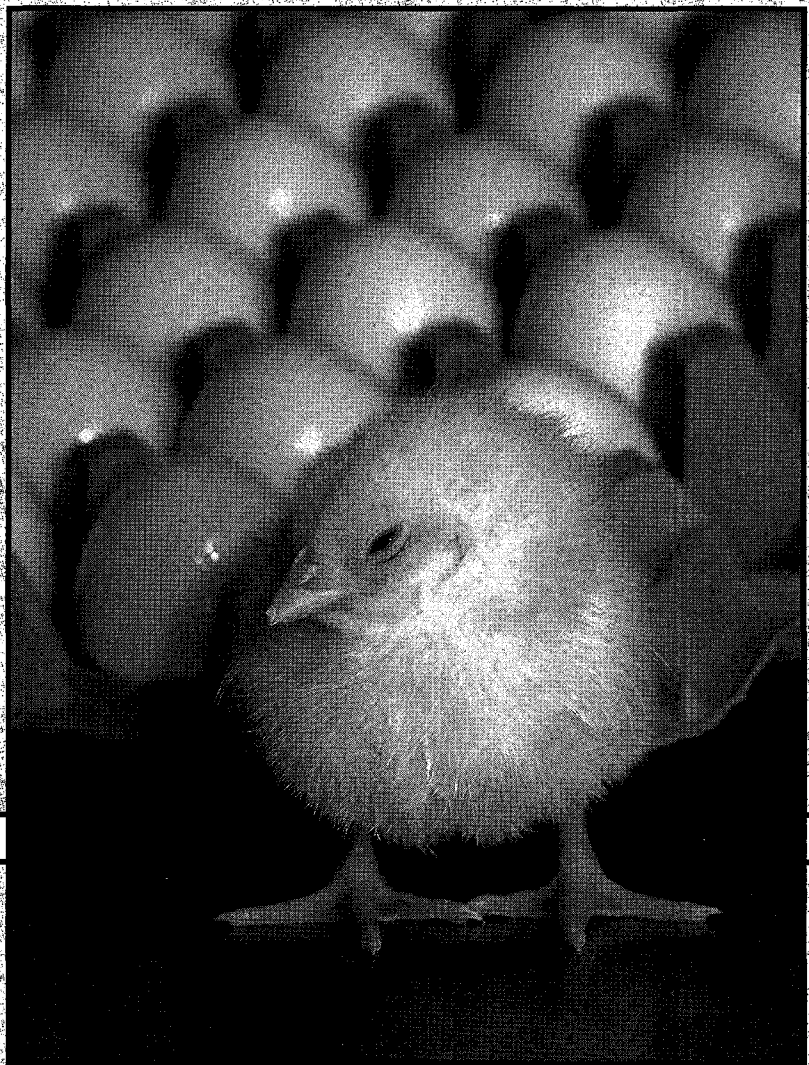


**Annual Report of the  
Minnesota Veterinary Diagnostic Laboratory – 1997**

# **Animal Health in Minnesota**



UNIVERSITY OF MINNESOTA

**Minnesota Agricultural Experiment Station  
Miscellaneous Publication 96-1998**



# **Animal Health in Minnesota**

**Annual Report of the  
Minnesota Veterinary Diagnostic Laboratory  
Fiscal Year 1997**

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

**and**

**The Minnesota Board of Animal Health**

**Miscellaneous Publication 96-1998  
Minnesota Agricultural Experiment Station  
University of Minnesota**

**St. Paul, Minnesota**

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

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

**DEPARTMENTAL MISSION**

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

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

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Approved by the VDM faculty December 19, 1985

## FOREWORD

This report is a summary of activities of the Minnesota Veterinary Diagnostic Laboratory for July 1, 1996 through June 30, 1997. Its 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.

The Minnesota Veterinary Diagnostic Laboratory was established in 1904 in the Agricultural Experiment Station of the University of Minnesota, by agreement between the Minnesota Livestock Sanitary Board and the University. Its purpose is to satisfy the need for accurate diagnosis of animal diseases that threaten Minnesota's livestock and poultry industries, companion animals, 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 and eradication programs.

The Veterinary Diagnostic Laboratory is a program of the University of Minnesota Academic Health Center that is based in the Department of Veterinary Diagnostic Medicine of the College of Veterinary Medicine. The faculty and professional staff of the Department carry out a comprehensive academic program in diagnostic medicine by integrating laboratory investigational activities with education and mission-oriented research. The primary thrust of this program is providing accurate and timely contemporary animal health diagnostic services for the people of Minnesota.

Progress during this fiscal year included the establishment of an avian serology section within the diagnostic laboratory program and completion of the renovation of the older portion of the laboratory building. The newly renovated area provides modern, safe laboratories for endocrinology, diagnostic genetics, histotechnique, mycotoxin analysis, immunofluorescence, electron microscopy specimen preparation, molecular diagnostic procedures and for storage of laboratory supplies and records. In addition, space for departmental educational resources and for the residency/graduate training program in Veterinary Pathology is incorporated into this area of the facility. This completes the capital project for renovation and construction of a new addition to the Veterinary Diagnostic Laboratory that was funded by the 1990 Minnesota Legislature.

Acknowledgement is given to Dr. Mark Hinton for compiling the data for this report, and to Larry Etkin of the Communication and Educational Technology Services Unit of the University of Minnesota Extension Service for editorial assistance.

Martin E. Bergeland  
Director

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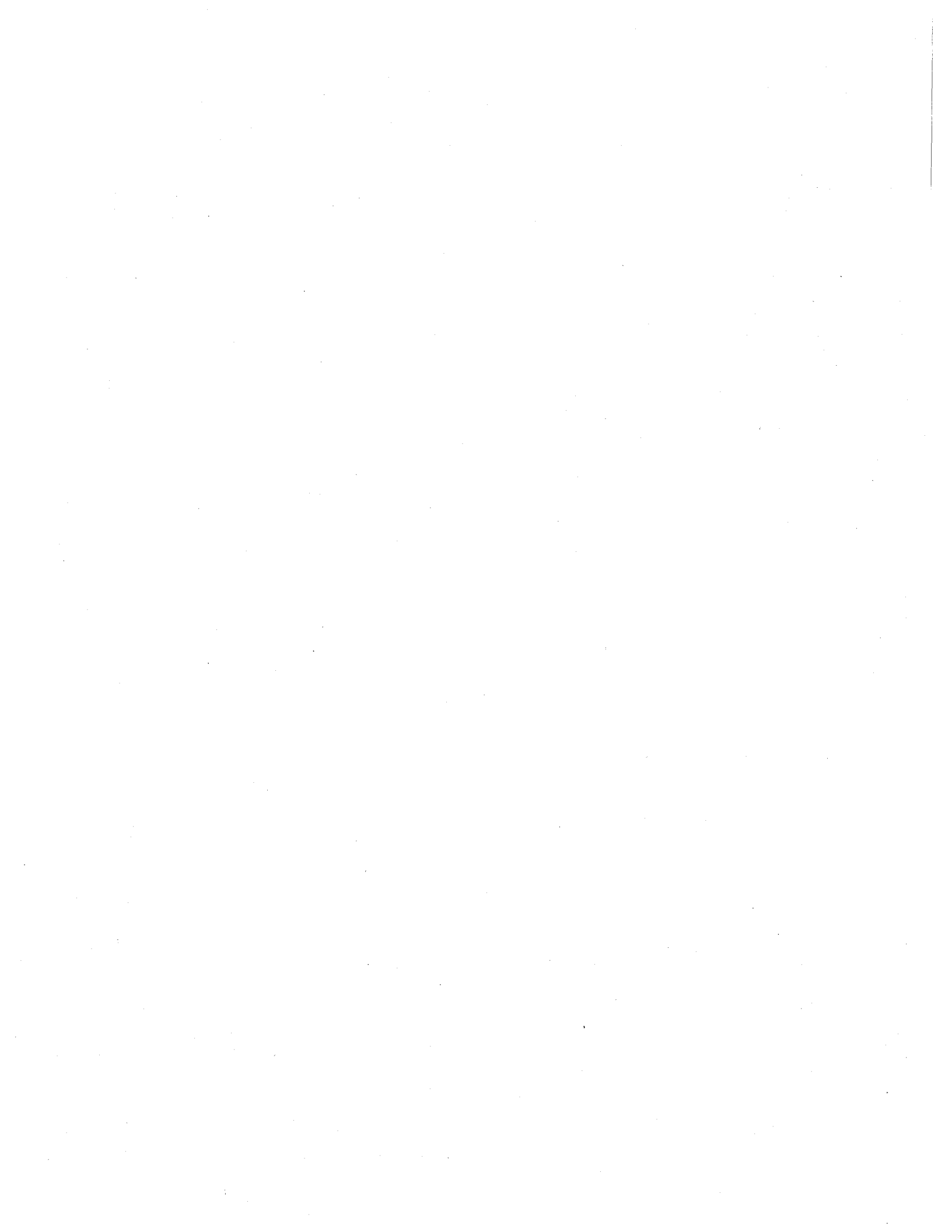
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# CONTENTS

Personnel.....	1
Accessions by Month.....	3
Accessions – Prior Fiscal Years .....	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.....	20
Canine.....	26
Caprine.....	37
Equine.....	38
Feline.....	43
Fish, Amphibians and Reptiles .....	50
Miscellaneous Mammals.....	52
Ovine.....	61
Porcine.....	63
Miscellaneous Specimens .....	70
Laboratory Procedures Summary .....	71
Necropsies .....	73
Tissue Accessions .....	74
Positive Rabies Cases .....	74
Rabies Examinations.....	75
Clinical Chemistry Laboratory Summary .....	76
Cytology Laboratory Summary.....	76
Endocrinology Laboratory Summary.....	77
Hematology Laboratory Summary.....	78
Histotechnique Laboratory Summary .....	78
Bacterial Cultures – Susceptibilities.....	79
Bacterial Cultures – Special Procedures .....	79
Campylobacter and Mycobacterium.....	79
Mycoplasma, Ureaplasma and Chlamydia .....	80
Bacterial Immunofluorescence in Tissues.....	80
Clostridia.....	80
<i>Escherichia coli</i> Pilus Antigens .....	80
Chlamydia, Leptospira and Mycoplasma .....	81

Bovine Mastitis Cultures and Drug Susceptibility Tests .....	81
Bacterial Serotyping .....	83
<i>Actinobacillus pleuropneumoniae</i> .....	83
<i>Pasteurella multocida</i> .....	83
<i>Streptococcus suis</i> .....	83
<i>Salmonella spp.</i> .....	84
Bacterial Toxin Testing .....	85
<i>Pasteurella multocida</i> .....	85
In Vitro Antimicrobial Drug Susceptibility Tests .....	86
Avian (Chicken and Turkey) .....	86
Bovine .....	87
Canine and Feline .....	88
Equine .....	90
Ovine .....	91
Porcine .....	92
Mycology .....	93
Genetics Laboratory Summary .....	93
Parasitology .....	94
Microscopic Examinations .....	94
Special Examinations .....	94
Serology .....	96
Test Summary by Species .....	96
Accessions by Species by month .....	99
Leptospirosis Serology .....	100
Immunology .....	100
Analytical Toxicology/Nutrition .....	101
Viral Immunofluorescence in Tissues .....	103
Virus Antigen Detection (Swine Influenza Virus) .....	105
Virus Identification (Electron Microscopy) .....	105
Virus Isolation (Cell Culture) and Special Procedure – Antigen Detection ELISA or Immunoperoxidase (BVD) .....	106
Appendix .....	107
Minnesota Brucellosis Testing Laboratory .....	108
Minnesota Poultry Testing Laboratory .....	109
Professional Curriculum .....	110
Residents and Graduate Students .....	112
Research .....	112
Publications .....	113
Continuing Education .....	115
Scientific Presentations .....	116
Awards and Citations .....	117
Professional Organizations .....	117
University Committees .....	118
Departmental Income .....	119
Administration .....	120





## Personnel

### Faculty

Martin E. Bergeland, DVM, PhD (ACVP)	Professor, Department Chair
Elizabeth A. Aird DVM (ACVP)	Assistant Clinical Specialist
Donald M. Barnes, DVM, PhD (ACVP)	Professor Emeritus
James E. Collins, DVM, PhD (ACVP)	Professor
Lawrence J. Felice, MS, PhD	Adjunct Associate Professor
Sagar M. Goyal, BVSc, PhD (SM-AAM)	Professor, Interim Chair
David W. Hayden, DVM, PhD (ACVP)	Professor
Vicki L. Horton, DVM, PhD	Adjunct Associate Professor
Kenneth Johnson, DVM, PhD (ACVP)	Professor
Harold J. Kurtz, DVM, PhD (ACVP)	Professor
Martha Mellencamp, PhD	Associate Professor
Michael J. Murphy, DVM, PhD (ABVT)	Associate Professor
Glen H. Nelson, DVM	Professor Emeritus
Timothy O'Brien, DVM, PhD (ACVP)	Associate Professor
Terrance P. O'Leary, DVM, PhD	Associate Professor
George R. Ruth, DVM, PhD (ACVP)	Professor
Daniel P. Shaw, DVM, PhD (ACVP)	Associate Professor
Ashok K. Singh, MS, PhD	Associate Professor
Mary M. Walsler, DVM, PhD	Professor
Ronald E. Werdin, DVM, PhD	Professor Emeritus

### Residents/Graduate Students

Mostafa Bouljihad, DVM, PhD	Vet. Med. Assistant
Deborah Carr, DVM	Teaching Assistant
M. Arshud Dar, DVM, MS	PhD Candidate
Kurt Rossow, BS, DVM	Vet. Med. Assoc./Research Assistant
M. Anwar Sheikh, DVM, MS	PhD Candidate
Dina Spassova, BS	Research Assistant
Stephanie Sprenger, DVM	Vet. Med. Assoc./Teaching Assistant
Thomas White, BS	Research Assistant

### Minnesota Veterinary Diagnostic Laboratory Staff

#### Administration

Martin E. Bergeland, DVM, PhD (ACVP)	Director
Dorene Coles	Senior Office Assistant
Bonnie Gagne	Principal Secretary
Wendy Hansen	Medical Transcriptionist
Margaret Ingalls, BA	Associate Administrator
Lynn Marshik	Med. Records Administrator
Elaine Matthys, BS	Senior Lab. Technician
Jean Paavala	Accounts Specialist
Judy Russell	Senior Accounts Assistant
Debra Schouviller	Accounts Specialist
Patricia Smith, AA	Office Specialist
Connie Strand, BS, MA	Accounts Supervisor
Mary Thurn	Executive Secretary
Jeri Walseth, BS	Senior Secretary

#### Bacteriology/Mycology

Martin E. Bergeland, DVM, PhD (ACVP)	Faculty Supervisor
Debra Bell	Principal Lab. Technician
Douglas Check, CLT	Principal Lab. Technician
Jennifer Feulner, BS	Senior Lab. Technician
Cynthia Lindeman, BS	Assistant Scientist
Martha Mellencamp, PhD	Associate Professor
Jennifer M. Nelson	Principal Lab. Technician
Gayle Pantlin, VT	Assistant Scientist
Karen Timmons, BS	Assistant Scientist
Thomas Yentsch, BS	Principal Lab. Technician

#### Endocrinology

Ashok K. Singh, MS, PhD	Faculty Supervisor
Yin Jiang, MS, PhD	Research Assistant
Dina Spassova, BS	Research Assistant

**Personnel (continued)**

Genetics

George R. Ruth, DVM, PhD (ACVP)	Faculty Supervisor
Lance Buoen, BS	Senior Scientist
Ting Qing Zhang, BVM, MS, PhD	Post Doctoral Associate

Pathology-Histotechnique

George R. Ruth, DVM, PhD (ACVP)	Faculty Supervisor
Jacalyn Evenson, AA, HT (ASCP)	Principal Lab. Technician
Donna Gulbranson, HT (ASCP)	Principal Lab. Technician
Mary Ito, BS, MT (ASCP), CL (NCA)	Univ. Medical Technician

Immunohistochemistry

Mary M. Walsler, DVM, PhD	Faculty Supervisor
Timothy O'Brien, DVM, PhD	Diagnostic Pathologist
Jan Shivers, BS	Scientist

Pathology-Necropsy

David W. Hayden, DVM, PhD (ACVP)	Faculty Supervisor
Anita Franson, AHT, BS	Assistant Scientist
Ron Joki, BA	Scientist
Richard Roback, AA	Assistant Scientist
Duane Weiss, BS	Scientist

Molecular Diagnostics

Kathy (Tune) Grunstad	Scientist
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Serology

Sagar M. Goyal, BVSc, PhD (SM-AAM)	Faculty Supervisor
Amy M. Bergmann	Senior Lab. Technician
Judith Brees, BS	Principal Lab. Technician
Alan Ducommun, BA	Principal Lab. Technician
Elizabeth Ellert, CLA	Principal Lab. Technician
Jerome Fahrman, BS	Sr. Univ. Med. Technician
Gay Ann Fleming	Senior Lab. Technician
Londa Kroone, CLA	Principal Lab. Technician

Pathology-Anatomical

Martin E. Bergeland, DVM, PhD (ACVP)	Diagnostic Pathologist
Mostafa Buljihad, DVM, PhD	Vet. Med. Assistant
Deborah Carr, DVM	Teaching Assistant
James E. Collins, DVM, PhD (ACVP)	Diagnostic Pathologist
David W. Hayden, DVM, PhD (ACVP)	Diagnostic Pathologist
Kenneth Johnson, DVM, PhD (ACVP)	Diagnostic Pathologist
Harold J. Kurtz, DVM, PhD (ACVP)	Diagnostic Pathologist
Timothy O'Brien, DVM, PhD (ACVP)	Diagnostic Pathologist
Terrance P. O'Leary, DVM, PhD	Diagnostic Pathologist
Kurt Rossow, BS, DVM	Vet. Med. Assoc./R. Assist.
George R. Ruth, DVM, PhD (ACVP)	Diagnostic Pathologist
Daniel P. Shaw, DVM, PhD (ACVP)	Diagnostic Pathologist
Stephanie Sprenger, DVM	Vet. Med. Assoc./T. Assist.
Mary M. Walsler, DVM, PhD	Diagnostic Pathologist

Toxicology/Nutrition

Michael J. Murphy, DVM, PhD (ABVT)	Veterinary Toxicologist
Ashok K. Singh, MS, PhD	Analytical Toxicologist
Tom Arendt, BS	Assistant Scientist
Thomas White, BS	Research Assistant

Pathology-Clinical

Terrance P. O'Leary, DVM, PhD	Surgical Pathologist
Elizabeth A. Aird, DVM (ACVP)	Clinical Pathologist

Virology

Sagar M. Goyal, BVSc, PhD (SM-AAM)	Faculty Supervisor
Chuanpis Ajariyahajorn, DVM, MS	Research Assistant
Daniel A. Berg	Principal Lab. Technician
M. Arshud Dar, DVM, MS	PhD Candidate
Sigrun Haugerud, BS	Principal Lab. Technician
Pin King, BS, MS	Junior Scientist
Kem Pomeroy, BS, PhD	Scientist; Elec. Microscopist
M. Anwar Sheikh, DVM, MS	PhD Candidate
Christopher Thurn, BA	Assistant Scientist

**Student Assistants**

Dritan Agalliu	Student Laboratory Attendant	Nicole Lund	Student Office Assistant
Lori Ann Ballenger	Undergrad Research Assistant	Frank McAleer	Student Laboratory Technician
Jennifer Carter	Student Laboratory Technician	Eric Melin	Student Laboratory Technician
John Flagan	Student Laboratory Technician	Donald Otten	Student Laboratory Technician
Miriam Gabelia	Student Office Assistant	Carey Prigge	Student Laboratory Technician
Kevin Koll	Student Laboratory Technician	Lea Tietje	Student Office Assistant
Jason Kutz	Student Laboratory Technician	Lisa Westergard	Student Laboratory Technician
Scott Lang	Student Laboratory Technician	Amber Wheelbarger	Student Laboratory Technician

<b>Accessions by Month</b>			
July .....	3,514	February .....	2,433
August .....	3,313	March .....	2,621
September .....	2,533	April .....	2,973
October .....	2,709	May .....	2,666
November .....	2,147	June .....	2,623
December .....	2,240		
January .....	2,451	<b>FY 1997 Total</b> .....	<b>32,223</b>

