Haemonchus	1	-	1	-	-	-	-	-	-	-	-	-	-
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	4	-	-	-	-	-	-	-	-	1	1	2	-
Intestine-Parasitism, Trichostrongyle	9	-	1	-	3	-	-	2	-	2	1	-	-
Intestine-Volvulus	3	-	-	-	1	-	-	-	-	-	1	-	1
Liver-Abscess	4	-	-	1	-	-	-	1	-	1	-	1	-
Liver-Cirrhosis	3	-	1	1	-	-	-	-	-	-	-	-	1
Liver-Hepatitis	10	1	-	1	1	-	2	-	-	-	-	4	1
Liver-Hepatositis	10	-	-	1	3	-	-	1	-	2	1	1	1
Liver-Lipidosis	15	2	-	-	-	1	1	1	2	-	4	-	4
Liver-Parasitism, Fascioloides	1	-	-	-	-	-	-	-	-	-	-	1	-
Oral-Neoplasm, Fibrosarcoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Oral-Neoplasm, Odontoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Oral-Stomatitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Stomach-Abomasitis	22	1	-	-	8	2	1	2	3	2	-	2	1
Stomach-Abomasal Displacement	1	1	-	-	-	-	-	-	-	-	-	-	-
Stomach-Abomasal Ulcer	4	1	-	1	-	-	-	-	1	-	1	-	-
Stomach-Abomasal Volvulus	2	-	1	-	-	-	1	-	-	-	-	-	-
Stomach-Gastritis	2	-	-	-	-	-	-	-	1	-	-	-	1
Stomach-Gastritis, Mycotic	2	-	-	-	-	-	2	-	-	-	-	-	-
Stomach-Rumenitis	9	-	-	-	1	-	2	-	1	1	3	1	-
Stomach-Rumen Tympany (Bloat)	9	1	1	-	1	2	1	-	-	-	1	1	1
Stomach-Rupture	2	-	-	-	-	-	-	1	-	-	-	-	1
Stomach-Traumatic Reticulitis	2	-	-	-	-	-	-	1	-	-	-	1	-
Stomach-Ulcer	6	-	-	1	-	1	1	-	-	-	-	1	2
7 Urogenital													
Abortions, Total Cases	508	38	31	27	41	36	45	59	41	49	54	49	38
Abortion, Anasarca	1	-	-	-	-	-	-	-	-	-	-	1	-
Abortion, Anomaly	9	1	-	-	1	2	-	1	-	1	1	1	1
Abortion, Bacterial, <i>Actinomyces pyogenes</i>	28	-	2	1	4	5	2	4	1	1	1	3	4
Abortion, Bacterial, <i>Bacillus sp.</i>	20	4	-	-	1	2	1	2	2	3	1	3	1
Abortion, Bacterial, <i>Campylobacter sp.</i>	4	2	2	-	-	-	-	-	-	-	-	-	-
Abortion, Bacterial, <i>E. coli</i>	6	-	-	-	-	-	1	-	-	-	2	3	-
Abortion, Bacterial, <i>Listeria</i>	8	1	-	-	2	1	-	2	-	-	2	-	-
Abortion, Bacterial, <i>Pasteurella hemolytica</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Abortion, Bacterial, <i>Pasteurella multocida</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Abortion, Bacterial, <i>Salmonella</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Abortion, Bacterial, <i>Streptococcus</i>	6	-	-	2	-	-	1	-	-	1	1	-	1
Abortion, Circulatory Failure	3	-	-	1	-	1	-	-	-	1	-	-	-
Abortion, Hepatitis	5	-	-	1	1	-	1	2	-	-	-	-	-
Abortion, Hepatositis	2	-	-	-	-	-	1	-	-	1	-	-	-

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Abortion, Idiopathic	248	21	18	13	21	16	29	29	17	21	25	20	18
Abortion, Mummified Fetus	7	1	-	-	-	2	-	-	-	2	1	1	-
Abortion, Mycotic Placentitis	12	1	2	-	-	-	1	3	2	1	1	1	-
Abortion, Myocarditis	32	2	2	1	1	2	5	5	5	5	2	2	-
Abortion, Parasitism, Toxoplasma	1	-	-	-	-	-	-	-	-	-	-	1	-
Abortion, Placentitis	41	1	4	2	5	2	2	1	3	4	7	4	6
Abortion, Pneumonia	25	2	1	2	2	2	1	3	2	1	2	2	5
Abortion, Specimen Unsuitable	7	-	-	1	-	-	-	2	1	-	1	2	-
Abortion, Twins	12	-	-	1	1	-	1	-	2	2	2	3	-
Abortion, Viral, BVD	21	2	-	1	-	-	-	2	5	4	5	1	1
Abortion, Viral, IBR	10	-	-	-	2	1	-	3	-	2	-	1	1
Genital-Anomaly, Freemartin	3	-	-	-	-	-	-	1	1	1	-	-	-
Genital-Bacteriologic Examination	34	2	2	1	4	-	5	2	2	3	3	6	4
Genital-Infertility	2	-	-	-	-	-	-	-	1	-	1	-	-
Kidney-Infarction	1	-	-	-	-	-	-	-	-	-	1	-	-
Kidney-Nephritis	7	1	-	-	1	1	2	-	-	1	-	1	-
Kidney-Nephritis, Glomerulo	1	-	-	-	1	-	-	-	-	-	-	-	-
Kidney-Nephritis, Interstitial	1	-	-	1	-	-	-	-	-	-	-	-	-
Kidney-Nephritis, Pyelo	2	-	-	1	-	-	-	-	-	-	-	-	1
Kidney-Nephrosis	7	-	-	2	-	1	1	-	-	1	-	2	-
Stillbirth, Idiopathic	10	-	-	-	-	3	-	-	1	2	-	4	-
Urocyst-Urocystitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Uterus-Endometrial Biopsy	1	-	-	-	-	-	-	-	1	-	-	-	-
Uterus-Metritis	8	-	1	-	-	1	2	1	1	1	1	-	-
Vas Deferens-Normal	1	-	-	-	-	-	-	-	-	-	-	1	-
9 Neurological													
Neurological Disorders, Total Cases	71	8	3	6	6	7	6	13	6	7	2	3	6
Brain-Abscess	1	1	-	-	-	-	-	-	-	-	-	-	-
Brain-Edema	1	-	-	1	-	-	-	-	-	-	-	-	-
Brain-Vasculitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Encephalitis, <i>Hemophilus somnus</i>	4	-	-	-	-	1	1	-	1	1	-	-	-
Encephalitis, <i>Listeria</i>	8	-	-	-	3	1	2	-	1	-	-	1	-
Encephalitis, Non-suppurative	3	-	-	-	-	2	-	-	-	1	-	-	-
Encephalitis, Pseudorabies	3	-	-	-	-	-	1	-	-	1	1	-	-
Encephalitis, Rabies	19	-	3	-	2	-	2	7	1	1	-	-	3
Encephalitis, Suppurative	1	-	-	-	-	-	-	1	-	-	-	-	-
Encephalomalacia	2	-	-	-	-	-	1	-	-	-	-	-	1
Meningitis	2	-	-	1	-	-	-	-	-	1	-	-	-
Meningitis, Suppurative	4	1	-	2	-	-	-	1	-	-	-	-	-
Neurological Disorder-Idiopathic	26	3	1	1	1	2	1	6	3	2	1	1	4
Polioencephalomalacia	7	1	-	1	-	-	-	2	-	1	-	1	1

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
X <u>Special Senses</u>													
Eye-Conjunctivitis	6	-	-	2	-	1	-	1	-	1	1	-	-
Eye-Keratitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Eye-Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	-	1	-	-	-

CANINE

O Body as a Whole

Abdomen-Hematoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Amyloidosis	8	-	1	-	-	3	1	-	1	-	-	2	-
Anomaly	7	1	-	-	2	-	1	-	2	1	-	-	-
Chylothorax	1	-	-	1	-	-	-	-	-	-	-	-	-
Emaciation	2	-	-	-	-	1	1	-	-	-	-	-	-
Heat Exhaustion/Stroke	2	2	-	-	-	-	-	-	-	-	-	-	-
Hernia	1	-	-	-	-	-	1	-	-	-	-	-	-
Hernia, Diaphragmatic	1	-	-	1	-	-	-	-	-	-	-	-	-
Herpesvirus Infection	2	-	-	-	-	1	-	-	-	1	-	-	-
Hypoglycemia	2	-	-	-	-	-	-	-	-	-	-	2	-
Metabolic, Ketosis	1	-	-	-	-	1	-	-	-	-	-	-	-
Mycosis, Systemic, Blastomyces	7	1	1	1	-	1	2	-	-	-	1	-	-
Mycosis, Systemic, Cryptococcus	1	-	-	-	-	1	-	-	-	-	-	-	-
Mycosis, Systemic, Histoplasma	3	-	-	-	-	-	-	1	2	-	-	-	-
Neonatal Death	5	1	-	1	-	-	1	-	-	2	-	-	-
Neonatal Weakness	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm	3	-	-	-	1	1	-	-	1	-	-	-	-
Neoplasm, Carcinoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Neoplasm, Carcinoma, Metastatic	10	-	1	1	-	-	2	3	-	-	1	1	1
Neoplasm, Hemangiosarcoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Neoplasm, Hemangiosarcoma, Metastatic	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm, Mastocytoma, Metastatic	1	-	-	-	-	1	-	-	-	-	-	-	-
Neoplasm, Sarcoma, Metastatic	1	-	-	-	1	-	-	-	-	-	-	-	-
Peritonitis	4	-	-	1	-	-	-	2	1	-	-	-	-
Pleural Effusion	3	-	-	1	-	-	-	-	-	2	-	-	-
Pseudorabies	6	-	-	-	1	-	-	3	1	-	-	1	-
Pyothorax	1	-	-	-	-	-	-	1	-	-	-	-	-
Septicemia, <i>Bacillus piliformis</i> -Tyzzer's	1	-	-	-	-	-	1	-	-	-	-	-	-
Septicemia, Bacterial	1	-	-	1	-	-	-	-	-	-	-	-	-
Septicemia, <i>E. coli</i>	1	-	-	-	-	-	-	-	-	1	-	-	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Septicemia, Klebsiella	1	-	-	1	-	-	-	-	-	-	-	-	-
Septicemia, Salmonella	3	-	-	-	1	1	-	-	1	-	-	-	-
Septicemia, Staphylococcus	1	-	-	1	-	-	-	-	-	-	-	-	-
Septicemia, Streptococcus	2	1	-	-	-	-	1	-	-	-	-	-	-
Starvation	7	-	-	-	1	1	-	-	1	2	-	1	1
Steatitis	2	-	-	1	-	-	-	-	-	-	-	1	-
Sudden Death	40	4	6	4	5	1	2	2	2	6	2	3	3
Toxicosis, Arsenic	3	3	-	-	-	-	-	-	-	-	-	-	-
Toxicosis, Copper	1	1	-	-	-	-	-	-	-	-	-	-	-
Toxicosis, Ethylene Glycol	9	-	1	-	1	-	3	1	-	-	1	1	1
Toxicosis, Lead	9	-	-	1	1	-	2	-	1	-	-	2	2
Toxicosis, Miscellaneous	4	-	-	1	1	-	1	-	1	-	-	-	-
Toxicosis, Organophosphate	1	-	-	1	-	-	-	-	-	-	-	-	-
Toxicosis, Strychnine	12	1	1	1	1	-	-	1	-	2	1	1	3
Toxoplasmosis	1	-	-	-	-	-	-	-	-	1	-	-	-
Trauma	14	-	1	2	1	2	1	2	1	3	-	1	-
<u>1 Integumentary</u>													
Abscess	9	1	1	1	-	-	2	2	-	-	-	2	-
Alopecia	1	-	-	-	-	-	-	-	-	-	-	1	-
Calcinosis Circumscripta	14	1	-	-	2	2	1	1	-	3	2	1	1
Cellulitis	23	2	4	-	1	1	-	1	3	3	3	3	2
Cyst, Axillary	100	5	8	2	7	9	11	12	6	6	11	10	13
Cyst, Apocrine	2	-	-	-	-	-	-	-	-	-	1	1	-
Cyst, Epidermal	4	-	-	3	1	-	-	-	-	-	-	-	-
Dermal, Fibrosis	33	1	1	4	4	-	3	4	1	2	4	5	4
Dermatitis, Allergic/Atopic	50	7	2	4	7	2	5	5	3	6	4	5	-
Dermatitis, Bacterial	8	-	-	-	2	-	1	3	-	-	1	-	1
Dermatitis, Diffuse	17	2	-	-	-	1	-	1	1	3	4	4	1
Dermatitis, Eosinophilic	6	1	-	2	1	-	-	1	-	1	-	-	-
Dermatitis, Eosinophilic Granuloma	4	2	-	-	1	-	-	-	-	-	-	1	-
Dermatitis, Focal	91	4	8	8	7	13	11	8	7	8	6	5	6
Dermatitis, Folliculitis	5	-	-	3	-	-	-	1	1	-	-	-	-
Dermatitis, Granulomatous	108	7	5	9	13	10	10	8	7	11	11	7	10
Dermatitis, Lupus Erythematosus	10	1	-	1	1	-	1	-	-	2	2	2	-
Dermatitis, Mycotic	7	-	-	1	3	1	-	-	1	-	-	1	-
Dermatitis, Pemphigus	6	-	1	2	1	-	-	-	1	1	-	-	-
Dermatitis, Pododermatitis	24	2	1	4	-	1	1	-	2	2	-	3	8
Dermatitis, Staphylococcus	6	-	2	1	-	1	-	-	-	1	1	-	-
Dermatitis, Ulcerative	2	-	-	2	-	-	-	-	-	-	-	-	-
Dermatosis, Endocrine	23	2	1	-	1	-	2	3	3	2	2	2	5
Granulation Tissue	14	2	1	3	-	1	-	-	-	2	1	4	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Hematoma	9	1	-	-	-	-	1	2	1	1	3	-	-
Mammary-Duct Ectasia	7	-	-	-	1	-	2	2	-	-	-	1	1
Mammary-Hyperplasia	10	2	-	-	1	1	-	-	2	2	-	-	2
Mammary-Mastitis	10	2	3	1	-	-	-	2	-	1	-	-	1
Mammary-Neoplasm	6	-	2	-	-	-	1	1	-	-	1	1	-
Mammary-Neoplasm, Adenoma	58	4	4	6	8	2	7	6	1	7	5	2	6
Mammary-Neoplasm, Adenocarcinoma	108	10	4	10	9	9	9	12	10	9	6	9	11
Mammary-Neoplasm, Mastocytoma	2	-	-	-	-	-	-	-	-	-	-	1	1
Mammary-Neoplasm, Mixed Tumor-Benign	37	1	4	5	4	1	1	4	5	1	3	6	2
Mammary-Neoplasm, Mixed Tumor-Malignant	24	2	2	1	3	1	1	-	1	4	2	2	5
Mammary-Neoplasm, Myoepithelioma	2	-	-	-	-	1	1	-	-	-	-	-	-
Mammary-Neoplasm, Osteosarcoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Mammary-Neoplasm, Sarcoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Nail Bed-Neoplasm	2	-	-	-	1	-	-	-	-	-	-	-	1
Nail Bed-Perionychia	1	-	-	-	-	-	1	-	-	-	-	-	-
Neoplasm	18	3	2	2	4	1	1	-	1	1	-	1	2
Neoplasm, Adenoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Neoplasm, Anal Sac Carcinoma	5	-	2	-	-	-	1	-	-	-	-	2	-
Neoplasm, Apocrine Adenocarcinoma	4	2	-	-	-	-	-	-	-	-	-	-	2
Neoplasm, Apocrine Adenoma	5	-	-	-	2	-	-	-	-	-	-	1	2
Neoplasm, Basal Cell Tumor	53	-	5	4	4	4	4	8	4	3	7	3	7
Neoplasm, Carcinoma	16	-	-	3	2	3	2	2	1	1	-	1	1
Neoplasm, Fibroma	39	1	5	1	3	6	2	3	2	5	4	7	-
Neoplasm, Fibropapilloma	2	1	1	-	-	-	-	-	-	-	-	-	-
Neoplasm, Fibrosarcoma	33	2	2	3	4	3	2	4	1	3	4	3	2
Neoplasm, Hemangioma	33	4	1	1	3	4	3	4	3	2	2	4	2
Neoplasm, Hemangiopericytoma	46	1	3	3	2	7	1	4	3	2	7	6	7
Neoplasm, Hemangiosarcoma	10	-	2	2	-	1	-	1	1	1	1	-	1
Neoplasm, Histiocytoma	157	8	10	10	9	14	20	11	23	11	15	15	11
Neoplasm, Intracutaneous Cornifying Epithelioma	16	2	1	1	2	2	1	1	-	5	-	-	1
Neoplasm, Leiomyoma	2	-	-	1	-	-	-	-	-	-	1	-	-
Neoplasm, Lipoma	91	9	4	8	10	3	5	14	9	5	10	5	9
Neoplasm, Liposarcoma	3	1	-	-	-	-	-	1	1	-	-	-	-
Neoplasm, Lymphosarcoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Mastocytoma	134	15	12	8	12	7	4	11	11	11	16	11	16
Neoplasm, Melanoma	54	5	5	2	10	3	3	7	2	1	8	5	3
Neoplasm, Myxosarcoma	7	-	-	-	-	-	1	1	-	2	-	1	2
Neoplasm, Papilloma	22	5	-	1	4	1	1	-	-	3	3	3	1
Neoplasm, Perianal Gland Adenoma	84	9	10	5	7	12	5	6	5	4	5	9	7
Neoplasm, Perianal Gland Carcinoma	12	1	1	2	1	1	1	-	-	3	1	-	1
Neoplasm, Pilomatricoma	7	4	-	1	1	-	1	-	-	-	-	-	-
Neoplasm, Rhabdomyosarcoma	2	-	-	-	-	-	-	-	-	1	-	-	1

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Neoplasm, Sarcoma, Anaplastic	42	1	3	2	2	4	2	3	2	5	8	5	5
Neoplasm, Schwannoma	2	1	-	-	-	-	1	-	-	-	-	-	-
Neoplasm, Sebaceous Gland Adenocarcinoma	3	-	-	1	1	-	-	-	-	-	-	-	1
Neoplasm, Sebaceous Gland Adenoma	81	7	6	5	9	7	1	4	8	6	3	14	11
Neoplasm, Squamous Cell Carcinoma	15	2	-	1	-	2	1	1	-	3	2	-	3
Neoplasm, Trichoepithelioma	25	-	-	4	-	2	4	4	4	2	-	3	2
Parakeratosis	1	-	-	-	-	-	-	-	-	1	-	-	-
Parasitism, Fleas	3	-	1	1	-	-	-	-	-	-	-	-	1
Parasitism, Lice	1	-	-	1	-	-	-	-	-	-	-	-	-
Parasitism, Mites	9	1	1	-	-	3	1	2	1	-	-	-	-
Seroma	1	-	-	-	-	-	-	-	-	1	-	-	-
Skin-Microbiologic Exam	2	1	-	-	-	-	1	-	-	-	-	-	-
Steatitis	18	2	-	-	2	3	1	1	2	3	3	1	-
2 Musculoskeletal													
Arthritis	2	-	-	-	-	-	1	-	-	1	-	-	-
Arthritis, <i>E. coli</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
Arthritis, Non-suppurative	1	-	-	-	-	-	1	-	-	-	-	-	-
Arthritis, Suppurative	1	-	-	-	-	-	-	-	-	1	-	-	-
Lameness	3	-	-	-	1	1	1	-	-	-	-	-	-
Muscle-Myodegeneration	4	-	3	-	-	-	-	-	-	-	1	-	-
Muscle-Neoplasm, Rhabdomyosarcoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Neoplasm	6	-	-	1	1	-	2	-	1	-	-	-	1
Neoplasm, Chondroma	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm, Chondrosarcoma	2	-	-	-	-	-	1	-	-	-	-	1	-
Neoplasm, Osteosarcoma	22	1	4	-	3	2	1	1	2	3	1	2	2
Neoplasm, Sarcoma	2	-	-	-	-	-	-	1	-	1	-	-	-
Osteodystrophy	1	-	-	-	-	-	1	-	-	-	-	-	-
Synovitis	2	-	-	-	-	-	-	1	-	1	-	-	-
3 Respiratory													
Respiratory Disorders, Total Cases	93	9	7	10	8	2	12	12	8	5	10	6	4
Lung-Bronchitis	2	-	1	-	-	-	1	-	-	-	-	-	-
Lung-Congestion	2	-	-	-	-	-	-	-	1	-	1	-	-
Lung-Edema	19	2	1	3	2	-	2	1	-	-	4	2	2
Lung-Hemorrhage	6	1	-	2	1	-	1	-	-	-	1	-	-
Lung-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung-Neoplasm, Carcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, <i>Bordetella sp.</i>	5	1	-	-	1	-	-	2	1	-	-	-	-
Lung-Pneumonia, <i>Bordetella bronchiseptica</i>	1	-	-	-	-	-	-	-	-	-	1	-	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Lung-Pneumonia, Broncho (Idiopathic)	16	1	2	1	1	-	3	2	-	2	1	2	1
Lung-Pneumonia, <i>E. coli</i>	6	-	-	1	-	-	1	2	1	-	-	-	1
Lung-Pneumonia, Foreign Body	5	-	2	-	1	1	-	1	-	-	-	-	-
Lung-Pneumonia, Granulomatous	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Interstitial	6	1	-	-	1	1	-	1	1	1	-	-	-
Lung-Pneumonia, Klebsiella	2	1	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	4	-	1	2	-	-	-	1	-	-	-	-	-
Lung-Pneumonia, Streptococcus	4	-	-	1	-	-	-	-	-	2	1	-	-
Lung-Thrombosis	1	-	-	-	-	-	1	-	-	-	-	-	-
Nasal-Neoplasm, Adenocarcinoma	2	-	-	-	-	-	1	-	1	-	-	-	-
Nasal-Rhinitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Pleuritis	4	1	-	-	-	-	-	1	1	-	-	1	-
Respiratory Nasal Swab (Idiopathic)	3	-	-	-	1	-	-	1	1	-	-	-	-
Respiratory Nasal Swab, <i>Pasteurella multocida</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Trachea-Collapse	1	-	-	-	-	-	-	-	1	-	-	-	-
4 Cardiovascular													
Atherosclerosis	1	-	-	1	-	-	-	-	-	-	-	-	-
Blood Vessel Disorder	3	-	1	-	-	-	-	1	-	-	-	1	-
Heart-Anomaly	2	-	-	-	-	-	-	-	-	-	1	-	1
Heart-Cardiomyopathy	2	-	-	-	-	1	-	-	-	-	-	1	-
Heart-Endocardiosis	7	1	1	-	-	-	1	1	-	-	-	-	3
Heart-Endocarditis	1	-	1	-	-	-	-	-	-	-	-	-	-
Heart-Myocarditis	7	1	1	2	1	-	-	-	1	-	-	1	-
Heart-Myocardial Degeneration	4	-	1	-	1	-	-	-	-	-	-	-	2
Heart-Neoplasm, Hemangiosarcoma	8	-	1	-	-	3	-	1	-	-	1	1	1
Heart Failure, Acute	7	-	-	-	4	-	-	1	1	-	1	-	-
Heart Failure, Chronic	5	-	-	-	-	1	-	2	1	-	1	-	-
Hemopericardium	1	-	-	-	1	-	-	-	-	-	-	-	-
Neoplasm	1	-	-	-	-	-	-	-	-	-	-	-	1
Parasitism, Dirofilaria	6	-	-	-	1	-	-	1	1	1	1	-	1
5 Hemic/Lymphatic													
Anemia	5	-	2	1	1	-	-	-	-	-	-	1	-
Anemia, Hemolytic	7	-	-	-	3	-	1	-	-	-	1	2	-
Coagulation Disorder	8	1	-	1	2	-	1	-	2	-	-	1	-
Hemorrhage, Generalized	6	1	1	-	1	-	2	-	-	1	-	-	-
Lymphangiectasis	1	-	-	-	-	-	-	-	-	-	-	1	-
Lymph Node-Hyperplasia	17	1	2	1	-	1	1	1	1	2	2	1	4
Lymph Node-Lymphadenitis	10	-	3	1	-	-	-	-	1	2	-	1	2
Neoplasm, Lymphosarcoma	111	11	14	9	12	1	10	14	7	10	3	11	9
Neoplasm, Myeloproliferative Disease	7	1	-	-	-	1	-	2	-	1	1	1	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Neoplasm, Plasma Cell Tumor	1	1	-	-	-	-	-	-	-	-	-	-	-
Spleen-Hematoma	4	-	-	1	-	-	1	-	-	1	-	-	1
Spleen-Infarction	3	-	-	2	1	-	-	-	-	-	-	-	-
Spleen-Neoplasm	3	-	-	1	-	-	-	-	-	-	1	1	-
Spleen-Neoplasm, Hemangiosarcoma	19	1	1	1	1	1	1	1	3	2	2	3	2
Spleen-Nodular Hyperplasia	5	-	-	1	-	2	-	-	-	1	-	1	-
Spleen-Splenitis	3	-	-	-	-	-	-	-	1	-	2	-	-
Thymus-Neoplasm	1	-	-	-	-	-	1	-	-	-	-	-	-
Thymus-Neoplasm, Thymoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Tonsil-Neoplasm, Squamous Cell Carcinoma	3	-	1	-	-	-	-	-	-	1	-	-	1
6 Digestive													
Bile Duct-Neoplasm	1	-	-	-	-	-	-	-	-	1	-	-	-
Feces-Microbiologic Exam	81	15	5	10	3	3	2	5	5	7	8	7	11
Intestine-Colitis	5	1	1	-	-	2	-	1	-	-	-	-	-
Intestine-Enteritis, Atrophic	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Enteritis, Campylobacter	2	-	-	-	-	-	-	-	1	-	1	-	-
Intestine-Enteritis, Coronavirus	10	-	1	1	1	-	-	1	2	1	2	1	-
Intestine-Enteritis, Enterovirus	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Enteritis, Eosinophilic	2	-	-	2	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, <i>E. coli</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, Hemorrhagic	2	-	-	1	-	-	-	-	1	-	-	-	-
Intestine-Enteritis, Idiopathic	13	2	-	2	-	-	1	3	-	1	1	1	2
Intestine-Enteritis, Necrotic	5	-	-	2	1	-	-	-	1	1	-	-	-
Intestine-Enteritis, Parvovirus	166	13	24	10	12	8	11	12	15	12	19	13	17
Intestine-Enteritis, Rotavirus	3	-	-	-	1	1	-	-	-	-	-	-	1
Intestine-Enteritis, Salmonella	2	-	-	1	-	-	-	-	-	-	-	1	-
Intestine-Hemorrhage	8	1	2	-	-	2	-	1	1	-	1	-	-
Intestine-Infarction	3	-	-	1	-	-	1	-	-	-	1	-	-
Intestine-Intussusception	4	1	-	1	1	1	-	-	-	-	-	-	-
Intestine-Neoplasm	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Neoplasm, Adenocarcinoma	2	-	-	1	-	-	-	-	-	1	-	-	-
Intestine-Neoplasm, Carcinoma	4	-	1	-	1	1	-	-	-	1	-	-	-
Intestine-Neoplasm, Leiomyoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Neoplasm, Leiomyosarcoma	2	-	-	-	-	1	-	-	1	-	-	-	-
Intestine-Neoplasm, Polyp	4	-	1	-	1	-	-	1	-	1	-	-	-
Intestine-Neoplasm, Sarcoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Ascaris	5	1	-	-	-	-	1	-	-	-	-	2	1
Intestine-Parasitism, Cestode	3	1	-	-	1	-	-	-	1	-	-	-	-
Intestine-Parasitism, Coccidia	8	1	1	-	-	1	1	1	-	2	1	-	-
Intestine-Parasitism, Cryptosporidia	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Giardia	3	-	-	-	-	-	-	-	-	-	2	1	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Intestine-Parasitism, Nematode	2	-	1	-	-	-	-	-	1	-	-	-	-
Intestine-Parasitism, Strongyloides	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Volvulus	7	-	-	-	1	1	1	-	2	2	-	-	-
Lip-Chelitis	4	1	-	-	-	1	1	-	-	-	-	-	1
Lip-Neoplasm	8	-	-	1	1	1	-	1	-	2	1	1	-
Lip-Neoplasm, Fibroma	1	1	-	-	-	-	-	-	-	-	-	-	-
Lip-Neoplasm, Fibrosarcoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Lip-Neoplasm, Histiocytoma	11	-	-	-	-	2	3	-	1	2	1	-	2
Lip-Neoplasm, Mastocytoma	2	1	-	-	-	-	-	-	-	-	-	-	1
Lip-Neoplasm, Melanoma	12	-	2	-	2	1	-	-	-	1	-	2	4
Lip-Neoplasm, Sarcoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Lip-Neoplasm, Squamous Cell Carcinoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Cirrhosis	5	1	-	1	1	-	1	-	-	-	-	-	1
Liver-Hepatitis	12	3	-	1	2	-	-	1	1	-	-	2	2
Liver-Hepatitis	25	2	1	3	-	5	1	2	4	4	1	1	1
Liver-Lipidosis	10	-	-	1	-	2	-	2	-	1	-	2	2
Liver-Neoplasm	2	2	-	-	-	-	-	-	-	-	-	-	-
Liver-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Liver-Neoplasm, Hepatoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Oral-Gingivitis	3	-	-	-	-	-	-	-	2	-	-	-	1
Oral-Neoplasm	7	-	1	1	1	-	-	1	-	2	1	-	-
Oral-Neoplasm, Carcinoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Oral-Neoplasm, Epulis	82	7	11	6	8	1	6	2	5	8	14	7	7
Oral-Neoplasm, Fibrosarcoma	6	-	-	1	2	1	-	1	-	-	-	1	-
Oral-Neoplasm, Mastocytoma	2	-	-	-	-	-	-	-	-	-	1	1	-
Oral-Neoplasm, Melanoma	24	1	3	2	2	-	1	4	2	3	2	4	-
Oral-Neoplasm, Osteosarcoma	3	-	-	-	1	-	-	-	-	1	1	-	-
Oral-Neoplasm, Papilloma	7	-	-	2	-	-	-	1	1	-	2	-	1
Oral-Neoplasm, Sarcoma	4	2	-	1	-	-	1	-	-	-	-	-	-
Oral-Neoplasm, Squamous Cell Carcinoma	12	-	2	1	1	-	2	1	-	1	1	1	2
Oral-Stomatitis	11	-	-	-	2	2	-	1	2	-	2	1	1
Pancreas-Atrophy	1	-	-	-	-	-	-	-	-	-	1	-	-
Pancreas-Pancreatitis	11	1	-	1	-	2	1	1	-	-	1	1	3
Rectum-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Rectum-Neoplasm, Polyp	1	-	-	-	-	-	-	-	-	-	-	1	-
Salivary-Cyst	2	1	-	-	-	-	-	-	-	-	1	-	-
Salivary Gland-Neoplasm	3	-	2	-	-	-	-	1	-	-	-	-	-
Stomach-Dilatation	3	-	-	1	-	-	-	-	-	2	-	-	-
Stomach-Gastritis	2	1	-	-	-	-	1	-	-	-	-	-	-
Stomach-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Stomach-Neoplasm, Leiomyoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Stomach-Ulcer	3	-	-	-	1	1	-	-	-	-	1	-	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Stomach-Volvulus	9	1	-	2	-	-	1	-	-	-	3	-	2
7 Urogenital													
Abortion, Bacterial <i>E. coli</i>	2	-	-	-	-	-	2	-	-	-	-	-	-
Abortion, Idiopathic	3	-	-	-	-	1	-	-	-	-	-	-	2
Genital-Bacteriologic Examination	73	1	5	4	9	8	3	5	8	7	8	9	6
Genital-Infertility	1	-	-	-	-	-	-	-	-	-	1	-	-
Kidney-Dysplasia	2	2	-	-	-	-	-	-	-	-	-	-	-
Kidney-Hydronephrosis	2	-	-	-	-	-	-	-	1	-	-	-	1
Kidney-Hypoplasia	1	-	-	-	-	-	-	-	-	-	-	-	1
Kidney-Neoplasm	2	-	-	-	-	-	-	-	-	1	-	1	-
Kidney-Nephritis	7	-	1	3	1	2	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	19	1	3	2	1	4	1	1	1	2	1	2	-
Kidney-Nephritis, Interstitial	1	-	-	-	-	-	-	-	-	-	-	-	1
Kidney-Nephritis, Pyelo	1	-	-	-	-	1	-	-	-	-	-	-	-
Kidney-Nephrosis	16	1	1	1	1	-	2	4	-	1	1	2	2
Ovary-Cyst	4	-	-	1	-	-	-	-	1	-	-	-	2
Ovary-Neoplasm	2	-	1	1	-	-	-	-	-	-	-	-	-
Ovary-Neoplasm, Granulosa Cell Tumor	1	-	-	-	-	-	-	-	-	1	-	-	-
Penis-Neoplasm	2	-	-	-	-	2	-	-	-	-	-	-	-
Prepuce-Neoplasm	2	-	1	-	-	-	-	-	-	-	-	-	-
Prostate-Hyperplasia	1	-	-	1	-	-	-	-	-	-	-	-	-
Prostate-Prostatitis	2	1	-	1	-	-	-	-	-	-	-	-	-
Stillbirth, Idiopathic	5	-	-	1	1	1	-	1	-	-	-	-	1
Testis-Atrophy	4	1	-	-	-	-	-	-	1	-	1	1	-
Testis-Neoplasm, Interstitial Cell Tumor	16	-	-	2	2	-	2	5	1	-	1	1	2
Testis-Neoplasm, Seminoma	9	-	2	1	-	1	-	1	-	2	-	1	1
Testis-Neoplasm, Sertoli Cell Tumor	11	-	3	2	-	-	1	1	-	1	-	1	2
Testis-Orchitis	8	-	3	2	-	-	1	1	-	-	-	-	1
Urinary Bacteriologic Exam	53	4	2	1	3	2	1	9	4	4	12	7	4
Urocyst-Neoplasm	3	-	-	-	-	-	-	-	-	-	1	2	-
Urocyst-Neoplasm, Polyp	3	1	-	-	-	-	-	1	-	-	-	-	1
Urocyst-Neoplasm, Trans, Cell Carcinoma	11	-	-	-	-	2	2	1	1	4	-	-	1
Urocyst-Urocystitis	13	3	1	1	-	1	1	3	2	-	-	-	1
Urocyst-Urolithiasis	4	-	-	1	1	1	-	-	-	-	-	1	-
Uterus-Metritis	7	1	-	-	-	-	1	1	2	-	1	-	1
Uterus-Neoplasm, Adenocarcinoma	2	-	-	-	-	-	-	1	-	1	-	-	-
Uterus-Neoplasm, Leiomyoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Vagina-Neoplasm	3	1	1	-	-	-	-	-	-	-	-	1	-
Vagina-Neoplasm, Fibroleiomyoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Vagina-Neoplasm, Fibrosarcoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Vagina-Vaginitis	1	-	-	1	-	-	-	-	-	-	-	-	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Vulva-Neoplasm	2	-	-	-	-	-	-	-	-	-	2	-	-
8 Endocrine													
Adrenal-Atrophy	1	-	-	-	-	-	-	-	-	-	-	-	1
Adrenal-Necrosis	2	-	1	1	-	-	-	-	-	-	-	-	-
Adrenal-Neoplasm, Adenoma	2	-	2	-	-	-	-	-	-	-	-	-	-
Pituitary-Neoplasm	1	-	-	-	-	-	-	-	-	1	-	-	-
Thyroid-Atrophy	1	-	-	1	-	-	-	-	-	-	-	-	-
Thyroid-Neoplasm	1	-	-	-	-	1	-	-	-	-	-	-	-
Thyroid-Neoplasm, Carcinoma	2	-	-	1	-	-	-	-	-	-	-	1	-
9 Neurological													
Neurological Disorders, Total Cases	73	5	9	2	5	3	8	10	6	3	7	9	6
Brain-Abscess	1	-	-	-	-	-	1	-	-	-	-	-	-
Brain-Anomaly	2	-	1	-	-	-	-	-	1	-	-	-	-
Brain-Hemorrhage	2	-	-	-	-	-	-	-	-	-	-	2	-
Brain-Neoplasm, Meningioma	1	1	-	-	-	-	-	-	-	-	-	-	-
Encephalitis, Distemper	24	1	1	1	2	-	2	5	2	2	3	3	2
Encephalitis, Granulomatous	2	-	2	-	-	-	-	-	-	-	-	-	-
Encephalitis, Listeria	1	-	-	-	-	-	-	-	-	-	-	-	1
Encephalitis, Non-suppurative	4	-	-	1	-	-	-	1	-	-	-	-	2
Encephalitis, Pseudorabies	5	-	-	-	1	-	-	3	1	-	-	-	-
Encephalitis, Rabies	8	-	2	-	2	-	1	-	-	-	2	-	1
Encephalomalacia	1	-	-	-	-	-	1	-	-	-	-	-	-
Encephalopathy	1	-	-	-	-	-	-	-	-	-	-	1	-
Meningitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Meningitis, Suppurative	1	-	-	-	-	1	-	-	-	-	-	-	-
Myelitis, Non-suppurative	2	-	1	-	-	-	-	-	1	-	-	-	-
Myelomalacia	1	-	-	-	-	-	1	-	-	-	-	-	-
Neurological Disorder-Idopathic	18	3	2	-	1	2	2	1	-	1	3	3	-
X Special Senses													
Ear-Dermatitis	5	-	-	1	-	-	-	1	1	-	-	2	-
Ear-Neoplasm	5	-	2	-	-	2	-	1	-	-	-	-	-
Ear-Neoplasm, Basal Cell Tumor	1	-	-	-	-	1	-	-	-	-	-	-	-
Ear-Neoplasm, Carcinoma	2	-	-	-	1	-	-	-	-	-	1	-	-
Ear-Neoplasm, Ceruminous Gland Adenoma	2	-	-	-	-	-	-	-	1	-	1	-	-
Ear-Neoplasm, Ceruminous Gland Carcinoma	2	-	-	-	-	-	-	-	-	-	1	-	1
Ear-Neoplasm, Histiocytoma	33	5	2	1	2	1	1	5	2	4	5	2	3
Ear-Neoplasm, Mastocytoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Ear-Neoplasm, Melanoma	2	1	-	-	-	-	-	-	-	-	-	-	1

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Ear-Neoplasm, Papilloma	1	-	-	-	-	-	1	-	-	-	-	-	-
Ear-Neoplasm, Sebaceous Gland Adenoma	3	-	-	-	-	1	-	1	-	-	-	1	-
Ear-Otitis	55	4	4	3	2	3	3	3	6	5	8	6	8
Eye-Conjunctivitis	3	2	1	-	-	-	-	-	-	-	-	-	-
Eye-Keratitis	3	-	-	1	-	-	1	1	-	-	-	-	-
Eye-Neoplasm	2	-	-	-	-	-	-	-	-	-	-	1	1
Eye-Neoplasm, Melanoma	3	-	1	-	-	-	-	-	-	1	-	-	1
Eye-Ophthalmitis	2	-	-	-	-	2	-	-	-	-	-	-	-
Eyelid-Blepharitis	4	1	-	-	-	-	-	1	1	-	1	-	-
Eyelid-Neoplasm	1	-	-	-	-	-	-	-	-	1	-	-	-
Eyelid-Neoplasm, Melanoma	10	2	-	-	1	1	-	3	-	2	-	-	1
Eyelid-Neoplasm, Papilloma	6	-	2	-	-	-	-	1	-	1	1	-	1
Eyelid-Neoplasm, Sebaceous Gland Adenoma	21	3	-	2	-	3	4	2	2	-	3	-	2

CAPRINE

0 Body as a Whole

Caseous Lymphadenitis	2	-	1	1	-	-	-	-	-	-	-	-	-
Emaciation	1	-	-	-	-	-	-	1	-	-	-	-	-
Sudden Death	1	-	-	-	-	-	-	-	-	-	1	-	-
Tetanus	1	-	-	-	-	-	-	-	-	-	1	-	-
Toxicosis, Plant	1	1	-	-	-	-	-	-	-	-	-	-	-

1 Integumentary

Dermatitis, Focal	1	-	-	-	-	-	-	-	-	-	-	-	1
Parasitism, Lice	1	1	-	-	-	-	-	-	-	-	-	-	-

2 Musculoskeletal

Lameness	2	-	-	-	-	1	-	-	1	-	-	-	-
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3 Respiratory

Lung-Pneumonia, Broncho (Idiopathic)	3	-	-	1	1	-	-	-	1	-	-	-	-
Lung-Pneumonia, <i>Pasteurella hemolytica</i>	3	-	-	-	1	-	-	-	-	-	1	-	1
Lung-Pneumonia, <i>Pasteurella multocida</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Pleuritis	1	-	-	-	-	-	-	1	-	-	-	-	-

4 Cardiovascular

Atherosclerosis	1	-	-	-	-	-	-	-	-	-	-	-	1
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CAPRINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
6 Digestive													
Intestine-Enteritis, <i>E. coli</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Parasitism, <i>Ascaris</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	5	-	-	1	1	-	-	1	-	-	-	-	2
Intestine-Parasitism, Nematode	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Parasitism, Trichostrongyle	2	-	-	1	1	-	-	-	-	-	-	-	-
7 Urogenital													
Abortion, Idiopathic	2	-	-	-	-	-	1	1	-	-	-	-	-
Abortion, Mummified Fetus	1	-	-	-	-	-	-	-	1	-	-	-	-
Abortion, Parasitism, Toxoplasma	2	-	-	-	-	-	-	-	1	-	1	-	-
Kidney-Nephrosis	2	1	-	-	-	-	-	-	-	-	-	-	1
9 Neurological													
Encephalitis, Non-suppurative	1	-	-	-	-	-	-	1	-	-	-	-	-
Meningitis, Suppurative	1	1	-	-	-	-	-	-	-	-	-	-	-
Neurological Disorder-Idiopathic	1	-	-	-	1	-	-	-	-	-	-	-	-
Polioencephalomalacia	2	-	-	-	-	-	-	2	-	-	-	-	-
X Special Senses													
Eye-Conjunctivitis	1	-	-	-	-	-	-	1	-	-	-	-	-

EQUINE

0 Body as a Whole													
Amyloidosis	1	-	-	-	-	-	-	-	-	-	-	1	-
Anomaly	1	-	-	-	-	-	-	-	-	1	-	-	-
Grain Overload	4	-	1	1	1	-	-	-	-	-	-	1	-
Neonatal Death	3	-	-	-	-	-	-	-	-	1	-	1	1
Neoplasm, Lipoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Peritonitis	3	1	-	-	-	-	-	1	1	-	-	-	-
Septicemia, <i>Actinobacillus equuli</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Septicemia, <i>Bacillus pilliformis</i> -Tyzzer's	2	-	-	-	-	-	-	1	-	-	-	1	-
Septicemia, <i>E. coli</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Septicemia, <i>Klebsiella</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Septicemia, <i>Salmonella</i>	2	1	-	-	-	-	-	-	-	1	-	-	-
Septicemia, <i>Streptococcus</i>	3	1	-	-	1	-	1	-	-	-	-	-	-
Sudden Death	5	-	1	-	-	-	3	1	-	-	-	-	-
Toxicosis, Plant	1	-	-	1	-	-	-	-	-	-	-	-	-

EQUINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
1 Integumentary													
Abscess	2	-	-	-	-	2	-	-	-	-	-	-	-
Cellulitis	1	-	-	-	-	-	-	-	-	-	1	-	-
Cyst, Adnexal	1	-	-	1	-	-	-	-	-	-	-	-	-
Dermal, Fibrosis	4	-	-	-	1	-	-	-	-	-	-	3	-
Dermatitis, Allergic/Atopic	1	-	-	1	-	-	-	-	-	-	-	-	-
Dermatitis, Diffuse	1	-	-	-	-	-	-	-	-	-	1	-	-
Dermatitis, Eosinophilic	3	-	-	1	-	-	2	-	-	-	-	-	-
Dermatitis, Focal	6	2	-	-	1	1	-	1	-	-	-	-	1
Dermatitis, Granulomatous	4	-	1	-	1	1	-	-	-	-	-	1	-
Dermatitis, Mycotic	1	-	-	1	-	-	-	-	-	-	-	-	-
Dermatitis, Staphylococcus	1	1	-	-	-	-	-	-	-	-	-	-	-
Granulation Tissue	6	-	-	-	1	-	-	-	-	-	2	2	1
Neoplasm	3	-	-	2	-	-	-	-	-	-	1	-	-
Neoplasm, Fibroma	4	2	1	-	-	1	-	-	-	-	-	-	-
Neoplasm, Fibrosarcoma	2	1	1	-	-	-	-	-	-	-	-	-	-
Neoplasm, Hemangioma	1	-	-	-	-	-	-	-	-	1	-	-	-
Neoplasm, Hemangiosarcoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Neoplasm, Mastocytoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Melanoma	3	-	-	-	-	-	-	-	-	1	-	-	2
Neoplasm, Papilloma	1	-	-	-	-	-	-	-	-	-	1	-	-
Neoplasm, Sarcoid	20	1	4	2	2	-	-	1	1	3	3	1	2
Neoplasm, Squamous Cell Carcinoma	2	-	-	-	-	-	-	-	-	1	-	-	1
Nodular Necrobiosis	8	2	1	-	2	1	-	-	1	1	-	-	-
Skin-Microbiologic Exam	1	-	-	-	-	-	-	1	-	-	-	-	-
2 Musculoskeletal													
Arthritis, Suppurative	1	-	-	1	-	-	-	-	-	-	-	-	-
Fracture	2	-	-	-	-	-	-	-	-	-	-	-	2
Laminitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Muscle-Myodegeneration	1	-	1	-	-	-	-	-	-	-	-	-	-
Muscle-Myositis	3	-	-	-	-	1	-	-	-	-	1	-	1
3 Respiratory													
Respiratory Disorders, Total Cases	20	3	2	2	3	-	2	2	-	-	3	1	2
Lung-Congestion	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Edema	4	-	-	-	1	-	1	-	-	-	1	1	-
Lung-Hemorrhage	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Actinobacillus equuli</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, Broncho (Idiopathic)	3	1	-	-	-	-	-	1	-	-	1	-	-
Lung-Pneumonia, Viral Rhinopneumonitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Rhodococcus equi</i>	5	-	2	-	-	-	1	-	-	-	-	-	2
Lung-Pneumonia, Salmonella	2	-	1	-	-	-	-	-	-	-	1	-	-

EQUINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Lung-Pneumonia, Streptococcus	3	-	-	1	-	-	-	1	-	-	-	-	1
Pleuritis	2	-	-	1	1	-	-	-	-	-	-	-	-
Respiratory Nasal Swab (Idiopathic)	2	1	-	-	1	-	-	-	-	-	-	-	-
4 Cardiovascular													
Arteritis, Verminous	1	1	-	-	-	-	-	-	-	-	-	-	-
Blood Vessel Disorder	1	1	-	-	-	-	-	-	-	-	-	-	-
Heart-Myocardial Degeneration	1	-	-	-	-	-	-	-	1	-	-	-	-
Heart-Pericarditis	1	-	-	-	-	-	-	-	-	-	-	-	1
Heart Failure, Acute	1	1	-	-	-	-	-	-	-	-	-	-	-
Heart Failure, Chronic	1	-	-	1	-	-	-	-	-	-	-	-	-
5 Hemic/Lymphatic													
Anemia, Hemolytic	1	-	-	-	-	-	-	-	-	1	-	-	-
Hemorrhage, Generalized	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Lymphosarcoma	2	-	-	-	-	-	-	1	-	-	-	1	-
6 Digestive													
Feces-Microbiologic Exam	17	1	2	4	3	-	-	-	1	2	-	2	2
Intestine-Colitis	3	1	-	1	-	-	1	-	-	-	-	-	-
Intestine-Colitis X	3	-	-	-	1	1	1	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	5	-	4	-	-	-	-	-	-	-	-	-	1
Intestine-Enteritis, Rotavirus	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Enteritis, Salmonella	5	-	1	-	-	1	-	-	-	-	2	1	-
Intestine-Infarction	4	1	-	1	-	-	-	-	2	-	-	-	-
Intestine-Intussusception	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	3	-	-	-	1	1	-	-	-	-	1	-	-
Intestine-Parasitism, Parascaris	2	-	-	1	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Strongyloides Unidentified	6	-	1	-	1	1	1	1	-	-	-	1	-
Intestine-Parasitism, Strongyloides	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Trichostrongyle	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Torsion	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Volvulus	1	-	-	-	-	-	-	-	-	-	-	1	-
Lip-Chelitis	3	-	-	-	-	-	-	-	1	-	2	-	-
Lip-Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Liver-Cirrhosis	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	2	1	-	-	-	-	-	-	-	-	-	1	-
Stomach-Rupture	2	-	-	1	-	-	-	-	-	-	-	-	1
Stomach-Ulcer	1	1	-	-	-	-	-	-	-	-	-	-	-

EQUINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
7 Urogenital													
Abortions, Total Cases	33	-	1	-	1	4	5	8	5	4	2	2	1
Abortion	1	-	-	-	-	-	-	-	-	-	-	1	-
Abortion, Anomaly	1	-	-	-	-	1	-	-	-	-	-	-	-
Abortion, Idiopathic	26	-	-	-	1	3	4	8	4	3	1	1	1
Abortion, Mummified Fetus	1	-	-	-	-	-	1	-	-	-	-	-	-
Abortion, Placentitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Abortion, Rhinopneumonitis, Equine Viral	1	-	-	-	-	-	-	-	1	-	-	-	-
Abortion, <i>Streptococcus zooepidemicus</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Abortion, Twins	1	-	-	-	-	-	-	-	-	-	1	-	-
Genital-Bacteriologic Examination	44	8	3	1	-	-	-	7	3	5	4	7	6
Genital-Infertility	1	-	1	-	-	-	-	-	-	-	-	-	-
Kidney-Nephritis	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Nephrosis	4	-	-	-	2	1	-	-	-	-	1	-	-
Prepuce-Neoplasm	2	-	-	-	-	-	-	-	-	-	-	2	-
Prepuce-Neoplasm, Squamous Cell Carcinoma	-	-	-	-	-	-	-	1	-	-	-	-	-
Stillbirth, Idiopathic	3	-	-	-	-	-	-	-	-	2	-	1	-
Urinary Bacteriologic Exam	1	-	-	-	-	-	-	-	-	1	-	-	-
Uterus-Endometrial Biopsy	8	2	-	1	2	-	-	-	-	1	1	1	-
Vulva-Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	1	-	-	-	-
8 Endocrine													
Pituitary-Neoplasm, Adenoma	2	-	-	-	-	-	-	2	-	-	-	-	-
9 Neurological													
Brain-Hemorrhage	1	-	-	-	-	-	-	-	-	-	-	1	-
Encephalitis, Rabies	2	-	-	1	-	-	-	-	-	-	-	1	-
Neurological Disorder-Idiopathic	4	-	-	-	-	-	-	-	1	1	-	1	1
X Special Senses													
Ear-Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Eyelid-Neoplasm	2	1	-	-	-	-	-	1	-	-	-	-	-
Eyelid-Neoplasm, Papilloma	1	-	-	-	-	-	1	-	-	-	-	-	-
Eyelid-Neoplasm, Sarcoid	4	1	-	-	-	-	-	3	-	-	-	-	-
Eyelid-Neoplasm, Squamous Cell Carcinoma	4	-	-	1	-	-	-	1	-	1	1	-	-

FELINE

0 Body as a Whole

Amyloidosis	4	1	-	-	2	-	-	-	-	1	-	-	-
Anomaly	4	1	-	-	-	1	1	1	-	-	-	-	-
Chlamydiosis	3	-	-	-	-	-	-	-	2	-	-	-	1

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Chylothorax	1	-	-	1	-	-	-	-	-	-	-	-	-
Emaciation	3	1	-	2	-	-	-	-	-	-	-	-	-
Feline Infectious Peritonitis	18	2	1	1	2	2	-	1	-	2	2	3	2
Feline Leukemia	2	2	-	-	-	-	-	-	-	-	-	-	-
Hernia	1	-	-	-	1	-	-	-	-	-	-	-	-
Hernia, Diaphragmatic	1	-	-	-	-	-	-	-	-	-	-	1	-
Icterus	5	-	1	-	-	1	-	-	2	-	-	1	-
Infectious Feline Panleukopenia	26	4	4	4	2	2	-	2	4	1	-	1	2
Mineralization	2	-	-	-	-	-	-	-	1	-	-	1	-
Mycosis, Systemic, Blastomyces	1	-	-	-	1	-	-	-	-	-	-	-	-
Mycosis, Systemic, Cryptococcus	4	-	-	-	-	-	-	-	1	-	-	1	2
Neonatal Death	3	-	-	-	-	-	-	1	-	1	1	-	-
Neoplasm, Carcinoma	5	-	1	-	-	-	1	2	1	-	-	-	-
Neoplasm, Mastocytoma, Metastatic	1	-	-	-	-	1	-	-	-	-	-	-	-
Peritonitis	4	-	-	-	1	1	1	-	-	1	-	-	-
Pleural Effusion	4	-	-	2	-	-	-	-	-	-	2	-	-
Polyserositis	2	-	-	-	-	-	-	-	-	-	-	1	1
Pyothorax	6	-	-	-	1	-	2	1	-	1	-	1	-
Septicemia, Bacterial	3	1	1	-	-	-	-	-	-	-	1	-	-
Septicemia, <i>E. coli</i>	2	1	-	-	-	-	-	-	-	-	1	-	-
Septicemia, Klebsiella	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, Pseudomonas	1	-	-	1	-	-	-	-	-	-	-	-	-
Septicemia, Salmonella	1	1	-	-	-	-	-	-	-	-	-	-	-
Sudden Death	19	2	-	1	1	2	2	3	1	2	3	-	2
Toxicosis, Ethylene Glycol	6	-	2	-	1	1	-	1	1	-	-	-	-
Toxicosis, Lead	4	1	-	-	2	1	-	-	-	-	-	-	-
Toxicosis, Miscellaneous	2	1	-	-	-	-	-	-	-	-	-	-	1
Toxoplasmosis	2	1	-	1	-	-	-	-	-	-	-	-	-
Trauma	7	-	-	-	2	1	-	-	-	-	-	1	3
1 <u>Integumentary</u>													
Abscess	4	1	-	2	-	-	-	-	-	-	1	-	-
Alopecia	1	-	-	-	-	-	-	1	-	-	-	-	-
Cellulitis	3	-	1	1	-	-	-	-	-	-	-	-	1
Cyst, Adnexal	8	-	-	1	-	-	-	1	1	4	1	-	-
Dermal, Fibrosis	2	-	-	-	-	-	1	-	-	-	-	1	-
Dermatitis, Allergic/Atopic	11	1	-	-	1	-	-	2	1	2	1	2	1
Dermatitis, Bacterial	3	-	-	-	-	1	-	-	1	-	-	1	-
Dermatitis, Diffuse	2	-	-	-	-	-	-	-	2	-	-	-	-
Dermatitis, Eosinophilic	4	-	-	1	1	-	-	-	-	1	-	-	1
Dermatitis, Eosinophilic Granuloma	16	2	2	1	1	3	-	3	-	1	-	2	1
Dermatitis, Focal	20	-	1	2	1	3	4	3	1	-	-	3	2
Dermatitis, Granulomatous	8	1	1	-	1	-	-	1	1	-	1	1	1