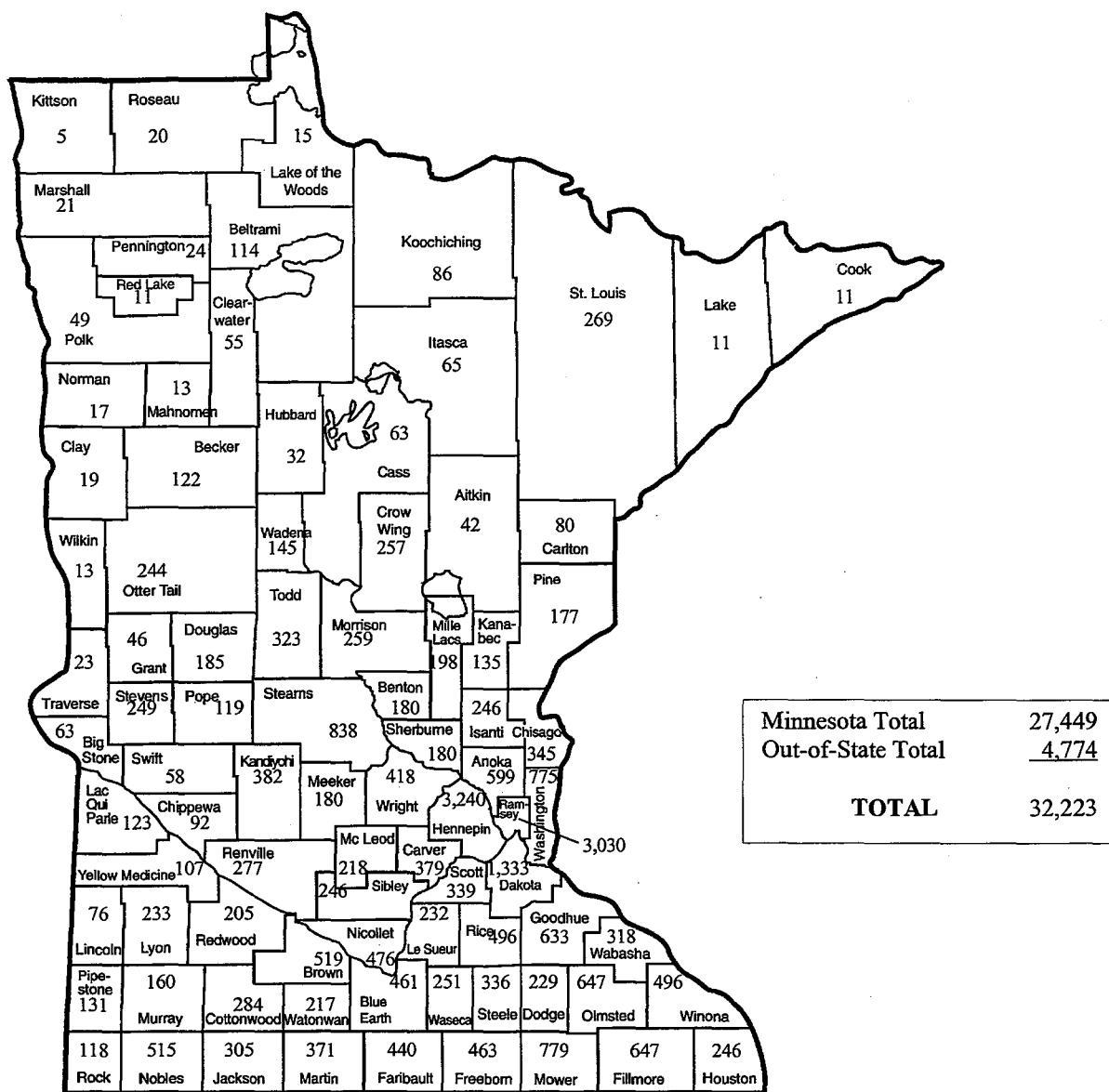
<b>Accessions – Prior Fiscal Years</b>			
1960 .....	3,277	1989 .....	12,803
1961 .....	3,450	1980 .....	14,668
1962 .....	3,285	1981 .....	15,580
1963 .....	2,635	1982 .....	18,064
1964 .....	4,225	1983 .....	20,668
1965 .....	2,635	1984 .....	20,184
1966 .....	3,166	1985 .....	22,836
1967 .....	3,680	1986 .....	21,748
1968 .....	4,581	1987 .....	24,390
1969 .....	5,552	1988 .....	30,899
1970 .....	6,451	1989 .....	35,233
1971 .....	6,926	1990 .....	37,093
1972 .....	7,951	1991 .....	43,421
1973 .....	10,527	1992 .....	42,800
1974 .....	8,635	1993 .....	39,764
1975 .....	7,593	1994 .....	40,154
1976 .....	8,782	1995 .....	38,914
1977 .....	8,953	1996 .....	34,926
1978 .....	10,591		

<b>Accessions by Species by Month</b>							
<b>Species</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>	<b>November</b>	<b>December</b>	<b>January</b>
Avian-Chicken	17	9	7	11	12	13	9
Avian-Miscellaneous	61	60	80	78	63	66	58
Avian-Turkey	28	19	27	25	20	13	21
Bovine	468	453	435	456	409	352	461
Canine	731	724	701	733	607	656	679
Caprine	21	15	14	12	13	17	13
Equine	284	242	193	195	90	92	115
Feline	267	273	244	257	206	187	243
Fish-Amphi.-Reptile	3	15	8	10	6	4	6
Miscellaneous Mammal	114	133	89	111	77	75	65
Miscellaneous Specimen	11	18	12	18	10	9	11
Ovine	16	19	20	14	22	15	20
Porcine	1,493	1,333	703	789	612	741	750
<b>TOTAL</b>	<b>3,514</b>	<b>3,313</b>	<b>2,533</b>	<b>2,709</b>	<b>2,147</b>	<b>2,240</b>	<b>2,451</b>

<b>Species</b>	<b>February</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>TOTALS</b>	<b>%TOTAL</b>
Avian-Chicken	11	10	20	14	8	141	0.4
Avian-Miscellaneous	50	53	57	43	57	726	2.3
Avian-Turkey	19	25	25	36	16	274	0.9
Bovine	429	468	503	441	392	5,267	16.3
Canine	624	655	756	687	710	8,263	25.6
Caprine	16	14	12	12	17	176	0.5
Equine	156	215	303	359	274	2,518	7.8
Feline	193	207	216	238	228	2,759	8.6
Fish-Amphi.-Reptile	4	9	5	10	4	84	0.3
Miscellaneous Mammal	82	82	74	84	109	1,095	3.4
Miscellaneous Specimen	8	9	18	16	10	150	0.5
Ovine	17	39	26	11	22	241	0.8
Porcine	824	835	958	715	776	10,529	32.7
<b>TOTAL</b>	<b>2,433</b>	<b>2,621</b>	<b>2,973</b>	<b>2,666</b>	<b>2,623</b>	<b>32,223</b>	<b>100.0</b>

**Accessions by County**



**OUT OF STATE:**

Alabama	6	Illinois	239	Missouri	207	Pennsylvania	42
Alaska	2	Indiana	64	Montana	15	South Carolina	1
Arizona	9	Iowa	431	Nebraska	254	South Dakota	242
Arkansas	224	Kansas	254	New Hampshire	6	Tennessee	2
California	17	Kentucky	148	New Jersey	2	Texas	28
Colorado	185	Louisiana	5	New York	39	Utah	2
Connecticut	4	Maine	3	North Carolina	99	Vermont	10
Delaware	1	Maryland	6	North Dakota	121	Virginia	27
Florida	12	Massachusetts	7	Ohio	48	Washington	32
Georgia	11	Michigan	46	Oklahoma	432	West Virginia	2
Idaho	4	Mississippi	7	Oregon	17	Wisconsin	1,378
						Wyoming	50

**INTERNATIONAL:**

Barbados	1	Canada	29	Puerto Rico	1
Brazil	1	Colombia	1		

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## Disease Diagnoses by Animal Species

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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)

Note: For select organ systems of various species, the total number of cases (accessions) actually presented to the diagnostic laboratory have been included in this report. Since one case may be diagnosed with several diseases, the number of cases may differ from the number of diagnoses.

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**AVIAN**


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<b>CHICKEN</b>	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>0 Body as a Whole</u>													
Cannibalism	4	-	-	-	-	1	2	-	-	-	-	-	1
Dehydration	2	-	-	-	-	-	2	-	-	-	-	-	-
Effusion, Peritoneal	3	1	-	-	-	-	-	-	-	-	1	1	-
Emaciation	3	-	-	-	-	-	-	1	-	1	-	-	1
Gout	8	-	1	2	1	-	1	-	-	-	3	-	-
Health Evaluation, Normal	11	2	1	-	1	-	3	1	1	-	1	1	-
Marek's Disease	8	-	-	-	-	1	1	1	2	1	-	1	1
Neonatal Weakness	1	-	-	-	-	-	-	-	-	1	-	-	-
Neoplasm	2	-	-	-	-	-	-	-	-	1	-	-	1
Peritonitis	3	-	1	-	-	-	-	-	-	-	1	1	-
Peritonitis, Egg Yolk	4	-	-	-	1	-	-	-	-	1	1	-	1
Septicemia, <i>Erysipelothrix sp.</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Escherichia coli</i>	6	1	1	-	2	-	-	-	-	-	1	1	-
Septicemia, <i>Mycoplasma synoviae</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Pasteurella hemolytica</i>	6	-	-	1	1	-	-	-	-	-	2	2	-
Septicemia, <i>Pasteurella multocida</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Salmonella sp.</i>	5	1	-	-	-	2	-	-	1	-	-	-	1
Septicemia, <i>Staphylococcus sp.</i>	2	1	-	-	-	-	-	-	-	1	-	-	-
Virus Infection, Adenovirus	1	-	-	-	1	-	-	-	-	-	-	-	-
Virus Infection, Pox	4	-	-	-	-	-	-	-	1	1	2	-	-
Yolk Sac Infection	8	-	-	1	-	2	-	-	1	1	2	-	1
<u>1 Integumentary</u>													
Cellulitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Dermatitis, Necrotic	1	-	-	-	-	-	-	-	-	-	1	-	-
Dermatitis, Podo	1	-	-	-	1	-	-	-	-	-	-	-	-
Dermatitis, Ulcerative	1	-	-	-	-	-	-	-	-	1	-	-	-
<u>2 Musculoskeletal</u>													
Arthritis	1	-	-	-	-	-	-	-	-	-	-	-	1
Arthritis, <i>Staphylococcus sp.</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Bone-Osteodystrophy	4	1	-	-	1	1	-	-	-	1	-	-	-
Bone-Osteomyelitis	1	-	1	-	-	-	-	-	-	-	-	-	-

CHICKEN (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>3 Respiratory</b>													
Air Sac—Airsacculitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Infectious Laryngotracheitis	4	1	-	-	1	1	-	1	-	-	-	-	-
Lung—Bronchitis	5	-	-	-	2	-	-	-	-	-	1	2	-
Lung—Pneumonia, <i>Bordetella sp.</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Lung—Pneumonia, Broncho	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung—Pneumonia, <i>Pasteurella hemolytica</i>	3	-	-	-	1	-	-	1	-	-	-	1	-
Respiratory Infection	2	-	-	-	-	-	1	-	-	-	-	1	-
Respiratory Infect., <i>Pasteurella hemolytica</i>	3	-	-	-	-	-	-	-	1	-	2	-	-
Sinus—Sinusitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Trachea—Tracheitis	12	1	1	-	-	-	1	1	2	3	1	2	-
<b>4 Cardiovascular</b>													
Heart—Endocarditis	1	-	-	-	-	1	-	-	-	-	-	-	-
Heart—Round Heart Disease	1	-	-	-	-	-	-	-	-	-	1	-	-
<b>6 Digestive</b>													
Feces—Microbiologic Exam	2	-	-	-	-	2	-	-	-	-	-	-	-
Intestine—Enteritis, Idiopathic	2	-	-	-	-	-	-	1	-	1	-	-	-
Intestine—Enteritis, Necrotic	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine—Enteritis, Rotavirus	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine—Enteritis, <i>Salmonella sp.</i>	2	-	-	-	-	-	-	1	-	-	-	-	1
Intestine—Parasitism, Ascaris	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine—Parasitism, <i>Capillaria sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine—Parasitism, Coccidia	8	-	1	-	2	1	1	1	-	1	-	-	1
Liver—Hepatitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver—Hepatosi	1	-	-	-	-	-	-	-	-	-	1	-	-
Liver—Lipidosis	1	1	-	-	-	-	-	-	-	-	-	-	-
<b>7 Urogenital</b>													
Kidney—Nephrosi	1	-	-	-	-	-	-	-	-	-	-	1	-
Kidney—Urolithiasis	5	-	-	-	1	-	1	-	-	-	3	-	-
Oviduct—Salpingiti	1	-	-	-	-	1	-	-	-	-	-	-	-
<b>9 Nervous</b>													
Brain—Encephaliti, Non-Suppurative	2	-	-	-	-	-	-	1	-	1	-	-	-



**CHICKEN (continued)**

	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>X Special Senses</u>													
Eye-Conjunctivitis	2	-	1	-	-	-	-	-	-	-	-	-	1
Eye-Ophthalmitis	1	-	-	-	-	-	-	-	-	-	-	-	1

**TURKEY**
0 Body as a Whole

Feed-Bacteriologic Exam	1	-	-	-	-	-	-	-	-	1	-	-	-
Gout	1	1	-	-	-	-	-	-	-	-	-	-	-
Growth Retardation	1	-	-	-	-	1	-	-	-	-	-	-	-
Mycotoxycosis, Deoxynivalenol	1	-	-	1	-	-	-	-	-	-	-	-	-
Neonatal Weakness	2	-	-	-	-	-	-	-	-	-	1	1	-
Parasitism, <i>Histomonas sp.</i>	2	-	1	-	1	-	-	-	-	-	-	-	-
Septicemia, Bacterial	14	-	-	1	1	-	1	2	-	1	1	6	1
Septicemia, <i>Erysipelothrix sp.</i>	3	-	1	-	1	-	-	-	1	-	-	-	-
Septicemia, <i>Escherichia coli</i>	13	5	1	-	1	2	1	-	-	-	2	-	1
Septicemia, <i>Pasteurella multocida</i>	14	-	-	-	-	2	1	5	2	3	-	1	-
Septicemia, <i>Pasteurella sp.</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Salmonella sp.</i>	13	4	-	3	1	1	-	1	3	-	-	-	-
Sudden Unexpected Death	3	-	-	1	1	1	-	-	-	-	-	-	-
Toxicosis, Ionophore	2	1	-	-	-	1	-	-	-	-	-	-	-
Virus Infection, Adenovirus	4	-	2	-	-	-	-	1	-	-	-	1	-
Yolk Sac Infection	4	2	1	-	-	-	-	-	-	-	1	-	-

1 Integumentary

Dermatitis, Diffuse	1	-	-	-	-	-	-	1	-	-	-	-	-
Dermatitis, Podo	2	1	-	-	-	-	-	-	-	-	-	-	1

2 Musculoskeletal

Arthritis	1	-	-	-	-	-	-	-	-	-	-	1	-
Arthritis, <i>Actinomyces pyogenes</i>	4	-	-	1	-	-	-	-	-	1	-	-	2
Arthritis, <i>Staphylococcus sp.</i>	3	-	1	-	-	1	-	-	1	-	-	-	-
Bone-Dyschondroplasia	2	-	1	-	-	-	-	-	-	-	-	-	1
Bone-Osteomalacia	1	-	-	1	-	-	-	-	-	-	-	-	-
Bone-Osteomyelitis	8	-	3	2	-	-	-	-	-	-	-	1	2

TURKEY (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Muscle–Degeneration	1	-	-	-	-	-	-	1	-	-	-	-	-
Muscle–Myositis	2	1	-	-	-	1	-	-	-	-	-	-	-
<b>3 Respiratory</b>													
Air Sac–Airsacculitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Aspergillosis	4	-	-	-	-	-	2	-	1	1	-	-	-
Lung–Pneumonia	3	-	-	-	-	1	-	-	-	1	-	1	-
Lung–Pneumonia, <i>Bordetella bronchiseptica</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung–Pneumonia, <i>Bordetella sp.</i>	5	-	-	-	-	-	1	-	-	2	-	2	-
Lung–Pneumonia, Broncho	2	-	-	-	1	-	1	-	-	-	-	-	-
Lung–Pneumonia, <i>Escherichia coli</i>	2	1	-	-	-	-	-	1	-	-	-	-	-
Lung–Pneumonia, <i>Mycoplasma gallisepticum</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Respiratory Infection	3	-	-	1	-	-	-	1	-	-	1	-	-
Respiratory, Microbiologic Exam	2	-	-	-	-	-	-	-	-	-	-	1	1
Sinus–Sinusitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Trachea–Tracheitis	3	-	-	1	1	-	-	-	-	-	1	-	-
<b>4 Cardiovascular</b>													
Heart–Cardiomyopathy	1	-	1	-	-	-	-	-	-	-	-	-	-
Heart–Round Heart Disease	2	-	-	-	-	-	1	-	-	1	-	-	-
<b>6 Digestive</b>													
Feces–Microbiologic Exam	7	1	-	1	-	-	-	1	1	-	-	3	-
Intestine–Enteritis, Coronavirus	3	-	-	-	-	-	-	-	1	1	1	-	-
Intestine–Enteritis, Idiopathic	6	1	1	2	-	1	-	-	-	1	-	-	-
Intestine–Enteritis, Rotavirus	23	5	2	2	-	1	1	-	1	4	4	3	-
Intestine–Enteritis, <i>Salmonella sp.</i>	21	2	1	2	-	3	2	2	1	4	2	2	-
Intestine–Enteropathy, Atrophic	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine–Parasitism, Ascaris	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine–Parasitism, Coccidia	15	1	3	3	1	2	-	1	-	1	2	1	-
Liver–Hepatitis	2	-	-	-	-	-	-	-	-	-	-	-	2
Liver–Lipidosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Liver–Parasitism, Ascaris (Larvae)	1	-	1	-	-	-	-	-	-	-	-	-	-
<b>9 Nervous</b>													
Meninges–Meningitis, Suppurative	1	-	-	-	-	1	-	-	-	-	-	-	-

**MISCELLANEOUS AVIAN SPECIES**

**CANARY**

Air Sac—Airsacculitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Feces—Microbiologic Exam	1	-	1	-	-	-	-	-	-	-	-	-	-
Gout	1	-	-	-	1	-	-	-	-	-	-	-	-
Liver—Hepatitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Liver—Neoplasm	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung—Parasitism	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung—Pneumonia, Broncho	1	-	-	-	-	-	-	-	-	-	-	-	1
Respiratory, Microbiologic Exam	1	-	-	-	1	-	-	-	-	-	-	-	-
Septicemia, <i>Staphylococcus sp.</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
Sinus—Sinusitis	1	-	-	-	-	-	-	1	-	-	-	-	-

**COCKATOO**

Blood Vessel—Arteriosclerosis	1	-	-	-	-	-	-	1	-	-	-	-	-
Brain—Encephalitis, Non-Suppurative	2	-	-	-	-	-	-	-	-	-	1	-	1
Dermatitis, Podo	1	-	1	-	-	-	-	-	-	-	-	-	-
Emaciation	1	-	1	-	-	-	-	-	-	-	-	-	-
Feces—Microbiologic Exam	6	1	-	-	-	1	1	-	1	2	-	-	-
Heart—Myocarditis	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung—Pneumonia, Foreign Body	1	-	-	-	-	-	-	-	-	-	1	-	-
Psittacine Wasting Disease	7	1	-	1	-	1	1	-	-	-	-	2	1
Trauma	1	-	-	-	-	1	-	-	-	-	-	-	-
Virus Infection, Herpes	1	-	-	-	-	-	-	-	-	1	-	-	-

**DUCK (DOMESTIC)**

Kidney—Nephritis	1	1	-	-	-	-	-	-	-	-	-	-	-
Parasitism	1	-	-	1	-	-	-	-	-	-	-	-	-
Tuberculosis	1	-	-	-	-	-	-	-	-	-	1	-	-

**DUCK (WILD)**

Aspergillosis	1	1	-	-	-	-	-	-	-	-	-	-	-
Heart—Myocardial Degeneration	1	-	-	-	-	-	-	-	-	-	-	1	-
Liver—Hepatitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Toxicosis, Lead	3	-	-	-	-	-	-	-	1	2	-	-	-
Trauma	1	-	-	-	-	1	-	-	-	-	-	-	-

MISCELLANEOUS AVIAN (continued) Total JI Ag Sp Oc Nv Dc Jn Fb Mr Ap My Jn

EAGLE

Aspergillosis	1	-	-	1	-	-	-	-	-	-	-	-	-
Blood Vessel-Arteriosclerosis	1	-	-	-	-	-	-	1	-	-	-	-	-
Brain-Encephalomalacia	1	-	-	-	-	-	-	1	-	-	-	-	-
Genital Anomaly, Freemartin	1	-	1	-	-	-	-	-	-	-	-	-	-
Heart-Cardiomyopathy	1	-	-	-	-	-	1	-	-	-	-	-	-
Heart-Myocarditis	1	-	-	-	-	-	-	1	-	-	-	-	-
Nasal-Rhinitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Toxicosis, Lead	21	-	-	-	-	3	6	4	-	1	3	3	1