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Dermatitis, Mycotic	2	-	-	-	-	-	-	1	-	-	-	-	1
Dermatitis, Pemphigus	1	-	-	-	-	-	-	-	1	-	-	-	-
Dermatitis, Podo	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Ulcerative	1	-	-	1	-	-	-	-	-	-	-	-	-
Dermatosis, Endocrine	1	-	-	-	-	-	1	-	-	-	-	-	-
Granulation Tissue	1	-	1	-	-	-	-	-	-	-	-	-	-
Mammary-Duct Ectasia	4	-	-	-	-	1	-	-	-	-	-	-	3
Mammary-Hyperplasia	6	-	-	-	-	-	-	3	-	2	-	-	1
Mammary-Mastitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Mammary-Neoplasm	1	-	-	-	-	-	-	-	-	-	-	-	1
Mammary-Neoplasm, Adenoma	3	-	-	-	1	-	-	1	-	-	-	1	-
Mammary-Neoplasm, Adenocarcinoma	29	3	3	3	2	2	-	2	2	3	2	4	3
Mammary-Neoplasm, Sarcoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm	2	-	-	-	1	-	-	-	-	-	1	-	-
Neoplasm, Apocrine Adenocarcinoma	2	-	-	-	-	-	-	-	1	-	-	-	1
Neoplasm, Apocrine Adenoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Neoplasm, Basal Cell Tumor	23	1	1	1	3	1	1	1	4	4	4	1	2
Neoplasm, Carcinoma	11	-	-	1	-	1	2	-	2	-	1	2	2
Neoplasm, Fibroma	2	-	-	-	1	-	-	-	-	-	-	-	1
Neoplasm, Fibrosarcoma	14	1	1	-	-	-	2	2	2	2	-	2	2
Neoplasm, Hemangioma	2	-	-	-	-	-	1	-	1	-	-	-	-
Neoplasm, Leiomyoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm, Lipoma	9	1	1	2	-	-	-	-	-	1	1	-	3
Neoplasm, Mastocytoma	37	1	4	1	7	1	2	3	5	7	4	1	1
Neoplasm, Melanoma	2	-	-	-	-	-	-	-	-	1	1	-	-
Neoplasm, Perianal Gland Carcinoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Neoplasm, Rhabdomyosarcoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Neoplasm, Sebaceous Gland Adenoma	4	-	1	-	1	-	-	-	1	1	-	-	-
Neoplasm, Squamous Cell Carcinoma	6	-	-	1	1	-	-	-	-	-	2	2	-
Neoplasm, Trichoepithelioma	1	-	-	-	1	-	-	-	-	-	-	-	-
Parasitism, Fleas	2	1	-	-	-	-	-	1	-	-	-	-	-
Steatitis	5	-	-	-	1	1	-	-	1	-	1	-	1
2 Musculoskeletal													
Arthritis, Suppurative	1	-	-	1	-	-	-	-	-	-	-	-	-
Fracture	1	-	-	-	-	-	-	-	-	-	-	-	1
Neoplasm	3	-	-	2	-	-	1	-	-	-	-	-	-
Neoplasm, Osteoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Neoplasm, Osteosarcoma	7	1	-	-	-	1	1	2	-	-	-	1	1
Neoplasm, Sarcoma	2	-	-	-	-	-	-	-	-	1	-	-	1

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
3 Respiratory													
Respiratory Disorders, Total Cases	70	6	11	6	7	3	2	5	8	5	6	7	4
Asphyxiation	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Bronchitis	3	-	1	-	1	1	-	-	-	-	-	-	-
Lung-Edema	10	-	3	2	2	-	1	2	-	-	-	-	-
Lung-Emphysema	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Neoplasm, Carcinoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Neoplasm, Carcinoma, Metastatic	1	-	-	-	-	-	-	-	-	1	-	-	-
Lung-Pneumonia	2	1	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Actinomyces pyogenes</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Lung-Pneumonia, <i>Bordetella sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, <i>Bordetella bronchiseptica</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, Broncho (Idiopathic)	13	1	2	1	1	-	-	-	1	1	1	3	2
Lung-Pneumonia, Calici Virus	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, <i>E. coli</i>	6	1	-	-	1	-	-	-	-	1	2	1	-
Lung-Pneumonia, Foreign Body	3	-	-	-	-	-	-	1	1	-	-	-	1
Lung-Pneumonia, Interstitial	2	-	1	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella hemolytica</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	4	1	-	1	1	-	-	1	-	-	-	-	-
Lung-Pneumonia, Streptococcus	2	-	1	-	-	1	-	-	-	-	-	-	-
Pleuritis	3	1	1	-	-	-	-	-	-	1	-	-	-
Respiratory Nasal Swab (Idiopathic)	8	1	-	-	-	-	1	-	5	-	1	-	-
Rhinotracheitis, Feline Viral	3	-	1	-	-	-	-	1	1	-	-	-	-
Sinusitis	2	-	-	-	1	-	-	-	-	-	1	-	-
Trachea-Tracheitis	2	-	-	1	-	-	-	-	-	1	-	-	-
4 Cardiovascular													
Atherosclerosis	2	-	-	-	-	-	-	-	-	-	-	1	1
Blood Vessel Disorder	1	-	1	-	-	-	-	-	-	-	-	-	-
Heart-Cardiomyopathy	15	-	1	1	2	1	1	-	1	3	1	4	-
Heart-Myocarditis	2	-	-	-	-	-	-	-	-	1	1	-	-
Heart-Myocardial Degeneration	3	1	-	-	-	1	-	-	-	-	1	-	-
Heart Failure, Acute	3	-	-	-	1	-	-	-	-	2	-	-	-
Heart Failure, Chronic	1	-	-	-	-	-	-	-	-	-	1	-	-
5 Hemic/Lymphatic													
Anemia	5	-	1	-	-	-	-	2	1	-	1	-	-
Anemia, Hemolytic	1	-	-	-	1	-	-	-	-	-	-	-	-
Anemia, Regenerative	1	-	1	-	-	-	-	-	-	-	-	-	-
Hemorrhage, Focal	1	-	-	-	-	-	1	-	-	-	-	-	-
Hemorrhage, Generalized	3	-	1	1	1	-	-	-	-	-	-	-	-
Lymph Node-Hyperplasia	5	1	-	1	-	1	-	1	-	-	-	-	1

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Lymph Node-Lymphadenitis	4	-	-	1	-	-	1	1	-	-	-	1	-
Neoplasm, Lymphosarcoma	24	-	1	2	1	1	4	2	1	3	3	3	3
Neoplasm, Myeloproliferative Disease	9	-	-	-	-	1	2	2	3	-	-	1	-
Spleen-Hematoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Spleen-Splenitis	1	-	-	-	-	-	-	-	1	-	-	-	-
6 Digestive													
Bile Duct-Neoplasm	2	-	-	1	-	-	-	-	1	-	-	-	-
Feces-Microbiologic Exam	13	1	1	3	2	-	-	-	1	1	-	3	1
Intestine-Anomaly	2	-	-	1	-	-	-	-	-	1	-	-	-
Intestine-Colitis	2	-	-	-	-	1	-	-	-	1	-	-	-
Intestine-Enteritis, Calicivirus	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Enterovirus	3	3	-	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Eosinophilic	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	7	1	2	-	1	2	-	-	-	-	-	-	1
Intestine-Enteritis, Parvovirus	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, Rotavirus	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Enteritis, Salmonella	6	-	2	3	-	-	-	-	-	-	-	1	-
Intestine-Enteritis, Viral	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Neoplasm	2	-	-	-	-	-	-	-	-	-	1	-	1
Intestine-Neoplasm, Adenocarcinoma	3	1	-	-	-	-	-	-	2	-	-	-	-
Intestine-Neoplasm, Carcinoma	2	-	-	-	-	-	-	-	-	-	1	1	-
Intestine-Parasitism, Ancylostoma	2	1	-	-	-	-	-	-	-	-	-	1	-
Intestine-Parasitism, Ascaris	4	-	1	-	1	-	-	1	-	-	1	-	-
Intestine-Parasitism, Cestode	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	6	2	1	-	1	-	-	-	1	-	-	-	1
Intestine-Parasitism, Nematode	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Trichostrongyle	1	-	-	-	-	-	-	-	-	-	1	-	-
Lip-Chelitis	6	2	1	-	-	3	-	-	-	-	-	-	-
Lip-Neoplasm, Carcinoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Lip-Neoplasm, Mastocytoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Liver-Cyst	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	4	-	-	-	1	-	-	-	1	-	-	1	1
Liver-Hepatositis	9	1	1	2	2	1	-	1	1	-	-	-	-
Liver-Lipidosis	19	2	1	3	2	-	-	3	1	1	2	3	1
Oral-Gingivitis	2	-	-	-	-	-	-	-	-	-	2	-	-
Oral-Glossitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Oral-Neoplasm	2	-	-	-	-	-	1	-	-	-	-	1	-
Oral-Neoplasm, Epulis	1	-	-	-	-	-	-	-	-	-	-	1	-
Oral-Neoplasm, Fibroma	1	-	-	-	-	-	-	-	-	-	1	-	-
Oral-Neoplasm, Fibrosarcoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Oral-Neoplasm, Hemangioma	1	-	-	-	-	-	-	-	-	-	-	1	-
Oral-Neoplasm, Melanoma	1	-	-	-	1	-	-	-	-	-	-	-	-

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Oral-Neoplasm, Papilloma	2	-	-	-	-	-	1	-	-	-	1	-	-
Oral-Neoplasm, Sarcoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Oral-Neoplasm, Squamous Cell Carcinoma	24	4	2	-	2	-	5	1	3	1	-	3	3
Oral-Stomatitis	11	1	1	1	-	2	-	2	1	-	1	-	2
Pancreas-Neoplasm, Adenocarcinoma	2	1	-	-	-	-	-	-	-	-	-	-	1
Pancreas-Pancreatitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Salivary-Cyst	1	-	-	1	-	-	-	-	-	-	-	-	-
Salivary Gland	1	-	-	-	-	-	1	-	-	-	-	-	-
Salivary Gland-Neoplasm	2	-	-	-	-	-	1	-	-	-	-	-	1
Stomach-Gastritis	2	-	-	1	-	-	-	-	-	-	-	-	1
Stomach-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	-	-	1	-	-
7 Urogenital													
Abortion, Idiopathic	1	-	-	-	1	-	-	-	-	-	-	-	-
Genital-Bacteriologic Examination	2	-	-	-	1	-	-	-	-	-	1	-	-
Genital-Infertility	1	-	-	-	-	-	-	1	-	-	-	-	-
Kidney-Cyst	1	-	-	-	-	-	-	1	-	-	-	-	-
Kidney-Nephritis	3	-	-	-	-	1	1	-	-	-	-	-	1
Kidney-Nephritis, Glomerulo	3	-	-	1	-	1	-	-	-	1	-	-	-
Kidney-Nephritis, Interstitial	5	-	-	-	-	-	1	-	1	1	-	1	1
Kidney-Nephrosis	17	1	3	1	2	1	-	2	1	1	1	4	-
Ovary-Cyst	1	-	-	-	-	-	-	-	-	-	-	-	1
Ovary-Neoplasm	1	1	-	-	-	-	-	-	-	-	-	-	-
Ovary-Neoplasm, Granulosa Cell Tumor	1	-	-	-	-	-	-	-	-	-	1	-	-
Testis-Atrophy	1	-	-	-	-	-	-	-	-	-	1	-	-
Urinary Bacteriologic Exam	27	1	1	3	1	3	-	3	3	4	-	5	3
Urocyst-Urocystitis	12	1	2	-	1	1	-	1	1	4	1	-	-
Urocyst-Urolithiasis	3	1	-	-	2	-	-	-	-	-	-	-	-
Uterus-Endometrial Biopsy	1	-	-	1	-	-	-	-	-	-	-	-	-
Uterus-Metritis	2	1	-	-	1	-	-	-	-	-	-	-	-
Uterus-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Uterus-Neoplasm, Leiomyoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Vas Deferens-Normal	1	-	-	-	1	-	-	-	-	-	-	-	-
8 Endocrine													
Thyroid-Atrophy	2	1	-	-	-	-	-	-	-	-	-	1	-
9 Neurological													
Neurological Disorders, Total Cases	22	1	3	1	2	3	3	1	1	3	1	2	1
Brain-Abscess	2	-	-	-	-	1	-	-	1	-	-	-	-
Brain-Infarction	3	1	-	-	2	-	-	-	-	-	-	-	-

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Encephalitis, Granulomatous	1	-	-	-	-	-	1	-	-	-	-	-	-
Encephalitis, Non-suppurative	1	-	1	-	-	-	-	-	-	-	-	-	-
Encephalitis, Rabies	11	1	1	-	1	2	3	1	-	-	-	-	2
Encephalomalacia	1	-	-	-	-	-	-	-	-	-	1	-	-
Encephalopathy	2	-	-	-	-	1	-	1	-	-	-	-	-
Meningitis, Non-suppurative	1	-	-	-	-	-	-	-	-	1	-	-	-
Neurological Disorder-Idiopathic	9	-	2	1	-	-	1	-	-	2	-	2	1
X Special Senses													
Ear-Neoplasm	3	1	-	-	-	1	-	-	-	1	-	-	-
Ear-Neoplasm, Carcinoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Ear-Neoplasm, Ceruminous Gland Carcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Ear-Neoplasm, Papilloma	1	1	-	-	-	-	-	-	-	-	-	-	-
Ear-Neoplasm, Squamous Cell Carcinoma	2	-	-	1	1	-	-	-	-	-	-	-	-
Ear-Otitis	5	-	1	-	-	1	-	1	1	-	-	-	1
Ear-Parasitism, Mites	1	1	-	-	-	-	-	-	-	-	-	-	-
Eye-Conjunctivitis	16	-	1	1	2	-	-	-	5	3	3	-	1
Eye-Neoplasm, Melanoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Eye-Ophthalmitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Eyelid-Neoplasm	1	-	-	1	-	-	-	-	-	-	-	-	-
Eyelid-Neoplasm, Basal Cell Tumor	1	-	-	-	-	-	-	1	-	-	-	-	-
Eyelid-Neoplasm, Melanoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Eyelid-Neoplasm, Sebaceous Gland Adenoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Eyelid-Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	-	-	-	-	1

FISH, AMPHIBIANS & REPTILES

FISH

Ascites	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, Bacterial	2	-	-	-	-	-	-	-	1	1	-	-	-
Tuberculosis	2	-	-	-	-	-	-	-	-	1	-	-	1
Dermatitis, Focal	1	-	-	-	-	-	-	-	1	-	-	-	-
Muscle-Myodegeneration	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	1	-	-	-	-	-	-	-	-	1	-	-	-
Thyroid-Goiter	1	-	-	-	-	-	-	-	-	-	-	-	1
Neurological Disorder-Idiopathic	1	-	-	-	-	-	-	-	-	1	-	-	-

AMPHIBIAN

Abscess	1	-	-	-	-	-	-	-	-	-	-	-	1
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FISH, AMPHIBIANS & REPTILES (cont.) Total J1 Ag Sp Oc Nv Dc Jn Fb Mr Ap My Jn

REPTILE

Ascites	1	-	1	-	-	-	-	-	-	-	-	-	-
Gout	2	-	-	-	-	-	-	1	-	-	1	-	-
Mineralization	1	-	-	-	1	-	-	-	-	-	-	-	-
Septicemia, Bacterial	1	-	-	-	-	1	-	-	-	-	-	-	-
Septicemia, <i>E. coli</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Septicemia, <i>Klebsiella</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Septicemia, <i>Salmonella</i>	2	-	-	-	1	-	-	-	-	-	1	-	-
Abscess	1	-	-	-	-	-	-	-	-	-	-	1	-
Cyst, Adnexal	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Podo	1	-	-	-	-	-	-	-	-	-	-	1	-
Neoplasm, Lipoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Neoplasm, Melanoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Arthritis	1	-	-	-	-	-	-	1	-	-	-	-	-
Muscle-Myodegeneration	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneum, Broncho (Idiopathic)	1	-	-	-	-	1	-	-	-	-	-	-	-
Blood Vessel Disorder	1	-	-	-	-	1	-	-	-	-	-	-	-
Heart-Myocarditis	1	-	-	-	-	-	-	-	-	1	-	-	-
Heart-Myocardial Degeneration	1	-	-	-	-	-	-	1	-	-	-	-	-
Feces-Microbiologic Exam	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Colitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Intestine-Enteritis, <i>Salmonella</i>	8	-	-	2	-	1	3	-	-	1	1	-	-
Intestine-Parasitism, <i>Coccidia</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Nematode	2	-	-	-	1	-	-	1	-	-	-	-	-
Liver-Lipidosis	2	-	-	1	-	1	-	-	-	-	-	-	-
Oral-Stomatitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	1	-	-	-	-	-	-	1	-	-	-	-	-

MISCELLANEOUS MAMMALS

BAT

Encephalitis, Rabies	7	-	5	-	-	1	-	-	-	-	-	-	1
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BEAR

Pleural Effusion	1	-	-	1	-	-	-	-	-	-	-	-	-
Hemorrhage, Generalized	1	-	-	1	-	-	-	-	-	-	-	-	-

CHINCHILLA

Emaciation	1	-	-	-	-	-	-	1	-	-	-	-	-
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MISCELLANEOUS MAMMALS (cont.)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
DEER													
Grain Overload	1	1	-	-	-	-	-	-	-	-	-	-	-
Growth Retardation	1	-	-	-	-	1	-	-	-	-	-	-	-
Starvation	1	-	-	-	1	-	-	-	-	-	-	-	-
Sudden Death	1	-	-	-	-	-	-	-	-	-	-	-	-
Trauma	1	-	-	-	-	-	-	-	-	-	-	-	1
Dermatitis, Podo	1	-	-	-	-	-	-	-	-	-	-	-	1
Mammary-Mastitis	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Edema	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, Foreign Body	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, Interstitial	1	-	-	-	-	-	-	-	-	-	-	-	1
Heart-Myocarditis	1	-	-	1	-	-	-	-	-	-	-	-	-
Coagulation Disorder	1	-	-	-	-	1	-	-	-	-	-	-	-
Feces-Microbiologic Exam	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Colitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, <i>C. perfringens</i> Type C	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	2	-	-	-	-	-	-	-	-	-	1	-	1
Intestine-Parasitism, Coccidia	3	1	-	-	1	-	-	1	-	-	-	-	-
Intestine-Parasitism, Nematode	2	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Parasitism, Trichostrongyle	1	-	-	-	1	-	-	-	-	-	-	-	-
Lip-Chelitis	2	-	-	-	2	-	-	-	-	-	-	-	-
Liver-Hepatitis	2	-	-	-	-	-	-	-	-	-	-	-	2
Liver-Hepatosi	2	2	-	-	-	-	-	-	-	-	-	-	-
Liver-Parasitism, Fascioloides	1	-	-	-	-	-	-	-	-	1	-	-	-
Stomach-Abomasal Volvulus	1	-	-	-	-	-	-	-	-	-	-	-	1
Genital-Bacteriologic Examination	1	-	-	-	-	-	-	-	-	-	1	-	-
Kidney-Nephritis	1	-	-	-	1	-	-	-	-	-	-	-	-
Urocyst-Urocystitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Encephalitis, Non-suppurative	1	-	-	-	-	-	-	1	-	-	-	-	-
ELK													
Feces-Microbiologic Exam	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Enteritis, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	-	1
ERMINE													
Coagulation Disorder	1	-	-	-	-	-	-	1	-	-	-	-	-
Liver-Abscess	1	-	-	-	-	-	-	1	-	-	-	-	-
Meningitis, Non-suppurative, Idiopathic	1	-	-	-	-	-	-	1	-	-	-	-	-

MISCELLANEOUS MAMMALS (cont.)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
FERRET													
Cyst, Adnexal	2	-	-	-	-	-	1	-	-	-	-	-	1
Mammary-Mastitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Mastocytoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Edema	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung-Pneumonia, <i>E. coli</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Heart-Myocardial Degeneration	1	-	1	-	-	-	-	-	-	-	-	-	-
Heart Failure, Chronic	1	-	-	-	-	-	1	-	-	-	-	-	-
Neoplasm, Lymphosarcoma	2	-	1	-	-	-	-	-	-	1	-	-	-
Feces-Microbiologic Exam	1	-	-	-	-	-	1	-	-	-	-	-	-
Pancreas-Neoplasm	1	1	-	-	-	-	-	-	-	-	-	-	-
Stomach-Gastritis	1	-	-	-	-	-	1	-	-	-	-	-	-
Genital-Bacteriologic Examination	1	-	-	-	-	-	-	-	-	1	-	-	-
Adrenal-Atrophy	1	-	-	-	1	-	-	-	-	-	-	-	-
Adrenal-Neoplasm, Adenoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Adrenal-Neoplasm, Carcinoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Neurological Disorder-Idiopathic	1	-	-	-	-	-	-	-	-	1	-	-	-
Ear-Neoplasm, Sebaceous Gland Adenoma	1	-	-	-	-	-	-	-	1	-	-	-	-
FOX													
Parasitism, Mites	1	1	-	-	-	-	-	-	-	-	-	-	-
GERBIL													
Lung-Edema	1	-	-	1	-	-	-	-	-	-	-	-	-
Heart-Cardiomyopathy	1	-	-	1	-	-	-	-	-	-	-	-	-
Ear-Otitis	1	-	-	1	-	-	-	-	-	-	-	-	-
GUINEA PIG													
Dermal, Fibrosis	1	-	1	-	-	-	-	-	-	-	-	-	-
Mammary-Neoplasm, Adenocarcinoma	3	-	-	-	-	-	-	1	-	-	1	1	-
Neoplasm, Liposarcoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Lung-Congestion	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho (Idiopathic)	1	-	-	-	-	-	-	1	-	-	-	-	-
Heart-Epicarditis	1	-	-	-	-	-	-	-	-	1	-	-	-
Heart-Myocardial Degeneration	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, Necrotic	1	-	-	-	1	-	-	-	-	-	-	-	-
Stomach-Ulcer	1	-	-	-	-	-	1	-	-	-	-	-	-
HAMSTER													
Emaciation	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Interstitial	1	-	-	-	-	-	-	-	-	-	1	-	-
Hemorrhage, Generalized	1	-	-	-	-	1	-	-	-	-	-	-	-

MISCELLANEOUS MAMMALS (cont.)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
HAMSTER (cont.)													
Neoplasm, Lymphosarcoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Eye-Conjunctivitis	1	-	-	-	-	-	-	-	-	-	1	-	-
LLAMA													
Neonatal Death	1	-	-	-	-	-	-	-	-	-	-	1	-
Neonatal Weakness	1	-	-	-	-	1	-	-	-	-	-	-	-
Peritonitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Septicemia, <i>E. coli</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Dermatitis, Allergic/Atopic	1	-	-	-	1	-	-	-	-	-	-	-	-
Dermatitis, Bacterial	1	-	-	-	-	-	-	1	-	-	-	-	-
Dermatitis, Granulomatous	1	-	-	-	-	-	-	-	-	-	-	1	-
Muscle-Myositis	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung-Pneumonia, <i>Bordetella sp.</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Lung-Pneumonia, Broncho (Idiopathic)	1	-	-	-	-	-	-	1	-	-	-	-	-
Lung-Pneumonia, <i>Rhodococcus equi</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Pleuritis	2	-	-	2	-	-	-	-	-	-	-	-	-
Respiratory Infection, <i>Strep. zooepidemicus</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Anemia	1	-	-	-	1	-	-	-	-	-	-	-	-
Parasitism, Plasmodium	1	1	-	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	2	-	-	-	1	-	-	-	-	-	-	-	1
Intestine-Enteritis, Adenovirus	1	-	-	-	-	-	1	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	2	-	-	1	-	-	-	-	-	-	-	1	-
Intestine-Parasitism, Nematode	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Parasitism, Trichostrongyle	3	-	-	-	-	-	-	-	1	-	2	-	-
Liver-Hepatitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Liver-Hepatosi	1	-	-	-	-	-	-	-	1	-	-	-	-
Liver-Lipidosis	1	-	-	-	-	-	-	1	-	-	-	-	-
Abortion, Bacterial, <i>Listeria</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Abortion, Idiopathic	3	1	-	-	1	-	1	-	-	-	-	-	-
Genital-Bacteriologic Examination	1	-	-	-	-	-	-	-	-	-	1	-	-
Kidney-Nephritis, Glomerulo	1	-	-	-	-	-	-	1	-	-	-	-	-
Meningitis, Streptococcus	1	-	-	-	-	-	-	1	-	-	-	-	-
Meningitis, Suppurative	1	-	-	-	-	-	-	-	1	-	-	-	-
MINK													
Septicemia, <i>E. coli</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
Septicemia, <i>Salmonella</i>	2	1	-	-	-	1	-	-	-	-	-	-	-
Sudden Death	3	-	-	-	1	-	-	-	-	1	-	-	1
Lung-Pneumonia, Broncho (Idiopathic)	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Interstitial	1	-	-	1	-	-	-	-	-	-	-	-	-
Heart-Myocardial Degeneration	1	1	-	-	-	-	-	-	-	-	-	-	-

MISCELLANEOUS MAMMALS (cont.)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
MINK (cont.)													
Aleutian Disease	2	-	-	-	-	1	-	-	-	-	1	-	-
Feces-Microbiologic Exam	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	2	1	-	-	-	-	-	-	-	-	1	-	-
Intestine-Enteritis, Necrotic	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Parvovirus	2	-	-	-	-	2	-	-	-	-	-	-	-
Intestine-Enteritis, Salmonella	2	-	1	-	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Cryptosporidia	1	-	-	-	1	-	-	-	-	-	-	-	-
Liver-Cirrhosis	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Lipidosis	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	1	-	-	-	-	1	-	-	-	-	-	-	-
Urocyst-Urocystitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Encephalitis, Distemper	1	-	-	-	1	-	-	-	-	-	-	-	-
Neurological Disorder-Idiopathic	1	-	-	-	-	1	-	-	-	-	-	-	-
MONKEY													
Sudden Death	1	-	-	-	-	-	-	-	-	1	-	-	-
Bile Duct-Neoplasm	1	-	-	-	-	-	-	1	-	-	-	-	-
Feces-Microbiologic Exam	3	-	-	3	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	1	-	-	-	1	-	-	-	-	-	-	-	-
Uterus-Metritis	1	-	-	-	-	-	-	1	-	-	-	-	-
Neurological Disorder-Idiopathic	1	-	-	-	1	-	-	-	-	-	-	-	-
RABBIT													
Neonatal Death	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Bacillus pilliformis</i> -Tyzzer's	1	-	-	-	-	-	-	-	-	-	-	1	-
Septicemia, <i>Pasteurella multocida</i>	3	-	1	-	-	-	-	-	-	-	1	1	-
Starvation	1	-	1	-	-	-	-	-	-	-	-	-	-
Sudden Death	3	-	-	-	-	-	-	-	1	2	-	-	-
Abscess	1	-	-	-	-	-	-	1	-	-	-	-	-
Dermatitis, Focal	2	-	1	-	-	-	-	-	1	-	-	-	-
Mammary-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung-Pneumonia, Broncho (Idiopathic)	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	3	1	-	-	-	-	-	-	-	-	1	-	1
Respiratory Nasal Swab (Idiopathic)	1	-	-	-	-	-	-	-	-	-	-	-	1
Respiratory Nasal Swab, <i>P. multocida</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Heart-Myocarditis	1	-	1	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	2	-	-	-	-	1	-	-	-	-	-	-	1
Intestine-Enteritis, Idiopathic	2	-	1	1	-	-	-	-	-	-	-	-	-

MISCELLANEOUS MAMMALS (cont.)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
RABBIT (cont.)													
Intestine-Parasitism, Coccidia	1	-	-	-	-	-	-	-	-	-	-	1	-
Liver-Hepatitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Hepatosi	3	1	-	-	1	-	-	-	-	-	-	1	-
Liver-Lipidosis	2	1	-	-	-	-	-	1	-	-	-	-	-
Liver-Parasitism	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Nephritis	1	-	1	-	-	-	-	-	-	-	-	-	-
Encephalitis, Granulomatous	6	-	1	-	-	-	-	-	-	1	-	3	1
Ear-Neoplasm, Fibroma	1	-	-	-	-	-	-	-	1	-	-	-	-
Ear-Neoplasm, Papilloma	1	-	-	-	-	-	-	1	-	-	-	-	-
Eye-Keratitis	1	-	-	-	-	-	1	-	-	-	-	-	-
RACCOON													
Septicemia, Salmonella	1	-	-	-	-	-	-	-	-	-	1	-	-
Sudden Death	1	-	-	-	-	-	-	-	-	-	-	1	-
Toxicosis, Organophosphate	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Parasitism	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho (Idiopathic)	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>E. coli</i>	2	-	-	1	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, Interstitial	2	-	-	1	-	-	-	-	-	-	-	-	1
Intestine-Enteritis, Parvovirus	2	-	1	1	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Ascaris	1	-	-	-	-	1	-	-	-	-	-	-	-
Encephalitis, Distemper	5	-	-	1	-	-	-	-	1	2	1	-	-
Encephalitis, Rabies	2	1	-	-	-	-	-	-	-	-	1	-	-
Meningitis, Non-suppurative	1	-	-	-	-	-	-	-	1	-	-	-	-
Meningitis, Suppurative	1	-	-	-	1	-	-	-	-	-	-	-	-
RAT													
Sudden Death	1	-	-	-	-	1	-	-	-	-	-	-	-
Mammary-Neoplasm	2	-	-	-	-	-	1	-	-	1	-	-	-
Mammary-Neoplasm, Adenoma	2	-	1	-	1	-	-	-	-	-	-	-	-
Neoplasm, Carcinoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Sarcoma, Anaplastic	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Hepatosi	1	-	-	-	1	-	-	-	-	-	-	-	-
Thyroid-Neoplasm, Carcinoma	1	-	-	-	-	-	-	1	-	-	-	-	-
SKUNK													
Toxoplasmosis	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho (Idiopathic)	1	-	-	-	-	-	-	-	1	-	-	-	-
Pancreas-Neoplasm	1	-	-	-	-	-	-	-	1	-	-	-	-
Kidney-Nephrosis	1	-	-	-	-	-	-	-	1	-	-	-	-
Encephalitis, Rabies	125	2	9	4	10	11	8	14	3	18	12	17	17

MISCELLANEOUS MAMMALS (cont.)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
SQUIRREL													
Septicemia, Bacterial	1	-	-	-	1	-	-	-	-	-	-	-	-
WALLABY													
Sudden Death	1	-	-	-	-	-	-	-	-	1	-	-	-
Toxoplasmosis	1	-	-	-	-	-	-	-	-	1	-	-	-
Muscle-Myodegeneration	1	-	-	-	-	-	1	-	-	-	-	-	-
White Muscle Disease	1	-	-	1	-	-	-	-	-	-	-	-	-
Respiratory Nasal Swab (Idiopathic)	1	-	-	-	-	-	1	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	2	1	-	1	-	-	-	-	-	-	-	-	-
WOODCHUCK													
Encephalitis, Granulomatous	1	-	1	-	-	-	-	-	-	-	-	-	-
Encephalitis, Non-suppurative	1	-	-	-	-	1	-	-	-	-	-	-	-
Encephalomalacia	1	-	-	-	1	-	-	-	-	-	-	-	-
MISCELLANEOUS													
Abscess	1	-	1	-	-	-	-	-	-	-	-	-	-
Peritonitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Starvation	1	-	-	-	1	-	-	-	-	-	-	-	-
Abscess	1	-	-	-	-	-	-	-	-	-	-	1	-
Mammary-Neoplasm, Adenocarcinoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Edema	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Actinomyces pyogenes</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Streptococcus	1	-	1	-	-	-	-	-	-	-	-	-	-
Respiratory Nasal Swab (Idiopathic)	1	-	-	1	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	4	3	-	1	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	2	1	-	-	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	1	-	1	-	-	-	-	-	-	-	-	-	-
Stomach-Ulcer	1	-	1	-	-	-	-	-	-	-	-	-	-
Genital-Bacteriologic Examination	3	-	-	-	-	-	-	-	-	3	-	-	-
Testis-Orchitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Urinary Bacteriologic Exam	3	-	-	-	-	-	2	-	-	-	-	1	-
Eye-Ophthalmitis	1	1	-	-	-	-	-	-	-	-	-	-	-

OVINE

0 Body as a Whole

Abscess	1	-	1	-	-	-	-	-	-	-	-	-	-
Caseous Lymphadenitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Copper Deficiency	1	-	-	-	-	-	-	-	-	-	-	1	-

OVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Emaciation	1	-	-	-	-	-	-	-	-	1	-	-	-
Grain Overload	3	1	1	-	-	-	-	-	-	-	-	1	-
Neonatal Death	2	-	-	-	-	-	-	1	-	1	-	-	-
Pseudorabies	1	-	-	-	-	-	-	1	-	-	-	-	-
Septicemia, <i>Pasteurella hemolytica</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Septicemia, Salmonella	3	-	-	1	-	1	-	-	-	-	-	-	1
Starvation	1	-	-	-	-	-	-	-	-	1	-	-	-
Sudden Death	5	-	-	-	-	-	-	3	-	-	1	-	1
Tetanus	1	-	-	-	-	-	-	-	1	-	-	-	-
Toxicosis, Copper	3	-	-	-	1	-	1	-	-	-	-	-	1
Toxicosis, Ionophore	1	-	-	-	-	-	1	-	-	-	-	-	-
Toxicosis, Lead	1	-	-	-	-	-	-	-	1	-	-	-	-
1 Integumentary													
Abscess	1	-	-	1	-	-	-	-	-	-	-	-	-
Mammary-Mastitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Neoplasm, Fibrosarcoma	1	-	-	-	-	-	-	-	-	-	-	1	-
2 Musculoskeletal													
Muscle-Myodegeneration	1	-	-	-	-	1	-	-	-	-	-	-	-
Muscle-Myositis	1	-	-	-	-	-	-	-	-	-	1	-	-
Osteodystrophy	1	-	-	-	-	-	-	-	-	-	1	-	-
White Muscle Disease	1	-	-	-	-	-	-	-	-	1	-	-	-
3 Respiratory													
Respiratory Disorders, Total Cases	34	3	5	4	1	2	-	-	3	2	6	3	5
Lung-Edema	3	2	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, <i>Actinomyces pyogenes</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho (Idiopathic)	11	-	2	2	-	-	-	-	2	-	2	1	2
Lung-Pneumonia, <i>E. coli</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, Foreign Body	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Interstitial	2	-	-	1	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, Ovine Progressive	3	-	-	-	-	-	-	-	1	1	1	-	-
Lung-Pneumonia, <i>Pasteurella hemolytica</i>	9	1	1	1	-	1	-	-	-	1	1	-	3
Lung-Pneumonia, <i>Pasteurella multocida</i>	5	-	2	-	-	-	-	-	-	-	2	-	1
Pleuritis	1	-	-	1	-	-	-	-	-	-	-	-	-
Respiratory Nasal Swab, <i>P. hemolytica</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
Respiratory Nasal Swab, <i>P. multocida</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
4 Cardiovascular													
Heart-Myocarditis	1	-	1	-	-	-	-	-	-	-	-	-	-
Heart-Myocardial Degeneration	4	1	-	-	-	-	1	-	1	-	-	-	1

OVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
5 Hemic/Lymphatic													
Anemia	1	1	-	-	-	-	-	-	-	-	-	-	-
Anemia, Hemolytic	2	1	-	-	-	-	1	-	-	-	-	-	-
6 Digestive													
Intestine-Enteritis, Atrophic	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Enteritis, <i>E. coli</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Enteritis, Idiopathic	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Enteritis, <i>M. paratuberculosis</i>	2	-	-	-	1	-	-	1	-	-	-	-	-
Intestine-Enteritis, Salmonella	9	3	-	-	1	-	-	-	2	1	-	2	-
Intestine-Enteritis, Specimen Unsuitable	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Hemorrhage	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Cestode	3	1	1	-	-	-	-	-	-	-	-	1	-
Intestine-Parasitism, Coccidia	9	-	2	-	-	-	1	1	-	-	1	4	-
Intestine-Parasitism, Esophagostomum	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Parasitism, Haemonchus	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Nematode	2	-	-	1	-	-	-	-	-	-	-	1	-
Intestine-Parasitism, Nematodirus	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Parasitism, Strongyloides	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Trichostrongyle	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Volvulus	2	-	-	-	-	-	-	-	1	-	-	-	1
Lip-Chelitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Liver-Hepatitis	2	-	-	1	-	-	-	1	-	-	-	-	-
Liver-Hepatosiis	1	-	-	-	-	-	1	-	-	-	-	-	-
Liver-Lipidosis	2	-	-	1	-	-	-	-	-	-	-	1	-
Stomach-Parasitism, Haemonchus	2	1	-	-	-	-	-	-	-	-	-	-	1
Stomach-Rumenitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Stomach-Rumen Tympany (Bloat)	1	1	-	-	-	-	-	-	-	-	-	-	-
7 Urogenital													
Abortions, Total Cases	45	-	-	2	-	-	5	9	12	11	5	1	-
Abortion, Anomaly	1	-	-	-	-	-	-	-	-	1	-	-	-
Abortion, Bacterial, <i>Actinomyces pyogenes</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Abortion, Bacterial, <i>Campylobacter sp.</i>	3	-	-	1	-	-	-	1	-	1	-	-	-
Abortion, Bacterial, Chlamydia	1	-	-	-	-	-	-	-	-	-	1	-	-
Abortion, Bacterial, <i>E. coli</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Abortion, Bacterial, Salmonella	2	-	-	-	-	-	-	-	1	-	-	1	-
Abortion, Idiopathic	23	-	-	-	-	-	3	6	7	4	3	-	-
Abortion, Mummified Fetus	3	-	-	-	-	-	-	1	2	-	-	-	-
Abortion, Mycotic Placentitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Abortion, Parasitism, Toxoplasma	6	-	-	-	-	-	1	-	1	3	1	-	-
Abortion, Placentitis	1	-	-	-	-	-	-	-	1	-	-	-	-

OVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Abortion, Viral, Border Disease	2	-	-	-	-	-	-	1	-	1	-	-	-
Dystocia	1	-	-	-	-	-	-	-	-	1	-	-	-
Genital-Bacteriologic Examination	1	-	-	-	-	-	-	1	-	-	-	-	-
Kidney-Nephritis	1	-	-	-	-	1	-	-	-	-	-	-	-
Kidney-Nephrosis	1	-	-	-	-	-	1	-	-	-	-	-	-
Uterus-Metritis	1	-	-	-	-	-	-	-	-	-	1	-	-
Vas Deferens-Normal	3	-	-	-	-	1	-	-	-	-	-	1	1
9 Neurological													
Neurological Disorders, Total Cases	19	2	2	2	2	-	2	-	-	2	2	2	3
Brain-Abscess	1	-	-	-	1	-	-	-	-	-	-	-	-
Encephalitis, Listeria	5	-	-	1	1	-	-	-	-	1	-	-	2
Encephalitis, Non-suppurative	2	-	1	-	-	-	-	-	-	1	-	-	-
Encephalitis, Pseudorabies	1	-	-	-	-	-	1	-	-	-	-	-	-
Encephalomalacia	1	-	-	-	-	-	-	-	-	-	-	1	-
Encephalopathy	1	-	1	-	-	-	-	-	-	-	-	-	-
Neurological Disorder-Idiopathic	4	1	-	1	-	-	1	-	-	-	1	-	-
Polioencephalomalacia	4	1	-	-	-	-	-	-	-	-	1	1	1

PORCINE

0 Body as a Whole	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Abscess	1	-	-	-	-	-	-	-	1	-	-	-	-
Anomaly	1	-	1	-	-	-	-	-	-	-	-	-	-
Ascites	2	-	-	-	-	-	-	1	-	1	-	-	-
Dehydration	1	-	-	1	-	-	-	-	-	-	-	-	-
Edema Disease	21	2	-	3	4	2	1	1	1	2	2	3	-
Electrocution	1	-	-	-	-	-	-	-	-	1	-	-	-
Emaciation	4	-	1	2	1	-	-	-	-	-	-	-	-
Growth Retardation	2	-	-	-	-	-	1	1	-	-	-	-	-
Health Evaluation	1	-	-	-	-	-	1	-	-	-	-	-	-
Hernia	2	-	1	-	-	-	-	-	1	-	-	-	-
Hypoglycemia	4	-	1	1	-	-	1	-	-	-	-	1	-
Icterus	2	-	-	-	-	-	-	1	-	-	-	1	-
Neonatal Death	7	-	-	1	-	2	1	1	1	-	1	-	-
Neonatal Weakness	8	-	3	1	1	-	1	1	-	-	-	-	1
Omphalitis	3	-	1	-	-	-	-	-	-	-	-	1	1
Peritonitis	8	-	-	3	-	3	-	1	1	-	-	-	-
Polyserositis	27	3	1	4	3	3	-	-	3	1	4	2	3
Porcine Stress Syndrome	13	1	2	1	-	1	2	1	1	1	1	1	1

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Pseudorabies	54	2	3	-	6	3	3	7	6	11	6	5	2
Puffer Sow Syndrome	1	-	-	-	-	-	-	-	-	-	-	1	-
Septicemia, <i>Actinobacillus sp.</i>	2	-	-	-	-	1	-	-	1	-	-	-	-
Septicemia, <i>Actinobacillus equuli</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Septicemia, <i>Actinomyces pyogenes</i>	3	-	1	-	1	-	-	-	1	-	-	-	-
Septicemia, Bacterial	11	-	3	1	2	2	1	1	-	-	-	1	-
Septicemia, <i>Clostridium septicum</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Septicemia, Erysipelothrix	34	17	6	-	1	1	-	2	-	1	-	1	5
Septicemia, <i>E. coli</i>	33	1	-	1	2	6	5	2	1	2	7	4	2
Septicemia, <i>Hemophilus parasuis</i>	9	-	1	-	5	-	-	-	1	1	1	-	-
Septicemia, <i>Pasteurella hemolytica</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Pasteurella multocida</i>	11	-	2	-	4	-	-	1	2	-	2	-	-
Septicemia, Salmonella	139	7	9	10	16	17	15	7	13	11	12	12	10
Septicemia, Staphylococcus	3	-	-	-	-	-	-	-	1	1	1	-	-
Septicemia, Streptococcus	10	2	1	1	2	-	-	-	1	2	-	1	-
Septicemia, <i>Streptococcus suis</i>	38	3	-	1	2	4	3	2	9	-	7	5	2
Starvation	9	-	1	1	1	3	1	-	-	-	2	-	-
Sudden Death	66	4	5	9	5	2	6	5	5	2	9	9	5
Toxicosis, Iron Injection	1	-	-	-	-	-	-	-	1	-	-	-	-
Toxicosis, Miscellaneous	1	-	-	-	-	-	1	-	-	-	-	-	-
Toxicosis, Sodium (Water Deprivation)	5	1	-	-	2	1	-	-	-	1	-	-	-
Weakness	1	-	-	-	-	-	-	-	-	-	-	-	1
1 Integumentary													
Abscess	3	1	1	-	-	-	-	-	1	-	-	-	-
Cellulitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Allergic/Atopic	1	-	-	-	-	-	-	-	-	-	-	-	1
Dermatitis, Diffuse	3	-	-	1	-	-	1	-	-	1	-	-	-
Dermatitis, Eosinophilic	1	-	-	-	-	-	-	-	-	-	1	-	-
Dermatitis, Focal	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Granulomatous	3	-	-	1	-	-	-	-	-	2	-	-	-
Dermatitis, Podo	2	-	-	-	-	2	-	-	-	-	-	-	-
Dermatitis, Staphylococcus	4	-	-	2	-	-	-	-	-	1	1	-	-
Dermatitis, Streptococcus	2	-	-	-	-	-	-	1	-	-	1	-	-
Dermatosis, Endocrine	1	-	-	-	-	-	-	-	-	1	-	-	-
Exudative Epidermitis	18	5	-	2	-	-	2	3	4	-	1	1	-
Granulation Tissue	1	-	1	-	-	-	-	-	-	-	-	-	-
Mammary-Mastitis	5	2	-	1	-	-	1	1	-	-	-	-	-
Neoplasm	1	-	-	-	-	-	-	-	-	-	1	-	-
Parasitism, Lice	1	-	-	1	-	-	-	-	-	-	-	-	-
Parasitism, Mites	1	-	-	-	-	-	1	-	-	-	-	-	-
Pityriasis Rosea	1	-	-	-	-	1	-	-	-	-	-	-	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Pox	1	-	-	-	-	-	-	-	-	-	1	-	-
2 Musculoskeletal													
Arthritis	3	-	1	2	-	-	-	-	-	-	-	-	-
Arthritis, <i>Actinomyces pyogenes</i>	3	-	-	-	-	1	-	2	-	-	-	-	-
Arthritis, <i>E. coli</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Arthritis, <i>Hemophilus parasuis</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Arthritis, Idiopathic	1	-	-	1	-	-	-	-	-	-	-	-	-
Arthritis, Staphylococcus	3	1	-	-	-	-	-	-	-	-	1	-	1
Arthritis, Streptococcus	2	-	-	-	-	-	-	-	-	-	-	1	1
Arthritis, Suppurative	1	-	-	-	-	-	-	-	-	-	-	-	1
Fracture	1	-	-	1	-	-	-	-	-	-	-	-	-
Lameness	1	-	-	1	-	-	-	-	-	-	-	-	-
Muscle-Myodegeneration	1	-	1	-	-	-	-	-	-	-	-	-	-
Osteochondrosis	1	1	-	-	-	-	-	-	-	-	-	-	-
Osteomyelitis	1	-	-	-	-	1	-	-	-	-	-	-	-
Synovitis	3	1	-	-	1	-	-	-	-	1	-	-	-
3 Respiratory													
Respiratory Disorders, Total Cases	834	48	61	55	58	66	56	84	65	95	87	97	62
Lung-Bronchitis	20	2	2	2	2	1	1	1	1	4	1	3	-
Lung-Congestion	2	-	1	-	-	-	-	-	-	-	-	1	-
Lung-Edema	23	-	2	5	1	3	1	2	-	1	2	3	3
Lung-Emphysema	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Hemorrhage	6	1	-	2	-	-	-	-	-	-	3	-	-
Lung-Parasitism	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Parasitism, <i>Ascaris</i> (Larvae)	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, <i>Actinobacillus</i>	5	-	-	1	1	-	1	1	-	1	-	-	-
Lung-Pneumonia, <i>A. pleuropneumoniae</i>	173	11	14	7	10	10	11	21	19	20	14	22	14
Lung-Pneumonia, <i>Actinomyces pyogenes</i>	61	5	6	1	1	5	5	6	7	12	4	8	1
Lung-Pneumonia, <i>Bordetella</i> sp.	37	1	-	1	3	3	1	4	2	5	4	9	4
Lung-Pneumonia, Broncho (Idiopathic)	77	5	8	9	2	2	5	4	9	3	16	8	6
Lung-Pneumonia, <i>E. coli</i>	2	-	-	1	-	-	-	-	-	1	-	-	-
Lung-Pneumonia, Foreign Body	2	1	-	-	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, <i>Hemophilus parasuis</i>	69	3	2	1	4	13	6	6	1	6	9	6	12
Lung-Pneumonia, <i>Hemophilus</i> sp.	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, Influenza	40	2	3	-	2	13	8	2	1	5	1	3	-
Lung-Pneumonia, Interstitial	32	2	2	1	6	3	3	4	1	4	3	1	2
Lung-Pneumonia, <i>M. hyopneumoniae</i>	27	2	2	4	5	-	-	6	-	1	2	3	2
Lung-Pneumonia, <i>Pasteurella hemolytica</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	296	14	25	13	22	19	20	36	27	42	30	29	19
Lung-Pneumonia, Salmonella	8	1	1	4	-	1	-	-	-	-	1	-	-
Lung-Pneumonia, Staphylococcus	1	-1	-	-	-	-	-	-	-	-	-	-	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Lung-Pneumonia, Streptococcus	24	-	2	1	1	1	1	3	2	2	2	6	3
Lung-Pneumonia, <i>Streptococcus suis</i>	272	15	18	14	19	21	15	30	23	37	27	29	24
Lung-Thrombosis	1	-	-	-	-	-	-	1	-	-	-	-	-
Nasal-Rhinitis	6	1	-	-	2	-	-	1	2	-	-	-	-
Nasal-Rhinitis, Atrophic	9	1	2	3	-	-	-	-	-	1	1	1	-
Nasal-Rhinitis, Bordetella	3	-	-	-	-	1	-	1	-	1	-	-	-
Nasal-Rhinitis, Cytomegalovirus	11	-	-	-	1	1	1	-	-	1	1	3	3
Nasal-Rhinitis, Idiopathic	11	-	-	-	-	2	1	-	2	2	3	-	1
Nasal-Rhinitis, <i>Pasteurella multocida</i>	8	-	-	-	3	-	-	-	2	1	1	-	1
Nasal-Rhinitis, Streptococcus	4	-	-	-	-	-	-	-	1	1	1	-	1
Pleuritis	6	-	-	-	-	-	-	1	1	-	1	3	-
Respiratory Infection	1	-	-	-	-	-	1	-	-	-	-	-	-
4 Cardiovascular													
Atherosclerosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Blood Vessel Disorder	1	-	-	-	-	-	-	-	-	1	-	-	-
Heart-Cardiomyopathy	2	-	-	-	-	-	-	-	-	1	-	-	1
Heart-Endocarditis	11	1	-	1	1	1	-	3	-	1	1	-	2
Heart-Epicarditis	7	-	-	1	1	1	1	-	1	-	2	-	-
Heart-Myocarditis	19	2	2	2	1	2	-	-	-	2	1	4	3
Heart-Myocardial Degeneration	12	1	2	2	1	1	-	-	2	-	-	1	2
Heart-Pericarditis	4	-	1	-	1	1	-	-	-	-	-	-	1
Heart Failure, Chronic	2	-	-	-	-	-	1	-	-	-	1	-	-
Mulberry Heart Disease	37	2	5	5	1	4	2	3	2	6	2	4	1
Vasculitis	1	-	-	-	-	-	1	-	-	-	-	-	-
5 Hemic/Lymphatic													
Anemia	12	1	1	1	-	-	-	1	-	3	2	2	1
Coagulation Disorder	3	-	-	1	-	1	-	-	-	-	-	1	-
Hemorrhage, Focal	1	-	-	-	-	-	-	-	1	-	-	-	-
Hemorrhage, Generalized	2	-	-	-	-	-	-	-	-	-	-	1	1
Neoplasm, Lymphosarcoma	2	-	-	-	-	1	1	-	-	-	-	-	-
Spleen-Splenitis	1	-	-	-	-	-	-	-	-	-	1	-	-
6 Digestive													
Esophagitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Feces-Microbiologic Exam	32	1	4	5	-	-	3	3	5	4	2	2	3
Intestine-Colitis	31	1	4	5	-	-	3	3	5	4	2	2	3
Intestine-Enteritis, Nursing, Total Cases	584	43	51	75	39	48	52	49	51	60	48	39	29
Intestine-Enteritis, Older, Total Cases	462	48	37	48	37	27	30	33	51	44	33	38	36
Intestine-Enteritis, Adenovirus	6	-	1	-	-	-	-	-	1	1	-	1	2
Intestine-Enteritis, Atrophic	62	8	4	3	3	3	8	7	6	10	4	2	4
Intestine-Enteritis, <i>Clostridium perfringens</i>	5	-	-	-	-	-	1	1	-	-	1	1	1
Intestine-Enteritis, <i>C. perfringens</i> Type C	11	-	1	2	-	2	-	-	1	3	2	-	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Intestine-Enteritis, <i>E. coli</i> , Nursing	202	18	25	29	20	23	9	16	12	18	14	12	6
Intestine-Enteritis, <i>E. coli</i> , Weaned	113	15	8	7	8	8	9	11	12	10	11	10	4
Intestine-Enteritis, Hemorrhagic	2	-	-	1	-	-	-	-	-	-	-	1	-
Intestine-Enteritis, Idiopathic	88	8	9	17	7	4	11	4	8	6	6	2	6
Intestine-Enteritis, Necrotic	51	2	6	11	5	2	7	4	3	3	2	2	4
Intestine-Enteritis, Porcine Proliferative	55	3	4	5	9	4	6	4	3	3	3	5	6
Intestine-Enteritis, Rotavirus	181	12	9	11	10	13	17	15	27	22	18	18	9
Intestine-Enteritis, Salmonella	47	6	6	11	3	1	4	-	6	3	3	1	3
Intestine-Enteritis, Specimen Unsuitable	33	4	-	8	2	1	1	2	3	5	3	2	2
Intestine-Enteritis, Streptococcus	2	-	-	2	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Swine Dysentery	67	11	11	11	9	5	1	3	2	3	5	2	4
Intestine-Enteritis, TGE	58	5	1	-	1	4	6	7	10	10	7	4	3
Intestine-Hemorrhage	5	-	-	-	-	-	1	2	-	1	-	-	1
Intestine-Hemorrhage Syndrome	6	-	2	-	1	-	1	1	1	-	-	-	-
Intestine-Infarction	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Intussusception	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Parasitism, Ascaris	2	-	-	-	-	-	2	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	90	8	8	12	7	7	3	3	12	4	6	14	6
Intestine-Parasitism, Cryptosporidia	12	-	-	-	-	5	-	3	1	-	-	3	-
Intestine-Parasitism, Nematode	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Parasitism, Trichuris	9	2	-	2	1	1	1	1	-	-	-	-	1
Intestine-Rupture	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Volvulus	5	-	1	1	-	-	1	-	1	-	1	-	-
Liver-Hepatitis	5	-	-	-	1	-	-	-	2	-	1	1	-
Liver-Hepatositis	10	1	4	-	1	-	-	-	1	2	-	-	1
Liver-Lipidosis	3	-	-	1	-	-	-	-	-	1	-	-	1
Liver-Parasitism, Ascaris	12	-	2	1	1	2	-	-	-	1	1	3	1
Stomach-Gastritis	2	-	-	-	-	-	1	-	-	-	-	-	1
Stomach-Ulcer	22	1	1	2	1	3	2	1	3	3	-	3	2
7 Urogenital													
Abortions, Total Cases	384	31	42	41	40	29	35	33	33	31	27	21	21
Abortion, Anomaly	1	1	-	-	-	-	-	-	-	-	-	-	-
Abortion, Bacterial	1	-	-	-	-	-	-	1	-	-	-	-	-
Abortion, Bacterial, <i>Actinobacillus sp.</i>	16	1	1	3	1	2	-	3	3	2	-	-	-
Abortion, Bacterial, <i>Actinomyces pyogenes</i>	2	-	1	-	-	-	-	-	-	1	-	-	-
Abortion, Bacterial, <i>Bacillus sp.</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Abortion, Bacterial, <i>Campylobacter sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Abortion, Bacterial, <i>E. coli</i>	3	-	-	-	-	-	-	-	-	1	1	1	-
Abortion, Bacterial, <i>Leptospira sp.</i>	2	-	-	-	-	-	1	-	-	-	-	-	1
Abortion, Bacterial, Staphylococcus	3	-	-	-	-	-	-	-	1	1	1	-	-
Abortion, Bacterial, Streptococcus	20	1	1	2	2	2	2	-	2	3	1	3	1
Abortion, Emphysema	1	-	-	-	-	-	-	1	-	-	-	-	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Abortion, Encephalitis	5	1	-	-	1	1	1	1	-	-	-	-	-
Abortion, Hepatitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Abortion, Idiopathic	196	17	30	22	25	13	20	11	15	12	14	7	10
Abortion, Mummified Fetus	64	5	5	4	5	5	6	8	3	4	5	7	7
Abortion, Mycotic Placentitis	2	1	-	-	-	-	-	1	-	-	-	-	-
Abortion, Myocarditis	19	2	2	2	-	1	2	2	2	5	-	1	-
Abortion, Placentitis	11	-	-	4	2	1	-	-	2	-	-	1	1
Abortion, Pneumonia	7	-	-	2	2	-	-	1	1	1	-	-	-
Abortion, Specimen Unsuitable	1	-	1	-	-	-	-	-	-	-	-	-	-
Abortion, Viral, Parvovirus	28	1	1	1	2	2	4	4	4	2	5	1	1
Abortion, Viral, Pseudorabies	2	-	-	-	-	1	-	1	-	-	-	-	-
Dystocia	1	-	-	-	-	-	-	-	-	1	-	-	-
Genital-Bacteriologic Examination	7	-	1	-	2	-	-	1	2	1	-	-	-
Genital-Infertility	10	2	1	-	2	2	-	-	1	1	1	-	-
Kidney-Cyst	1	-	-	-	-	-	-	-	-	-	-	-	1
Kidney-Infarction	2	-	1	-	-	-	-	-	-	-	-	-	1
Kidney-Neoplasm	1	-	-	-	-	1	-	-	-	-	-	-	-
Kidney-Nephritis	11	-	3	2	2	1	-	-	1	-	-	1	1
Kidney-Nephritis, Glomerulo	1	-	-	1	-	-	-	-	-	-	-	-	-
Kidney-Nephritis, Interstitial	2	-	-	-	-	-	1	-	1	-	-	-	-
Kidney-Nephritis, Pyelo	5	-	-	-	1	1	-	-	-	1	1	-	1
Kidney-Nephrosis,	9	1	-	2	-	1	-	1	-	2	1	1	-
Ovary-Cyst	1	-	-	-	-	-	-	-	-	-	1	-	-
Stillbirth, Idiopathic	36	4	3	5	3	3	2	1	2	4	1	5	3
Urinary Bacteriologic Exam	1	-	-	-	-	-	-	-	-	-	1	-	-
Urocyst-Urocystitis	7	-	1	-	1	2	1	-	1	-	1	-	-
Uterus-Metritis	18	1	-	1	1	2	1	3	2	1	1	2	3
9 Neurological													
Neurological Disorders, Total Cases	207	16	11	10	23	13	17	20	13	24	14	28	18
Brain-Abscess	6	-	-	-	-	-	1	-	2	1	1	1	-
Brain-Vasculitis	3	-	-	-	1	-	-	-	-	1	-	-	1
Congenital Tremor	5	1	-	1	-	-	-	-	-	-	-	1	2
Edema Disease	21	1	-	3	1	-	2	3	1	2	-	4	4
Encephalitis, <i>Actinomyces pyogenes</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Encephalitis, Non-suppurative	23	1	2	-	1	2	2	3	1	1	2	5	3
Encephalitis, Pseudorabies	33	1	2	-	3	1	5	5	4	5	4	2	1
Encephalitis, Suppurative	2	-	-	-	-	-	-	-	-	1	-	-	1
Meningitis	2	-	-	-	-	-	-	-	1	1	-	-	-
Meningitis, <i>Actinomyces pyogenes</i>	3	-	-	-	-	1	1	1	-	-	-	-	-
Meningitis, <i>E. coli</i>	4	-	-	-	-	1	1	-	-	1	-	1	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Meningitis, <i>Hemophilus parasuis</i>	5	-	2	-	-	-	-	1	1	1	-	-	-
Meningitis, Non-suppurative	3	1	-	-	1	-	-	-	-	1	-	-	-
Meningitis, Streptococcus	6	-	-	-	2	-	1	1	-	-	1	1	-
Meningitis, <i>Streptococcus suis</i>	37	3	2	4	4	2	3	5	1	3	2	5	3
Meningitis, Suppurative	25	5	3	1	4	2	1	2	1	1	1	1	3
Myelitis, Non-suppurative	1	-	-	-	-	-	-	-	-	-	1	-	-
Neurological Disorder-Idiopathic	25	2	1	1	4	3	-	-	-	4	2	7	1
Toxicosis, Sodium (Water Deprivation)	6	1	-	-	2	1	-	-	1	1	-	-	-
X <u>Special Senses</u>													
Eye-Conjunctivitis	2	-	-	-	-	-	-	2	-	-	-	-	-