EMU

Aspergillosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Brain-Encephalomalacia	1	-	-	1	-	-	-	-	-	-	-	-	-
Brain-Encephalomalacia, Parasitism	1	-	-	-	1	-	-	-	-	-	-	-	-
Deficiency, Copper	1	-	-	1	-	-	-	-	-	-	-	-	-
Emaciation	1	-	-	-	-	-	-	-	-	1	-	-	-
Esophagus-Esophagitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	4	-	-	-	2	-	-	-	1	-	1	-	-
Heart-Endocarditis	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Enteritis, Necrotic	1	-	-	-	-	-	-	-	-	-	1	-	-
Pancreas-Hemorrhage	1	-	-	-	-	-	-	1	-	-	-	-	-
Septicemia, <i>Salmonella sp.</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Toxicosis, Copper	1	-	-	-	-	-	-	1	-	-	-	-	-
Toxicosis, Iron	1	-	-	-	-	-	-	1	-	-	-	-	-
Yolk Sac Infection	1	-	-	-	-	-	-	-	-	-	-	-	1

FALCON

Amyloidosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Blood-Anemia	1	1	-	-	-	-	-	-	-	-	-	-	-
Blood-Parasitism, <i>Plasmodium sp.</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Dermatitis, Podo	1	-	1	-	-	-	-	-	-	-	-	-	-
Heart-Myocardial Degeneration	1	-	-	-	1	-	-	-	-	-	-	-	-
Neurologic Disorder, Idiopathic	1	1	-	-	-	-	-	-	-	-	-	-	-
Septicemia, Bacterial	1	-	-	-	-	-	1	-	-	-	-	-	-
Septicemia, <i>Mycobacterium sp.</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Ventriculus-Ventriculitis	1	-	-	-	-	-	-	-	-	-	-	-	1

MISCELLANEOUS AVIAN (continued) Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>GOOSE</b>												
Aspergillosis	1	-	1	-	-	-	-	-	-	-	-	-
Bone-Fracture	1	-	-	-	1	-	-	-	-	-	-	-
Emaciation	1	-	1	-	-	-	-	-	-	-	-	-
Kidney-Nephrosis	1	-	-	-	-	-	-	-	-	-	1	-
Lung-Parasitism	1	-	1	-	-	-	-	-	-	-	-	-
Septicemia, <i>Pasteurella multocida</i>	2	-	-	2	-	-	-	-	-	-	-	-
Toxicosis, Lead	4	-	-	-	-	1	1	-	-	2	-	-
<b>HAWK</b>												
Air Sac-Airsacculitis	1	1	-	-	-	-	-	-	-	-	-	-
Aspergillosis	1	-	-	-	1	-	-	-	-	-	-	-
Brain-Encephalomalacia	1	-	-	1	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	1	-	-	-	-	1	-	-	-	-	-	-
Gout	3	-	-	2	-	-	1	-	-	-	-	-
Heart-Myocarditis	1	-	1	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	1	-	1	-	-	-	-	-	-	-	-	-
Kidney-Nephritis	2	-	-	1	-	-	1	-	-	-	-	-
Kidney-Nephrosis	1	-	1	-	-	-	-	-	-	-	-	-
Liver-Hepatitis	2	-	1	-	-	-	1	-	-	-	-	-
Lung-Pneumonia, Broncho	1	-	-	-	-	1	-	-	-	-	-	-
Parasitism	2	-	1	1	-	-	-	-	-	-	-	-
Spleen-Splenitis	1	-	1	-	-	-	-	-	-	-	-	-
Tuberculosis	1	-	-	1	-	-	-	-	-	-	-	-
<b>LOON</b>												
Intestine-Parasitism, Cestode	1	-	-	1	-	-	-	-	-	-	-	-
Liver-Hepatitis	1	-	-	-	-	-	-	1	-	-	-	-
<b>MISCELLANEOUS AVIAN SPECIES</b>												
Air Sac-Airsacculitis	2	-	-	1	-	1	-	-	-	-	-	-
Bone-Osteitis	1	-	-	-	-	1	-	-	-	-	-	-
Crop-Ingluvitis	1	-	-	-	-	1	-	-	-	-	-	-
Dermatitis, Podo.	1	-	-	-	-	-	-	1	-	-	-	-
Emaciation	2	1	-	-	-	1	-	-	-	-	-	-
Eye-Conjunctivitis	3	1	1	-	-	-	1	-	-	-	-	-
Feces-Microbiologic Exam	7	1	1	2	1	-	-	1	1	-	-	-
Gout	1	-	-	-	-	-	-	-	-	1	-	-
Health Evaluation, Normal	1	-	1	-	-	-	-	-	-	-	-	-

MISCELLANEOUS AVIAN (continued) Total      Jl   Ag   Sp   Oc   Nv   Dc   Jn   Fb   Mr   Ap   My   Jn

MISCELLANEOUS AVIAN SPECIES (continued)

Intestine-Enteritis, Necrotic	1	-	1	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Rotavirus	1	-	-	-	-	-	-	1	-	-	-	-
Intestine-Enteritis, <i>Salmonella sp.</i>	1	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, <i>Capillaria sp.</i>	1	-	1	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Cestode	1	-	-	-	-	1	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	1	-	1	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, <i>Cryptosporidium sp.</i>	1	-	-	-	-	-	-	-	1	-	-	-
Kidney-Nephrosis	1	-	-	-	-	-	-	-	-	1	-	-
Liver-Hemosiderosis	1	-	-	-	-	-	-	-	-	1	-	-
Liver-Hepatitis	5	-	1	1	-	1	-	2	-	-	-	-
Lung-Pneumonia, Foreign Body	1	-	-	-	-	1	-	-	-	-	-	-
Pancreas-Neoplasm	1	-	-	-	1	-	-	-	-	-	-	-
Parasitism, Mites	1	1	-	-	-	-	-	-	-	-	-	-
Psittacine Wasting Disease	1	-	-	-	-	1	-	-	-	-	-	-
Respiratory, Microbiologic Exam	5	-	-	-	-	1	-	2	2	-	-	-
Septicemia, Bacterial	2	-	-	-	-	-	-	-	-	2	-	-
Septicemia, <i>Staphylococcus sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-
Sinus-Sinusitis	1	-	-	-	-	1	-	-	-	-	-	-
Skin-Microbiologic Exam	1	-	1	-	-	-	-	-	-	-	-	-
Sudden Unexpected Death	2	-	-	-	-	-	-	-	-	-	-	2
Toxicosis, Iron	1	-	-	-	-	-	-	-	-	1	-	-
Trauma	1	-	-	-	-	-	-	-	-	-	-	1
Ventriculus-Ventriculitis	2	-	-	-	-	-	1	1	-	-	-	-
Virus Infection, Pox	2	-	-	2	-	-	-	-	-	-	-	-

OSTRICH

Air Sac-Airsacculitis	1	1	-	-	-	-	-	-	-	-	-	-
Aspergillosis	1	-	-	-	-	-	-	1	-	-	-	-
Bone-Osteomalacia	1	-	1	-	-	-	-	-	-	-	-	-
Cloaca-Impaction	1	-	-	-	-	-	1	-	-	-	-	-
Effusion, Peritoneal	2	1	-	-	1	-	-	-	-	-	-	-
Emaciation	14	-	1	-	3	3	1	2	3	-	1	-
Feces-Microbiologic Exam	1	-	-	-	1	-	-	-	-	-	-	-
Gout	1	-	-	-	1	-	-	-	-	-	-	-
Heart-Myocarditis	1	1	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	2	-	-	-	-	1	-	1	-	-	-	-
Intestine-Enteritis, <i>Salmonella sp.</i>	1	-	-	-	-	-	1	-	-	-	-	-
Intestine-Volvulus	2	-	-	-	1	-	-	1	-	-	-	-

MISCELLANEOUS AVIAN (continued) Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>OSTRICH (continued)</b>												
Liver–Hepatitis	1	-	-	-	1	-	-	-	-	-	-	-
Lung–Pneumonia, Broncho	1	-	1	-	-	-	-	-	-	-	-	-
Mineralization, Soft Tissue	1	-	-	1	-	-	-	-	-	-	-	-
Muscle–Degeneration	1	-	-	-	1	-	-	-	-	-	-	-
Parasitism	1	-	1	-	-	-	-	-	-	-	-	-
Peritonitis	1	-	-	-	-	-	-	1	-	-	-	-
Proventriculus, Impaction	1	-	-	-	-	-	1	-	-	-	-	-
Septicemia, <i>Escherichia coli</i>	1	-	-	-	-	1	-	-	-	-	-	-
Septicemia, <i>Salmonella sp.</i>	1	-	-	-	1	-	-	-	-	-	-	-
Sudden Unexpected Death	5	-	1	-	2	-	2	-	-	-	-	-
Toxicosis, Gossypol	1	-	-	-	-	-	1	-	-	-	-	-
Toxicosis, Iron	1	-	-	-	-	1	-	-	-	-	-	-
Toxicosis, Lead	1	-	-	-	-	1	-	-	-	-	-	-
Toxicosis, Zinc	1	-	-	-	-	1	-	-	-	-	-	-
Trachea–Tracheitis	1	-	-	-	-	-	-	1	-	-	-	-
Trauma	1	-	-	-	-	1	-	-	-	-	-	-
Ventriculus–Ventriculitis	1	-	-	-	-	1	-	-	-	-	-	-
Ventriculus–Impaction	4	-	1	-	2	1	-	-	-	-	-	-
Yolk Sac Infection	1	1	-	-	-	-	-	-	-	-	-	-
<b>OWL</b>												
Air Sac–Airsacculitis	1	-	-	-	-	-	-	-	1	-	-	-
Feces–Microbiologic Exam	8	-	-	1	-	1	2	-	2	2	-	-
Heart–Myocarditis	1	-	-	-	-	-	-	-	-	-	1	-
Liver–Lipidosis	1	-	-	1	-	-	-	-	-	-	-	-
Muscle–Myopathy	1	-	-	-	-	-	-	-	1	-	-	-
<b>PEACOCK</b>												
Air Sac–Airsacculitis	1	-	-	-	-	-	-	-	-	1	-	-
Blood–Anemia	1	-	-	-	-	1	-	-	-	-	-	-
Bone–Osteodystrophy	1	-	-	-	-	-	-	-	1	-	-	-
Intestine–Parasitism	1	-	-	-	-	-	-	-	1	-	-	-
Intestine–Parasitism, Ascaris	1	-	-	-	-	1	-	-	-	-	-	-
Intestine–Parasitism, <i>Capillaria sp.</i>	1	-	-	-	1	-	-	-	-	-	-	-
Intestine–Parasitism, Coccidia	2	-	-	-	1	1	-	-	-	-	-	-
Parasitism, <i>Histomonas sp.</i>	1	-	-	-	1	-	-	-	-	-	-	-
Toxicosis, Anticoagulant	1	-	-	-	-	1	-	-	-	-	-	-

MISCELLANEOUS AVIAN (continued) Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>PENGUIN</b>												
Liver–Hepatitis	1	-	-	-	-	-	-	-	1	-	-	-
Liver–Parasitism	1	-	-	-	-	-	-	-	1	-	-	-
<b>PHEASANT</b>												
Emaciation	2	1	-	1	-	-	-	-	-	-	-	-
Infectious Laryngotracheitis	1	-	-	-	-	1	-	-	-	-	-	-
Intestine–Enteritis, Idiopathic	1	-	-	1	-	-	-	-	-	-	-	-
Intestine–Enteritis, Rotavirus	1	1	-	-	-	-	-	-	-	-	-	-
Intestine–Enteritis, <i>Salmonella</i> sp.	1	1	-	-	-	-	-	-	-	-	-	-
Intestine–Parasitism, Ascaris	1	-	-	-	1	-	-	-	-	-	-	-
Intestine–Parasitism, Coccidia	3	1	1	1	-	-	-	-	-	-	-	-
Neurologic Disorder, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	1
Respiratory Infection	1	-	1	-	-	-	-	-	-	-	-	-
Septicemia, <i>Erysipelothrix</i> sp.	1	-	-	-	-	-	-	-	-	1	-	-
Septicemia, <i>Pasteurella hemolytica</i>	1	1	-	-	-	-	-	-	-	-	-	-
Sinus–Sinusitis	1	-	-	-	-	1	-	-	-	-	-	-
Virus Infection, Adenovirus	1	-	-	1	-	-	-	-	-	-	-	-
<b>PIGEON/DOVE</b>												
Aspergillosis	1	-	1	-	-	-	-	-	-	-	-	-
Bone–Osteodystrophy	1	-	-	-	-	-	-	-	-	-	-	1
Crop–Ingluvitis	2	1	-	-	1	-	-	-	-	-	-	-
Crop–Ingluvitis, Mycotic	1	-	-	-	-	-	-	-	-	-	-	1
Emaciation	1	-	-	-	-	-	-	-	-	-	-	1
Esophagus–Esophagitis	1	-	1	-	-	-	-	-	-	-	-	-
Feces–Microbiologic Exam	1	1	-	-	-	-	-	-	-	-	-	-
Gout	1	-	-	-	-	-	-	-	-	1	-	-
Intestine–Parasitism, Ascaris	2	1	-	-	-	-	-	1	-	-	-	-
Intestine–Parasitism, <i>Capillaria</i> sp.	1	-	-	-	1	-	-	-	-	-	-	-
Intestine–Parasitism, Coccidia	7	1	1	2	1	-	1	-	-	1	-	-
Kidney–Nephrosis	1	-	-	-	-	-	-	-	-	-	-	1
Liver–Hepatitis	4	2	1	-	-	-	-	-	-	1	-	-
Liver–Parasitism	1	-	-	-	-	-	-	1	-	-	-	-
Lung–Pneumonia	1	-	-	-	-	-	-	-	-	1	-	-
Lung–Pneumonia, Mycotic	1	-	-	-	-	-	-	-	-	-	-	1
Oral–Parasitism, <i>Trichomonas</i> sp.	1	-	-	-	-	-	-	-	-	-	1	-
Oral–Stomatitis	1	-	1	-	-	-	-	-	-	-	-	-



MISCELLANEOUS AVIAN (continued) Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>PIGEON/DOVE (continued)</b>												
Oviduct–Salpingitis	1	1	-	-	-	-	-	-	-	-	-	-
Pancreas–Pancreatitis	1	1	-	-	-	-	-	-	-	-	-	-
Paralysis	1	-	-	-	-	-	-	-	-	-	-	1
Septicemia, <i>Salmonella</i> sp.	3	-	-	1	1	-	-	-	-	-	-	1
Ventriculus–Ventriculitis	1	-	-	-	1	-	-	-	-	-	-	-
Sudden Unexpected Death	1	-	-	-	-	-	-	-	1	-	-	-
Trachea–Tracheitis	1	-	1	-	-	-	-	-	-	-	-	-
Virus Infection, Herpes	3	1	-	-	-	-	1	-	-	1	-	-
Virus Infection, Paramyxovirus	5	-	-	2	2	-	-	1	-	-	-	-
<b>PSITTACINE–MISCELLANEOUS</b>												
Adrenal–Adrenitis	2	-	-	-	1	-	-	-	-	1	-	-
Adrenal–Neoplasm	1	-	-	-	1	-	-	-	-	-	-	-
Air Sac–Airsacculitis	2	-	-	-	-	1	-	-	-	-	1	-
Amyloidosis	1	-	-	-	-	-	1	-	-	-	-	-
Aspergillosis	2	1	-	-	-	-	-	1	-	-	-	-
Blood Vessel–Atherosclerosis	1	-	-	-	-	-	-	-	-	1	-	-
Blood–Anemia	1	-	-	1	-	-	-	-	-	-	-	-
Blood–Coagulation Disorder	1	-	-	-	-	-	-	-	1	-	-	-
Bone–Fracture	1	-	-	-	-	-	-	-	-	1	-	-
Brain–Encephalitis, Non-Suppurative	1	-	-	-	-	-	1	-	-	-	-	-
Brain–Encephalomalacia	1	-	-	-	-	-	-	-	1	-	-	-
Brain–Vasculitis	1	-	-	-	-	-	1	-	-	-	-	-
Chlamydiosis	2	-	-	-	-	-	2	-	-	-	-	-
Crop–Ingluvitis	1	-	-	-	-	-	-	-	1	-	-	-
Crop–Ingluvitis, Mycotic	1	-	-	1	-	-	-	-	-	-	-	-
Cyst, Adnexal	1	-	-	-	-	-	1	-	-	-	-	-
Dermatitis, Focal	1	-	-	-	-	1	-	-	-	-	-	-
Effusion, Peritoneal	1	1	-	-	-	-	-	-	-	-	-	-
Emaciation	14	1	1	2	1	1	-	2	1	1	1	2
Esophagus–Perforation	1	-	-	-	-	-	1	-	-	-	-	-
Feces–Microbiologic Exam	119	8	10	16	9	5	8	9	10	10	8	12
Gout	7	-	1	2	1	1	1	-	-	-	1	-
Heart–Heart Failure, Acute	1	-	-	1	-	-	-	-	-	-	-	-
Heart–Heart Failure, Chronic	1	-	-	-	-	1	-	-	-	-	-	-
Heart–Myocardial Degeneration	2	-	-	-	-	-	-	2	-	-	-	-
Heart–Pericarditis	1	-	-	-	-	-	-	-	-	-	1	-
Intestine–Enteritis, Necrotic	1	-	-	-	-	-	-	-	-	1	-	-

MISCELLANEOUS AVIAN (continued) Total JI Ag Sp Oc Nv Dc Jn Fb Mr Ap My Jn

PSITTACINE-MISCELLANEOUS (continued)

Kidney-Cyst	1	-	-	-	-	1	-	-	-	-	-	-
Kidney-Nephritis	4	-	1	-	-	1	-	1	-	1	-	-
Kidney-Nephritis, Glomerulo	1	-	-	-	-	-	-	-	-	1	-	-
Kidney-Nephrosis	3	-	-	-	1	-	1	1	-	-	-	-
Liver-Cirrhosis	1	-	-	-	-	-	1	-	-	-	-	-
Liver-Hemosiderosis	1	-	-	-	-	-	-	-	-	-	-	1
Liver-Hepatitis	8	-	-	-	3	1	-	1	1	-	2	-
Liver-Hepatopathy	1	-	1	-	-	-	-	-	-	-	-	-
Liver-Hepatosi	6	1	-	-	1	1	1	-	1	-	1	-
Liver-Lipidosis	4	-	-	1	-	-	-	-	-	1	-	2
Liver-Neoplasm	1	-	-	-	-	-	-	1	-	-	-	-
Liver-Neoplasm, Hepatoma	1	-	-	-	-	-	1	-	-	-	-	-
Lung-Pneumonia	1	-	-	-	-	1	-	-	-	-	-	-
Lung-Pneumonia, <i>Bordetella sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, Broncho	3	-	-	-	1	1	1	-	-	-	-	-
Lung-Pneumonia, Foreign Body	1	-	-	-	-	-	1	-	-	-	-	-
Lung-Pneumonia, Interstitial	2	-	-	-	-	-	-	-	-	-	1	1
Mineralization, Soft Tissue	2	-	-	1	-	1	-	-	-	-	-	-
Muscle-Degeneration	2	-	-	1	1	-	-	-	-	-	-	-
Muscle-Myopathy	2	-	1	-	-	1	-	-	-	-	-	-
Neoplasm	2	1	-	-	-	-	1	-	-	-	-	-
Neoplasm, Papilloma	1	-	-	-	-	-	-	-	-	-	-	1
Neoplasm, Squamous Cell Carcinoma	1	-	1	-	-	-	-	-	-	-	-	-
Neurologic Disorder, Idiopathic	2	-	-	-	1	1	-	-	-	-	-	-
Psittacine Wasting Disease	7	1	-	-	2	1	-	1	-	-	-	1
Respiratory Infection	1	-	-	-	-	-	1	-	-	-	-	-
Respiratory, Microbiologic Exam	5	-	-	-	-	3	-	1	-	-	-	1
Septicemia, Bacterial	7	2	1	1	-	-	1	-	-	1	-	1
Septicemia, <i>Pasteurella sp.</i>	1	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Pseudomonas sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-
Septicemia, <i>Streptococcus sp.</i>	1	-	-	-	-	-	-	-	-	1	-	-
Sudden Unexpected Death	10	-	-	2	3	-	-	1	-	-	3	1
Testicle-Neoplasm, Seminoma	1	-	-	1	-	-	-	-	-	-	-	-
Toxicosis, Cadmium	1	-	-	-	-	-	-	-	-	-	-	1
Toxicosis, Iron	1	-	-	-	1	-	-	-	-	-	-	-
Toxicosis, Lead	3	-	-	-	-	1	-	-	1	-	-	1
Toxicosis, Zinc	2	-	-	-	1	-	1	-	-	-	-	-
Trauma	1	-	-	-	-	-	-	-	-	-	1	-
Ventriculus-Neoplasm	1	-	-	-	-	-	-	-	1	-	-	-