MISCELLANEOUS SPECIMENS

FEED

Meat Inspection	1	-	-	1	-	-	-	-	-	-	-	-	-
Toxicosis, Arsenic	1	-	-	1	-	-	-	-	-	-	-	-	-
Toxicosis, Ionophore	1	-	-	1	-	-	-	-	-	-	-	-	-
Toxicosis, Miscellaneous	1	-	-	-	1	-	-	-	-	-	-	-	-
Toxicosis, Nitrate	2	-	-	1	1	-	-	-	-	-	-	-	-
Toxicosis, Vomitoxin	1	-	-	-	-	-	-	1	-	-	-	-	-
Toxicosis, Zearalenone	1	-	-	1	-	-	-	-	-	-	-	-	-

Laboratory Procedures Summary

I.	Pathology	
A.	Necropsies (whole animals)	6,336
B.	Tissues from field necropsies (accessions)	4,975
C.	Formalin-fixed tissues (surgical or necropsy)	3,375
D.	Cytology (accessions)	607
E.	Electron Microscopy (thin sections)	16
F.	Hematology (specimens)	181
G.	Histopathology	
1)	Tissue Sections - H & E stain	60,792
2)	Tissue Sections - special stain	980
H.	Rabies (specimens)	2,109
	Sub-total	79,371
II.	Bacteriology/Mycology	
A.	Specimens cultured (aerobic)	23,951
B.	Specimens cultured (anaerobic)	733
C.	Specimens cultured (special procedures)	
1)	Campylobacter	1,309
2)	Milk - quarter samples	2,453
3)	Milk - bulk tank	294
4)	<i>Mycobacterium paratuberculosis</i>	878
D.	Direct tissue examinations	
1)	Darkfield/phase contrast (specimens)	350
2)	Immunofluorescence - <i>Chlamydia</i>	76
3)	Immunofluorescence - <i>Clostridium sp.</i>	82
4)	Immunofluorescence - <i>E. coli</i> pili	2,096
5)	Immunofluorescence - <i>Leptospira</i>	892
6)	Immunofluorescence - Mycoplasma	926
E.	Microbial susceptibility (cultures = 5,439; drugs = 62,268)	5,439
F.	Mycoplasma/Ureaplasma Cultures	22
G.	Mycology (specimens)	2,124
H.	Serotyping	
1)	<i>Actinobacillus pleuropneumoniae</i> (cultures)	168
2)	<i>Pasteurella multocida</i> (cultures)	34
3)	<i>Salmonella spp.</i> (cultures)	482
3)	<i>Streptococcus suis</i> (cultures)	367
	Sub-total	42,676
III.	Immunology/Serology	
A.	Immunology (specimens)	882
B.	Serology (tests)	235,267
	Sub-total	236,149
IV.	Parasitology	
A.	Direct Smears - Cryptosporidium	Not Recorded
B.	Direct Smears - Other	Not Recorded
C.	Flotation Fecal Exams	Not Recorded
D.	Skin Scrapings	Not Recorded
E.	Trichomonas Cultures	95
F.	Trichomonas Direct Smears	Not Recorded
	Sub-total	95
V.	Toxicology/Clinical Chemistry/Endocrinology	
A.	Analytical toxicology (analyses)	1,932
B.	Clinical chemistry (specimens)	769
C.	Endocrinology (specimens)	2,167
	Sub-total	4,868
VI.	Virology	
A.	Electron microscopy (fecal/tissue specimens)	2,962
B.	Tissue immunofluorescence (tests)	17,855
C.	Virus isolation (specimens)	4,356
	Sub-total	25,173
	TOTAL LABORATORY PROCEDURES	388,332

Necropsies (Accessions/Whole Animals)

Species	July	August	September	October	November	December	(continued below)
Avian- Chicken	10/89	8/128	11/89	10/59	19/131	10/81	
Avian- Miscellaneous	14/35	17/31	10/15	12/20	6/6	7/8	
Avian- Turkey	15/89	15/87	12/113	13/83	10/51	5/32	
Bovine	24/126	29/32	25/30	39/40	40/46	61/71	
Canine	32/31	39/44	34/42	29/33	29/41	28/31	
Caprine	1/1	0/0	2/2	2/2	0/0	2/3	
Equine	5/5	5/5	4/4	5/5	7/7	7/7	
Feline	23/23	28/27	22/24	25/27	12/12	13/12	
Fish-Amphibian-Reptile	0/0	1/1	1/1	4/5	1/3	0/0	
Miscellaneous Mammal	13/18	16/55	12/37	13/14	9/18	8/8	
Ovine	4/4	1/1	2/2	1/1	1/1	8/13	
Porcine	68/203	87/251	83/197	60/179	75/204	69/187	
TOTAL	209/624	246/662	218/556	213/468	209/520	218/453	

Species	January	February	March	April	May	June	Total
Avian- Chicken	15/119	13/155	11/72	8/56	11/114	12/42	138/1135
Avian- Miscellaneous	9/14	6/26	8/8	12/21	14/61	14/34	129/279
Avian- Turkey	12/61	14/65	15/204	10/63	5/28	5/18	131/894
Bovine	71/80	43/48	57/62	52/56	46/47	37/34	524/672
Canine	34/32	31/30	32/37	30/37	28/25	34/39	380/422
Caprine	4/5	3/4	0/0	2/3	0/0	3/3	19/23
Equine	12/11	6/6	6/6	5/5	7/7	5/5	74/73
Feline	16/16	13/13	22/21	20/25	17/15	15/13	226/228
Fish-Amphibian-Reptile	1/1	4/6	6/35	1/1	1/1	2/7	22/61
Miscellaneous Mammal	5/7	4/12	10/19	9/19	10/13	12/16	121/236
Ovine	8/8	15/18	11/14	10/16	6/7	5/5	72/90
Porcine	61/153	72/184	68/183	62/177	66/135	50/170	821/2223
TOTAL	248/507	224/567	246/661	221/479	211/453	194/386	2657/6336

Tissue Accessions

Species	Tissues from Field Necropsies	Formalin Fixed Tissues Only (Surgical or Necropsy)
Avian- Chicken	28	12
Avian- Miscellaneous	42	131
Avian- Turkey	25	19
Bovine	2,012	49
Canine	393	2,469
Caprine	12	2
Equine	79	118
Feline	107	434
Fish-Amphibian-Reptile	6	12
Miscellaneous Mammal	93	64
Ovine	83	15
Porcine	2,095	50
TOTAL	4,975	3,375

Positive Rabies Cases

Species	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn	Total	Percent Total
Bat	-	5	-	-	1	-	-	-	-	-	-	1	7	4.0
Bovine	-	3	-	2	-	2	7	1	1	-	-	3	19	10.9
Canine	-	2	-	2	-	1	-	-	-	2	-	1	8	4.6
Equine	-	-	1	-	-	-	-	-	-	-	1	-	2	1.2
Feline	1	1	-	1	2	3	1	-	-	-	-	2	11	6.3
Raccoon	1	-	-	-	-	-	-	-	-	1	-	-	2	1.2
Skunk	2	9	4	10	11	8	14	3	18	12	17	17	125	71.8
TOTAL	4	20	5	15	14	14	22	4	19	15	18	24	174	100.0

Rabies Examinations*

Species	Human Exposure				Non-Human Exposure				Grand Total
	Pos	Neg	No Test	Total	Pos	Neg	No Test	Total	
Bat	4	79	-	83	3	67	1	71	154
Beaver	-	1	-	1	-	1	-	1	2
Bovine	8	58	-	66	11	62	-	73	139
Canine	3	536	2	541	5	69	-	74	615
Chipmunk	-	10	-	10	-	-	-	-	10
Equine	2	13	-	15	-	7	-	7	22
Feline	8	594	3	605	3	63	-	66	671
Ferret	-	12	-	12	-	2	-	2	14
Fox	-	21	1	22	-	15	-	15	37
Goat	-	3	-	3	-	2	-	2	5
Gopher	-	5	-	5	-	-	-	-	5
Guinea Pig	-	1	-	1	-	-	-	-	1
Hamster	-	11	-	11	-	-	-	-	11
Llama	-	2	-	2	-	-	-	-	2
Mink	-	3	-	3	-	-	-	-	3
Misc. Species	-	9	-	9	-	5	-	5	14
Mole	-	2	-	2	-	-	-	-	2
Mouse	-	11	-	11	-	-	-	-	11
Muskrat	-	7	-	7	-	5	-	5	12
Ovine	-	1	-	1	-	12	-	12	13
Pocket Gopher	-	3	-	3	-	1	-	1	4
Porcine	-	-	-	-	-	3	-	3	3
Porcupine	-	-	-	-	-	1	-	1	1
Rabbit	-	11	-	11	-	1	-	1	12
Raccoon	2	93	-	95	-	38	-	38	133
Rat	-	3	-	3	-	-	-	-	3
Shrew	-	2	-	2	-	-	-	-	2
Skunk	30	15	-	45	95	21	2	118	163
Squirrel	-	21	-	21	-	3	-	3	24
Weasel	-	-	-	-	-	1	-	1	1
Wolf	-	1	-	1	-	-	-	-	1
Woodchuck	-	6	-	6	-	12	1	13	19
TOTAL	57	1,534	6	1,597	117	391	4	512	2,109

*Fluorescent antibody testing performed by the Minnesota Department of Health

Cytology Laboratory Summary*

Species	Specimens*
Avian	2
Bovine	11
Canine	433
Equine	7
Feline	133
Fish-Amphibian-Reptile	1
Miscellaneous Mammals	17
Porcine	3
TOTAL	607

*Dr. Doug Weiss, Supervisor

Hematology Laboratory Summary*

Species	CBC	Crossmatch	Differential	Fibrinogen	Heartworm	Packed Cell Volume	Platelet Count	Von Willebrand
Bovine	37	-	2	-	-	-	-	-
Canine	21	6	11	2	3	-	3	6
Equine	31	4	3	-	-	-	-	-
Feline	14	-	2	-	-	-	2	-
Miscellaneous	10	-	1	-	-	-	-	-
Porcine	-	-	2	-	-	21	-	-
TOTAL	113	10	21	2	3	21	5	6

*Dr. Doug Weiss, Laboratory Supervisor

Histotechnique Laboratory Summary

Tissue Sections (H&E Stain)	Slides (H&E Stain)	Special Stains (Slides)	Recut Blocks	Decalcification
60,792	23,327	980	243	206

Bacterial Cultures/Susceptibilities

Species	Accessions	Aerobic Cultures	Anaerobic Cultures	Microbial Susceptibility	Mycoplasma/Ureaplasma
Avian	217	560	16	161	-
Bovine	2,670	5,986	60	915	15
Canine	1,948	2,484	422	1,011	6
Caprine	41	94	-	8	-
Equine	456	734	67	227	-
Feline	490	695	71	172	1
Fur Bearing	55	196	-	22	-
Ovine	161	426	4	59	-
Porcine	2,900	9,573	57	2,487	-
Chicken/Turkey	315	2,543	-	242	-
Other	292	660	36	135	-
TOTAL	9,545	23,951	733	5,439	22

Bacterial Cultures - Special Procedures

Species	<i>Campylobacter spp.</i>	<i>Mycobacterium paratuberculosis</i>	
	Specimens	Specimens	Positive
Bovine	762	878	52
Canine	90	-	-
Chicken/Turkey	5	-	-
Equine	10	-	-
Feline	11	-	-
Fur Bearing	12	-	-
Porcine	450	-	-
Ovine	48	-	-
Other	2	-	-
TOTAL	1,390	878	52

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. bifermntans (sordelli)</i> Positive
Bovine	82	82	13	18	21	8

*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	357	-	-	357	47	-	-
Porcine	670	670	338	534	22	532	55
Other	3	-	-	3	-	-	-
TOTAL	1,030	670	338	894	69	532	55

*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>			
	Accessions	Samples	Pos	Neg	Accessions	Samples	Pos	Neg	Accessions	Samples	Pos	Neg
Avian- Chicken	1	2	0	2	-	-	-	-	-	-	-	-
Avian- Miscellaneous	7	14	0	14	-	-	-	-	-	-	-	-
Avian- Turkey	2	10	0	10	-	-	-	-	-	-	-	-
Bovine	2	4	0	4	17	23	0	23	-	-	-	-
Buffalo	-	-	-	-	1	2	0	2	-	-	-	-
Canine	-	-	-	-	2	4	0	4	-	-	-	-
Caprine	1	3	0	3	1	2	0	2	-	-	-	-
Equine	-	-	-	-	2	3	0	3	-	-	-	-
Feline	21	37	0	37	-	-	-	-	-	-	-	-
Hamster	1	1	0	1	-	-	-	-	-	-	-	-
Koala	1	2	0	2	-	-	-	-	-	-	-	-
Ovine	-	-	-	-	1	2	0	2	-	-	-	-
Porcine	2	3	0	3	401	854	0	854	625	926	50	876
Raccoon	-	-	-	-	1	2	0	2	-	-	-	-
TOTAL	38	76	0	76	426	892	0	892	625	926	50	876

*Frozen Section or Tissue Imprints

Bovine Mastitis Cultures

Number of Bovine Mastitis Cultures: 2,453
 Number with Significant Isolates: 1,165 (47%)
 Number with No growth: 1,288 (53%)
 Number of Bulk Tank Samples: 294

Isolate	Number Isolated	Number of Isolates Tested	Percent Susceptible		
			Amikacin	Ampicillin	Cephalothin
<i>Actinomyces pyogenes</i>	20	9	100	100	100
<i>Citrobacter spp.</i>	4	4	100	25	50
<i>Corynebacterium spp.</i>	19	2	100	100	50
<i>Enterobacter spp.</i>	15	7	100	29	29
<i>Enterococcus sp.</i>	45	34	25	85	50
<i>Escherichia coli</i>	53	42	100	59	64
<i>Klebsiella sp.</i>	18	18	100	11	94
Miscellaneous Gram Negative Rods	6	-	-	-	-
<i>Pasteurella multocida</i>	9	8	88	88	100
<i>Pseudomonas spp.</i>	11	8	100	25	13
<i>Serratia spp.</i>	11	11	100	0	0
<i>Staphylococcus aureus</i>	341	212	95	48	98
<i>Staphylococcus spp.- coag. neg.</i>	208	87	99	67	99
<i>Streptococcus agalactiae</i>	286	31	10	97	97
<i>Streptococcus bovis</i>	65	49	35	88	84
<i>Streptococcus dysgalactiae</i>	52	48	49	98	96
<i>Streptococcus spp.- Group G</i>	3	3	33	100	100
<i>Streptococcus uberis</i>	98	91	15	99	98
<i>Candida krusei</i>	21	-	-	-	-
Other Yeasts	14	-	-	-	-

(continued)

Bovine Mastitis Cultures (continued)

Isolate	Percent Susceptible				
	Cloxacillin	Erythromycin	Gentamicin	Neomycin	Novobiocin
<i>Actinomyces pyogenes</i>	99	86	98	90	92
<i>Citrobacter spp.</i>	-	0	100	75	0
<i>Corynebacterium spp.</i>	-	100	100	75	50
<i>Enterobacter spp.</i>	-	14	100	71	0
<i>Enterococcus spp.</i>	-	41	50	29	15
<i>Escherichia coli</i>	-	7	95	71	0
<i>Klebsiella spp.</i>	-	0	100	67	0
Miscellaneous Gram Negative Rods	-	-	-	-	-
<i>Pasteurella multocida</i>	-	63	75	88	50
<i>Pseudomonas spp.</i>	-	0	100	63	0
<i>Serratia spp.</i>	-	0	100	91	0
<i>Staphylococcus aureus</i>	99	86	98	90	92
<i>Staphylococcus spp.</i> - coag. neg.	87	71	98	93	69
<i>Streptococcus agalactiae</i>	-	90	19	13	19
<i>Streptococcus bovis</i>	-	76	53	43	33
<i>Streptococcus dysgalactiae</i>	-	65	69	35	21
<i>Streptococcus spp.</i> Group G	-	100	33	33	33
<i>Streptococcus uberis</i>	-	65	32	20	12
<i>Candida krusei</i>	-	-	-	-	-
Other Yeasts	-	-	-	-	-

Isolate	Percent Susceptible				
	Penicillin	Streptomycin	Vetasulid	Tetracycline	Triple Sulfa
<i>Actinomyces pyogenes</i>	100	67	44	78	44
<i>Citrobacter spp.</i>	0	75	75	75	75
<i>Corynebacterium spp.</i>	100	100	50	100	50
<i>Enterobacter spp.</i>	0	14	100	43	86
<i>Enterococcus spp.</i>	62	6	26	21	21
<i>Escherichia coli</i>	21	55	64	69	57
<i>Klebsiella spp.</i>	0	72	77	83	61
Miscellaneous Gram Negative Rods	-	-	-	-	-
<i>Pasteurella multocida</i>	88	50	75	100	63
<i>Pseudomonas spp.</i>	13	25	13	25	13
<i>Serratia spp.</i>	0	27	64	9	45
<i>Staphylococcus aureus</i>	50	77	91	89	71
<i>Staphylococcus spp.</i> - coag. neg.	63	68	63	67	49
<i>Streptococcus agalactiae</i>	97	13	48	65	55
<i>Streptococcus bovis</i>	78	16	49	31	31
<i>Streptococcus dysgalactiae</i>	96	27	46	31	40
<i>Streptococcus spp.</i> Group G	100	0	100	100	100
<i>Streptococcus uberis</i>	99	6	13	47	12
<i>Candida krusei</i>	-	-	-	-	-
Other Yeasts	-	-	-	-	-

Actinobacillus pleuropneumoniae Serotyping*

Type	Accessions	Percent
1	121	72
5	31	18
7	10	6
Untypable	6	4
TOTAL	168	100

*Serotyping conducted by Dr. Carlos Pijoan

Pasteurella multocida Serotyping*

Type	Avian	Chicken	Porcine	Turkey	Total
A	-	-	8	-	8
1	3	3	-	3	9
3	2	2	-	-	4
3x4	-	-	-	2	2
3x4x5	-	1	-	1	2
Untypable	2	4	-	1	7
D	-	-	2	-	2
TOTAL	7	10	10	7	34

*Serotyping conducted by Dr. K. Nagaraja

Salmonella Serotyping

Serotype	Misc.									Misc. Species	Total
	Avian	Bovine	Canine	Chicken	Equine	Feline	Ovine	Porcine	Turkey		
agona	-	2	-	-	-	-	-	1	8	-	11
anatum	-	1	-	-	-	-	-	7	1	1	10
arizona 4,5,12:1 monophasic	-	2	-	-	-	-	-	1	-	-	3
arizona 16:210;ent 215	-	-	-	-	-	-	-	-	-	1	1
arizona 35:1 monophasic	-	-	-	-	-	-	-	-	-	1	1
arizona 41:24,233	-	-	-	-	-	-	-	-	-	1	1
arizona 50:K-2 monophasic	-	-	-	-	-	-	-	-	-	1	1
arizona 61:1,5	-	-	-	-	1	-	14	-	-	-	15
bardo	-	-	-	-	-	-	-	1	-	-	1
blockley	-	-	-	-	-	-	-	-	1	-	1
braenderup	-	-	-	1	-	-	-	-	-	-	1
brandenberg	-	2	-	-	-	1	-	3	2	-	8
bredney	-	-	-	-	-	-	-	3	2	-	5
cairau	-	-	-	-	-	-	-	-	-	1	1
cerro	-	2	-	1	-	-	-	-	-	-	3
cholerasuis/kunzendorf	-	1	-	-	-	-	-	139	-	1	141
derby	-	1	-	-	-	-	-	13	-	-	14
drypool	-	-	-	-	-	-	-	-	1	-	1
dublin	-	31	-	-	-	-	-	1	-	-	32
enteriditis	-	5	-	4	-	-	-	2	-	-	11
gaminara	-	-	2	-	-	-	-	-	-	-	2
haardt	-	1	-	-	-	-	-	-	-	-	1
hadar	1	2	-	5	3	-	1	-	3	2	17
haromelen	-	-	-	-	-	-	-	-	-	1	1
heidelberg	2	-	-	3	-	-	-	4	1	-	10
indiana	1	-	-	1	-	-	-	-	2	2	6
infantis	1	-	-	1	-	-	-	-	-	1	3
istanbul	-	-	-	-	-	-	-	1	-	-	1
java	-	-	-	-	-	-	-	-	-	1	1
livingstone	-	-	-	1	-	-	-	-	-	-	1
london	-	-	-	-	-	-	-	1	-	1	2
m. bandaha	-	2	-	-	-	-	-	2	-	-	4
meleagridis	-	1	-	-	-	-	-	-	-	-	1
montevideo	-	1	1	-	-	-	-	-	4	-	6
muechen	-	1	-	-	-	-	-	-	-	2	3
muenster	-	-	-	1	-	-	-	-	-	1	2
newport	-	-	-	-	-	6	-	1	-	1	8
norwich	-	-	-	-	1	-	-	-	-	-	1
reading	-	-	1	-	-	-	-	-	-	1	2
st. paul	-	-	-	-	1	-	-	2	7	1	11
seftenberg	-	-	-	-	-	-	-	-	3	-	3
typhimurium	4	37	3	-	13	3	1	14	-	2	77
typhimurium/copenhagen	3	20	-	1	-	-	-	9	-	1	34
worthington	-	-	-	-	-	-	-	-	7	-	7
yovokome	-	-	-	-	-	-	-	-	1	-	1
Salmonella C2:non-motile	-	-	-	-	-	1	-	-	-	1	2
Salmonella 6,8:non-motile	-	-	-	-	-	1	-	-	-	-	1
Salmonella 9,12 non-motile	9	-	-	-	-	-	-	-	-	1	10
Untypable	-	-	-	-	-	-	-	-	1	1	2
TOTAL	21	112	7	19	19	12	16	205	44	27	482

Streptococcus suis Serotyping - Porcine Origin*

Source	Serotype												Total	Percent
	1	2	3	4	5	6	7	8	9	11	14	UT**		
Brain/Meninges	-	23	8	8	-	-	3	1	-	2	-	2	47	12.8
Heartblood/Myocardium	-	-	-	-	-	-	-	-	-	-	-	2	2	0.5
Heart Valve	-	5	-	-	-	-	1	-	-	-	-	-	6	1.6
Joint	-	-	-	-	-	-	2	-	-	-	-	1	3	0.8
Kidney	-	1	-	-	-	-	-	-	-	-	-	-	1	0.3
Liver	1	2	1	1	1	-	3	2	-	-	-	-	11	3.1
Lung	2	74	48	30	13	2	15	39	4	10	1	29	267	72.8
Nasal Mucosa	-	-	3	3	-	1	-	3	1	1	-	2	14	3.8
Pericardial Sac	-	1	-	-	1	-	-	-	-	-	-	-	2	0.5
Spleen	-	7	1	-	-	-	-	1	-	-	-	-	9	2.5
Fetal Stomach	-	-	-	-	1	-	-	-	-	-	-	1	2	0.5
Unknown	-	1	1	1	-	-	-	-	-	-	-	-	3	0.8
TOTAL	3	114	62	43	16	3	24	46	5	13	1	37	367	
PERCENT	0.8	31.1	16.9	11.7	4.4	0.8	6.5	12.5	1.4	3.5	0.3	10.1		100.0

*Serotyping conducted by Dr. Carlos Pijoan

**Untypable

In Vitro Antimicrobial Drug Susceptibility Tests

Avian (Chicken and Turkey)

Isolate	Number of Isolates Tested	Percent Susceptible					
		Bacitracin	Erythromycin	Gentamicin	Lincomycin	Neomycin	Nitrofurantoin
<i>Bordetella</i> spp.	1	0	100	100	0	0	0
<i>Escherichia coli</i>	63	0	0	92	0	41	83
<i>Klebsiella</i> spp.	3	0	0	100	0	67	100
<i>Pasteurella hemolytica</i>	47	15	79	98	11	83	98
<i>Pasteurella multocida</i>	14	0	50	100	0	93	100
<i>Pasteurella</i> spp.	3	67	100	100	33	100	100
<i>Pseudomonas</i> spp.	5	0	20	100	0	80	0
<i>Salmonella</i> spp.	58	0	0	73	0	51	91
<i>Staphylococcus aureus</i>	23	96	63	100	92	92	92
<i>Staphylococcus</i> spp.-coag. neg.	13	85	27	100	91	100	100
<i>Streptococcus</i> spp.-alpha	3	67	33	0	0	0	100

Percent Susceptible

Isolate	Percent Susceptible						
	Novobiocin	Penicillin	Streptomycin	Sulfachloro-pyridazine	Tetracycline Doxycycline	Trimetho-prim Sulfa	Triple Sulfa
<i>Bordetella</i> spp.	100	0	0	0	100	0	0
<i>Escherichia coli</i>	0	0	21	70	13	95	30
<i>Klebsiella</i> spp.	0	0	50	67	33	67	67
<i>Pasteurella hemolytica</i>	11	74	85	80	9	100	62
<i>Pasteurella multocida</i>	93	100	46	50	100	100	36
<i>Pasteurella</i> spp.	67	100	100	67	37	100	67
<i>Pseudomonas</i> spp.	0	20	0	18	20	33	40
<i>Salmonella</i> spp.	0	0	37	47	51	93	30
<i>Staphylococcus aureus</i>	92	68	76	90	12	100	68
<i>Staphylococcus</i> spp.-coag. neg.	100	45	78	90	9	100	64
<i>Streptococcus</i> spp.-alpha	0	0	0	0	50	100	0

In Vitro Antimicrobial Drug Susceptibility Tests (continued)

Bovine

Isolate	Number of Isolates Tested	Percent Susceptible					Cephalothin
		Amikacin	Ampicillin	Apramycin	Ceftiofur		
<i>Actinobacillus spp.</i>	7	-	86	-	80	80	
<i>Actinomyces pyogenes</i>	14	-	100	-	100	100	
<i>Escherichia coli</i>	407	99	33	89	98	63	
<i>Enterobacter spp.</i>	4	100	50	100	100	50	
<i>Haemophilus spp.</i>	34	-	100	-	91	100	
<i>Klebsiella spp.</i>	11	100	9	100	100	73	
<i>Moraxella bovis</i>	2	-	100	-	100	100	
<i>Pasteurella haemolytica</i>	109	-	50	-	100	97	
<i>Pasteurella multocida</i>	115	-	85	-	100	100	
<i>Proteus spp.</i>	2	100	0	100	100	50	
<i>Pseudomonas spp.</i>	10	100	30	80	70	20	
<i>Salmonella spp.</i>	115	98	23	94	98	86	
<i>Staphylococcus spp.</i> -coag. pos.	6	-	50	-	100	100	
<i>Staphylococcus spp.</i> -coag. neg.	2	-	50	-	100	100	
<i>Streptococcus spp.</i> -alpha	21	-	83	-	74	70	

Isolate	Percent Susceptible						
	Erythro-mycin	Gentamicin	Kanamycin	Lincomycin	Neomycin	Nitro-furantoin	Novo-biocin
<i>Actinobacillus spp.</i>	71	100	100	14	-	100	29
<i>Actinomyces pyogenes</i>	100	100	100	83	-	100	86
<i>Escherichia coli</i>	-	78	18	-	13	95	-
<i>Enterobacter spp.</i>	-	100	50	-	50	50	-
<i>Haemophilus spp.</i>	88	94	53	19	-	100	79
<i>Klebsiella spp.</i>	-	73	64	-	45	67	-
<i>Moraxella bovis</i>	100	100	100	50	-	100	100
<i>Pasteurella haemolytica</i>	29	97	83	3	-	100	5
<i>Pasteurella multocida</i>	58	97	71	4	-	100	66
<i>Proteus spp.</i>	-	50	50	-	50	0	-
<i>Pseudomonas spp.</i>	-	70	30	-	60	30	-
<i>Salmonella spp.</i>	-	94	23	-	18	96	-
<i>Staphylococcus spp.</i> -coag. pos.	83	83	75	75	-	100	100
<i>Staphylococcus spp.</i> -coag. neg.	100	100	100	100	-	100	0
<i>Streptococcus spp.</i> -alpha	76	80	5	44	-	72	11

In Vitro Antibiotic Drug Susceptibility Tests (continued)

Isolate	Percent Susceptible						
	Penicillin	Spectino- mycin	Sulfachloro- pyridazine	Tetracycline	Trimetho- prim Sulfa	Triple Sulfa	Enro- floxacin
<i>Actinobacillus spp.</i>	86	46	71	71	100	86	-
<i>Actinomyces pyogenes</i>	100	92	31	60	100	14	-
<i>Escherichia coli</i>	-	57	31	10	71	15	100
<i>Enterobacter spp.</i>	-	50	50	75	50	50	100
<i>Haemophilus spp.</i>	89	88	74	77	94	23	-
<i>Klebsiella spp.</i>	-	45	18	9	82	18	100
<i>Moraxella bovis</i>	100	100	100	100	100	100	-
<i>Pasteurella haemolytica</i>	47	91	52	38	97	22	-
<i>Pasteurella multocida</i>	85	84	72	74	100	34	-
<i>Proteus spp.</i>	-	50	50	0	50	50	100
<i>Pseudomonas spp.</i>	-	50	20	30	20	20	100
<i>Salmonella spp.</i>	-	44	20	15	87	17	100
<i>Staphylococcus spp.-coag. pos.</i>	50	50	67	83	100	67	-
<i>Staphylococcus spp.-coag. neg.</i>	50	100	100	50	100	50	-
<i>Streptococcus spp.-alpha</i>	67	63	29	38	95	24	67

Canine and Feline

Isolate	Number of Isolates Tested	Percent Susceptible					
		Amikacin	Ampicillin	Amoxicillin/ Clavulanic Acid	Bacitracin	Cefa- taxime	Cefur- oxime
<i>Bordetella spp.</i>	15	-	53	100	-	33	-
<i>Enterobacter spp.</i>	13	100	27	38	-	92	33
<i>Escherichia coli</i>	203	97	54	85	-	99	90
<i>Klebsiella spp.</i>	34	100	6	76	-	97	90
<i>Pasteurella multocida</i>	66	-	95	97	67	98	-
<i>Pasteurella spp.</i>	16	-	94	100	-	100	-
<i>Proteus spp.</i>	46	98	62	84	-	89	70
<i>Pseudomonas spp.</i>	59	88	2	10	-	39	0
<i>Salmonella spp.</i>	14	100	36	64	-	100	78
<i>Staphylococcus spp.-coag. pos.</i>	125	-	24	98	93	99	-
<i>Staphylococcus spp.-coag. neg.</i>	110	-	33	99	94	98	-
<i>Streptococcus spp.-alpha</i>	97	-	90	96	77	59	-
<i>Streptococcus spp.-beta</i>	86	-	95	100	94	99	-

In Vitro Antimicrobial Drug Susceptibility Tests (continued)

Canine and Feline (continued)

Isolate	Percent Susceptible						
	Cephalo- thin	Chloram- phenicol	Clinda- mycin	Enro- floxacin	Erythro- mycin	Genta- micin	Neomycin
<i>Bordetella spp.</i>	60	100	0	100	86	100	-
<i>Enterobacter spp.</i>	23	100	-	100	3	100	-
<i>Escherichia coli</i>	28	83	-	100	-	93	55
<i>Klebsiella spp.</i>	62	71	-	100	-	85	-
<i>Pasteurella multocida</i>	95	97	5	98	83	100	-
<i>Pasteurella spp.</i>	100	100	0	100	88	100	-
<i>Proteus spp.</i>	78	78	-	100	-	90	79
<i>Pseudomonas spp.</i>	0	5	-	92	-	69	18
<i>Salmonella spp.</i>	77	43	-	100	-	93	-
<i>Staphylococcus spp.</i> -coag. pos.	98	99	83	99	78	99	98
<i>Staphylococcus spp.</i> -coag. neg.	98	97	81	98	86	95	79
<i>Streptococcus spp.</i> -alpha	60	85	46	73	72	72	39
<i>Streptococcus spp.</i> -beta	99	98	85	95	89	91	31

Percent Susceptible

Isolate	Percent Susceptible						
	Nitro- furantoin	Oxacillin	Penicillin	Polymyxin	Tetra- cycline	Ticarcillin	Trimetho- prim Sulfa
<i>Bordetella spp.</i>	33	-	0	-	83	-	60
<i>Enterobacter spp.</i>	100	-	-	-	67	83	92
<i>Escherichia coli</i>	97	-	-	63	56	58	80
<i>Klebsiella spp.</i>	79	-	-	67	62	10	82
<i>Pasteurella multocida</i>	-	-	94	-	91	-	100
<i>Pasteurella spp.</i>	-	-	94	-	100	-	100
<i>Proteus spp.</i>	2	-	-	21	6	70	82
<i>Pseudomonas spp.</i>	3	-	-	81	9	90	8
<i>Salmonella spp.</i>	100	-	-	-	36	38	100
<i>Staphylococcus spp.</i> -coag. pos.	-	98	23	89	53	-	83
<i>Staphylococcus spp.</i> -coag. neg.	-	95	30	83	50	-	83
<i>Streptococcus spp.</i> -alpha	-	-	62	19	43	-	92
<i>Streptococcus spp.</i> -beta	-	-	95	9	26	-	95

In Vitro Antimicrobial Susceptibility Tests (continued)

Equine

Isolate	Number of Isolates Tested	Percent Susceptible			
		Amikacin	Ampicillin	Carbenicillin	Ceftiofur
<i>Actinobacillus spp.</i>	9	-	89	-	100
<i>Enterobacter spp.</i>	6	100	33	0	100
<i>Escherichia coli</i>	17	100	53	53	100
<i>Klebsiella spp.</i>	15	100	0	0	100
<i>Proteus spp.</i>	7	100	29	100	83
<i>Pseudomonas spp.</i>	15	100	0	88	25
<i>Rhodococcus equi</i>	8	-	25	-	67
<i>Salmonella spp.</i>	16	100	38	86	100
<i>Staphylococcus spp.</i> -coag. pos.	7	-	29	-	83
<i>Staphylococcus spp.</i> -coag. neg.	11	-	27	-	90
<i>Streptococcus spp.</i> -alpha	19	-	83	-	61
<i>Streptococcus spp.</i> -beta	50	-	94	-	100

Percent Susceptible

Isolate	Percent Susceptible				
	Cephalothin	Chloramphenicol	Erythromycin	Gentamicin	Kanamycin
<i>Actinobacillus spp.</i>	100	100	38	100	100
<i>Enterobacter spp.</i>	50	83	-	83	50
<i>Escherichia coli</i>	53	87	-	83	43
<i>Klebsiella spp.</i>	92	87	-	87	75
<i>Proteus spp.</i>	17	100	-	100	100
<i>Pseudomonas spp.</i>	0	0	-	92	0
<i>Rhodococcus equi</i>	13	100	100	100	67
<i>Salmonella spp.</i>	56	75	-	63	13
<i>Staphylococcus spp.</i> -coag. pos.	100	80	86	86	67
<i>Staphylococcus spp.</i> -coag. neg.	82	100	80	78	33
<i>Streptococcus spp.</i> -alpha	67	83	79	67	29
<i>Streptococcus spp.</i> -beta	100	100	96	63	28

In Vitro Antimicrobial Drug Susceptibility Tests (continued)

Equine (continued)

Isolate	Percent Susceptible					
	Neomycin	Nitro- furantoin	Novo- biocin	Penicillin	Polymyxin	Rifampin
<i>Actinobacillus spp.</i>	-	100	0	78	-	98
<i>Enterobacter spp.</i>	50	60	-	-	67	-
<i>Escherichia coli</i>	44	94	-	-	69	-
<i>Klebsiella spp.</i>	69	30	-	-	62	-
<i>Proteus spp.</i>	80	14	-	-	20	-
<i>Pseudomonas spp.</i>	50	0	-	-	67	-
<i>Rhodococcus equi</i>	-	11	0	13	-	89
<i>Salmonella spp.</i>	40	93	-	-	38	-
<i>Staphylococcus spp.-coag. pos.</i>	-	100	83	29	-	100
<i>Staphylococcus spp.-coag. neg.</i>	-	88	75	20	-	86
<i>Streptococcus spp.-alpha</i>	-	84	16	68	-	76
<i>Streptococcus spp.-beta</i>	-	100	23	94	-	94

Isolate	Percent Susceptible					
	Spectino- mycin	Sulfachloro- pyridizine	Tetra- cycline	Ticarcillin	Trimetho- prim Sulfa	Triple Sulfa
<i>Actinobacillus spp.</i>	89	89	100	-	100	100
<i>Enterobacter spp.</i>	75	60	67	33	100	50
<i>Escherichia coli</i>	67	64	56	60	83	42
<i>Klebsiella spp.</i>	89	67	71	7	87	67
<i>Proteus spp.</i>	100	100	43	86	100	100
<i>Pseudomonas spp.</i>	43	0	0	92	0	33
<i>Rhodococcus equi</i>	100	56	22	-	89	67
<i>Salmonella spp.</i>	100	33	6	50	69	36
<i>Staphylococcus spp.-coag. pos.</i>	67	57	86	-	100	43
<i>Staphylococcus spp.-coag. neg.</i>	30	67	60	-	100	50
<i>Streptococcus spp.-alpha</i>	65	35	75	-	89	26
<i>Streptococcus spp.-beta</i>	90	30	51	-	86	20

Ovine

Isolate	Number of Isolates Tested	Percent Susceptible				
		Amikacin	Ampicillin	Apramycin	Ceftiofur	Cephalo- thin
<i>Escherichia coli</i>	10	100	60	100	100	60
<i>Pasteurella hemolytica</i>	14	-	100	-	100	100
<i>Pasteurella multocida</i>	8	-	100	-	100	100
<i>Salmonella spp.</i>	15	100	93	100	100	93

In Vitro Antimicrobial Drug Susceptibility Tests (continued)

Ovine (continued)

Isolate	Percent Susceptible						
	Erythro- mycin	Enro- floxacin	Gentamicin	Kanamycin	Lincomycin	Neomycin	Nitro- furantoin
<i>Escherichia coli</i>	-	100	100	70	-	40	100
<i>Pasteurella hemolytica</i>	46	-	100	86	0	-	100
<i>Pasteurella multocida</i>	57	-	100	75	0	-	100
<i>Salmonella spp.</i>	-	100	100	93	-	87	87

Percent Susceptible

Isolate	Percent Susceptible						
	Novo- biocin	Penicillin	Spectino- mycin	Sulfachloro- pyridazine	Tetra- cycline	Trimetho- prim Sulfa	Triple Sulfa
<i>Escherichia coli</i>	-	-	90	50	40	100	40
<i>Pasteurella hemolytica</i>	0	100	100	64	100	100	50
<i>Pasteurella multocida</i>	38	100	86	75	100	100	38
<i>Salmonella spp.</i>	-	-	93	87	87	100	80

Porcine

Percent Susceptible

Isolate	Number of Isolates Tested	Percent Susceptible					Cephalo- thin
		Amikacin	Ampicillin	Apramycin	Ceftiofur		
<i>Actinobac. pleuropneumoniae</i>	165	-	46	-	99	99	
<i>Actinobacillus spp.</i>	32	-	53	-	100	100	
<i>Actinomyces pyogenes</i>	26	-	100	-	100	100	
<i>Bordetella spp.</i>	46	-	33	-	25	36	
<i>Enterobacter spp.</i>	4	100	75	100	100	75	
<i>Escherichia coli</i>	798	99	58	59	99	62	
<i>Haemophilus spp.</i>	72	-	43	-	97	100	
<i>Klebsiella spp.</i>	9	100	0	89	100	89	
<i>Pasteurella multocida</i>	340	-	48	-	99	99	
<i>Proteus spp.</i>	4	100	75	75	100	100	
<i>Salmonella spp.</i>	203	100	72	86	99	98	
<i>Staphylococcus hyicus</i>	29	-	7	-	96	100	
<i>Staphylococcus spp.-coag.neg.</i>	5	-	60	-	100	100	
<i>Streptococcus suis</i>	323	-	96	-	98	98	
<i>Streptococcus spp.-alpha</i>	180	-	97	-	93	91	
<i>Streptococcus spp.-beta</i>	51	-	90	-	99	100	

In Vitro Antimicrobial Drug Susceptibility Tests (continued)

Porcine (continued)

Isolate	Percent Susceptible						
	Enro- floxacin	Erythro- mycin	Gentamicin	Kanamycin	Lincomycin	Neomycin	Nitro- furantoin
<i>Actinobac. pleuropneumoniae</i>	93	57	88	68	5	-	100
<i>Actinobacillus spp.</i>	-	50	97	84	0	-	97
<i>Actinomyces pyogenes</i>	-	76	100	96	56	-	96
<i>Bordetella spp.</i>	-	79	98	91	0	-	7
<i>Enterobacter spp.</i>	100	-	100	75	-	75	50
<i>Escherichia coli</i>	100	-	62	33	-	32	79
<i>Haemophilus spp.</i>	100	96	99	82	66	-	94
<i>Klebsiella spp.</i>	89	-	89	89	-	67	33
<i>Pasteurella multocida</i>	100	54	99	91	1	75	0
<i>Proteus spp.</i>	100	-	75	75	-	-	99
<i>Salmonella spp.</i>	100	-	86	70	-	63	96
<i>Staphylococcus hyicus</i>	-	48	100	93	45	-	100
<i>Staphylococcus spp.-coag.neg.</i>	-	80	100	100	80	-	100
<i>Streptococcus suis</i>	-	37	72	10	27	-	75
<i>Streptococcus spp.-alpha</i>	-	35	76	16	23	-	82
<i>Streptococcus spp.-beta</i>	-	48	84	22	29	-	96

Isolate	Percent Susceptible						
	Novobiocin	Penicillin	Spectino- mycin	Sulfachloro- pyridazine	Tetracycline	Trimetho- prim Sulfa	Triple Sulfa
<i>Actinobac. pleuropneumoniae</i>	9	43	98	88	31	92	4
<i>Actinobacillus spp.</i>	13	41	94	83	16	100	35
<i>Actinomyces pyogenes</i>	86	100	96	60	40	96	40
<i>Bordetella spp.</i>	40	4	7	11	94	28	2
<i>Enterobacter spp.</i>	-	-	75	50	25	100	50
<i>Escherichia coli</i>	-	-	63	29	7	90	17
<i>Haemophilus spp.</i>	87	92	96	82	95	93	15
<i>Klebsiella spp.</i>	-	-	44	44	0	67	44
<i>Pasteurella multocida</i>	78	96	97	68	74	99	28
<i>Proteus spp.</i>	-	-	25	75	0	100	75
<i>Salmonella spp.</i>	-	-	91	9	12	96	11
<i>Staphylococcus hyicus</i>	96	7	36	90	14	100	68
<i>Staphylococcus spp.-coag.neg.</i>	60	60	100	100	50	100	80
<i>Streptococcus suis</i>	13	91	87	34	5	97	26
<i>Streptococcus spp.-alpha</i>	22	83	76	25	6	92	20
<i>Streptococcus spp.-beta</i>	7	90	66	51	0	100	45

Mycology (Specimens Cultured)

Species	Total Cultures
Avian- Chicken/Turkey	138
Avian- Miscellaneous	84
Bovine	667
Canine	468
Caprine	14
Equine	128
Feline	56
Miscellaneous	38
Ovine	58
Porcine	473
TOTAL	2,124

Immunology

Species	Antithrombin III Level	Autoimmune Dermatitis (IgG, C ₃)	Coombs	FANA	Immune Panel
Bovine	-	-	-	-	-
Canine	3	24	28	36	16
Equine	-	-	-	1	1
Feline	-	3	-	-	-
Llama	-	-	-	-	-
Miscellaneous	-	-	-	-	-
TOTAL	3	27	28	37	17

Species	Immunoglobulins Fetal Fluid	Immunoglobulins Serum	LE Clot	Occult Heartworm	Rheumatoid Factor
Bovine	116	146	-	-	-
Canine	-	2	28	20	2
Equine	-	16	-	-	-
Feline	-	-	-	-	-
Llama	-	2	-	-	-
Miscellaneous	-	29	-	-	-
Porcine	409	-	28	20	2
TOTAL	525	195	28	20	2

Serology Summary

Disease	Positive	Suspect	Negative	No Test/ Toxic	Total Tests	Percent Positive
Aleutian Disease (CIEP)	35	-	410	-	445	7.9
Anaplasmosis (CF)	29	65	14,796	65	14,955	0.2
Blue Tongue (AGID)	25	5	857	-	887	2.8
Bovine Adenovirus	167	-	18	-	185	90.3
Bovine Herpesvirus DN599 (IFA)	30	-	34	-	64	46.9
Bovine Leukosis (AGID)	516	6	1,175	-	1,697	30.4
Bovine Respiratory Syncytial Virus (SN)	880	-	237	11	1,128	78.0
Bovine Viral Diarrhea (SN)	2,447	-	1,046	181	3,674	66.6
<i>Brucella abortus</i> (CF)	-	-	2	-	2	0.0
<i>Brucella canis</i> (Rapid Slide/Tube Agg.)	-	-	153	-	153	0.0
Canine Parvovirus (HAI)	1	-	-	-	1	100.0
Caprine Arthritis Encephalitis Virus (AGID)	238	31	325	8	602	39.5
Chlamydia (CF)	55	38	476	1	570	9.6
Encephalomyocarditis Virus (SN)	965	-	1,026	5	1,996	48.3
Equine Infectious Anemia (AGID)	5	-	1,994	-	1,999	0.3
Equine Viral Rhinopneumonitis Virus (SN)	55	-	25	7	87	63.2
Eperythrozoonosis (HA)	103	371	989	-	1,463	7.0
Feline Leukemia (ELISA)	2	-	45	-	47	4.3
Infectious Bovine Rhinotracheitis (SN)	2,236	-	1,129	168	3,533	63.3
Leptospira (MA-6 serovars)	4,553	-	4,063	-	8,616	52.8
Lyme Disease (IFA)	535	557	841	-	1,933	27.7
<i>Mycobacterium paratuberculosis</i> (AGID)	243	9	440	-	692	35.1
<i>Mycobacterium paratuberculosis</i> (CF)	1	9	184	-	194	0.5
Ovine Progressive Pneumonia (AGID)	1,620	32	3,622	3	5,277	30.7
Parainfluenza-3 (HI)	1,541	-	272	-	1,813	85.0
Parvovirus (HAI)	2,211	-	191	162	2,564	86.2
Pseudorabies (ELISA)	8,602	-	121,829	-	130,431	6.6
Pseudorabies (GP1)	5,306	-	9,288	-	14,594	36.4
Pseudorabies (GPX)	4,385	-	15,005	-	19,390	22.6
Pseudorabies (LAT)	56	-	667	-	723	7.7
Pseudorabies (SN)	6,809	-	4,967	34	11,810	57.7
Swine Influenza Virus (HI)	178	-	79	-	257	69.3
Transmissible Gastroenteritis (SN)	413	-	1,359	3	1,775	23.3
Toxoplasma (IHA)	18	-	146	-	164	11.0
Vesicular Stomatitis (CF)	-	-	2	-	2	0.0
Vesicular Stomatitis - Indiana (SN)	1	-	739	-	740	0.1
Vesicular Stomatitis - New Jersey (SN)	-	-	804	-	804	0.0
TOTAL	44,261	1,123	189,235	648	235,267	

Serology by Species (Accessions/Animals)

Species	July	August	September	October	November	December	(continued below)
Avian- Chicken	1/1	1/12	0/0	2/39	6/370	0/0	
Avian- Miscellaneous	1/1	4/9	2/2	2/2	2/461	0/0	
Avian- Turkey	9/763	6/304	4/239	9/631	8/519	7/269	
Bovine	217/1063	384/1599	424/1618	254/1723	286/1462	207/1955	
Canine	241/241	181/182	115/118	202/208	176/188	94/102	
Caprine	19/122	8/105	6/9	6/41	7/42	7/36	
Equine	97/148	121/217	91/233	107/268	32/113	26/46	
Feline	7/10	2/4	1/1	0/0	1/1	2/2	
Miscellaneous Mammal	6/83	3/9	9/17	10/140	8/16	10/374	
Ovine	8/128	17/226	10/318	7/493	7/93	4/85	
Porcine	808/11921	902/13080	620/9261	515/8069	526/8602	623/12648	
TOTAL	1414/14481	1629/15747	1282/11816	1114/11614	1059/11867	980/15517	

Species	January	February	March	April	May	June	Total
Avian- Chicken	3/205	5/112	3/35	2/43	0/0	2/13	25/830
Avian- Miscellaneous	1/1	4/104	3/15	1/1	5/74	4/50	29/720
Avian- Turkey	9/781	15/625	11/1248	7/477	0/0	2/30	87/5886
Bovine	319/1409	300/1761	427/2658	256/1357	285/1636	290/1676	3649/19917
Canine	79/85	70/70	96/103	112/113	150/166	168/181	1684/1757
Caprine	5/9	10/87	10/26	11/52	14/108	15/138	118/775
Equine	62/113	70/134	139/285	150/330	165/413	91/178	1151/2478
Feline	2/6	3/6	4/6	3/5	5/7	7/11	37/59
Miscellaneous Mammal	12/473	17/39	18/37	15/58	16/33	6/13	130/1292
Ovine	14/683	13/863	20/853	9/136	5/400	8/341	122/4619
Porcine	867/17024	794/15387	1064/21386	1143/20008	1027/16111	1009/16454	9898/169951
TOTAL	1373/20789	1301/19188	1795/26652	1709/22580	1672/18948	1602/19085	16930/208284

Foreign Export Testing

Procedure	Accessions	Samples
Anaplasma (CF)	89	251
Bluetongue (AGID)	128	451
<i>Brucella abortus</i> (CF)	2	2
<i>Mycobacterium paratuberculosis</i> (CF)	37	136
Bovine Leukosis (AGID)	60	128
Vesicular Stomatitis (CF)	1	1
Vesicular Stomatitis - New Jersey (SN)	44	804
Vesicular Stomatitis - Indiana (SN)	29	740

Leptospirosis Serology - Summary

Species	Herds				Animals			
	Number Tested	Number Negative	Number Positive	Percent Positive	Number Tested	Number Negative	Number Positive	Percent Positive
Bovine	1,316	764	552	41.9	2,991	1,693	1,298	43.4
Canine	12	11	1	8.3	15	10	5	33.3
Caprine	10	6	4	40.0	28	18	10	35.7
Equine	97	27	70	72.2	258	88	170	65.9
Ovine	24	24	-	0.0	30	30	-	0.0
Porcine	928	378	550	59.3	5,052	1,998	3,054	60.5
Misc. Species	16	8	8	50.0	242	226	16	6.6
TOTAL	2,403	1,218	1,185	49.3	8,616	4,063	4,553	52.8

Leptospirosis Serology - Positive Results by Microscopic Agglutination Test

Species	Bratislava	Canicola	Grippityphosa	Hardjo	Icterohemorrhagica	Pomona
Bovine	265	714	303	729	809	709
Canine	1	2	0	0	4	0
Caprine	15	1	0	0	1	1
Equine	169	55	9	18	81	22
Ovine	0	0	0	0	0	1
Porcine	2,537	546	436	414	1,364	354
Misc. Species	7	4	5	4	5	8
TOTAL	2,994	1,322	753	1,165	2,264	1,095

Lyme Disease (*Borrelia burgdorferi*) Serology (Indirect Fluorescent Antibody)

Species	Samples	Titers		
		< 80	80-160	320- \geq 1280
Bovine	247	75	138	34
Canine	1,540	734	339	467
Equine	146	32	80	34
TOTAL	1,933	841	557	535

Toxoplasmosis Serology (Indirect Hemagglutination)

Species	Accessions	Samples	Negative	Positive Titers							
				32	64	128	256	512	1024	2048	4096
Bovine	9	17	17	0	0	0	0	0	0	0	0
Canine	10	10	10	0	0	0	0	0	0	0	0
Caprine	4	8	5	0	0	0	2	0	0	1	0
Feline	23	33	27	0	0	1	1	2	2	0	0
Ovine	28	42	40	1	0	0	0	0	1	0	0
Porcine	8	45	42	1	1	1	0	0	0	0	0
Llama	3	5	1	0	2	1	0	0	1	0	0
TOTAL	85	160	142	2	3	3	3	2	4	1	0

Virus Serology

Bovine Infectious Bovine Rhinotracheitis (Serum Neutralization)

Accessions	Samples	Negative	1:4	1:8-1:32	$\geq 1:64$	Toxic
1364	3533	1129	743	1160	395	168

Bovine Parainfluenza-3 (Hemagglutination Inhibition)

Accessions	Samples	Negative	1:10-20	1:40-80	$\geq 1:160$	Toxic
754	1813	272	480	895	166	N/A

Bovine Respiratory Syncytial Virus (Serum Neutralization)

Accessions	Samples	Negative	1:4	1:8-64	$\geq 1:128$	Toxic
328	1128	237	152	623	105	11

Bovine Viral Diarrhea (Serum Neutralization)

Accessions	Samples	Negative	1:4	1:8-128	$\geq 1:256$	Toxic
1518	3674	1046	307	1448	692	181

Equine Rhinopneumonitis Virus (Serum Neutralization)

Accessions	Samples	Negative	1:4	1:8-64	$\geq 1:128$	Toxic
54	87	25	14	31	10	7

Porcine Encephalomyocarditis Virus (Serum Neutralization)

Accessions	Samples			Negative		$\leq 1:16$		$> 1:16$		Toxic	
	Sera	FF*	Total	Sera	FF	Sera	FF	Sera	FF	Sera	FF
732	1996	640	2636	1026	636	922	0	42	0	5	4

Porcine Parvovirus (Hemagglutination Inhibition)

Accessions	Samples			Negative		1:8-64		1:128-512		1:1024-2048		$\geq 1:4096$		NT
	Sera	FF*	Total	Sera	FF	Sera	FF	Sera	FF	Sera	FF	Sera	FF	
701	2564	543	3107	191	480	164	41	592	7	1049	10	406	5	162

Porcine Swine Influenza Virus (Hemagglutination Inhibition)

Accessions	Samples	Negative	1:10-20	1:40	$\geq 1:90$	Toxic
35	257	79	85	44	49	N/A

Porcine Transmissible Gastroenteritis (Serum Neutralization)

Accessions	Samples	Negative	1:4	1:8-128	$\geq 1:256$	Toxic
142	1775	1359	54	162	197	3