MISCELLANEOUS AVIAN (continued) Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>PSITTACINE-MISCELLANEOUS (continued)</b>												
Ventriculus-Ventriculitis	2	-	-	-	2	-	-	-	-	-	-	-
Ventriculus-Impaction	1	1	-	-	-	-	-	-	-	-	-	-
Virus Infection, Herpes	3	-	-	-	1	1	-	-	1	-	-	-
Virus Infection, Polyomavirus	4	-	-	-	-	-	1	1	1	-	1	-
<b>QUAIL</b>												
Eyelid-Blepharitis	1	1	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, <i>Clostridium colinum</i>	1	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	2	1	-	1	-	-	-	-	-	-	-	-
Virus Infection, Adenovirus	1	-	-	1	-	-	-	-	-	-	-	-
<b>RHEA</b>												
Bone-Osteodystrophy	1	1	-	-	-	-	-	-	-	-	-	-
Ventriculus-Impaction	1	1	-	-	-	-	-	-	-	-	-	-
<b>SWAN</b>												
Amyloidosis	1	-	-	-	1	-	-	-	-	-	-	-
Anomaly	1	-	-	-	-	1	-	-	-	-	-	-
Aspergillosis	1	-	-	-	-	-	1	-	-	-	-	-
Bone-Osteodystrophy	1	-	-	-	-	1	-	-	-	-	-	-
Crop-Impaction	1	-	-	-	-	-	-	-	-	1	-	-
Septicemia, <i>Pasteurella multocida</i>	1	-	-	-	1	-	-	-	-	-	-	-
Sudden Unexpected Death	1	-	-	-	-	1	-	-	-	-	-	-
Toxicosis, Lead	5	-	-	1	-	-	1	-	-	3	-	-
<b>TOUCAN</b>												
Toxicosis, Iron	1	-	-	-	-	-	-	-	-	-	1	-
<b>UNKNOWN AVIAN SPECIES</b>												
Feces-Microbiologic Exam	9	-	1	1	1	-	1	1	1	2	1	-

**BOVINE**

BOVINE	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>O Body as a Whole</u>													
Abscess	4	-	-	-	2	-	-	1	-	-	-	-	1
Amyloidosis	2	-	-	-	1	-	-	-	-	-	-	1	-
Anomaly	6	-	-	-	-	-	1	-	2	-	1	2	-
Bovine Viral Diarrhea	75	4	3	10	6	5	3	10	7	6	12	7	2
Deficiency, Copper	9	2	-	-	-	1	-	1	-	1	2	-	2
Deficiency, Selenium	2	-	-	-	1	-	-	1	-	-	-	-	-
Dehydration	1	-	-	-	-	1	-	-	-	-	-	-	-
Downer Cow Syndrome	21	3	1	3	2	1	1	1	2	1	3	-	3
Emaciation	73	-	2	1	4	13	13	14	13	4	7	1	1
Fat Cow Syndrome	1	-	-	-	-	-	-	1	-	-	-	-	-
Feed-Bacteriologic Exam	13	-	-	2	2	-	-	4	1	4	-	-	-
Grain Overload	9	-	-	-	-	2	1	-	-	4	1	1	-
Health Evaluation, Normal	1	-	1	-	-	-	-	-	-	-	-	-	-
Hernia, Umbilical	1	1	-	-	-	-	-	-	-	-	-	-	-
Icterus	2	-	-	-	1	-	-	-	1	-	-	-	-
Malignant Catarrhal Fever	1	-	-	-	-	-	-	-	-	-	-	1	-
Metabolic Imbalance, Ketosis	1	-	-	-	-	-	-	-	-	-	1	-	-
Metabolic Imbalance, Serum Electrolytes	1	-	-	-	-	-	1	-	-	-	-	-	-
Mineralization, Soft Tissue	1	1	-	-	-	-	-	-	-	-	-	-	-
Mycotoxicosis, Deoxynivalenol	2	-	-	1	-	1	-	-	-	-	-	-	-
Neonatal Death	1	-	-	-	-	-	-	-	-	-	1	-	-
Neonatal Weakness	13	-	-	-	-	-	-	1	2	4	5	1	-
Neoplasm	2	-	-	1	-	-	1	-	-	-	-	-	-
Omphalitis	6	-	-	-	1	-	-	-	2	-	2	1	-
Paralysis	2	-	1	-	-	-	-	-	-	-	-	-	1
Peritonitis	7	-	1	-	-	-	1	1	1	-	-	2	1
Septicemia, <i>Actinomyces pyogenes</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Septicemia, Bacterial	1	-	-	-	-	-	-	-	-	-	-	1	-
Septicemia, <i>Clostridium chauvoei</i>	5	2	2	-	-	-	-	-	-	-	-	-	1
Septicemia, <i>Clostridium septicum</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Septicemia, <i>Escherichia coli</i>	6	-	1	2	-	-	-	-	2	-	-	-	1
Septicemia, <i>Hemophilus somnus</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Septicemia, <i>Listeria sp.</i>	4	-	-	-	-	-	-	-	-	-	-	4	-
Septicemia, <i>Pasteurella hemolytica</i>	3	1	-	-	1	-	1	-	-	-	-	-	-
Septicemia, <i>Salmonella sp.</i>	58	2	6	7	13	2	2	8	4	4	4	5	1
Sudden Unexpected Death	74	10	6	4	4	5	2	7	9	3	7	7	10

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Toxicosis, Anticoagulant	1	1	-	-	-	-	-	-	-	-	-	-	-
Toxicosis, Arsenic	1	-	-	-	1	-	-	-	-	-	-	-	-
Toxicosis, Chlordane	1	-	-	-	-	-	-	1	-	-	-	-	-
Toxicosis, Copper	8	-	-	1	1	1	-	-	-	1	1	1	2
Toxicosis, Lead	15	2	-	-	-	-	-	3	-	2	2	2	4
Toxicosis, Nitrate	7	-	1	-	2	-	-	-	1	1	2	-	-
Toxicosis, Plant	1	-	-	1	-	-	-	-	-	-	-	-	-
Toxicosis, Selenium	4	-	-	-	-	-	-	-	-	-	4	-	-
Toxicosis, Zinc	6	-	-	1	-	-	-	-	1	-	2	-	2
Trauma	1	-	-	-	-	-	-	-	-	-	-	1	-
Virus Infection, Herpes	1	-	-	-	-	-	-	-	-	1	-	-	-
<u>1 Integumentary</u>													
Alopecia	1	-	-	-	-	-	-	-	-	-	1	-	-
Anomaly	1	-	-	-	-	-	-	-	-	-	1	-	-
Cellulitis	4	1	1	1	-	-	-	-	-	-	-	-	1
Dermatitis, Diffuse	1	-	1	-	-	-	-	-	-	-	-	-	-
Dermatitis, Mycotic	2	-	1	-	-	-	-	1	-	-	-	-	-
Dermatitis, Podo	8	2	1	1	1	2	-	-	-	-	1	-	-
Mammary–Mamillitis	5	-	-	-	-	-	-	-	-	3	-	-	2
Mammary–Mastitis	161	10	21	9	12	11	6	10	18	22	20	13	9
Mammary–Mastitis, <i>Actinomyces pyogenes</i>	5	2	-	-	-	-	-	-	-	-	2	1	-
Mammary–Mastitis, <i>Klebsiella pneumoniae</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Mammary–Mastitis, <i>Staphylococcus aureus</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Mammary–Mastitis, <i>Staphylococcus sp.</i>	2	-	-	-	-	-	-	-	-	1	1	-	-
Mammary–Mastitis, <i>Streptococcus agalactiae</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Mammary–Mastitis, <i>S. dysgalactiae</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Mammary–Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Milk–Bulk Tank, Bacteriologic Exam	230	26	17	14	16	10	6	16	21	30	22	29	23
Parasitism, Lice	1	-	-	-	-	-	1	-	-	-	-	-	-
Steatitis	1	-	-	-	-	-	-	-	1	-	-	-	-
<u>2 Musculoskeletal</u>													
Arthritis, <i>Actinomyces pyogenes</i>	5	1	-	-	2	-	-	1	1	-	-	-	-
Arthritis, <i>Escherichia coli</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Arthritis, Suppurative	2	1	-	-	-	1	-	-	-	-	-	-	-
Arthropathy	1	-	-	-	-	-	-	-	-	-	-	-	1
Bone–Fracture	1	-	1	-	-	-	-	-	-	-	-	-	-
Bone–Malformation	1	-	-	-	-	-	-	-	-	-	-	-	1

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Bone–Osteomyelitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Muscle–Degeneration	1	1	-	-	-	-	-	-	-	-	-	-	-
Muscle–Myopathy	2	-	1	-	-	-	-	-	-	-	-	1	-
Muscle–Myositis	2	1	1	-	-	-	-	-	-	-	-	-	-
Muscle–White Muscle Disease	1	1	-	-	-	-	-	-	-	-	-	-	-
<b>3 Respiratory</b>													
Respiratory Disorders, Total Cases	358	34	16	32	35	39	41	38	25	28	27	25	18
Lung–Abscess	5	1	-	-	1	-	-	2	-	1	-	-	-
Lung–Congestion	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung–Edema	3	-	-	-	-	1	-	-	-	1	-	1	-
Lung–Emphysema	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung–Hemorrhage	5	-	-	1	-	-	2	-	-	-	1	-	1
Lung–Parasitism	3	-	-	-	-	1	-	-	-	1	-	1	-
Lung–Parasitism, <i>Dictyocaulus sp.</i>	3	1	1	1	-	-	-	-	-	-	-	-	-
Lung–Pneumonia	4	1	-	-	-	-	1	1	-	-	1	-	-
Lung–Pneumonia, <i>Actinobacillus sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung–Pneumonia, <i>Actinobacillus suis</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Lung–Pneumonia, <i>Actinomyces pyogenes</i>	44	3	1	5	5	7	4	1	5	1	6	2	4
Lung–Pneumonia, Atypical Interstitial	3	-	-	1	-	-	-	-	1	-	-	1	-
Lung–Pneumonia, Bovine Resp. Syn. Virus	15	-	-	-	1	2	3	2	1	-	3	1	2
Lung–Pneumonia, Broncho	55	8	1	6	6	7	6	7	6	3	3	-	2
Lung–Pneumonia, <i>Escherichia coli</i>	3	-	-	1	-	-	-	-	1	1	-	-	-
Lung–Pneumonia, Foreign Body	15	1	1	2	-	-	2	1	1	2	4	1	-
Lung–Pneumonia, <i>Hemophilus somnus</i>	39	2	2	2	2	4	8	6	6	2	1	1	3
Lung–Pneumonia, Interstitial	8	2	-	-	1	1	-	1	-	2	-	-	1
Lung–Pneumonia, <i>Mycoplasma bovis</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung–Pneumonia, <i>Mycoplasma sp.</i>	3	-	1	-	-	-	1	-	-	-	-	1	-
Lung–Pneumonia, Mycotic	2	-	-	-	-	-	-	1	-	-	-	1	-
Lung–Pneumonia, <i>Pasteurella hemolytica</i>	85	7	3	5	8	9	8	10	6	6	8	11	4
Lung–Pneumonia, <i>Pasteurella multocida</i>	80	7	2	5	5	13	11	9	4	9	4	6	5
Lung–Pneumonia, <i>Pasteurella sp.</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung–Pneumonia, <i>Salmonella sp.</i>	37	3	4	6	7	4	2	5	3	1	1	1	-
Lung–Thrombosis	2	-	-	-	-	-	-	-	-	-	-	-	2
Respiratory Infection	2	1	-	-	-	-	-	-	-	1	-	-	-
Respiratory, Microbiologic Exam	18	-	1	4	4	1	4	-	-	1	2	-	1
Respiratory Infection, <i>Pasteurella multocida</i>	2	1	-	-	-	-	-	-	-	-	-	1	-
Trachea–Obstruction	1	-	-	-	-	-	-	-	-	-	-	1	-

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>4 Cardiovascular</b>													
Heart–Anomaly	1	-	-	1	-	-	-	-	-	-	-	-	-
Heart–Cardiomyopathy	3	-	-	-	-	-	-	-	-	-	1	1	1
Heart–Endocarditis	7	1	-	1	-	-	-	-	1	1	-	-	3
Heart–Heart Failure, Chronic	1	-	-	1	-	-	-	-	-	-	-	-	-
Heart–Myocardial Degeneration	4	-	-	-	-	-	-	2	1	-	-	-	1
Heart–Myocarditis	3	1	-	-	-	-	1	1	-	-	-	-	-
Heart–Pericarditis	3	-	-	-	-	-	-	-	1	-	-	1	1
<b>5 Hemic and Lymphatic</b>													
Blood–Anemia	1	-	-	-	-	-	-	-	-	-	-	-	1
Blood–Anemia, Hemolytic	1	-	-	1	-	-	-	-	-	-	-	-	-
Blood–Hemorrhage, Generalized	3	-	-	1	1	-	-	-	-	-	-	1	-
Blood–Parasitism, <i>Anaplasma sp.</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
Immune System–Hypogammaglobulinemia	20	2	4	2	-	-	1	2	3	3	2	-	1
Lymph Node–Lymphadenitis	1	-	-	-	-	-	-	1	-	-	-	-	-
Lymph Node–Neoplasm, Lymphosarcoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Spleen–Neoplasm	1	-	-	-	-	-	-	-	-	-	-	1	-
Spleen–Splinitis	1	-	1	-	-	-	-	-	-	-	-	-	-
<b>6 Digestive</b>													
Digestive Disorders, <b>Total Cases</b>	1,233	107	102	99	95	95	118	131	112	114	102	107	51
Abomasum–Parasitism, Ostertagia	2	-	1	-	-	-	-	-	-	-	-	-	1
Feces–Microbiologic Exam	268	24	28	24	25	23	16	24	21	27	21	22	13
Intestine–Anomaly	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine–Colitis	3	-	-	1	-	-	1	-	-	-	-	1	-
Intestine–Enteritis, Bovine Viral Diarrhea	23	2	1	4	1	2	-	4	3	1	1	3	1
Intestine–Enteritis, <i>C. perfringens</i> Type C	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine–Enteritis, Coronavirus	95	3	2	3	3	11	8	13	13	16	13	8	2
Intestine–Enteritis, <i>Escherichia coli</i>	44	2	3	6	5	2	7	2	6	5	3	3	-
Intestine–Enteritis, Hemorrhagic	5	-	-	-	2	-	-	1	2	-	-	-	-
Intestine–Enteritis, Idiopathic	69	7	9	2	4	8	8	3	4	7	8	5	4
Intestine–Ent., <i>M. paratuberculosis</i> (Johne's)	81	14	7	8	9	7	5	4	9	6	6	5	1
Intestine–Enteritis, Necrotic	13	5	1	-	1	-	-	4	-	1	1	-	-
Intestine–Enteritis, Reovirus	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine–Enteritis, Rotavirus	178	7	7	12	11	15	25	27	19	16	19	17	3
Intestine–Enteritis, <i>Salmonella sp.</i>	185	17	15	21	18	18	15	23	14	16	9	11	8
Intestine–Hemorrhage	17	3	-	3	-	-	1	2	-	2	3	1	2
Intestine–Intussusception	2	-	1	-	-	-	-	1	-	-	-	-	-

BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Intestine-Parasitism	2	1	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, <i>Capillaria sp.</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Cestode	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	65	6	9	8	4	7	7	6	1	2	2	11	2
Intestine-Parasitism, <i>Cryptosporidium sp.</i>	318	21	22	23	20	19	39	42	36	27	31	29	9
Intestine-Parasitism, <i>Moniezia sp.</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, <i>Nematodirus sp.</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Trichostrongylids	30	4	3	1	1	1	5	4	3	2	3	1	2
Intestine-Parasitism, <i>Trichuris sp.</i>	2	-	-	-	1	-	1	-	-	-	-	-	-
Intestine-Volvulus	1	-	-	-	-	-	-	-	1	-	-	-	-
Liver-Abscess	5	3	-	-	-	-	1	-	1	-	-	-	-
Liver-Hepatitis	7	-	1	2	1	1	-	1	-	-	-	-	1
Liver-Hepatosi	4	-	1	1	1	-	-	-	1	-	-	-	-
Liver-Lipidosis	26	2	6	3	3	2	-	1	1	2	3	-	3
Liver-Parasitism	1	-	-	-	-	-	-	-	-	-	-	1	-
Liver-Parasitism, <i>Fascioloides sp.</i>	4	1	-	-	-	-	1	-	1	1	-	-	-
Oral-Dentition Abnormal	1	-	-	-	-	-	1	-	-	-	-	-	-
Oral-Stomatitis	3	-	-	-	-	-	-	-	-	-	1	2	-
Rumen-Acidosis	4	-	-	-	-	-	-	-	-	4	-	-	-
Stomach-Abomasal Ulcer	12	1	1	-	-	3	3	-	-	1	1	1	1
Stomach-Abomasal Volvulus	1	-	-	1	-	-	-	-	-	-	-	-	-
Stomach-Abomasitis	13	1	2	-	-	2	4	2	1	-	-	-	1
Stomach-Abomasitis, Mycotic	3	1	-	-	-	-	-	-	-	-	2	-	-
Stomach-Abomasal Dilatation	4	-	1	-	-	-	-	-	1	1	-	1	-
Stomach-Foreign Body	1	-	-	-	-	-	-	-	-	-	1	-	-
Stomach-Gastritis, Mycotic	2	-	-	-	-	1	-	-	1	-	-	-	-
Stomach-Neoplasm	3	-	1	-	1	-	-	-	-	-	-	1	-
Stomach-Rumen Tympany (Bloat)	6	-	-	1	1	-	1	1	2	-	-	-	-
Stomach-Rumenitis	14	1	1	1	1	1	4	1	-	2	2	-	-
Stomach-Rupture	3	-	-	-	-	-	-	-	1	1	-	-	1
<b>7 Urogenital</b>													
Reproductive Disorders, Total Cases	516	47	46	52	38	34	27	38	58	52	48	41	35
Abortion, Anasarca	1	-	-	-	-	-	-	-	-	-	-	-	1
Abortion, Anomaly	15	3	-	-	1	-	1	2	3	2	1	1	1
Abortion, Bacterial	3	-	-	-	-	-	-	-	-	-	-	2	1
Abortion, Bacterial, <i>Actinobacillus sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Abortion, Bacterial, <i>Actinomyces pyogenes</i>	29	3	2	7	2	1	1	1	2	2	3	3	2
Abortion, Bacterial, <i>Bacillus sp.</i>	5	-	-	-	1	-	-	2	-	-	1	1	-
Abortion, Bacterial, <i>Campylobacter sp.</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Abortion, Bacterial, <i>Escherichia coli</i>	6	-	2	1	-	-	1	1	1	-	-	-	-



BOVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Abortion, Bacterial, <i>Hemophilus somnus</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Abortion, Bacterial, <i>Leptospira sp.</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
Abortion, Bacterial, <i>Listeria sp.</i>	3	-	1	-	-	-	-	-	-	-	-	-	2
Abortion, Bacterial, <i>Pasteurella hemolytica</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Abortion, Bacterial, <i>Salmonella sp.</i>	3	-	-	-	-	-	-	1	-	2	-	-	-
Abortion, Bacterial, <i>Staphylococcus sp.</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Abortion, Emphysematous Fetus	1	-	1	-	-	-	-	-	-	-	-	-	-
Abortion, Encephalitis	2	-	-	-	1	-	-	-	1	-	-	-	-
Abortion, Goiter	1	-	-	-	-	-	1	-	-	-	-	-	-
Abortion, Hepatitis	2	-	-	1	-	-	-	-	1	-	-	-	-
Abortion, Hepatopathy	2	-	-	-	-	-	-	-	2	-	-	-	-
Abortion, Idiopathic	165	17	16	13	9	12	13	4	19	17	19	15	11
Abortion, Mummified Fetus	6	-	1	-	1	1	-	1	-	-	-	1	1
Abortion, Mycotic Placentitis	4	-	-	-	2	-	-	-	-	2	-	-	-
Abortion, Myocarditis	27	4	3	3	5	1	3	2	3	1	-	1	1
Abortion, Parasitism, <i>Neospora sp.</i>	28	3	1	3	1	7	-	3	2	5	1	1	1
Abortion, Placentitis	25	1	5	1	-	1	-	2	4	4	2	2	3
Abortion, Pneumonia	16	-	2	-	1	1	1	1	3	3	1	1	2
Abortion, Twins	4	-	-	-	4	-	-	-	-	-	-	-	-
Abortion, Viral	1	-	-	1	-	-	-	-	-	-	-	-	-
Abortion, Viral, Bovine Viral Diarrhea	15	1	1	3	-	-	1	-	2	2	4	-	1
Abortion, Viral, Infec. Bovine Rhinotracheitis	8	-	-	-	-	-	-	3	1	2	1	-	1
Genital Anomaly, Freemartin	109	10	8	18	9	6	4	11	14	7	8	9	5
Genital-Bacteriologic Exam	11	2	-	1	1	2	-	2	1	-	1	-	1
Genital-Infertility	2	1	-	-	-	-	-	-	1	-	-	-	-
Kidney-Cyst	1	-	-	-	-	-	-	-	-	-	-	1	-
Kidney-Infarction	3	1	-	-	-	1	-	-	-	-	-	1	-
Kidney-Nephritis	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Nephritis, End Stage	1	-	-	-	-	-	1	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	3	-	-	-	1	-	-	1	1	-	-	-	-
Kidney-Nephritis, Interstitial	1	-	-	-	1	-	-	-	-	-	-	-	-
Kidney-Nephritis, Pyelo	3	-	-	-	-	-	-	-	1	-	1	-	1
Kidney-Nephrosis	3	1	-	1	-	-	-	-	-	-	-	1	-
Kidney-Urolithiasis	1	-	-	-	1	-	-	-	-	-	-	-	-
Prepuce-Neoplasm	1	1	-	-	-	-	-	-	-	-	-	-	-
Stillbirth, Idiopathic	14	-	-	-	1	-	1	1	-	3	5	2	1
Urinary Bladder-Urolithiasis	1	-	-	-	-	-	1	-	-	-	-	-	-
Urine-Microbiologic Exam	10	-	1	-	3	-	1	1	1	-	-	2	1
Uterus-Hemorrhage	1	-	-	-	-	-	-	-	-	-	-	1	-
Uterus-Metritis	10	2	3	-	-	1	-	-	1	1	-	1	1
Vas Deferens-Normal	2	1	-	-	-	-	-	-	-	-	1	-	-

**BOVINE (continued)**

Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn	
<b>8 Endocrine</b>													
Adrenal-Hyperadrenalism	1	-	-	-	-	-	-	-	-	1	-	-	
Thyroid-Goiter	4	1	-	-	-	-	-	1	1	-	1	-	
<b>9 Nervous</b>													
Neurological Disorders, <b>Total Cases</b>	70	5	10	6	3	4	5	7	4	4	4	11	7
Brain-Anomaly	2	-	-	-	-	-	1	1	-	-	-	-	-
Brain-Encephalitis, Eosinophilic	1	-	-	-	-	-	-	-	1	-	-	-	-
Brain-Encephalitis, <i>Hemophilus somnus</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Brain-Encephalitis, <i>Listeria sp.</i>	18	-	1	-	-	-	-	4	1	3	2	6	1
Brain-Encephalitis, Non-Suppurative	3	-	2	-	-	-	1	-	-	-	-	-	-
Brain-Encephalitis, Rabies	4	-	-	1	-	1	-	1	1	-	-	-	-
Brain-Encephalomalacia	2	1	-	-	-	-	-	-	-	1	-	-	-
Brain-Hemorrhage	1	-	-	-	-	-	-	-	-	1	-	-	-
Brain-Parasitism, <i>Neospora sp.</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Brain-Polioencephalomalacia	8	1	2	-	-	1	-	1	1	-	-	2	-
Congenital Tremor	1	-	1	-	-	-	-	-	-	-	-	-	-
Meninges-Meningitis, <i>Actinomyces pyogenes</i>	1	-	-	-	-	-	-	-	-	-	-	-	1
Meninges-Meningitis, <i>Escherichia coli</i>	2	-	-	1	-	-	1	-	-	-	-	-	-
Meninges-Meningitis, Suppurative	2	-	1	1	-	-	-	-	-	-	-	-	-
Neurologic Disorder, Idiopathic	25	3	2	3	3	3	2	1	-	-	-	3	5
Spinal Cord-Myelomalacia	1	-	-	-	-	-	-	-	-	1	-	-	-
<b>X Special Senses</b>													
Ear-Otitis	1	-	-	-	-	1	-	-	-	-	-	-	-
Eye-Conjunctivitis	9	-	1	-	2	1	1	-	1	-	-	-	3
Eye-Keratitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Eye-Keratoconjunctivitis	1	-	-	-	1	-	-	-	-	-	-	-	-

**CANINE**

**O Body as a Whole**

Abdomen-Steatitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Abscess	6	-	1	1	2	1	-	-	-	1	-	-	-
Amyloidosis	4	-	-	-	-	1	1	-	-	-	1	-	1
Anomaly	3	-	1	1	1	-	-	-	-	-	-	-	-
Canine Distemper	1	-	-	-	-	-	-	1	-	-	-	-	-
Deficiency, Copper	1	-	-	-	-	-	-	-	-	1	-	-	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Deficiency, Thiamine	1	-	-	-	-	-	-	-	-	-	1	-	-
Edema, Generalized	1	-	-	-	1	-	-	-	-	-	-	-	-
Effusion, Peritoneal	1	-	-	-	-	-	-	1	-	-	-	-	-
Effusion, Pyothorax	1	-	-	-	-	-	1	-	-	-	-	-	-
Emaciation	5	-	-	-	1	-	-	1	1	-	2	-	-
Hernia, Diaphragmatic	2	-	-	-	-	-	-	1	1	-	-	-	-
Hernia, Inguinal	2	-	-	-	-	-	1	-	-	-	-	1	-
Mineralization, Soft Tissue	3	-	1	-	-	1	1	-	-	-	-	-	-
Mycosis, <i>Blastomyces sp.</i>	5	-	-	-	1	-	-	1	-	-	1	1	1
Mycosis, <i>Histoplasma sp.</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Neonatal Death	1	-	1	-	-	-	-	-	-	-	-	-	-
Neonatal Weakness	5	1	-	-	-	-	-	2	1	1	-	-	-
Neoplasm	11	-	-	2	3	-	2	-	2	1	-	-	1
Neoplasm, Carcinoma	2	-	-	-	-	-	-	-	1	-	1	-	-
Neoplasm, Carcinoma, Metastatic	1	-	-	-	-	-	1	-	-	-	-	-	-
Neoplasm, Hemangiosarcoma	5	1	-	-	-	2	1	-	-	-	-	1	-
Neoplasm, Hemangiosarcoma, Metastatic	2	-	-	-	-	-	2	-	-	-	-	-	-
Neoplasm, Lipoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Neoplasm, Sarcoma	6	-	-	1	1	-	1	-	-	1	-	2	-
Parasitism, <i>Toxoplasma</i>	2	-	-	-	-	-	1	1	-	-	-	-	-
Peritonitis	4	-	-	-	2	-	-	-	1	-	-	1	-
Septicemia, Bacterial	1	-	-	1	-	-	-	-	-	-	-	-	-
Septicemia, <i>Escherichia coli</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Septicemia, <i>Pasteurella multocida</i>	2	-	-	-	-	-	-	1	-	1	-	-	-
Septicemia, <i>Pasteurella sp.</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Salmonella sp.</i>	2	1	1	-	-	-	-	-	-	-	-	-	-
Septicemia, <i>Staphylococcus sp.</i>	4	-	-	-	1	-	1	-	2	-	-	-	-
Septicemia, <i>Streptococcus sp.</i>	2	-	-	-	-	1	-	-	1	-	-	-	-
Sudden Unexpected Death	37	2	5	2	2	1	2	6	5	3	3	2	4
Toxicosis, Anticoagulant	24	1	2	3	3	2	4	2	1	2	2	1	1
Toxicosis, Barbiturate	1	-	-	-	-	-	-	-	1	-	-	-	-
Toxicosis, Ethylene Glycol	7	1	1	1	-	1	-	-	2	-	-	1	-
Toxicosis, Lead	5	-	1	1	-	-	-	-	-	-	1	1	1
Toxicosis, Metaldehyde	1	-	-	1	-	-	-	-	-	-	-	-	-
Toxicosis, Organophosphate	2	1	-	-	-	-	-	1	-	-	-	-	-
Toxicosis, Quinine	1	-	1	-	-	-	-	-	-	-	-	-	-
Toxicosis, Selenium	1	-	-	-	-	-	-	-	1	-	-	-	-
Toxicosis, Strychnine	11	1	-	2	-	-	-	2	-	3	2	1	-
Toxicosis, Zinc	3	1	1	-	-	-	-	-	1	-	-	-	-
Trauma	18	1	-	1	1	-	2	1	-	3	7	-	2
Virus Infection, Adenovirus	1	-	-	1	-	-	-	-	-	-	-	-	-
Virus Infection, Herpes	2	-	-	-	-	1	-	-	-	-	-	-	1

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>1 Integumentary</b>													
Abscess	5	-	-	-	1	1	-	-	1	1	-	1	-
Alopecia	14	2	-	-	1	1	2	-	2	3	-	2	1
Anal Sac-Inflammation	1	-	1	-	-	-	-	-	-	-	-	-	-
Calcinosis Circumscripta	1	-	-	-	-	-	-	-	-	-	-	-	1
Cellulitis	14	1	2	5	-	1	-	1	1	1	1	1	-
Cyst, Adnexal	88	10	5	5	12	9	7	6	3	11	10	6	4
Dermal Fibrosis	26	1	5	2	-	-	3	5	1	2	1	2	4
Dermal, Hemorrhage	1	-	1	-	-	-	-	-	-	-	-	-	-
Dermatitis, Acral Lick Granuloma	6	1	1	-	-	1	-	1	1	1	-	-	-
Dermatitis, Allergic	37	2	4	4	7	3	3	3	1	5	1	3	1
Dermatitis, Diffuse	36	2	4	2	5	6	-	3	4	3	3	3	1
Dermatitis, Eosinophilic	2	-	1	-	-	-	1	-	-	-	-	-	-
Dermatitis, Focal	140	10	8	15	19	7	22	13	10	10	12	4	10
Dermatitis, Folliculitis	2	-	-	-	-	-	1	1	-	-	-	-	-
Dermatitis, Granulation Tissue	1	-	-	-	-	-	-	1	-	-	-	-	-
Dermatitis, Granulomatous	4	-	2	-	-	1	-	-	-	-	1	-	-
Dermatitis, Lupus Erythematosus	6	-	1	-	1	1	2	-	-	-	-	1	-
Dermatitis, Lymphoplasmacytic	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Mycotic	8	-	1	-	-	-	2	1	-	-	3	-	1
Dermatitis, Pemphigus	11	1	1	2	-	1	-	1	-	-	2	2	1
Dermatitis, Podo	42	3	8	3	4	5	4	1	5	1	3	4	1
Dermatitis, Seborrhea	3	1	-	-	1	1	-	-	-	-	-	-	-
Dermatitis, <i>Staphylococcus sp.</i>	5	-	-	-	-	-	1	-	1	2	-	-	1
Dermatosis, Endocrine	6	-	-	-	-	-	-	-	1	1	3	-	1
Hematoma	11	3	1	-	-	-	1	-	-	-	1	3	2
Mammary-Duct Ectasia	7	2	-	-	1	-	2	1	1	-	-	-	-
Mammary-Hyperplasia	6	1	1	-	-	-	-	1	1	1	-	1	-
Mammary-Mastitis	16	-	3	2	3	-	-	3	-	2	2	1	-
Mammary-Neoplasm	5	2	-	-	-	3	-	-	-	-	-	-	-
Mammary-Neoplasm, Adenocarcinoma	66	8	8	5	7	5	3	4	2	7	6	6	5
Mammary-Neoplasm, Adenoma	21	2	2	2	-	1	-	2	2	2	3	4	1
Mammary-Neoplasm, Duct Carcinoma	11	-	-	1	4	-	2	1	1	-	-	-	2
Mammary-Neoplasm, Mixed, Benign	25	5	1	1	1	2	4	4	-	1	-	3	3
Mammary-Neoplasm, Mixed, Malignant	20	1	-	2	4	3	-	-	3	3	2	1	1
Mammary-Neo., Squamous Cell Carcinoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Neoplasm	8	-	2	3	-	-	2	1	-	-	-	-	-
Neoplasm, Anaplastic	28	3	4	1	6	6	-	1	1	1	-	1	4
Neoplasm, Adenocarcinoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Adenoma	9	2	-	-	-	-	3	1	2	-	-	-	1

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Neoplasm, Anal Sac Carcinoma	3	-	-	2	-	-	-	1	-	-	-	-	-
Neoplasm, Apocrine Adenocarcinoma	2	-	-	-	-	-	-	-	-	1	1	-	-
Neoplasm, Basal Cell Tumor	50	3	5	5	4	4	5	6	2	4	3	4	5
Neoplasm, Carcinoma	9	-	1	2	-	-	-	-	2	-	1	-	3
Neoplasm, Fibroma	23	3	2	1	3	1	4	2	-	3	1	1	2
Neoplasm, Fibrosarcoma	42	4	4	4	2	6	2	5	4	1	4	4	2
Neoplasm, Hemangioma	42	5	3	6	6	2	3	3	1	3	2	2	6
Neoplasm, Hemangiopericytoma	58	5	8	4	6	6	-	7	4	5	3	9	1
Neoplasm, Hemangiosarcoma	13	1	2	2	3	1	-	-	-	1	1	1	1
Neoplasm, Histiocytoma	139	10	16	6	8	11	15	13	13	16	7	13	11
Neoplasm, Lipoma	78	3	7	8	4	6	10	11	2	3	4	8	12
Neoplasm, Liposarcoma	5	-	1	-	-	2	1	-	-	-	1	-	-
Neoplasm, Lymphangiosarcoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Neoplasm, Lymphosarcoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Neoplasm, Mastocytoma	144	9	15	20	9	11	12	13	16	9	9	9	12
Neoplasm, Melanoma	57	5	7	2	3	5	3	5	3	4	6	9	5
Neoplasm, Neurofibrosarcoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Papilloma	10	-	1	2	1	-	2	-	1	1	-	1	1
Neoplasm, Perianal Gland Adenoma	61	4	5	7	5	2	3	4	5	7	7	10	2
Neoplasm, Perianal Gland Carcinoma	7	-	1	-	1	1	-	1	1	-	2	-	-
Neoplasm, Pilomatrixoma	13	1	1	1	-	1	-	1	-	1	4	1	2
Neoplasm, Plasmacytoma	10	-	6	-	-	-	-	1	1	1	-	-	1
Neoplasm, Sarcoma, Anaplastic	17	2	2	4	1	1	1	-	3	-	2	1	-
Neoplasm, Sebaceous Gland Adenoma	57	6	8	7	2	3	4	9	2	4	4	5	3
Neo., Sebaceous Gland, Adenocarcinoma	2	-	-	-	-	-	1	-	-	-	1	-	-
Neoplasm, Squamous Cell Carcinoma	19	1	4	2	3	1	1	1	2	-	1	2	1
Neoplasm, Trichoepithelioma	23	3	1	1	5	2	1	2	1	2	2	3	-
Parasitism	3	-	-	1	-	-	-	-	1	1	-	-	-
Parasitism, Demodex	4	-	-	-	-	-	2	-	-	1	-	1	-
Parasitism, Tick	1	-	-	-	1	-	-	-	-	-	-	-	-
Sebaceous Gland-Hyperplasia	5	-	1	-	-	-	-	-	2	-	-	1	1
Seroma	4	-	-	1	-	-	-	1	-	-	1	1	-
Skin-Adnexal, Dysplasia	2	-	-	-	-	-	-	-	1	-	-	-	1
Skin-Hyperkeratosis	1	-	-	-	-	-	-	-	-	-	-	1	-
Skin-Microbiologic Exam	4	-	-	-	-	-	-	-	2	1	1	-	-
Skin-Parakeratosis	2	-	1	-	-	-	-	-	1	-	-	-	-
Steatitis	17	1	1	3	-	2	1	-	4	-	4	1	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>2 Musculoskeletal</b>													
Arthritis	2	-	-	1	-	-	-	-	-	1	-	-	-
Arthritis, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	-	1
Arthritis, Non-Suppurative	10	2	1	1	2	-	-	-	-	-	2	2	-
Arthritis, <i>Staphylococcus sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Arthritis, Suppurative	3	1	-	-	1	-	-	-	-	-	-	1	-
Arthropathy	2	-	-	-	-	-	-	1	-	-	1	-	-
Bone-Fracture	3	-	1	-	-	-	1	-	-	-	1	-	-
Bone-Neoplasm, Chondroma	1	-	-	-	-	-	-	-	-	-	-	1	-
Bone-Neoplasm, Chondrosarcoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Bone-Neoplasm, Osteoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Bone-Neoplasm, Osteosarcoma	23	1	1	1	1	3	2	1	3	4	1	4	1
Bone-Neoplasm, Sarcoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Bone-Osteitis	4	1	-	-	1	-	2	-	-	-	-	-	-
Bone-Osteochondrosis	1	-	-	-	-	-	-	1	-	-	-	-	-
Bone-Osteomyelitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Joint-Neoplasm	1	-	-	-	-	-	1	-	-	-	-	-	-
Joint-Neoplasm, Synoviosarcoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Muscle-Atrophy	1	-	-	-	1	-	-	-	-	-	-	-	-
Muscle-Degeneration	2	-	-	-	1	-	-	-	1	-	-	-	-
Muscle-Myopathy	2	-	-	-	-	-	-	-	-	-	1	-	1
Muscle-Myositis	1	1	-	-	-	-	-	-	-	-	-	-	-
Synovitis	1	-	-	-	1	-	-	-	-	-	-	-	-
<b>3 Respiratory</b>													
Respiratory Disorders, Total Cases	141	11	12	24	11	10	5	12	11	9	19	6	11
Asphyxiation	1	-	-	1	-	-	-	-	-	-	-	-	-
Larynx-Laryngitis	2	-	-	-	-	-	-	1	-	-	1	-	-
Larynx-Neoplasm	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Bronchitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung-Edema	3	-	-	1	-	-	-	-	-	-	1	-	1
Lung-Hemorrhage	5	-	1	-	1	-	-	2	-	1	-	-	-
Lung-Neoplasm	1	-	-	-	-	-	-	-	1	-	-	-	-
Lung-Neoplasm, Carcinoma	4	1	1	-	-	-	1	-	-	-	-	-	1
Lung-Neoplasm, Sarcoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Lung-Parasitism	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, <i>Bordetella bronchiseptica</i>	3	1	-	1	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, Broncho	9	-	1	2	-	-	-	-	1	1	1	-	3
Lung-Pneumonia, <i>Escherichia coli</i>	3	-	-	-	-	-	-	-	-	-	3	-	-
Lung-Pneumonia, Foreign Body	5	1	1	1	-	-	-	-	-	2	-	-	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Lung-Pneumonia, Interstitial	1	-	-	1	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Klebsiella sp.</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	4	-	1	-	-	-	-	2	-	-	1	-	-
Lung-Thrombosis	2	1	-	-	-	-	-	-	-	-	1	-	-
Nasal-Neoplasm	3	1	-	2	-	-	-	-	-	-	-	-	-
Nasal-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Nasal-Rhinitis	10	-	1	1	-	2	-	1	1	-	2	2	-
Nasal-Rhinitis, <i>Pasteurella multocida</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Pleura-Pleuritis	1	-	-	-	-	-	-	-	-	-	-	1	-
Respiratory Infection	2	-	-	1	-	-	-	-	-	-	-	-	1
Respiratory, Microbiologic Exam	68	3	5	9	9	8	4	6	8	4	7	2	3
Respiratory Infection, <i>Pasteurella multocida</i>	4	-	-	3	-	-	-	-	-	-	1	-	-
Trachea-Collapse	2	2	-	-	-	-	-	-	-	-	-	-	-
Trachea-Tracheitis	1	1	-	-	-	-	-	-	-	-	-	-	-
<u>4 Cardiovascular</u>													
Heart-Anomaly	3	-	-	-	-	1	-	1	-	-	-	1	-
Heart-Cardiomyopathy	9	1	-	-	3	-	1	-	1	-	2	1	-
Heart-Endocardiosis	8	2	1	-	-	-	-	-	2	1	-	1	1
Heart-Heart Failure, Acute	13	2	3	3	1	-	-	1	1	-	1	1	-
Heart-Heart Failure, Chronic	9	1	1	1	2	-	2	-	-	-	1	-	1
Heart-Myocardial Degeneration	6	1	2	1	-	1	-	1	-	-	-	-	-
Heart-Myocardial Infarction	2	-	-	-	-	-	1	-	1	-	-	-	-
Heart-Myocarditis	4	-	-	1	-	-	-	2	-	-	-	-	1
Heart-Neoplasm	2	-	1	1	-	-	-	-	-	-	-	-	-
Heart-Neoplasm, Hemangiosarcoma	5	-	-	1	-	-	1	1	-	1	-	1	-
Heart-Parasitism, <i>Dirofilaria sp.</i>	5	-	-	-	-	-	1	2	-	-	1	-	1
Heart-Pericarditis	1	-	-	-	-	1	-	-	-	-	-	-	-
<u>5 Hemic and Lymphatic</u>													
Blood-Anemia	4	-	-	-	1	-	1	-	-	-	-	-	2
Blood-Anemia, Hemolytic	10	1	1	2	-	-	-	1	-	1	-	-	4
Blood-Hemorrhage, Focal	1	-	1	-	-	-	-	-	-	-	-	-	-
Blood-Hemorrhage, Generalized	7	1	-	1	-	-	-	-	4	-	-	-	1
Blood-Leukopenia	1	-	-	-	-	-	1	-	-	-	-	-	-
Blood-Thrombocytopenia	3	-	1	-	1	1	-	-	-	-	-	-	-
Bone Marrow-Neoplasm	1	-	-	-	1	-	-	-	-	-	-	-	-
Lymph Node-Hyperplasia	24	2	4	4	1	2	4	1	-	1	1	-	4
Lymph Node-Lymphadenitis	8	1	-	1	2	-	1	1	1	-	-	-	1

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Lymph Node–Neoplasm, Lymphosarcoma	105	12	4	8	10	10	4	6	9	8	6	12	16
Lymph Node–Neoplasm, Metastatic	1	-	-	-	-	-	-	-	-	-	-	1	-
Neoplasm, Leukosis	2	1	-	-	-	-	-	1	-	-	-	-	-
Spleen–Hematoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Spleen–Infarct	4	1	-	-	1	-	-	-	-	-	-	1	1
Spleen–Neoplasm	2	1	-	-	-	-	-	-	-	-	-	-	1
Spleen–Neoplasm, Fibrosarcoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Spleen–Neoplasm, Hemangiosarcoma	23	4	-	1	2	2	2	2	1	3	2	2	2
Spleen–Nodular Hyperplasia	2	-	1	-	-	-	-	-	-	-	-	1	-
Spleen–Siderotic Plaque	1	-	-	-	1	-	-	-	-	-	-	-	-
Spleen–Splinitis	5	-	-	1	-	1	-	1	1	-	-	1	-
Spleen–Volvulus	2	1	-	-	1	-	-	-	-	-	-	-	-
Thymus–Atrophy	1	-	1	-	-	-	-	-	-	-	-	-	-
Tonsil–Neoplasm, Squamous Cell Carcinoma	2	-	-	-	-	-	-	-	2	-	-	-	-
Tonsil–Tonsillitis	4	-	1	-	-	1	1	-	-	-	1	-	-
<b>6 Digestive</b>													
Esophagus–Dilatation	1	1	-	-	-	-	-	-	-	-	-	-	-
Feces–Microbiologic Exam	79	7	7	15	12	4	1	2	2	3	5	9	12
Gall Bladder–Cholecystitis	2	-	-	-	-	-	1	-	-	1	-	-	-
Intestine–Colitis	4	-	-	-	-	-	-	1	-	1	-	2	-
Intestine–Enteritis, <i>C. perfringens</i> Type C	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine–Enteritis, Coronavirus	2	-	-	-	-	-	-	2	-	-	-	-	-
Intestine–Enteritis, Enterovirus	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine–Enteritis, Eosinophilic	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine–Enteritis, <i>Escherichia coli</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine–Enteritis, Hemorrhagic	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine–Enteritis, Idiopathic	6	-	2	1	2	-	-	-	-	-	1	-	-
Intestine–Enteritis, Lymphoplasmacytic	9	-	-	-	-	1	3	2	2	1	-	-	-
Intestine–Enteritis, Necrotic	4	-	1	-	-	-	1	-	1	1	-	-	-
Intestine–Enteritis, Parvovirus	54	7	10	4	6	2	1	2	4	3	6	4	5
Intestine–Enteritis, <i>Salmonella sp.</i>	6	2	-	1	-	-	1	-	-	-	-	1	1
Intestine–Hemorrhage	3	-	1	-	1	-	-	-	-	-	-	-	1
Intestine–Intussusception	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine–Neoplasm	5	-	-	1	1	-	-	-	1	-	1	-	1
Intestine–Neoplasm, Adenocarcinoma	7	-	-	3	2	-	-	-	-	-	-	1	1
Intestine–Neoplasm, Carcinoma	3	-	-	-	1	-	-	1	-	1	-	-	-
Intestine–Neoplasm, Leiomyoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine–Neoplasm, Leiomyosarcoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine–Obstruction	5	-	1	1	-	-	-	1	-	-	1	1	-
Intestine–Parasitism	2	-	-	-	-	-	1	-	-	1	-	-	-



CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Intestine-Parasitism, <i>Ancylostoma sp.</i>	2	1	-	-	-	-	1	-	-	-	-	-	-
Intestine-Parasitism, Ascaris	2	-	-	1	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Cestode	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	8	2	1	-	-	1	-	1	-	2	-	1	-
Intestine-Parasitism, <i>Cryptosporidium sp.</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Parasitism, <i>Giardia sp.</i>	4	-	-	-	-	-	2	1	1	-	-	-	-
Intestine-Torsion	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Ulcer	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Volvulus	5	1	-	-	-	2	1	-	-	-	1	-	-
Lip-Chelitis	14	1	1	-	3	2	-	2	-	3	1	-	1
Lip-Neoplasm	6	-	2	2	-	-	-	2	-	-	-	-	-
Lip-Neoplasm, Histiocytoma	6	1	-	-	1	1	-	1	-	-	-	1	1
Lip-Neoplasm, Mastocytoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Lip-Neoplasm, Melanoma	4	-	-	-	-	-	-	1	-	1	1	1	-
Lip-Neoplasm, Sarcoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Liver-Atrophy	1	-	-	-	-	-	-	-	-	1	-	-	-
Liver-Cirrhosis	4	-	-	-	-	1	1	-	1	-	1	-	-
Liver-Hepatitis	16	3	1	4	-	-	1	1	1	3	1	1	-
Liver-Hepatopathy	2	-	-	-	-	-	-	-	-	1	-	-	1
Liver-Hepatositis	12	2	2	1	1	1	-	1	2	-	-	-	2
Liver-Infarction	1	-	-	-	-	-	-	-	-	1	-	-	-
Liver-Lipidosis	15	2	1	1	-	1	-	1	2	4	1	-	2
Liver-Neoplasm	10	2	-	2	1	-	2	-	-	2	1	-	-
Liver-Neoplasm, Hepatoma	3	1	-	1	-	1	-	-	-	-	-	-	-
Oral-Gingivitis	12	1	3	-	-	-	-	1	2	3	2	-	-
Oral-Glossitis	10	1	-	1	-	-	2	-	2	1	1	2	-
Oral-Neoplasm	15	2	1	1	1	2	1	1	-	3	-	-	3
Oral-Neoplasm, Carcinoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Oral-Neoplasm, Epulis	48	2	6	4	2	4	3	6	1	4	5	4	7
Oral-Neoplasm, Fibrosarcoma	6	-	1	-	1	-	-	3	1	-	-	-	-
Oral-Neoplasm, Mastocytoma	2	-	-	-	-	1	-	-	-	-	-	1	-
Oral-Neoplasm, Melanoma	25	2	4	1	5	1	3	2	3	-	2	-	2
Oral-Neoplasm, Osteosarcoma	2	-	-	-	1	-	-	-	-	-	1	-	-
Oral-Neoplasm, Sarcoma	4	-	1	-	-	-	1	-	-	-	-	2	-
Oral-Neoplasm, Squamous Cell Carcinoma	11	1	-	-	3	3	-	2	-	1	-	1	-
Oral-Neoplasm, Squamous Papilloma	1	-	-	-	-	-	-	-	-	1	-	-	-
Oral-Stomatitis	8	-	-	-	2	1	-	4	-	-	1	-	-
Pancreas-Atrophy	1	-	1	-	-	-	-	-	-	-	-	-	-
Pancreas-Hemorrhage	2	-	-	-	-	-	2	-	-	-	-	-	-
Pancreas-Pancreatitis	11	2	-	-	1	-	-	2	2	-	1	1	2
Salivary Gland-Cyst	4	-	-	-	1	1	-	-	-	-	1	-	1
Salivary Gland-Sialoadenitis	10	-	1	-	3	1	1	-	-	1	3	-	-

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Stomach–Foreign Body	2	-	-	-	-	-	-	-	1	-	-	1	-
Stomach–Gastritis	8	-	-	1	-	2	-	-	1	3	1	-	-
Stomach–Neoplasm	3	-	1	1	-	-	-	-	-	1	-	-	-
Stomach–Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
Stomach–Neoplasm, Leiomyoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Stomach–Rupture	2	-	-	-	-	-	-	-	-	-	-	2	-
Stomach–Ulcer	1	1	-	-	-	-	-	-	-	-	-	-	-
Stomach–Volvulus	9	1	-	-	1	-	3	1	-	1	-	1	1
<u>7 Urogenital</u>													
Abortion, Anomaly	1	-	-	-	-	-	1	-	-	-	-	-	-
Abortion, Idiopathic	6	-	-	2	1	-	-	-	1	-	-	1	1
Abortion, Neoplasm	1	-	-	-	-	-	1	-	-	-	-	-	-
Abortion, Specimen Unsuitable	4	-	1	-	-	2	-	-	-	1	-	-	-
Dystocia	1	-	-	-	-	-	-	-	-	-	-	-	1
Epididymis–Epididymitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Genital–Anomaly	2	1	-	-	-	-	-	-	-	-	1	-	-
Genital–Bacteriologic Exam	145	9	13	12	13	11	13	13	9	12	15	8	17
Kidney–Cyst	1	-	-	-	1	-	-	-	-	-	-	-	-
Kidney–Dysplasia	3	-	-	-	-	1	-	-	-	1	-	-	1
Kidney–Infarction	2	-	-	-	1	-	-	-	-	-	-	-	1
Kidney–Nephritis	2	1	1	-	-	-	-	-	-	-	-	-	-
Kidney–Nephritis, End Stage	8	2	2	1	-	-	-	-	-	1	-	1	1
Kidney–Nephritis, Glomerulo	14	-	1	1	1	3	4	1	-	-	-	2	1
Kidney–Nephritis, Pyelo	2	2	-	-	-	-	-	-	-	-	-	-	-
Kidney–Nephrosis	6	-	-	1	-	1	-	-	3	-	-	-	1
Kidney–Nephrosis, Oxalate	1	-	-	-	-	-	-	-	-	-	-	1	-
Ovary–Neoplasm, Granulosa Cell Tumor	1	-	-	-	1	-	-	-	-	-	-	-	-
Penis–Neoplasm, Papilloma	2	-	-	1	1	-	-	-	-	-	-	-	-
Penis–Posthitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Prepuce–Neoplasm	1	-	1	-	-	-	-	-	-	-	-	-	-
Prostate–Neoplasm, Adenocarcinoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Prostate–Prostatitis	5	1	-	-	1	1	-	-	-	1	1	-	-
Scrotum–Inflammation	2	-	-	-	-	-	1	-	-	-	-	1	-
Scrotum–Neoplasm	3	-	-	-	-	-	-	1	-	-	-	-	2
Stillbirth, Idiopathic	4	1	-	1	1	-	1	-	-	-	-	-	-
Testicle–Atrophy	1	-	-	-	-	-	-	-	-	-	1	-	-
Testicle–Cryptorchid	1	-	1	-	-	-	-	-	-	-	-	-	-
Testicle–Neoplasm	1	1	-	-	-	-	-	-	-	-	-	-	-
Testicle–Neoplasm, Interstitial Cell Tumor	6	-	-	-	3	-	-	-	1	1	-	-	1

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Testicle-Neoplasm, Seminoma	4	1	-	1	-	1	-	-	-	-	-	1	-
Testicle-Neoplasm, Sertoli Cell Tumor	7	-	-	1	2	-	-	-	2	-	1	1	-
Testicle-Orchitis	6	1	-	-	-	-	-	1	-	1	-	2	1
Urinary Bladder-Neoplasm, Polyp	3	-	-	-	-	1	1	1	-	-	-	-	-
Urin. Bladder-Neo., Trans. Cell Carcinoma	12	1	-	-	-	2	2	-	3	3	-	-	1
Urinary Bladder-Urocystitis	13	-	3	2	1	-	2	2	1	-	-	1	1
Urinary Bladder-Urolithiasis	1	-	-	-	-	-	-	-	-	-	-	-	1
Urine-Hematuria	1	-	-	-	-	-	-	-	-	-	1	-	-
Urine-Microbiologic Exam	714	60	59	61	62	58	67	48	64	58	64	57	56
Uterus-Endometrial Hyperplasia	1	-	-	-	-	1	-	-	-	-	-	-	-
Uterus-Metritis	10	-	-	-	3	1	4	-	-	-	1	1	-
Uterus-Perforation	1	-	-	-	-	-	-	-	-	-	-	-	1
Uterus-Torsion	1	-	-	-	1	-	-	-	-	-	-	-	-
Vagina-Neoplasm	2	-	-	-	-	-	1	-	-	-	-	-	1
Vagina-Neoplasm, Carcinoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Vagina-Vaginitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Vulva-Neoplasm	2	-	-	-	1	-	-	-	-	-	-	-	1
<b>8 Endocrine</b>													
Adrenal-Adrenalitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Adrenal-Atrophy	2	-	-	-	-	-	-	-	1	1	-	-	-
Adrenal-Hyperadrenalism	3	-	-	-	-	-	-	-	-	-	-	2	1
Adrenal-Hypoadrenalism	2	-	-	1	-	-	-	-	1	-	-	-	-
Adrenal-Neoplasm, Adenoma	6	-	1	-	-	-	-	1	1	-	-	1	2
Adrenal-Neoplasm, Carcinoma	2	-	-	-	-	1	-	-	-	-	-	1	-
Adrenal-Neoplasm, Pheochromocytoma	2	-	-	-	-	-	-	-	1	-	-	1	-
Pituitary-Cyst	1	-	1	-	-	-	-	-	-	-	-	-	-
Thyroid-Atrophy	3	1	-	1	-	-	-	-	-	1	-	-	-
Thyroid-Cyst	1	-	-	-	-	-	-	-	1	-	-	-	-
Thyroid-Hypothyroidism	33	3	2	2	4	1	2	5	2	3	3	5	1
Thyroid-Neoplasm, Adenoma	4	1	1	1	-	-	1	-	-	-	-	-	-
Thyroid-Neoplasm, Carcinoma	11	2	-	1	-	-	2	-	1	2	1	-	2
Thyroid-Thyroiditis	2	-	-	-	-	-	1	-	-	-	-	1	-
<b>9 Nervous</b>													
Neurological Disorders, Total Cases	48	1	5	7	4	2	4	10	3	5	3	1	3
Brain-Anomaly	5	-	-	-	1	-	-	-	-	3	1	-	-
Brain-Encephalitis, Distemper	1	-	-	-	-	-	-	1	-	-	-	-	-
Brain-Encephalitis, Non-Suppurative	3	-	-	1	-	-	1	1	-	-	-	-	-
Brain-Encephalitis, Pseudorabies	1	-	-	-	-	-	-	1	-	-	-	-	-
Brain-Encephalitis, Rabies	2	-	-	-	1	-	-	-	-	-	-	-	1

CANINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Brain–Encephalitis, Suppurative	1	-	-	-	-	-	-	1	-	-	-	-	-
Brain–Encephalomalacia	3	-	-	1	-	-	1	-	-	-	1	-	-
Brain–Hemorrhage	5	-	-	1	-	-	-	2	-	1	-	1	-
Brain–Neoplasm	3	-	-	1	-	-	1	-	1	-	-	-	-
Brain–Neoplasm, Meningioma	1	-	-	-	1	-	-	-	-	-	-	-	-
Brain–Polioencephalomalacia	1	-	-	-	-	-	-	1	-	-	-	-	-
Meninges–Meningitis	2	1	1	-	-	-	-	-	-	-	-	-	-
Meninges–Meningitis, Non-Suppurative	1	-	1	-	-	-	-	-	-	-	-	-	-
Meninges–Meningitis, Suppurative	2	-	1	-	-	-	1	-	-	-	-	-	-
Neurologic Disorder, Idiopathic	18	-	2	4	1	2	-	3	2	1	1	-	2
<b>X Special Senses</b>													
Ear–Dermatitis	5	-	-	-	-	-	2	-	-	-	1	1	1
Ear–Neoplasm	7	1	1	1	-	1	-	-	-	-	-	3	-
Ear–Neoplasm, Basal Cell Tumor	8	-	1	-	-	-	1	1	2	1	1	-	1
Ear–Neoplasm, Ceruminous Gland Adenoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Ear–Neoplasm, Ceruminous Gland Carcinoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Ear–Neoplasm, Histiocytoma	19	1	2	1	-	3	-	1	-	3	2	2	4
Ear–Neoplasm, Mastocytoma	2	1	-	-	1	-	-	-	-	-	-	-	-
Ear–Neoplasm, Melanoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Ear–Neoplasm, Sebaceous Gland Adenoma	2	1	-	-	-	-	-	1	-	-	-	-	-
Ear–Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	-	-	1	-	-
Ear–Otitis	172	17	20	21	15	18	13	12	9	13	15	7	12
Ear–Polyp	1	-	-	-	-	-	-	-	1	-	-	-	-
Eye–Conjunctivitis	5	2	-	-	-	-	-	2	-	-	-	1	-
Eye–Keratitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Eye–Neoplasm, Squamous Cell Carcinoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Eyelid–Blepharitis	4	-	-	-	1	-	-	-	1	1	1	-	-
Eyelid–Neoplasm	5	1	-	-	-	-	-	2	-	1	-	1	-
Eyelid–Neoplasm, Histiocytoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Eyelid–Neoplasm, Melanoma	5	1	-	-	-	-	-	-	1	1	-	-	2
Eyelid–Neoplasm, Papilloma	2	-	-	-	-	-	-	-	1	1	-	-	-
Eyelid–Neoplasm, Sebaceous Gland Adenoma	5	-	-	1	1	1	1	-	-	-	-	-	1
Eyelid–Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	-	1	-	-	-

**CAPRINE**

CAPRINE	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>0 Body as a Whole</u>													
Abscess	9	2	1	-	-	1	1	3	1	-	-	-	-
Caseous Lymphadenitis	3	1	-	1	-	-	-	-	1	-	-	-	-
Contagious Echthyma	1	-	-	-	-	-	-	-	-	-	-	-	1
Deficiency, Copper	1	-	-	-	-	-	-	-	-	-	-	1	-
Emaciation	2	-	-	-	-	1	-	-	-	-	-	1	-
Septicemia, <i>Streptococcus sp.</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Sudden Unexpected Death	1	-	-	-	-	-	-	-	-	-	-	1	-
<u>1 Integumentary</u>													
Abscess	1	-	-	-	-	-	-	-	1	-	-	-	-
Dermatitis, Diffuse	3	-	-	-	-	1	1	-	1	-	-	-	-
Dermatitis, Focal	2	-	1	-	-	-	1	-	-	-	-	-	-
Mammary-Mamillitis	1	-	-	-	-	-	-	-	-	-	-	1	-
<u>3 Respiratory</u>													
Lung-Hemorrhage	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, <i>Actinomyces pyogenes</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho	2	-	-	-	2	-	-	-	-	-	-	-	-
Lung-Pneumonia, Foreign Body	1	-	-	-	-	-	-	-	-	-	1	-	-
<u>5 Hemic And Lymphatic</u>													
Blood-Anemia	2	-	-	-	-	1	-	-	-	-	1	-	-
Blood-Anemia, Aplastic	1	-	-	-	-	-	1	-	-	-	-	-	-
Lymph Node-Lymphadenitis	1	1	-	-	-	-	-	-	-	-	-	-	-
<u>6 Digestive</u>													
Esophagus-Esophagitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Esophagus-Obstruction Choke	1	-	-	-	-	-	1	-	-	-	-	-	-
Feces-Microbiologic Exam	5	1	1	-	1	-	1	-	-	-	-	1	-
Intestine-Enterotox., <i>C. perfringens</i> Type D	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Ent., <i>M. Paratuberculosis</i> (Johne's)	9	1	-	2	-	1	1	1	-	-	1	2	-
Intestine-Enteritis, <i>Salmonella sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-	-

CAPRINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Intestine-Parasitism, Coccidia	6	1	-	-	1	-	-	-	1	-	-	1	2
Intestine-Parasitism, Trichostrongylids	3	-	1	2	-	-	-	-	-	-	-	-	-
Liver-Neoplasm	1	-	-	-	-	-	1	-	-	-	-	-	-
Pancreas-Pancreatitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Stomach-Abomasal Ulcer	1	-	-	-	-	-	-	-	-	-	-	1	-
<u>7 Urogenital</u>													
Abortion, Idiopathic	2	-	-	-	-	-	-	-	2	-	-	-	-
Abortion, Myocarditis	1	-	-	-	-	-	-	-	-	1	-	-	-
Genital-Bacteriologic Exam	1	-	-	-	-	-	-	-	-	1	-	-	-
Kidney-Nephritis	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	2	-	-	-	-	-	-	1	-	1	-	-	-
Kidney-Nephritis, Pyelo	1	-	-	-	-	-	-	-	-	-	1	-	-
Urine-Microbiologic Exam	1	-	-	-	-	-	-	-	-	-	-	-	1
Uterus-Metritis	1	-	-	-	-	-	1	-	-	-	-	-	-
<u>8 Endocrine</u>													
Thyroid-Goiter	1	-	-	-	-	-	-	-	-	-	-	1	-
<u>9 Nervous</u>													
Brain-Encephalitis, <i>Listeria sp.</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
<u>X Special Senses</u>													
Eye-Conjunctivitis	4	1	-	1	-	1	-	-	-	-	-	1	-
Eye-Keratoconjunctivitis	1	-	-	-	1	-	-	-	-	-	-	-	-

**EQUINE**

<u>0 Body as a Whole</u>													
Abscess	10	2	1	-	2	-	-	-	2	1	1	1	-
Amyloidosis	1	-	-	-	-	-	-	-	1	-	-	-	-
Anomaly	6	-	1	1	-	1	-	-	-	-	2	1	-
Deficiency, Vitamin E	1	1	-	-	-	-	-	-	-	-	-	-	-
Emaciation	1	-	-	-	1	-	-	-	-	-	-	-	-
Granulomas, Generalized	1	-	-	-	-	1	-	-	-	-	-	-	-

EQUINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Mycotoxycosis, Deoxynivalenol	1	-	-	-	-	-	-	-	-	-	-	1	-
Neonatal Weakness	1	-	-	-	-	-	-	-	-	-	-	1	-
Neoplasm, Lipoma	2	-	-	-	-	-	-	2	-	-	-	-	-
Peritonitis	3	1	1	-	1	-	-	-	-	-	-	-	-
Septicemia, <i>Actinobacillus equuli</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Septicemia, <i>Actinobacillus suis</i>	2	-	-	-	-	-	-	-	-	1	1	-	-
Septicemia, <i>Aeromonas sp.</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Sept., <i>Bacillus piliformis</i> (Tyzzer's Disease)	1	-	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Escherichia coli</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Septicemia, <i>Salmonella sp.</i>	2	-	-	-	-	-	-	-	1	-	-	1	-
Septicemia, <i>Streptococcus sp.</i>	24	-	3	4	-	1	2	5	1	2	2	2	2
Sudden Unexpected Death	2	-	-	-	-	-	-	1	-	-	-	1	-
Toxicosis, Plant	3	-	-	-	1	-	-	1	-	-	-	-	1
Toxicosis, Strychnine	1	-	-	-	1	-	-	-	-	-	-	-	-
Trauma	3	-	1	-	1	-	-	-	-	-	-	-	1
<u>1 Integumentary</u>													
Alopecia	3	1	-	1	-	-	-	-	-	-	1	-	-
Cellulitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Cyst, Adnexal	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermal Fibrosis	3	-	-	-	2	-	-	-	-	-	-	1	-
Dermatitis, Allergic	1	1	-	-	-	-	-	-	-	-	-	-	-
Dermatitis, Diffuse	5	-	-	2	1	-	1	1	-	-	-	-	-
Dermatitis, Eosinophilic	9	1	-	2	1	1	2	-	-	-	-	-	2
Dermatitis, Focal	9	1	-	-	-	2	1	-	2	1	1	1	-
Dermatitis, Folliculitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Dermatitis, Granulation Tissue	3	-	-	1	1	-	-	-	-	-	-	-	1
Dermatitis, Mycotic	1	-	-	-	-	1	-	-	-	-	-	-	-
Dermatitis, Pemphigus	1	1	-	-	-	-	-	-	-	-	-	-	-
Mammary-Mastitis	1	-	-	-	-	-	-	-	-	-	1	-	-
Neoplasm	2	1	-	-	-	-	-	-	-	-	-	-	1
Neoplasm, Mastocytoma	4	-	3	-	-	-	-	-	-	1	-	-	-
Neoplasm, Melanoma	3	1	1	-	1	-	-	-	-	-	-	-	-
Neoplasm, Sarcoïd	18	5	3	1	-	1	-	-	-	1	1	1	5
Neopl., Sebaceous Gland, Adenocarcinoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Skin-Microbiologic Exam	5	-	-	-	-	-	-	-	1	2	2	-	-
Steatitis	1	-	1	-	-	-	-	-	-	-	-	-	-

EQUINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>2 Musculoskeletal</b>													
Arthritis	1	-	-	-	-	-	-	-	-	-	1	-	-
Arthritis, <i>Streptococcus sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Arthritis, Suppurative	2	-	-	-	-	-	-	1	-	-	-	-	1
Arthropathy	1	-	-	-	-	-	-	-	-	-	-	-	1
Bone-Fracture	1	-	-	-	-	-	-	-	-	-	-	-	1
Lameness	1	-	-	1	-	-	-	-	-	-	-	-	-
Muscle-Degeneration	1	-	-	-	-	-	-	-	-	-	-	-	1
Muscle-Myopathy	1	-	-	-	-	-	-	-	-	-	-	1	-
<b>3 Respiratory</b>													
Respiratory Disorders, Total Cases	64	6	6	7	11	4	2	3	1	6	8	4	6
Lung-Abscess	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Edema	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia	2	-	-	-	-	1	-	-	-	1	-	-	-
Lung-Pneumonia, <i>Actinobacillus equuli</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, <i>Actinobacillus suis</i>	3	-	1	1	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, Broncho	5	-	-	1	1	-	-	-	-	2	-	1	-
Lung-Pneu., Equine Viral Rhinopneumonitis	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, <i>Klebsiella sp.</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, Mycotic	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Rhodococcus equi</i>	4	1	1	1	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, <i>Salmonella sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Lung-Pneumonia, <i>Streptococcus sp.</i>	6	-	1	-	-	-	-	-	-	-	2	2	1
Nasal-Neoplasm	1	-	-	-	1	-	-	-	-	-	-	-	-
Nasal-Rhinitis	2	-	-	-	-	1	-	-	-	-	-	-	1
Respiratory Infection	1	-	-	-	-	-	-	-	-	-	1	-	-
Respiratory, Microbiologic Exam	38	4	2	4	9	1	2	3	1	3	4	1	4
<b>5 Hemic and Lymphatic</b>													
Blood-Anemia	1	-	-	-	1	-	-	-	-	-	-	-	-
Blood-Hemorrhage, Generalized	1	-	1	-	-	-	-	-	-	-	-	-	-
Immune System-Hypogammaglobulinemia	1	-	-	-	-	-	-	-	-	-	1	-	-
Lymph Node-Lymphadenitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Lymph Node-Neoplasm, Lymphosarcoma	1	-	-	-	-	-	-	-	-	-	1	-	-



EQUINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>6 Digestive</b>													
Feces—Microbiologic Exam	140	18	29	11	14	7	13	19	2	7	4	9	7
Intestine—Colitis	4	-	2	-	-	1	-	-	1	-	-	-	-
Intestine—Enteritis, Necrotic	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine—Enteritis, Rotavirus	2	-	-	-	-	-	-	-	-	1	-	1	-
Intestine—Enteritis, <i>Salmonella sp.</i>	9	1	-	1	-	-	3	-	4	-	-	-	-
Intestine—Neoplasm, Polyp	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine—Obstruction	2	-	-	-	-	-	-	2	-	-	-	-	-
Intestine—Parasitism, Ascaris	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine—Parasitism, <i>Cryptosporidium sp.</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine—Parasitism, Strongyles	2	-	1	-	-	1	-	-	-	-	-	-	-
Intestine—Rupture	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine—Volvulus	4	1	1	-	-	-	-	-	1	-	1	-	-
Liver—Cirrhosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Liver—Hepatitis	3	-	-	1	1	1	-	-	-	-	-	-	-
Liver—Hepatositis	2	-	-	-	-	-	-	-	1	1	-	-	-
Liver—Lipidosis	2	-	-	-	-	1	-	1	-	-	-	-	-
Oral—Glossitis	2	-	-	-	-	1	-	-	1	-	-	-	-
Oral—Stomatitis	2	-	-	1	-	-	-	1	-	-	-	-	-
Stomach—Neopl., Squamous Cell Carcinoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Stomach—Rupture	2	-	-	-	-	-	-	1	-	1	-	-	-
<b>7 Urogenital</b>													
Reproductive Disorders, <b>Total Cases</b>	173	14	9	4	5	10	7	11	20	10	21	34	28
Abortion, Anomaly	2	-	-	-	-	-	-	-	2	-	-	-	-
Abortion, Bacterial, <i>Streptococcus sp.</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Abortion, Encephalitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Abortion, Idiopathic	22	-	-	-	1	7	2	5	3	1	1	2	-
Abortion, Myocarditis	1	-	-	-	-	-	-	1	-	-	-	-	-
Abortion, Pneumonia	1	-	-	-	-	-	-	-	-	1	-	-	-
Abortion, Umbilical Cord Torsion	2	-	-	-	-	-	-	1	1	-	-	-	-
Abortion, Viral	5	-	-	-	-	-	1	1	-	2	1	-	-
Genital—Anomaly	4	1	-	-	-	-	1	-	-	-	-	1	1
Genital—Bacteriologic Exam	115	12	5	4	3	3	-	3	12	4	18	27	24
Genital—Infertility	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney—Neoplasm	1	-	-	-	-	-	-	-	-	-	-	-	1
Kidney—Nephritis, Interstitial	1	-	-	-	-	-	-	-	-	1	-	-	-
Ovary—Neoplasm, Granulosa Cell Tumor	1	-	-	-	-	-	-	-	1	-	-	-	-
Penis—Neoplasm, Squamous Cell Carcinoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Prepuce—Neoplasm, Basal Cell Tumor	1	-	-	-	-	-	-	-	-	-	-	1	-
Prepuce—Neopl., Squamous Cell Carcinoma	2	-	-	-	-	-	-	-	-	1	-	-	1

EQUINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Stillbirth, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	1	-
Urethra-Urethritis	1	-	-	-	-	-	1	-	-	-	-	-	-
Urinary Bladder-Rupture	1	-	-	-	-	-	-	-	-	-	-	1	-
Urinary Bladder-Urocystitis	2	1	-	-	-	-	-	-	-	-	1	-	-
Urinary Bladder-Urolithiasis	1	-	-	-	-	-	-	-	-	-	-	-	1
Urine-Microbiologic Exam	18	2	3	2	1	2	1	-	1	2	2	1	1
Uterus-Metritis	9	1	2	-	-	-	1	-	-	1	1	2	1
Vulva-Neoplasm, Papilloma	1	-	-	-	-	-	-	-	-	-	-	-	1
Vulva-Neoplasm, Squamous Cell Carcinoma	3	-	1	-	1	-	-	-	1	-	-	-	-
<b>8 Endocrine</b>													
Adrenal-Hyperadrenalism	2	-	-	-	-	-	-	-	-	-	2	-	-
Pituitary-Neoplasm, Adenoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Thyroid-Hypothyroidism	2	-	-	-	-	-	-	-	1	1	-	-	-
Thyroid-Neoplasm, Adenoma	1	-	1	-	-	-	-	-	-	-	-	-	-
<b>9 Nervous</b>													
Neurological Disorders, Total Cases	9	6	-	1	-	-	-	-	-	-	1	1	-
Brain-Encephalitis, Rabies	2	1	-	-	-	-	-	-	-	-	-	-	1
Brain-Encephalitis, Suppurative	2	1	-	-	-	-	-	-	-	-	1	-	-
Brain-Encephalopathy	1	-	-	-	-	-	-	-	-	-	-	1	-
Brain-Hemorrhage	1	1	-	-	-	-	-	-	-	-	-	-	-
Neurologic Disorder, Idiopathic	2	2	-	-	-	-	-	-	-	-	-	-	-
Spinal Cord-Myelomalacia	2	1	-	1	-	-	-	-	-	-	-	-	-
<b>X Special Senses</b>													
Ear-Dermatitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Ear-Neoplasm, Fibroma	1	-	-	-	-	-	-	-	-	-	-	-	1
Ear-Otitis	1	-	-	-	-	1	-	-	-	-	-	-	-
Eye-Conjunctivitis	1	-	-	-	-	-	-	-	-	-	1	-	-
Eye-Keratitis	1	-	1	-	-	-	-	-	-	-	-	-	-
Eye-Neoplasm, Fibrosarcoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Eye-Neoplasm, Squamous Cell Carcinoma	3	-	-	-	-	-	-	-	-	-	1	1	1
Eye-Ophthalmitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Eyelid-Neoplasm, Papilloma	1	-	-	-	-	-	-	-	1	-	-	-	-
Eyelid-Neoplasm, Sarcoid	2	1	-	-	-	-	-	-	-	-	1	-	-
Eyelid-Neopl., Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	1	-	-	-	-

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**FELINE**


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<b>FELINE</b>	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>0 Body as a Whole</u>													
Abscess	4	1	-	-	1	-	-	-	-	-	-	1	1
Amyloidosis	13	2	-	1	1	-	-	2	1	3	2	1	-
Chlamydiosis	1	-	-	-	-	-	-	-	1	-	-	-	-
Diabetes Mellitus	1	-	-	-	-	-	-	-	1	-	-	-	-
Effusion, Pyothorax	6	-	-	1	-	1	-	-	2	1	-	-	1
Emaciation	2	-	2	-	-	-	-	-	-	-	-	-	-
Feline Infectious Peritonitis	32	1	2	3	1	3	2	8	3	5	2	-	2
Feline Panleukopenia	24	5	4	2	2	3	1	2	1	2	-	1	1
Hernia, Diaphragmatic	1	-	-	-	-	-	-	-	-	-	1	-	-
Hernia, Umbilical	1	-	-	-	-	1	-	-	-	-	-	-	-
Mycosis, <i>Blastomyces sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Mycosis, <i>Cryptococcus sp.</i>	3	-	-	-	1	1	-	-	-	1	-	-	-
Neonatal Weakness	1	-	-	-	-	-	-	-	-	-	-	-	1
Neoplasm	9	-	-	-	1	1	2	1	-	2	1	1	-
Neoplasm, Carcinoma	3	-	1	1	-	-	-	-	-	-	1	-	-
Neoplasm, Lipoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Parasitism, Toxoplasma	2	-	-	-	-	-	-	1	-	-	1	-	-
Peritonitis	2	-	-	-	1	-	1	-	-	-	-	-	-
Polyserositis	1	-	-	-	-	-	1	-	-	-	-	-	-
Septicemia, Bacterial	2	-	1	-	1	-	-	-	-	-	-	-	-
Septicemia, <i>Clostridium septicum</i>	1	-	-	-	-	-	-	1	-	-	-	-	-
Septicemia, <i>Escherichia coli</i>	4	1	-	3	-	-	-	-	-	-	-	-	-
Septicemia, <i>Pasteurella multocida</i>	8	1	3	1	-	-	-	1	-	2	-	-	-
Septicemia, <i>Salmonella sp.</i>	3	-	-	1	-	1	-	-	1	-	-	-	-
Septicemia, <i>Streptococcus sp.</i>	2	1	1	-	-	-	-	-	-	-	-	-	-
Sudden Unexpected Death	17	2	2	1	4	1	-	2	2	2	-	1	-
Toxicosis, Anticoagulant Rodenticide	3	1	2	-	-	-	-	-	-	-	-	-	-
Toxicosis, Ethylene Glycol	8	1	1	-	2	1	1	-	-	1	-	1	-
Toxicosis, Organophosphate	1	-	-	1	-	-	-	-	-	-	-	-	-
Trauma	11	1	1	2	3	-	1	2	-	-	-	1	-
Virus Infection, Herpes	1	-	-	-	-	-	1	-	-	-	-	-	-

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>1 Integumentary</b>													
Alopecia	2	-	-	-	-	-	-	-	-	-	-	-	2
Cellulitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Cyst, Adnexal	13	2	2	-	2	2	1	2	-	-	-	1	1
Dermal Fibrosis	2	-	-	-	-	1	1	-	-	-	-	-	-
Dermatitis, Allergic	7	-	-	-	-	2	-	3	-	1	-	1	-
Dermatitis, Diffuse	8	-	2	2	1	-	-	1	1	-	1	-	-
Dermatitis, Eosinophilic	2	-	-	-	-	-	-	-	-	-	1	-	1
Dermatitis, Eosinophilic Granuloma	4	-	-	-	1	-	-	-	-	1	-	1	1
Dermatitis, Focal	23	1	4	3	1	3	1	1	3	4	-	2	-
Dermatitis, Mycotic	3	-	-	-	1	-	-	-	1	1	-	-	-
Dermatitis, Pemphigus	1	-	-	-	1	-	-	-	-	-	-	-	-
Dermatitis, Podo	3	-	1	-	-	-	-	2	-	-	-	-	-
Dermatitis, <i>Staphylococcus sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Dermatitis, Ulcerative	1	1	-	-	-	-	-	-	-	-	-	-	-
Hematoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Mammary-Duct Ectasia	2	-	1	-	1	-	-	-	-	-	-	-	-
Mammary-Hyperplasia	3	-	-	-	-	-	1	-	1	1	-	-	-
Mammary-Mastitis	2	-	-	-	-	-	-	-	1	-	1	-	-
Mammary-Neoplasm, Adenocarcinoma	41	1	3	7	6	2	2	4	6	4	1	3	2
Mammary-Neoplasm, Adenoma	2	-	-	-	1	-	-	1	-	-	-	-	-
Mammary-Neoplasm, Carcinoma, Anaplastic	1	-	1	-	-	-	-	-	-	-	-	-	-
Mammary-Neoplasm, Fibroadenoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Neoplasm, Adenocarcinoma	3	-	-	-	-	1	-	-	-	-	2	-	-
Neoplasm, Adenoma	6	-	1	-	-	-	-	2	-	1	1	1	-
Neoplasm, Apocrine Adenoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Neoplasm, Apocrine Adenocarcinoma	5	-	1	-	-	1	1	1	-	1	-	-	-
Neoplasm, Basal Cell Tumor	39	10	1	1	2	3	-	8	5	4	1	3	1
Neoplasm, Carcinoma, Anaplastic	3	1	-	-	-	-	-	-	-	1	1	-	-
Neoplasm, Fibroma	7	-	-	-	-	1	1	-	-	3	1	1	-
Neoplasm, Fibrosarcoma	44	1	5	3	7	5	3	2	5	4	-	3	6
Neoplasm, Giant Cell Tumor	3	-	1	-	-	1	-	1	-	-	-	-	-
Neoplasm, Hemangioma	2	1	-	-	-	-	-	-	-	-	1	-	-
Neoplasm, Histiocytoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm, Lipoma	5	1	1	-	1	-	-	-	-	1	-	1	-
Neoplasm, Liposarcoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Neoplasm, Lymphoma	2	-	-	-	-	-	-	1	-	-	-	-	1
Neoplasm, Mastocytoma	23	2	3	2	2	2	1	2	3	4	-	2	-
Neoplasm, Melanoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Myxosarcoma	2	-	-	1	1	-	-	-	-	-	-	-	-