*Fetal Fluid

Virus Serology - Porcine Pseudorabies

Month	ELISA Screening				ELISA - GPX			
	Accessions	Samples	Negative	Positive	Accessions	Samples	Negative	Positive
July	775	11,955	11,413	542	16	227	212	15
August	832	10,769	9,644	1,125	65	1,473	1,050	423
September	524	8,188	7,892	296	37	586	487	99
October	589	7,296	7,065	231	39	604	539	65
November	446	6,408	6,102	306	43	1,127	960	167
December	502	9,489	9,005	484	73	1,599	1,382	217
January	594	10,260	9,535	725	114	2,800	2,304	496
February	667	10,800	9,924	876	95	2,557	2,042	515
March	921	15,453	14,002	1,451	88	2,456	1,743	713
April	976	15,422	14,443	989	84	2,677	1,806	871
May	824	12,621	11,760	921	99	1,850	1,310	540
June	753	11,700	11,044	656	63	1,434	1,170	264
TOTAL	8,403	130,361	121,829	8,602	816	19,390	15,005	4,385

Month	ELISA - GPI				Latex Agglutination			
	Accessions	Samples	Negative	Positive	Accessions	Samples	Negative	Positive
July	-	-	-	-	15	42	41	1
August	-	-	-	-	71	89	87	2
September	-	-	-	-	33	44	43	1
October	-	-	-	-	45	63	56	7
November	38	887	497	390	49	62	61	1
December	67	1,370	887	483	45	63	57	6
January	104	2,761	1,362	1,354	74	107	92	15
February	73	2,633	1,499	1,134	110	160	145	15
March	57	1,783	1,065	718	40	54	53	1
April	78	2,568	1,837	731	15	31	24	7
May	69	1,481	1,169	312	2	4	4	0
June	47	1,156	972	184	1	4	4	0
TOTAL	533	14,639	9,288	5,306	500	723	667	56

Month	Serum Neutralization						
	Accessions	Samples	Negative	1:2	≥ 1:4	≥ 1:32	Toxic
July	120	669	269	91	234	75	0
August	62	1,106	609	104	223	170	0
September	97	1,461	233	183	834	210	1
October	48	483	322	30	110	21	0
November	50	274	77	31	130	36	0
December	50	456	74	60	227	91	4
January	88	1,105	454	85	386	180	0
February	99	727	186	83	336	119	3
March	37	1,641	841	120	457	211	12
April	285	1,596	705	179	479	134	9
May	270	1,234	615	92	375	147	5
June	287	1,148	582	95	358	113	0
TOTAL	1,493	11,810	4,967	1,153	4,149	1,597	34

Analytical Toxicology (Accessions-Samples-Positive)

Analyses	Avian	Bovine	Canine	Caprine	Equine
Alkaloids	6-6-1	1-1-0	69-70-13	-	1-1-0
Anticoagulants	-	1-1-0	7-7-2	-	-
Ammonia	-	2-2-1	-	-	-
Arsenic	1-1-0	6-6-0	2-2-0	-	-
Copper	-	44-85-1	14-14-2	1-1-0	2-2-0
Cholinesterase	14-19-2	12-13-3	25-29-4	1-1-0	1-1-0
Cyanide	-	1-1-0	1-1-0	-	1-1-0
Drosophila	1-1-1	-	6-6-0	-	-
Ethylene Glycol	-	-	2-2-0	-	-
Iron	-	2-9-0	5-8-2	-	-
Lead	133-174-42	198-218-30	194-197-17	7-7-0	11-11-0
Metaldehyde	-	-	2-2-0	-	-
Methemoglobin	-	1-1-0	-	-	3-4-2
Nitrates	-	36-45-11	1-1-0	-	-
pH	-	21-23-3	-	-	-
Reinsch	4-5-0	142-146-1	84-85-2	4-4-0	9-9-0
Sulfonamides	-	1-1-1	-	-	-
Thallium	-	-	1-1-0	-	-
Zinc	-	6-25-1	6-6-2	-	-
TOTAL	159-206-46	474-577-52	419-431-44	13-13-0	28-29-2

Analyses	Feline	Miscellaneous	Ovine	Porcine	Total
Alkaloids	8-9-0	13-13-0	-	-	98-100-14
Anticoagulants	3-3-1	3-3-1	-	1-1-0	15-15-4
Ammonia	-	4-5-1	-	-	6-7-2
Arsenic	2-2-0	2-2-0	-	-	13-13-0
Arsenilic Acid	-	1-1-1	-	-	1-1-1
Copper	1-1-0	9-15-1	15-16-4	8-13-0	94-147-8
Cholinesterase	13-14-0	6-7-1	4-5-0	1-1-0	77-90-10
Cyanide	-	4-7-0	-	-	7-10-0
Drosophila	1-1-0	8-8-0	-	-	16-16-1
Ethylene Glycol	-	-	-	-	2-2-0
Iron	-	4-6-0	-	4-9-2	15-32-4
Lead	38-39-1	44-64-2	19-23-1	14-16-0	658-749-93
Metaldehyde	-	-	-	-	2-2-0
Methemoglobin	-	-	-	-	4-5-2
Monensin	-	10-10-1	-	-	10-10-1
Mycotoxins	-	86-116-9	-	-	86-116-9
Nitrates	-	42-72-7	-	-	79-118-18
pH	-	3-4-0	1-1-1	-	25-28-4
Poison Plants	-	8-8-2	-	-	8-8-2
Reinsch	25-26-1	19-20-0	18-20-0	12-15-0	317-330-4
Sodium	1-1-0	8-12-2	-	9-14-2	18-27-4
Sulfates	-	20-32-5	-	-	20-32-5
Sulfonamides	-	-	-	-	1-1-1
Thallium	-	-	-	-	1-1-0
Urea	-	1-1-0	-	-	1-1-0
Zinc	-	4-7-0	1-1-0	8-32-1	25-71-4
TOTAL	92-96-3	299-413-33	58-66-6	57-101-5	1,599-1932-191

Clinical Chemistry* (Number of Tests)

Species	Alanine Aminotransferase	Albumin	Ammonia	Aspartate Aminotransferase	Bile Acids	Blood Gas
Avian	-	-	-	-	-	-
Bovine	-	3	-	1	3	-
Canine	1	1	6	-	108	1
Equine	-	-	-	-	-	-
Feline	-	-	-	-	18	-
Llama	1	-	-	-	-	-
Miscellaneous	-	1	-	-	-	-
Porcine	-	-	-	-	-	-
TOTAL	2	5	6	1	129	1

Species	BUN	Calcium	Cholesterol	Creatinine	Fecal Fat	Globulin
Avian	-	-	-	1	-	-
Bovine	28	21	-	-	-	-
Canine	1	3	1	1	3	-
Equine	-	-	-	1	-	-
Feline	1	1	-	1	-	-
Llama	-	-	-	-	-	1
Miscellaneous	-	-	-	-	-	1
Porcine	10	14	-	1	-	-
TOTAL	40	39	1	5	3	2

Species	Glucose	Lactic Dehydrogenase	Lipase	Magnesium	Phenobarbital	Phosphate
Avian	-	-	-	-	-	-
Bovine	-	-	-	-	-	21
Canine	4	-	19	-	66	-
Equine	-	-	2	-	-	-
Feline	-	-	-	-	-	-
Miscellaneous	-	-	-	-	-	1
Porcine	9	-	-	1	-	14
TOTAL	13	1	21	1	66	36

Species	Urinalysis	Urine Creatinine	Urine Protein	Serum Profile	Serum Triglycerides	Total Bilirubin
Avian	-	-	-	27	-	-
Bovine	1	-	-	73	-	-
Canine	18	8	10	106	2	1
Equine	-	-	-	42	-	-
Feline	7	1	3	31	-	-
Llama	-	-	-	-	-	-
Miscellaneous	-	-	-	16	-	-
Porcine	-	-	-	51	-	-
TOTAL	26	9	13	346	2	1

*Dr. Doug Weist, Laboratory Supervisor

Endocrinology*

Species	Cortisol	Digoxin	Estradiol	Estrone Sulfate	Insulin
Avian	-	-	-	-	-
Bovine	-	-	5	-	-
Canine	413	3	103	-	15
Equine	-	-	1	27	-
Feline	9	-	11	-	2
Llama	-	-	1	-	-
Miscellaneous	-	-	2	-	2
Ovine	-	-	-	-	-
Porcine	-	-	1	-	-
TOTAL	422	3	124	27	19

Species	Progesterone	Parathyroid Hormone	Triiodothyronine (T-3)	Thyroxine (T-4)	Testosterone
Avian	-	-	-	1	-
Bovine	11	-	-	-	-
Canine	48	11	81	1,125	10
Equine	37	1	17	46	13
Feline	3	1	9	89	4
Llama	27	-	-	-	-
Miscellaneous	1	-	5	6	-
Ovine	1	-	-	-	-
Porcine	25	-	-	-	-
TOTAL	153	13	112	1,267	27

*Dr. Shirley Johnston, Laboratory Supervisor

Viral Immunofluorescence in Tissues (Frozen Sections or Tissue Imprints)

Species	Accessions	Samples	Bovine Coronavirus		Bovine Herpesvirus DN599		Bovine Parainfluenza-3		Bovine Parvovirus	
			Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
Avian- Chicken	6	17	-	-	-	-	-	-	-	-
Avian- Miscellaneous	1	2	-	-	-	-	-	-	-	-
Bison	1	4	0	4	-	-	-	-	-	-
Bovine	1,556	2,936	134	945	0	5	0	1,682	0	2
Buffalo	2	6	-	-	-	-	0	5	-	-
Canine	45	114	0	3	-	-	0	1	-	-
Caprine	6	7	0	1	-	-	0	6	-	-
Deer	1	1	0	1	-	-	-	-	-	-
Donkey	2	4	-	-	-	-	-	-	-	-
Equine	42	89	-	-	-	-	-	-	-	-
Feline	53	88	-	-	-	-	-	-	-	-
Ferret	1	1	-	-	-	-	-	-	-	-
Fox	1	2	-	-	-	-	-	-	-	-
Llama	6	11	0	2	0	3	0	4	-	-
Lynx	2	2	-	-	-	-	-	-	-	-
Mink	5	13	-	-	-	-	-	-	-	-
Ovine	23	39	0	5	-	-	0	24	-	-
Porcine	2,797	5,508	-	-	-	-	0	6	-	-
Raccoon	3	4	-	-	-	-	-	-	-	-
Reindeer	2	3	0	2	-	-	-	-	-	-
TOTAL	4,555	8,851	134	963	0	8	0	1,728	0	2

Species	Bovine Respiratory Syncytial Virus		Bovine Rotavirus		Bovine Viral Diarrhea		Canine Distemper		Canine Parvovirus		Equine Adenovirus	
	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
Avian- Chicken	-	-	-	-	-	-	-	-	-	-	-	-
Avian- Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-
Bison	-	-	0	4	0	4	-	-	-	-	-	-
Bovine	31	634	47	1,028	50	2,833	0	2	-	-	-	-
Buffalo	-	-	-	-	0	6	-	-	-	-	-	-
Canine	-	-	-	-	-	-	10	101	0	9	-	-
Caprine	0	3	0	1	0	7	-	-	-	-	-	-
Deer	-	-	0	1	0	1	-	-	-	-	-	-
Donkey	-	-	-	-	-	-	-	-	-	-	-	-
Equine	-	-	0	1	-	-	-	-	-	-	0	10
Feline	-	-	-	-	-	-	-	-	-	-	-	-
Ferret	-	-	-	-	-	-	0	1	-	-	-	-
Fox	-	-	-	-	-	-	0	2	-	-	-	-
Llama	0	1	0	2	3	8	-	-	-	-	-	-
Lynx	-	-	-	-	-	-	-	-	-	-	-	-
Mink	-	-	-	-	-	-	0	13	-	-	-	-
Ovine	0	5	0	5	0	26	-	-	-	-	-	-
Porcine	0	9	-	-	0	6	0	4	-	-	-	-
Raccoon	-	-	-	-	-	-	2	2	-	-	-	-
Reindeer	-	-	0	2	0	3	-	-	-	-	-	-
TOTAL	31	652	47	1,044	53	2,894	12	125	0	9	0	10

Viral Immunofluorescence in Tissues (Frozen Sections or Tissue Imprints) (continued)

Species	Equine Viral Rhino- pneumonitis		Feline Herpesvirus		Feline Parvovirus		Hemagglutinating Encephalo- myelitis		Infectious Bovine Rhinotracheitis		Infectious Laryngo- tracheitis	
	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
Avian- Chicken	-	-	-	-	-	-	-	-	-	-	3	14
Avian- Miscellaneous	-	-	-	-	-	-	-	-	-	-	0	2
Bison	-	-	-	-	-	-	-	-	-	-	-	-
Bovine	-	-	-	-	-	-	-	-	21	1,704	-	-
Buffalo	-	-	-	-	-	-	-	-	0	5	-	-
Canine	-	-	-	-	-	-	-	-	-	-	-	-
Caprine	-	-	-	-	-	-	-	-	0	6	-	-
Deer	-	-	-	-	-	-	-	-	-	-	-	-
Donkey	0	4	-	-	-	-	-	-	-	-	-	-
Equine	0	89	-	-	-	-	-	-	-	-	-	-
Feline	-	-	2	84	0	1	-	-	-	-	-	-
Ferret	-	-	-	-	-	-	-	-	-	-	-	-
Fox	-	-	-	-	-	-	-	-	-	-	-	-
Llama	0	5	-	-	-	-	-	-	0	9	-	-
Lynx	-	-	0	2	-	-	-	-	-	-	-	-
Mink	-	-	-	-	-	-	-	-	-	-	-	-
Ovine	-	-	-	-	-	-	-	-	0	21	-	-
Porcine	-	-	-	-	-	-	0	1	0	7	-	-
Raccoon	-	-	-	-	-	-	-	-	-	-	-	-
Reindeer	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	0	98	2	86	0	1	0	1	21	1,752	3	16

Species	Porcine Parvovirus		Porcine Reovirus		Porcine Rotavirus		Pseudorabies		Swine Influenza Virus		Transmissible Gastroenteritis	
	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
Avian- Miscellaneous	-	-	-	-	-	-	-	-	-	-	-	-
Avian- Chicken	-	-	-	-	-	-	-	-	-	-	-	-
Bison	-	-	-	-	-	-	-	-	-	-	-	-
Bovine	-	-	-	-	-	-	0	3	-	-	-	-
Buffalo	-	-	-	-	-	-	-	-	-	-	-	-
Canine	-	-	-	-	-	-	0	7	-	-	-	-
Caprine	-	-	-	-	-	-	-	-	-	-	-	-
Deer	-	-	-	-	-	-	-	-	-	-	-	-
Donkey	-	-	-	-	-	-	-	-	-	-	-	-
Equine	-	-	-	-	-	-	0	4	-	-	-	-
Feline	-	-	-	-	-	-	-	-	-	-	0	1
Ferret	-	-	-	-	-	-	-	-	-	-	-	-
Fox	-	-	-	-	-	-	-	-	-	-	-	-
Llama	-	-	-	-	-	-	0	1	-	-	-	-
Lynx	-	-	-	-	-	-	-	-	-	-	-	-
Mink	-	-	-	-	-	-	-	-	-	-	-	-
Ovine	-	-	-	-	-	-	0	6	-	-	-	-
Porcine	22	1,071	0	1,702	27	1,686	54	789	74	1,001	98	1,620
Raccoon	-	-	-	-	-	-	-	-	-	-	-	-
Reindeer	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	22	1,071	0	1,702	27	1,686	54	810	74	1,001	98	1,621

Electron Microscopy (Fecal or Tissue Specimens)

Species	Accessions	Specimens	Negative	Positive	Adenovirus	Calicivirus	Coronavirus
Avian	135	158	110	48	13	-	-
Bovine	987	1,011	707	304	0	-	101
Canine	455	459	258	201	-	-	14
Caprine	3	3	2	1	-	-	-
Equine	18	18	16	2	-	-	-
Feline	80	80	52	28	-	2	-
Llama	15	15	14	1	1	-	-
Mink	44	46	43	3	-	-	-
Miscellaneous	57	63	53	10	-	5	-
Ovine	11	11	11	0	-	-	-
Porcine	1,080	1,098	854	244	8	-	27
TOTAL	2,885	2,962	2,120	842	22	7	142

Species	Enterovirus	Herpesvirus	Parainfluenza		Pox Virus	Reovirus	Rotavirus
			Virus	Parvovirus			
Avian	-	1	-	-	-	2	33
Bovine	1	-	-	2	15	-	226
Canine	1	-	2	184	-	-	2
Caprine	1	-	-	-	-	-	-
Equine	-	-	-	-	-	-	17
Feline	-	4	-	21	-	-	1
Llama	-	-	-	-	-	-	-
Mink	-	-	-	3	-	-	-
Miscellaneous	1	2	-	2	-	-	1
Ovine	-	-	-	-	-	-	-
Porcine	2	-	-	-	-	-	195
TOTAL	6	7	2	212	15	2	475

Virus Isolation (Cell Culture)

Virus	Accessions	Positive
Bovine Herpesvirus DN599	1	0
Bovine Parainfluenza-3 Virus	2,406	0
Bovine Viral Diarrhea Virus	2,406	118*
Canine Herpesvirus	19	0
Duck Adenovirus	1	0
Equine Rhinopneumonitis Virus	62	0
Feline Calicivirus	25	1
Feline Infectious Peritonitis Virus	1	0
Feline Parvovirus	8	0
Feline Rhinopneumonitis Virus	45	6
Infectious Bovine Rhinotracheitis Virus	2,406	17
Infectious Laryngotracheitis Virus	10	0
Miscellaneous Viruses	90	0
Pseudorabies	1,688	53

*12 cytopathic and 106 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)
Tom Arendt, BS	Junior Scientist (Collaborator)
Usha Mishra, MS	Assistant Scientist
Dzintra Dombrowski, 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	Junior Laboratory Technician
Nish Agarwal	Student Laboratory Technician
Thomas White	Student Laboratory Technician
Shawn Eliason	Student Laboratory Technician
Alison Krinke	Student Laboratory Attendant
Scott Likely	Student Laboratory Attendant
Debbie Randall	Student Laboratory Attendant
Gussie Tessier	Student Laboratory Attendant

Minnesota Racing Analytical Laboratory - Laboratory Procedures Summary

Month	No. of Samples		No. of Analyses			Suspect Samples				
	Urine	Blood	TLC	HPLC	RIA	TDX	ELISA	Column GC/MS	Lasix	
July	637	657	11,466	657	637	637	218	1,274	79	218
August	614	621	11,178	621	614	614	221	4,298	98	221
September	640	666	11,520	666	640	640	215	4,480	64	215
October	251	251	4,518	251	251	251	87	1,757	11	87
April	94	97	1,261	97	94	-	94	-	9	31
May	638	641	8,294	641	638	-	638	-	105	200
June	658	662	8,554	662	658	-	658	-	70	257
TOTAL	3,532	3,592	56,791	3,592	3,532	2,142	2,131	11,809	436	1,229

Minnesota Brucella Testing Laboratory - Personnel

William Hartmann, DVM, MS	Supervisor
Robert Tiller	Laboratory 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

I. Cattle		
A. Serum		
1) On Farm		58,563
2) Market		<u>306,594</u>
	Sub-Total	365,157
B. Milk Ring Tests		74,640
II. Swine		
A. Market Reactor Follow-up		451
III. Other Species		
A. Canine		19
B. Sheep		347
C. Horses		180
D. Elk		19
E. Deer		15
F. Goats		1,364
G. Miscellaneous		<u>179</u>
	Sub-Total	2,123
	TOTAL	442,371

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>
I. Pullorum - Typhoid		
A. Chickens - Commercial	3,300	
B. Turkeys	46,727	
C. Waterfowl and Game Birds	7,116	104
D. Exhibition Testing	<u>6,679</u>	
Sub-Total	63,822	
II. <i>Salmonella enteritidis</i> - Sanitation Monitored Program		
A. Chicken Breeding Flocks/Hatcheries	3,325	4,025
III. Minnesota/California Agreement and U.S. Sanitation Monitored Program (includes <i>Salmonella typhimurium</i>)		
A. Turkey Breeders		
1) Blood Samples		46,727
2) Rectal Swabs		46,252
3) Environmental/Hatchery Samples		<u>3,018</u>
Sub-Total		95,997
IV. Mycoplasma		
A. <i>Mycoplasma gallisepticum</i> - Turkey	17,650	
B. <i>Mycoplasma megalynidis</i> - Turkey	58,480	
C. <i>Mycoplasma synoviae</i> - Turkey	59,020	
D. <i>Mycoplasma gallisepticum</i> - Chicken	14,205	
E. <i>Mycoplasma synoviae</i> - Chicken	<u>14,205</u>	
Sub-Total	163,560	
V. Avian Influenza - Turkey	26,031	
 TOTAL	 256,738	 100,126

Departmental Courses

Course	Title	Lect/Lab Hours	Quarter	Credits	No. of Students	Instructor
VDI 8888	Doctoral Thesis		SS89		5	Goyal Ruth
VDI 5000	Diagnostic Medicine	0/132	SS89	2.0	22	Shaw* VDI Faculty
VDI 5521	Surgical Pathology	0/26	SS89	3.0	1	Barnes
VDI 5622	Problems in Diag. Virology	0/16	SS89	4.0	3	Goyal
VDI 8888	Doctoral Thesis		F89		5	Goyal Ruth
VDI 5000	Diagnostic Medicine	0/132	F89	2.0	21	Shaw* VDI Faculty
VDI 5164	Tox. Poisonous Plants	10/5	F89	1.0	61	Murphy
VDI 5521	Surgical Pathology	0/78	F89	3.0	2	Barnes
VDI 5522	Diagnostic Pathology	0/250	F89	5.0	5	Barnes
VDI 8888	Doctoral Thesis		W90		5	Goyal
VDI 5000	Diagnostic Medicine	0/132	W90	2.0	23	Shaw* VDI Faculty
VDI 5521	Surgical Pathology	0/20	W90	3.0	1	Barnes
VDI 5522	Diagnostic Pathology	0/240	W90	5.0	6	Barnes
VDI 5622	Problems in Diag. Virology	0/80	W90	4.0	2	Goyal
VDI 8888	Doctoral Thesis		S90		5	Goyal
VDI 5165	Veterinary Toxicology	20/0	S90	2.0	61	Murphy* Felice Singh
VDI 5503	Diagnostic Pathology	32/0	S90	3.0	61	Werdin* Collins O'Brien O'Leary Ruth Shaw
VDI 5521	Surgical Pathology	0/60	S90	3.0	3	Barnes
VDI 5522	Diagnostic Pathology	0/70	S90	5.0	1	Barnes
VDI 5524	Prob. in Diag. Pathology	0/20	S90	1.0	1	Barnes
VDI 5622	Problems in Diag. Virology	0/30	S90	3.0	1	Goyal
VDI 8602	Colloquium in Virology	0/20	S90	2.0	3	Goyal

*Course Coordinator

VDI Faculty Participation in Other Courses

Course	Title	Lect/Lab Hours	Quarter	Credits	No. of Students	Instructor
VPB 5000	Vet. Hosp. Necropsy	0/11	SS89	2.0	4	Shaw
CVM 5100	Intro. to Vet. Medicine	1/0	F89	2.0	62	Nelson
CVM 5100	Intro. to Vet. Medicine	1/0	F89	2.0	62	Ruth
LACS 8291	Adv. Diag. & Therapeutics	0/5	F89	1.0	1	Felice
PubH 5171	Environ. Microbiology	3/3	F89	4.0	8	Goyal
SACS 8299	Research in Vet. Medicine	0/8	F89	3.0	1	Felice
VPB 5000	Vet. Hosp. Necropsy	0/11	F89	2.0	4	Shaw
VPB 5502	Systemic Pathology	6/7	F89	6.0	67	Ruth
VPB 5502	Systemic Pathology	9/16	F89	6.0	67	Werdin
LACS 5570	Repro. Dis. Domes. An.	2/0	W90	5.0	61	Werdin
SACS 8299	Res. in Vet. Medicine	0/8	W90	3.0	1	Felice
VPB 5000	Vet. Hosp. Necropsy	0/11	W90	2.0	4	Shaw
VPB 5501	Basic Veterinary Pathology	0/2	S90	5.0	67	Shaw
CVM 5200	Clin. Viro., Immuno., Parasit., & Tox.	2/0	S90	1.0	61	Felice
CVM 5200	Clin. Viro., Immuno., Parasit., & Tox.	10/0	S90	1.0	61	Murphy
LACS 5160	Large Animal Medicine	2/0	S90	6.0	67	Bergeland
LACS 5160	Large Animal Medicine	1/0	S90	6.0	67	Murphy
LACS 5160	Large Animal Medicine	1/0	S90	6.0	67	Werdin
LACS 5271	Law, Econ. & Ethics	2/0	S90	2.0	61	Nelson
LACS 5271	Law, Econ. & Ethics	1/0	S90	2.0	61	Ruth

Residents/Graduate Students

Name	Program	Degree Sought	Degree Granted	Advisor
Rodney K. Frank	Pathology	Ph.D.	12/89	Ruth
Sanjay Kapã	Microbiology	Ph.D.		Goyal
S. Maheshkumar	Microbiology	Ph.D.		Goyal
K. Naeem	Microbiology	Ph.D.		Goyal
Nour-Said Tãgui*	Pathology	Ph.D.		Ruth
Nourdine Bourãtriti**	Microbiology	Ph.D.		Goyal
T. Chalernchãkit	Veterinary Medicine	Ph.D.		Felice

*Department of Pathobiology

**Department of HUDAA, 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. 1989-90. Bovine respiratory disease: the role of *Pasteurella haemolytica* leukotoxin as a virulent determinant. MN Ag. Exp. Station, \$150,333.
- Ames, T., Maheswaran, S.K., Olchow, T., Molitor, T. and Werdin, R. 1989-90. Bovine respiratory disease project. AES, \$50,000.
- 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. 1990. Veterinary Diagnostic Investigation. MN Agr. Exp. Station, MINV-65-006.
- Bloomer, J., Straka, J. and Ruth, G.R. 1989-90. Enzyme defects in disorders of protoporphyrin metabolism. NIH, \$267,126.
- Collins, J.E. 1989-90. The use of hypothetico-deductive reasoning in diagnostic medicine. Apple Computer, \$3,000.
- Felice, L.J. and Osborne, C.A. 1989. Investigation of canine and feline serum and urine oxalate via ion chromatography. Mark Morris Foundation, \$24,000.
- Gebhart, C.J., Murtaugh, M.P., Ward, G.E., Collins, J.E. and McOrist, S. 1989-90. The intracellular organism of swine proliferative enteritis. U.S.D.A. \$27,000.
- Goyal, S.M. 1989-90. Propagation of bovine coronavirus. Immuncell, \$1000.
- Goyal, S.M. 1989-90. Comparison of PRV tests. Fermenta \$2650.
- Goyal, S.M. 1989-90. Comparison of PRV tests. Norden, \$1600.
- Goyal, S.M. 1989-90. Training grant for Kamil Naguib Mettias. Egyptian National Agr. Res., \$3,000.
- Goyal, S.M. 1989-90. Specimen submission and diagnostic virology. Minnemac, \$3,000.
- Goyal, S.M., Trent, A.M. and Kapil, S. 1989-90. Mucosal immunity to bovine enteric coronavirus. AES, \$10,240.
- Kannan, M.S., Weiss, D. and Felice, L.J. 1989-90. Role of platelet activating factor in pulmonary vascular injury in bovine pasteurellosis. MN Ag. Exp. Station, \$48,912.
- Maheswaran, S.K., Felice, L.J. and Sivanandan, V. 1989-90. Avian pasteurellosis: 1. New immunoprophylactic approaches to control the disease in turkey breeders 2) definition of the role of *Pasteurella siderophore* as a virulent determinant. MN Ag. Exp. Station, \$115,766.
- Maheswaran, S.K., Weiss, D.J., Kannan, M.S., Ames, T.R. and Felice, L.J. 1989-90. Mechanisms of pulmonary endothelial and epithelial cell injury in pasteurella pneumonia. U.S.D.A. Special Grants, \$142,022.
- Mathur, K. and Goyal, S.M. 1989-90. Mechanism of epithelial damage in viral respiratory disease of cattle. AES, \$14,980.
- Nagaraja, K.U., Zhang, C.L., Sivanandan, V., Newman, J.A., Shaw, D.P. and Felice, L.J. 1989-90. Effect of rotavirus on absorption of fat soluble vitamins. MN Turkey Growers Assoc., \$23,000.
- Osborne, C.A., Lulich, J., Felice, L.J., Parker, M.L., Sanna, J. and Unger, L. 1989. Canine Urine Chemistries. The influence of citrate, sodium and magnesium consumption on urine excretion of minerals in normal dogs. Mark Morris Foundation, \$11,000.
- Osborne, C.A., Lulich, J., Felice, L.J., Unger, L., and Sanna, J. 1989. Canine Urine Chemistries: The influence of chlorothiazide on daily calcium excretion in dogs. Mark Morris Foundation, \$8,000.
- Osborne, C.A., Lulich, J., Felice, L.J., Unger, L., Sanna, J., Caywood, D., Polzin, D., Adams, L., and Bartges, J. 1989. Canine Urine Chemistries: Dissolution and prevention of canine calcium oxalate uroliths. Mark Morris Foundation, \$45,000.

Pentel, P.R., Keyler, D.E., Gilbertson, D.G., Ruth, G.R. and Pond, S.M. 1989-90. Antibody treatment of desipramine toxicity in rats. NIH, \$84,580.

Pijoan, C., Collins, J.E., Murtaugh, M.P., Mogollon, J. and Cleary, P. 1989-90. M-Like protein as a virulence factor in *Streptococcus suis* strains. National Pork Producers Council, \$13,000.

Ruth, G.R., Buoen, L., Morrison, R. and Weber, A. 1989-90. Identification of inherited chromosomal abnormalities in low prolificacy boars and sows by G-banding cytogenetic procedures. U.S.D.A., \$19,200.

Nagaraja, K., Shaw, D.P., Sivinandan, V. 1989-90. Enteric disease in turkeys. Minnesota Turkey Growers Assoc., \$28,000.

Shaw, D.P. 1989-90. *Pasteurella haemolytica* as a pathogen in chickens. Poultry Industries, \$2,000.

Trent, A.M. and Shaw, D.P. 1989-90. Use of mucosal grafts in repair of bovine teat injuries. Graduate School, \$12,000.

Singh, A.K., Murphy, M. and Felice, L. 1989-90. Analysis of fentanyl, etorphine, and sufentanyl in race horses. Minnesota Racing Commission \$30,700.

Singh, A.K., Murphy, M.J. and Felice, L.J. 1989-90. Screening of furosemide in race horses. Minnesota Racing Commission \$71,000.

Ward, G.E., Murtaugh, M., Collins, J.E. and Goyal, S.M. 1989-90. Etiology and pathogenesis of porcine proliferative enteritis. MN Ag. Exp. Sta. \$30,000.

Service and Research Contracts

Bergeland, M.E. 1989-90. Minnesota Poultry Testing Laboratory. MN Board of Animal Health. \$95,000.

Bergeland, M.E. 1989-90. Minnesota Racing Analytical Laboratory. MN Racing Commission. \$214,000.

Bergeland, M.E. 1989-90. Pseudorabies control program. MN Board of Animal Health. \$2.00/sample.

Bergeland, M.E. 1989-90. Diagnostic Services, Minnesota Zoological Garden. \$2,500.

Publications: Refereed Journals

Refereed Journals (July 1, 1989-July 30, 1990)

Collins, J.E., Bergeland, M.E., Bouley, D., Ducommun, A.L., Francis, D.H. and Yeske, P. 1989. Diarrhea associated with enterotoxigenic *Clostridium perfringens* type A enterotoxin in neonatal pigs. J. Vet. Diagn. Invest. 1:351-353.

Collins, J.E., Bergeland, M.E., Myers, L.L. and Shoop, D.S. 1989. Exfoliating colitis associated with enterotoxigenic *Bacterioides fragilis* in a piglet. J. Vet. Diagn. Invest. 1:349-351.

Fales, W.H., Morehouse, L.G., Mittal, K.R., Bean-Knudsen, C., Nelson, S.L., Kintner, L.D., Turk, J.R., Brown, T.P., and Shaw, D.P. 1989. Antimicrobial susceptibility and serotypes of *Actinobacillus (Haemophilus) pleuropneumoniae* recovered from Missouri swine. J. Vet. Diagn. Invest. 1:16-19.

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.

Halvorson, D.A., Noll, S.L., Bergeland, M.E., Cloud, H.A. and Pursley, R. 1989. The effects of stray voltage on turkey poults. Avian Dis. 33:582-585.

Jergens, A.E. and Shaw, D.P. 1989. Hyperinsulinism and hypoglycemia associated with pancreatic islet cell tumor in a ferret. J. Am. Vet. Med. Assoc. 194:269-271.

- Johnson, K.H., Sletten, K., Werdin, R.E., Westermarck, G.T., O'Brien, T.D. and Westermarck, P. 1989. Amino acid sequence variations in protein AA of cats with high and low incidence of AA amyloidosis. *Comp. Biochem. Physiol.* 94B:765-768.
- Kruger, J.M., Osborne, C.A., Whetstone, C.A., Goyal, S.M. and Sendlak, R.A. 1989. Genetic and serological analysis of feline cell-associated herpesvirus induced infection of the urinary tract in conventionally reared cats. *Am. J. Vet. Res.* 50:2023-2027.
- Myers, L.L., Shoop, D.S. and Collins, J.E. 1989. Enterotoxigenic *Bacteroides fragilis* infection in neonatal rabbits. *J. Clin. Microbiol.* 27:2025-2030.
- Naeem, K., Goyal, S.M. and Werdin, R.E. 1989. Prevalence of bovid herpesvirus Type-4 and its antibody in cattle in Minnesota. *Am. J. Vet. Res.* 50:1931-1935.
- Rawson, R.E., Dziuk, H.E., Good, A.L., Anderson, J.F., Bates, D.W., Ruth, G.R., and Serfass, R.C.. 1989. Health and metabolic responses of young calves housed at -30°C to -8°C. *Can. J. Vet. Res.* 53:268-274.
- Rawson, R.E., Dziuk, H.E., Good, A.L., Anderson, J.F., Bates, D.W. and Ruth, G.R. 1989. Thermal insulation of young calves exposed to cold. *Can. J. Vet. Res.* 53:275-278.
- Roepke, D.C., Halvorson, D.A., Goyal, S.M. and Kelleher, C.J. 1989. An adsorption-elution technique for the recovery of influenza virus from water. *Avian Dis.* 33:649-653.
- Schultheiss, P.C., Kurtz, H.J. and Glassman, D. 1989. Retrospective study of *Campylobacter* spp. isolated from porcine diagnostic case material. *J. Vet. Diagn. Invest.* 1:181-182.
- Shaw, D.P., Morehouse, L.G. and Solorzano, R.F. 1989. Experimental rotavirus infection in three-week-old pigs. *Am. J. Vet. Res.* 50:1961-1965.
- Shaw, D.P., Morehouse, L.G. and Solorzano, R.F. 1989. Rotavirus replication in colostrum-fed and colostrum-deprived pigs. *Am. J. Vet. Res.* 50:1966-1970.
- Shaw, D.P., Overend, M.F. and Grina, L.A. 1989. Endometrial carcinoma in a Celebese Black Macaque. *Vet. Pathol.* 26:451-452.
- Sherman, D.M., Gay, J.M., Bouley, D.S. and Nelson, G.H. 1989. Comparison of the complement-fixation and agar gel immunodiffusion tests for diagnosis of subclinical bovine paratuberculosis. *Am. J. Vet. Res.* 50(3):461-465.
- Singh, A.K., Gordon, B., Hewetson, D., Granley, K., Ashraf, M., Mishra, U. and Dombrovskis, D. 1989. Screening of steroids in horse urine and plasma by using electron impact and chemical ionization gas chromatography-mass spectrometry. *J. Chrom.* 479:233-242.
- Singh, A.K., Granley, K., Ashraf, M. and Mishra, U. 1989. Drug screening and confirmation by thin layer chromatography. *J. Planar Chrom.* 2:410-419.
- Turk, J., Turk, M., Fales, W., Kintner, L., Nelson, S., Shaw, D., Brown, T. and Morehouse, L. 1989. Summary of porcine respiratory disease diagnoses at the Missouri veterinary medical diagnostic laboratory for the years 1984 and 1986. *J. Vet. Diagn. Invest.* 1:183-184.
- Weber, A.F., Buoen, L.C., Terharr, B.L., Ruth, G.R. and Momont, H.W. 1989. Low fertility related to 1/29 centric fusion anomaly in cattle. *J. Am. Vet. Med. Assoc.* 195:643-646.
- Werdin, R.E., Ames, T.R. and Goyal, S.M. 1989. Detection and elimination of carrier animals in a dairy herd persistently infected with bovine viral diarrhea. *J. Vet. Diagn. Invest.* 1:277-279.
- Christianson, W.T., Kim, H.S., Joo, H.S. and Barnes, D.M. 1990. Reproductive and neonatal losses associated with possible encephalomyocarditis virus infection in pigs. *Vet. Rec.* 126:54-57.
- Goyal, S.M., Amundson, D., Robinson, R.A. and Gerba, C.P. 1990. Viruses and drug-resistant bacteria in groundwater of southeastern Minnesota. *J. Minn. Acad. sci.* 55:58-62.
- Hornfeldt, C.S. and Collins, J.E. 1990. Toxicity of nightshade berries (*Solanum dulcamera*) in mice. *J. Toxicol. Clin. Toxicol.* 28:185-192.

Janke, B.H., Francis, D.H., Collins, J.E. and Libal, M.C. 1990. A new cause of diarrhea in young calves: Attaching and effacing *Escherichia coli* infection. J. Am. Vet. Med. Assoc. 196:897-901.

Myers, L.L., Shoop, D.S., Collins, J.E. 1990. Rabbit model to evaluate enterovirulence of *Bacteroides fragilis*. J. Clin. Microbiol. 28:1658-1660.

Naeem, K., Caywood, D.D., Werdin, R.E. and Goyal, S.M. 1990. Evaluation of the pregnant rabbit as a laboratory model for bovid herpesvirus-4 infection. Am. J. Vet. Res. 51:640-644.

Naeem, K. and Goyal, S.M. 1990. A dot immunobinding assay on nitrocellulose for the detection of bovid herpesvirus-4 antibodies. J. Vet. Diagn. Invest. 2:107-110.

Turk, J. Miller M., Brown, T., Fales, W., Fischer, J., Gosser, H., Nelson, S., Shaw, D. and Solorzano, R. 1990. Coliform septicemia and pulmonary disease associated with canine parvoviral enteritis: 88 cases (1987-1988). J. Am. Vet. Med. Assoc. 196:771-773.

Publications: Abstracts

Collins, J.E., Bergeland, M.E., Myers, L.L. and Shoop, D.S. 1989. Exfoliating colitis associated with enterotoxigenic *Bacteroides fragilis* in a piglet. American Association of Veterinary Laboratory Diagnosticians, 32nd Annual Mtg., p. 35.

Hornfeldt, C.S. and Collins, J.E. 1989. Determination of the toxicity of nightshade berries, *Solanum dulcamera*. American Association of Clinical Toxicologists, p. 6.

Jones, G.F., Ward, G.E. and Collins, J.E. 1989. Reproduction of proliferative enteritis using hens eggs injected with swine intestinal material. Conference of Research Workers in Animal Disease, p. 19

Mogollon, J.D., Pijoan, C., Murtaugh, M.J. and Collins, J.E. 1989. Genetic analysis of *Streptococcus suis* serotypes by DNA fingerprinting. Conference of Research Workers in Animal Diseases, p. 34

Murphy, M. and Collins, J.E. 1989. Clinical and pathological features of white snake root (*Eupatorium rugosum*) poisoning in horses from southwestern Minnesota. American Association of Veterinary Laboratory Diagnosticians, 32nd Annual Mtg., p. 63.

Naeem, K., Goyal, S.M., Caywood, D.D. and Werdin, R.E. 1989. Variation in pathogenic potential of bovid herpesvirus-4 isolates. 70th Conf. Res. Workers Anim. Dis., p. 48.

Bergeland, M.E., Cook, D.B. and Nagaraja, K.V. 1990. Minnesota experience with *Salmonella dublin* in cattle. North Central Conference Veterinary Laboratory Diagn., 31st Annual Mtg., p. 27.

Collins, J.E., Bergeland, M.E. and Yeske, P. 1990. The importance of *Clostridium perfringens* type A Enteritis. 21st Annual Mtg. of American Association of Swine Practitioners, p. 407.

Collins, J.E., Chengappa, M.M. and Wetzell, T.L. 1990. Enzootic bacterial conjunctivitis in swine. North Central Conference Veterinary Laboratory Diagn. 31st Annual Mtg., p. 32.

Kapil, S., Pomeroy, K., Goyal, S.M. and Trent, A.M. 1990. Coronavirus infection in calves: respiratory tract involvement. North Central Conf. Vet. Lab. Diagn., 31st Annual Mtg., p. 2.

Kapil, S., Trent, A.M. and Goyal, S.M. 1990. Immune responses in spiral colon, ileum and jejunum of coronavirus-infected, colostrum-deprived calves. 90th Ann. Mtg. Am. Soc. Microbiol., p. 238.

Kapil, S., Trent, A.M. and Goyal, S.M. 1990. Effects of bovine coronavirus on cellular immune responses in neonatal calves. Joint Mtg. Am. Soc. Biochem. Mol. Biol./Am. Ass. Immunol., p. A1885.

Pijoan, C., Mogollon, J., Murtaugh, M. and Collins, J.E. 1990. Epidemiology of *Streptococcus suis* in a closed herd. 21st Annual Mtg. American Association of Swine Practitioners, p. 355.

Publications: Books, Book Chapters and Monographs

Lulich, J.P., Osborne, C.A., Felice, L.J., Batges, J.W., Unger, L.K., Sanna, J.J., Johnston, G.R. and Kruger, J.M. 1989. Medical Management of Canine Ammonium Urate Urolithiasis. In: *Managing Canine and Feline Urolithiasis*. Vet. Med. Publ. Co., Lenexa, KS, pp. 46-52.

Lulich, J.P., Osborne, C.A., Sanna, J.J., Unger, L.K., Felice, L.J., Nagode, L.A., Johnston, G.R., Johnston, S.D. and Parker, M.L. 1989. Medical Aspects of Canine Calcium Oxalate Urolith Management. In: *Managing Canine and Feline Urolithiasis*. Vet. Med. Publ., Co., Lenexa, KS, pp. 53-61.

Osborne, C.A., Polzin, D.J., Lulich, J.P., Kruger, J.M., Johnston, G.R., O'Brien, T.D. and Felice, L.J. 1989. Relationship of Nutritional Factors to the Cause, Dissolution, and Prevention of Canine Uroliths. In: *The Veterinary Clinics of North America, Vol. 19(3)*. W.B. Saunders Col., Philadelphia, PA.

Publications: Miscellaneous

Bergeland, M.E., Collins, J.E., Thurn, M.D. and Johnson, D.J. 1989. Animal Health in Minnesota. MN Ag. Exp. Station, Misc. Report 61-1990 pp. 1-102.

Bergeland, M.E. 1989. Remarks of the president of AAVLD. Proc. 93rd Annual Mtg. U.S. Animal Health Assoc. p. 42.

Bergeland, M.E. 1989. *Streptococcus suis* disease in pigs. Pork Industry Handbook #118. (Reviewer).

Goyal, S.M. 1990. Viral diseases of horses. Minnesota Thoroughbred Journal, April.

Goyal, S.M. 1990. Antiviral agents. Minnesota Thoroughbred Journal, April.

Murphy, M.J. 1990. Plants, leaves can be horse killers. Agri. News. April 26.

Murphy, M.J. 1990. Blister beetles can be deadly for horses. Agri. News. April 26.

Murphy, M.J. 1990. Blister beetles in alfalfa: management options to minimize cantharidin poisoning in horses. Minnesota Forage Update, Winter.

Continuing Education Presentations

Collins, J.E. Sept. 25, 1989. Hemagglutinating encephalomyelitis virus in swine. Swine Herd Health Programming Conf., St. Paul, MN.

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

Collins, J.E. Nov. 7, 1989. Cryptosporidiosis: an emerging disease. St. Charles Veterinary Clinic, St. Charles, MN.

Murphy, M.J. June, 1989. Veterinary toxicology and the large animal practitioner. Summer Clinic, Alexandria, MN.

Bergeland, M.E. Feb. 15, 1990. *Salmonella dublin* in Minnesota dairy cattle. MN Vet. Med. Assoc. 93rd Annual Mtg., Bloomington, MN.

Bergeland, M.E. March 6, 1990. The importance of *Clostridium perfringens* Type A enteritis. Am. Assoc. Swine Pract., 21st Annual Mtg., Denver, CO.

Collins, J.E. Feb. 11, 1990. Swine erysipelas. MN Vet. Med. Assoc. 93rd Annual Mtg., Bloomington, MN.

Collins, J.E. June 7, 1990. Disease investigations in MN dairy herds. Dairy Herd Health Programming Conf., St. Paul, MN.

Murphy, M.J. Naturally occurring toxins of interest to Minnesota Horse Owners. County Extension Meetings in Carver, Hennepin, and Dakota Counties.

Murphy, M.J. April 7, 1990. Naturally occurring toxins of interest to Minnesota Horse Owners. Spring Clinic, St. Paul, MN.

Ruth, G.R. February 15, 1990. Pseudocowpox in calves. MN Vet. Med. Assoc. 93rd Annual Mtg., Bloomington, MN (2 hr).

Shaw, D.P. February 1, 1990. Common diseases of aquarium fish. MN Aquarium Society, Roseville, MN.

Shaw, D.P. March 13, 1990. Posting poultry. Poultry Extension Seminar, St. Cloud, MN.

Shaw, D.P. February 15, 1990. Scrapie and ovine pseudorabies. MN Vet. Med. Assoc. 93rd Annual Mtg., Bloomington, MN.

Werdin, R.E. April 21, 1990. Diagnostics for the food animal practitioners - toothpick diagnostics. Symposium sponsored by student chapters of AABP and AASP, St. Paul, MN.

Lecture, Seminar and Workshop Presentations

Murphy, M.J., Ray, A.C. and Reagor, J.C. May 15, 1990. The effects of phenobarbital induction on the toxicity of brodifacoum in the dog. University of Minnesota Research Poster Session and College of Veterinary Medicine Poster Session.

Scientific Meeting Presentations

Collins, J.E. October 28-31 1989. Exfoliating colitis associated with enterotoxigenic *Bacteroides fragilis* in a piglet. American Association of Veterinary Laboratory Diagnosticians, 32nd Annual Mtg., Las Vegas, NV.

Collins, J.E. October 28-31, 1989. Clinical and pathological features of white snake root (*Eupatorium rugosum*) poisoning in horses from southwestern Minnesota. American Association of Veterinary Laboratory Diagnosticians, 32nd Annual Mtg., Las Vegas, NV.

Felice, L.J. October 28-31, 1989. Analytical approaches to equine drug testing. 32nd Annual Mtg. - Am. Assoc. Vet. Lab. Diag., Las Vegas, NV.

Kapil, S. November 6-7, 1989. Intestinal immune response to newborn calves to bovine enteric coronavirus infection. 70th Conf. Res. Workers Anim. Dis., Chicago, IL.

Kurtz, H.J. October 28-31, 1989. Case report. 32nd Annual Meeting, American Assoc. Vet. Lab. Diagn., Las Vegas, NV.

Naeem, K. November 6-7, 1989. Variation in pathogenic potential of bovid herpesvirus-4 isolates. 70th Conf. Res. Workers Anim. Dis., Chicago, IL.

Werdin, R.E. October 5-7, 1989. Nephrosis due to Oak Toxicosis. Annual Meeting of the Western Conference of Veterinary Diagnostic Pathologists. Saskatoon, Sask., Canada.

Werdin, R.E. October 5-7, 1989. *Dioclophyna renale* infection in the dog. Annual Meeting of the Western Conference of Veterinary Diagnostic Pathologists. Saskatoon, Sask., Canada.

Werdin, R.E. October 28-31, 1989. Case presentation for the histopathology scientific program. 32nd Annual Mtg. - Am. Assoc. Vet. Lab. Diagn., Las Vegas, NV.

Bergeland, M.E. June 12-13, 1990. Minnesota experience with *Salmonella dublin* in cattle. North Central Conference Veterinary Laboratory Diagn., 31st Annual Mtg., Fargo, ND.

Collins, J.E. June 12-13, 1990. Enzootic bacterial conjunctivitis in swine. North Central Conference Veterinary Laboratory Diagn. 31st Annual Mtg., Fargo, ND.

Kapil, S. June 12-13, 1990. Coronavirus infection in calves: respiratory tract involvement. North Central Conf. Vet. Lab. Diagn., 31st Annual Mtg., Fargo, ND.

Kapil, S. May 13-17, 1990. Immune responses in spiral colon, ileum and jejunum of coronavirus-infected, colostrum-deprived calves. 90th Ann. Mtg. Am. Soc. Microbiol., Anaheim, CA.

Kapil, S. June 3-7 1990. Effects of bovine coronavirus on cellular immune responses in neonatal calves. Joint Mtg. Am. Soc. Biochem. Mol. Biol./Am. Ass. Immunol., New Orleans, LA.

Awards and Citations

Civil Service:

Hakomaki, Millie	Outstanding Achievement
Joki, Ron	Outstanding Achievement Civil Service Longevity, 20 years
Lindeman, Cindy	Outstanding Achievement
Roback, Richard	Civil Service Longevity, 23 years
Smith, Pat	Outstanding Achievement
Strand, Connie	Outstanding Achievement
Thurn, Mary	Outstanding Achievement

Faculty:

Bergeland, Martin E. Distinguished Service Award - North Central Conference of Veterinary Laboratory Diagnosticians 31st Annual Meeting - 1990

Outgoing President's Service Award - American Association of Veterinary Laboratory Diagnosticians - 1989.

Nelson, Glen H. Distinguished Service Award - Minnesota Veterinary Medical Alumni Association

Professional Organizations

- Bergeland, Martin E. American Association of Veterinary Laboratory Diagnosticians
 President -1989
 Executive Committee
 Executive Board
 Awards Committee, Chair - 1990
 Nominations Committee, Chair - 1990
 AAVLD-USAHA Liaison Committee
 Animal Disease Emergency Advisory Committee
 Laboratory Directors Committee
- Minnesota Board of Animal Health
 Pseudorabies Advisory Committee (Consultant)
- Minnesota Turkey Growers Association
 Health Subcommittee - 1989
- Midwest Poultry Federation
 Program Planning Committee - Pullet/Layer Health Workshop
- University of Wisconsin/Wisconsin Dept. Agr. Trade and Consumer Protection.
 Task Force on Animal Health Laboratory Services. July-August, 1989
- Collins, James E. American Association of Veterinary Laboratory Diagnosticians
 Long Range Planning Committee
 Animal Disease Reporting Committee, Subcommittee Chair
- North Central Association of Veterinary Laboratory Diagnosticians
 Secretary/Treasurer
- Minnesota Veterinary Medical Association
 Infectious Diseases Committee
- Felice, Lawrence J. American Association of Veterinary Laboratory Diagnosticians
 Mycotoxin Committee
- Midwest Association of Official Analytical Chemists
 Executive Board
- Minnesota Chromatography Forum Education Committee
- NCR-121 Safety of Foods and Feeds Related to Animal Production Committee
 University of Minnesota Representative
- Goyal, Sagar M. American Society for Testing and Materials
 Sub-committee D-19 Virus in the Environment

Nelson, Glen H. American Association of Veterinary Laboratory Diagnosticians
Interpretive Serology Committee, Chairman of SubCommittee
Mycotoxin Committee

Minnesota Veterinary Medical Council
Nominating Committee, Chairman
W.T.S. Thorp Lectureship Committee Chairman
Budget Committee
Alumni Activities Committee, Co-Chairman
Executive Board

Minnesota Veterinary Medical Alumni Association
Executive Board Member
Annual Meeting Chairman
Nominating Committee
Student Experience Committee

Minnesota Veterinary Medical Association
Government Affairs Committee
Board of Directors, Minnesota Veterinary Historical Museum

Ruth, George R. American Association of Veterinary Laboratory Diagnosticians
Congenital and Inherited Disease Committee, Chair
Diagnostic Pathology Committee

Minnesota Veterinary Medicine Association
Committee on Governmental Affairs
Committee on Chemically Impaired Veterinarians

Shaw, Daniel P. American Association of Veterinary Laboratory Diagnosticians
Diagnostic Pathology Committee

Werdin, Ronald E. Minnesota Veterinary Medicine Association
Memorial and Historical Committee
Infectious Diseases Committee
Board of Directors, Minnesota Veterinary Historical Museum

Western Conference of Veterinary Diagnostic Pathologists
Minnesota Representative

United States Animal Health Association
Infectious Diseases of Cattle Committee

American Association of Veterinary Laboratory Diagnosticians
Diagnostic Pathology Committee

 University Committees

Barnes, Donald M. Admissions and Scholastic Committee - CVM

Bergeland, Martin E. Administrative Council - CVM
 Legislative Committee - CVM
 Research Executive Committee - CVM
 VDL Building Advisory Committee - U of M

Collins, James E. Pew Steering Committee -CVM
 Faculty Council - CVM

Felice, Lawrence J. Faculty Council - CVM
 Library Committee - CVM
 Pew Task Force on Faculty Development - CVM
 Search Committee for Associate Dean of Research, Student Affairs and Academic Affairs - CVM

Goyal, Sagar M. OSHA Committee, Chairman - CVM
 Electron Microscope Management Committee - CVM
 Library Committee - CVM
 VDL Building Advisory Committee - U of M

Kurtz, Harold J. International Programs Committee - CVM
 Promotion and Tenure Committee - CVM
 Research Committee (Reviewer) - CVM

Murphy, Michael J. Curriculum Committee - CVM
 Toxicology Graduate Program Committee - U of M

Nelson, Glen H. Dean's Advisory Council - CVM
 Admissions and Scholastic Standing Committee - CVM
 Legislative Committee - CVM
 Honors Committee - CVM
 Long Range Planning Committee - CVM
 Recruitment Committee - CVM
 Promotion and Tenure Committee, Chairman - VDI
 VDL Building Advisory Committee - U of M
 President's Distinguished Faculty - Mentor Program - U of M
 Health Sciences Editorial Advisory Board - U of M

Ruth, George R. Pew Mission/Oriented Service Task Force, Chair - CVM
 Pew Steering Committee - CVM
 Awards and Scholarship Committee - CVM
 Pathobiology VMA Search Committee - CVM
 Health Sciences Tenure Review Committee - U of M

Shaw, Daniel P. Research Committee - CVM

Singh, Ashok, K. Research Committee - CVM

Department of Veterinary Diagnostic Investigation

Departmental Income

July 1, 1989 - June 30, 1990

I.	Instruction		
	A.	University Operations and Maintenance Fund	
		1) Annual Budget	
		a) Salaries	\$ 83,629
		b) Fringe Benefits	18,069
		c) Supplies	<u>255</u>
		Subtotal	101,953
		2) Supplements to Annual Budget	4,265
	B.	Student Training Grants	<u>23,366</u>
			\$ 131,584
II.	Research		
	A.	Agricultural Experiment Station	---
	B.	Federal Contracts and Grants	
		1) USDA - North Central Experiment Station	7,500
		2) USDA - Animal Health Funds	<u>29,440</u>
			36,940
III.	Services		
	A.	State Special Appropriation Minnesota Veterinary Diagnostic Laboratory	1,612,178
	B.	Laboratory User Fees	
		1) Veterinary Diagnostic Laboratory	
		a) Public	793,337
		b) Other University Departments	84,809
		2) Histotechnique Laboratory	48,259
		3) Minnesota Racing Analytical Laboratory	<u>214,000</u>
			2,752,583
IV.	Other		
	A.	Minnesota Poultry Testing Laboratory	95,000
	B.	College of Veterinary Medicine Administration	262
	C.	Private Gifts	
		1) Fenstermacher Fund	1,900
		2) Research	16,937
			<u>114,099</u>
	TOTAL		\$ <u>3,035,206</u>

Administration

University of Minnesota

Charles H. Casey - Chairman, Board of Regents
 Nils Hasselmo - President
 Cherie R. Perlmutter - Interim Vice President, Health Sciences
 Vilis Vikmanis - Assistant Vice President, Health Sciences
 David G. Thawley - Dean, College of Veterinary Medicine

Board of Animal Health

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

University of Minnesota

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