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Neoplasm, Sarcoma, Anaplastic	5	-	-	-	4	-	-	-	-	-	1	-	-
Neoplasm, Sebaceous Gland Adenoma	8	-	-	-	-	2	2	1	-	1	-	-	2
Neoplasm, Squamous Cell Carcinoma	6	1	-	-	1	-	1	1	-	-	-	-	2
Neoplasm, Trichoepithelioma	1	-	-	-	-	-	-	-	-	-	-	1	-
Parasitism	1	-	1	-	-	-	-	-	-	-	-	-	-
Seroma	2	-	-	-	1	-	-	-	1	-	-	-	-
Skin-Microbiologic Exam	2	1	-	-	-	-	-	-	-	1	-	-	-
Steatitis	6	-	1	-	-	-	-	2	1	1	-	1	-
<b>2 Musculoskeletal</b>													
Arthropathy	1	-	-	-	-	-	-	-	-	-	-	-	1
Bone-Fracture	1	-	-	-	-	1	-	-	-	-	-	-	-
Bone-Neoplasm	1	1	-	-	-	-	-	-	-	-	-	-	-
Bone-Neoplasm, Chondrosarcoma	1	-	-	-	1	-	-	-	-	-	-	-	-
Bone-Neoplasm, Osteoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Bone-Neoplasm, Osteosarcoma	2	-	-	-	-	-	-	-	-	1	1	-	-
Bone-Neoplasm, Sarcoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Muscle-Myositis	1	-	-	-	-	-	-	-	-	-	1	-	-
<b>3 Respiratory</b>													
Respiratory Disorders, Total Cases	76	4	10	7	2	7	10	6	6	8	4	4	8
Larynx-Laryngitis	2	-	1	-	-	-	-	-	-	1	-	-	-
Lung-Edema	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung-Neoplasm, Carcinoma	5	-	1	-	-	-	-	-	-	1	1	-	2
Lung-Neoplasm, Carcinoma, Metastatic	1	1	-	-	-	-	-	-	-	-	-	-	-
Lung-Parasitism	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung-Pneumonia	3	-	-	1	1	-	-	-	-	1	-	-	-
Lung-Pneumonia, <i>Bordetella bronchiseptica</i>	5	-	-	-	-	2	1	-	-	-	-	-	2
Lung-Pneumonia, Broncho	4	-	2	-	-	-	-	2	-	-	-	-	-
Lung-Pneumonia, Calicivirus	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Escherichia coli</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Lung-Pneumonia, Foreign Body	4	1	-	-	-	-	2	-	-	-	-	1	-
Lung-Pneumonia, <i>Hemophilus sp.</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, Interstitial	5	1	-	2	-	-	1	-	-	-	-	1	-
Lung-Pneumonia, <i>Mycoplasma sp.</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, Mycotic	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	5	-	-	-	-	1	1	2	-	-	1	-	-
Lung-Pneumonia, <i>Pasteurella sp.</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Lung-Pneumonia, <i>Salmonella sp.</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Staphylococcus sp.</i>	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Thrombosis	2	1	-	-	-	-	-	-	-	-	-	-	1

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Nasal-Neoplasm	2	-	-	-	-	-	-	-	1	1	-	-	-
Nasal-Rhinitis	7	-	1	1	-	2	1	-	-	1	-	-	1
Nasal-Rhinitis, <i>Pasteurella multocida</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Pleura-Pleuritis	1	-	-	-	-	-	-	-	-	-	-	1	-
Pleura-Pneumothorax	1	-	-	-	-	-	-	-	-	1	-	-	-
Respiratory Infection	1	-	-	-	-	1	-	-	-	-	-	-	-
Respiratory, Microbiologic Exam	19	-	3	2	-	1	2	1	5	-	3	-	2
Respiratory Infection, <i>Pasteurella multocida</i>	3	-	-	1	-	-	1	-	-	-	-	1	-
Trachea-Neoplasm	1	-	-	-	-	-	-	1	-	-	-	-	-
<u>4 Cardiovascular</u>													
Blood Vessel-Thrombosis	1	-	-	-	-	-	-	-	-	-	-	-	1
Heart-Anomaly	2	-	-	-	1	-	-	-	-	-	1	-	-
Heart-Cardiomyopathy	49	2	5	4	1	5	5	7	5	3	3	4	5
Heart-Heart Failure, Acute	1	-	1	-	-	-	-	-	-	-	-	-	-
Heart-Heart Failure, Chronic	4	1	-	-	-	-	-	-	2	-	1	-	-
Heart-Myocardial Degeneration	6	-	1	-	-	-	-	1	-	2	1	1	-
Heart-Myocarditis	2	1	-	-	-	1	-	-	-	-	-	-	-
<u>5 Hemic and Lymphatic</u>													
Blood-Anemia	9	-	1	1	1	1	-	1	1	-	1	2	-
Blood-Anemia, Aplastic	1	-	-	-	-	-	-	-	-	-	-	-	1
Blood-Anemia, Hemolytic	1	-	-	-	-	-	1	-	-	-	-	-	-
Blood-Parasitism, <i>Hemobartonella sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Bone Marrow-Neoplasm	2	-	1	1	-	-	-	-	-	-	-	-	-
Bone Mar.-Neo., Myeloproliferative Disorder	3	-	-	-	-	1	-	-	1	-	1	-	-
Lymph Node-Hyperplasia	7	1	-	-	1	2	1	-	-	-	-	1	1
Lymph Node-Lymphadenitis	2	1	1	-	-	-	-	-	-	-	-	-	-
Lymph Node-Neoplasm, Lymphosarcoma	6	-	-	1	1	-	-	-	-	-	1	1	2
Lymph Node-Neoplasm, Metastatic	2	-	-	-	-	-	-	-	1	1	-	-	-
Neoplasm, Lymphocytic Leukemia	1	-	-	-	-	-	-	-	-	-	-	1	-
Neoplasm, Mastocytic Leukemia	1	-	-	-	-	-	-	1	-	-	-	-	-
Spleen-Neoplasm, Mastocytoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Spleen-Splenitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Thymus-Neoplasm, Lymphosarcoma	2	-	-	-	-	-	-	-	-	-	1	1	-
Tonsil-Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	-	-	-	1	-
<u>6 Digestive</u>													
Feces-Microbiologic Exam	14	2	-	1	-	2	1	3	-	-	1	3	1
Intestine-Colitis	3	-	-	1	-	-	-	1	-	-	-	1	-
Intestine-Enteritis, Coronavirus	4	-	1	-	-	1	1	-	-	-	1	-	-

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Intestine-Enteritis, Eosinophilic	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Enteritis, <i>Escherichia coli</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Hemorrhagic	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Enteritis, Lymphoplasmacytic	2	-	-	-	-	1	-	-	-	-	-	1	-
Intestine-Enteritis, Necrotic	3	-	-	2	-	-	-	-	-	-	1	-	-
Intestine-Enteritis, Parvovirus	3	-	-	-	1	2	-	-	-	-	-	-	-
Intestine-Enteropathy, Atrophic	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Hemorrhage	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Intussusception	1	-	-	-	-	-	-	-	-	-	-	1	-
Intestine-Myohypertrophy	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Neoplasm	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Neoplasm, Carcinoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Obstruction	2	-	-	1	-	-	-	-	1	-	-	-	-
Intestine-Parasitism	1	-	-	-	1	-	-	-	-	-	-	-	-
Intestine-Parasitism, Ascaris	6	-	-	4	-	-	2	-	-	-	-	-	-
Intestine-Parasitism, Cestode	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	3	-	-	-	-	2	-	-	1	-	-	-	-
Intestine-Parasitism, <i>Giardia sp.</i>	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Rupture	1	-	1	-	-	-	-	-	-	-	-	-	-
Lip-Chelitis	2	-	-	-	1	-	-	-	-	1	-	-	-
Lip-Chelitis, Eosinophilic Granuloma	3	1	-	-	-	1	-	-	-	-	-	1	-
Lip-Neoplasm, Mastocytoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Liver-Atrophy	1	-	-	-	-	-	-	1	-	-	-	-	-
Liver-Cholangiohepatitis	1	-	-	-	-	-	-	-	-	-	1	-	-
Liver-Cyst	1	-	-	-	-	-	1	-	-	-	-	-	-
Liver-Hepatitis	13	3	1	1	2	-	1	2	-	1	-	1	1
Liver-Hepatositis	9	2	1	-	-	-	1	2	-	1	-	2	-
Liver-Lipidosis	24	2	1	1	3	1	1	3	2	4	1	2	3
Liver-Neoplasm	3	-	-	-	-	-	-	-	1	1	1	-	-
Liver-Neoplasm, Hepatoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Oral-Dentition Abnormal	1	-	-	-	-	-	-	-	1	-	-	-	-
Oral-Gingivitis	8	1	-	2	-	2	1	-	-	1	-	-	1
Oral-Glossitis	3	-	-	-	1	-	1	-	-	-	-	1	-
Oral-Neoplasm, Epulis	2	-	-	-	-	-	-	1	1	-	-	-	-
Oral-Neoplasm, Fibrosarcoma	4	-	-	1	-	-	1	1	-	-	1	-	-
Oral-Neoplasm, Polyp	1	-	-	-	-	-	-	-	-	-	1	-	-
Oral-Neoplasm, Squamous Cell Carcinoma	17	-	2	2	3	1	2	1	1	2	-	1	2
Oral-Stomatitis	11	1	1	1	1	-	-	-	1	1	1	1	3
Oral-Stomatitis, Eosinophilic Granuloma	1	-	-	-	-	-	-	-	-	-	1	-	-
Pancreas-Atrophy	1	-	-	-	-	-	-	-	-	1	-	-	-
Pancreas-Hyperplasia	1	-	-	-	-	-	-	-	1	-	-	-	-
Pancreas-Neoplasm	1	1	-	-	-	-	-	-	-	-	-	-	-

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Pancreas-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Pancreas-Pancreatitis	5	-	2	-	-	-	-	-	1	1	-	-	1
Salivary Gland-Cyst	1	-	-	-	-	-	-	-	-	-	-	-	1
Stomach-Gastritis	4	1	-	1	-	1	-	-	-	-	-	1	-
Stomach-Neoplasm	3	-	-	1	-	1	-	-	1	-	-	-	-
Stomach-Ulcer	1	-	1	-	-	-	-	-	-	-	-	-	-
<b>7 Urogenital</b>													
Abortion, Idiopathic	1	-	-	-	-	-	-	-	-	-	-	1	-
Genital-Anomaly	1	1	-	-	-	-	-	-	-	-	-	-	-
Genital-Bacteriologic Exam	2	1	-	-	-	-	-	-	1	-	-	-	-
Kidney-Atrophy	1	-	-	-	-	-	-	-	-	-	1	-	-
Kidney-Hypoplasia	1	-	-	-	-	-	-	-	-	-	1	-	-
Kidney-Neoplasm	1	-	-	-	-	-	-	-	1	-	-	-	-
Kidney-Nephritis	4	-	1	-	2	-	-	-	-	-	1	-	-
Kidney-Nephritis, End Stage	5	1	3	-	1	-	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	2	-	1	-	-	-	1	-	-	-	-	-	-
Kidney-Nephritis, Interstitial	6	-	-	1	-	-	2	-	1	1	-	-	1
Kidney-Nephrosis	12	1	3	-	1	1	3	-	-	2	-	1	-
Stillbirth, Idiopathic	1	-	-	-	-	-	-	-	-	-	1	-	-
Urethra-Obstruction	3	-	-	-	-	-	-	2	1	-	-	-	-
Urethra-Urethritis	1	-	-	-	-	-	-	-	-	-	-	1	-
Urinary Blad.-Neo., Trans. Cell Carcinoma	4	-	-	2	1	-	1	-	-	-	-	-	-
Urinary Bladder-Urocystitis	15	-	1	-	-	2	-	1	1	1	6	1	2
Urinary Bladder-Urolithiasis	3	-	-	1	-	-	-	-	1	-	-	1	-
Urine-Hematuria	1	-	-	-	-	-	-	-	-	-	-	1	-
Urine-Microbiologic Exam	331	19	24	34	28	36	23	36	21	16	20	39	35
Uterus-Endometrial Hyperplasia	2	-	-	-	1	-	-	-	-	-	1	-	-
Uterus-Metritis	2	-	-	-	-	-	-	-	2	-	-	-	-
Uterus-Neoplasm, Adenocarcinoma	1	-	-	-	1	-	-	-	-	-	-	-	-
<b>8 Endocrine</b>													
Adrenal-Atrophy	3	-	1	-	-	-	-	-	-	1	-	1	-
Adrenal-Hyperadrenalism	20	4	2	-	3	-	2	-	-	2	1	4	2
Adrenal-Hyperplasia	1	-	1	-	-	-	-	-	-	-	-	-	-
Thyroid-Atrophy	1	1	-	-	-	-	-	-	-	-	-	-	-
Thyroid-Cyst	3	-	-	-	-	-	-	1	-	2	-	-	-
Thyroid-Goiter	1	-	-	-	-	-	-	-	-	1	-	-	-



FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Thyroid-Hypothyroidism	9	-	1	1	1	-	-	1	-	-	2	-	3
Thyroid-Neoplasm, Adenoma	5	-	1	-	-	-	2	-	-	-	1	-	1
Thyroid-Neoplasm, Carcinoma	3	-	-	-	-	-	1	-	1	1	-	-	-
Thyroid-Thyroiditis	1	-	-	-	-	-	-	-	-	-	-	-	1
<b>9 Nervous</b>													
Neurological Disorders, Total Cases	33	3	3	4	5	2	2	2	1	4	2	2	3
Brain-Anomaly	7	1	1	1	-	-	1	-	-	1	1	1	-
Brain-Encephalitis, Granulomatous	1	-	-	-	-	-	-	-	-	-	-	-	1
Brain-Encephalitis, Non-Suppurative	6	-	-	-	1	1	-	1	-	2	-	-	1
Brain-Encephalomalacia	1	1	-	-	-	-	-	-	-	-	-	-	-
Brain-Encephalitis, Rabies	2	-	1	1	-	-	-	-	-	-	-	-	-
Brain-Neoplasm, Meningioma	1	-	-	-	-	-	-	1	-	-	-	-	-
Brain-Parasitism, <i>Toxoplasma sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Brain-Polioencephalomalacia	1	-	-	-	-	-	-	-	-	-	-	-	1
Meninges-Meningitis	2	-	-	1	-	-	-	-	-	-	1	-	-
Meninges-Meningitis, <i>Escherichia coli</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
Meninges-Meningitis, Non-Suppurative	1	-	-	-	1	-	-	-	-	-	-	-	-
Meninges-Meningitis, <i>Streptococcus sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Meninges-Meningitis, Suppurative	2	-	1	-	-	-	1	-	-	-	-	-	-
Neurologic Disorder, Idiopathic	5	-	1	1	2	-	-	-	-	1	-	-	-
Spinal Cord-Myelomalacia	2	-	-	-	1	-	-	-	1	-	-	-	-
Spinal Cord-Neoplasm	1	-	-	1	-	-	-	-	-	-	-	-	-
<b>X Special Senses</b>													
Ear-Dermatitis	1	-	-	-	-	1	-	-	-	-	-	-	-
Ear-Hematoma	1	-	1	-	-	-	-	-	-	-	-	-	-
Ear-Neoplasm	2	-	1	-	-	-	-	-	-	-	-	-	1
Ear-Neoplasm, Basal Cell Tumor	1	-	-	1	-	-	-	-	-	-	-	-	-
Ear-Neopl., Ceruminous Gland Adenoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Ear-Neopl., Ceruminous Gland Carcinoma	1	1	-	-	-	-	-	-	-	-	-	-	-
Ear-Neoplasm, Mastocytoma	2	-	-	-	-	-	1	-	-	-	-	1	-
Ear-Neoplasm, Squamous Cell Carcinoma	2	-	-	-	1	-	-	-	-	-	-	1	-
Ear-Otitis	14	1	-	-	2	2	-	1	2	1	3	-	2
Ear-Polyp	1	-	-	-	-	-	-	-	1	-	-	-	-
Eye-Conjunctivitis	8	1	-	-	2	1	-	1	1	1	1	-	-
Eye-Keratitis	3	-	-	-	-	-	-	1	1	-	-	1	-
Eye-Keratoconjunctivitis	1	-	-	-	-	-	-	-	1	-	-	-	-
Eye-Neoplasm, Basal Cell Tumor	1	-	-	-	-	-	-	-	-	-	1	-	-
Eye-Neoplasm, Melanoma	3	-	-	1	-	-	-	2	-	-	-	-	-

FELINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Eye-Neoplasm, Squamous Cell Carcinoma	1	-	-	-	-	-	-	-	-	-	-	-	1
Eye-Ophthalmitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Eyelid-Blepharitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Eyelid-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	-	1	-	-	-
Eyelid-Neoplasm, Mastocytoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Eyelid-Neopl., Squamous Cell Carcinoma	1	-	-	-	-	-	1	-	-	-	-	-	-

### FISH, AMPHIBIANS & REPTILES

#### ALLIGATOR/CROCODILE

Sudden Unexpected Death	1	-	-	-	-	-	-	-	-	-	-	-	1
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#### AQUARIUM FISH

Dermatitis, Focal	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Nematode	1	-	-	1	-	-	-	-	-	-	-	-	-
Septicemia, <i>Aeromonas sp.</i>	1	-	-	-	-	-	-	1	-	-	-	-	-

#### FRESH WATER FISH

Parasitism	1	-	1	-	-	-	-	-	-	-	-	-	-
Septicemia, Bacterial	1	-	-	-	1	-	-	-	-	-	-	-	-

#### FROG

Feces-Microbiologic Exam	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Nematode	1	-	-	1	-	-	-	-	-	-	-	-	-
Septicemia, <i>Aeromonas sp.</i>	1	-	-	1	-	-	-	-	-	-	-	-	-

#### LIZARD/IGUANA

Bone-Osteodystrophy	1	-	-	-	-	-	1	-	-	-	-	-	-
Dermatitis, Bacterial	1	-	-	-	-	-	-	-	-	-	-	1	-
Emaciation	1	-	-	-	-	-	1	-	-	-	-	-	-
Feces-Microbiologic Exam	3	-	-	-	1	1	-	-	-	1	-	-	-
Gall Bladder-Cholecystitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Gout	2	-	-	-	1	-	-	1	-	-	-	-	-
Intestine-Obstruction	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Parasitism	2	-	-	-	-	-	-	-	-	1	1	-	-
Intestine-Parasitism, Coccidia	2	-	-	-	-	-	-	-	-	2	-	-	-

FISH, AMPHI. & REPTILES (cont.)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>LIZARD/IGUANA (continued)</b>													
Intestine-Parasitism, Nematode	3	-	-	-	1	1	-	-	-	1	-	-	-
Kidney-Nephritis, Interstitial	1	-	-	-	-	-	1	-	-	-	-	-	-
Kidney-Nephrosis	1	-	-	-	-	-	-	1	-	-	-	-	-
Mineralization, Soft Tissue	1	-	-	-	-	-	-	-	-	1	-	-	-
Septicemia, <i>Salmonella sp.</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
<b>SALAMANDER</b>													
Intestine-Enteritis, Mycotic	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Parasitism	1	-	-	-	-	-	-	-	-	-	1	-	-
<b>SALT WATER FISH</b>													
Brain-Leukoencephalomalacia	1	-	-	-	-	-	-	-	-	-	-	-	1
Liver-Hepatitis	1	-	-	1	-	-	-	-	-	-	-	-	-
Septicemia, Bacterial	2	-	-	-	-	-	1	-	-	-	-	1	-
<b>SNAKE</b>													
Brain-Encephalitis, Non-Suppurative	1	-	1	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	5	1	3	1	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Necrotic	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Enteritis, <i>Salmonella sp.</i>	4	-	2	1	-	-	-	-	-	1	-	-	-
Intestine-Obstruction	1	-	-	-	-	-	-	-	-	1	-	-	-
Kidney-Nephrosis	1	-	-	-	-	-	-	-	-	1	-	-	-
Liver-Lipidosis	1	-	-	-	-	-	-	-	-	1	-	-	-
Septicemia, <i>Salmonella sp.</i>	5	-	1	1	1	-	-	1	-	-	-	1	-
Sudden Unexpected Death	2	-	-	-	-	-	-	-	1	-	-	1	-
<b>TURTLE</b>													
Feces-Microbiologic Exam	3	1	-	-	-	-	-	1	-	-	1	-	-
Intestine-Enteritis, <i>Salmonella sp.</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Intestine-Obstruction	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism	1	-	1	-	-	-	-	-	-	-	-	-	-
Liver-Lipidosis	1	-	-	-	-	-	1	-	-	-	-	-	-
Liver-Parasitism	1	-	1	-	-	-	-	-	-	-	-	-	-
Oral-Stomatitis	1	-	-	-	-	-	-	-	-	-	1	-	-
Septicemia, <i>Salmonella sp.</i>	2	-	-	1	-	-	1	-	-	-	-	-	-
Sudden Unexpected Death	2	1	1	-	-	-	-	-	-	-	-	-	-
Urine-Microbiologic Exam	1	-	-	-	-	-	-	-	1	-	-	-	-

**MISCELLANEOUS MAMMALS**

MISCELLANEOUS MAMMALS	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>AMERICAN MINIATURE HORSE</b>													
Abortion, Idiopathic	2	-	-	-	1	-	-	-	1	-	-	-	-
Feces-Microbiologic Exam	1	-	-	-	-	-	1	-	-	-	-	-	-
<b>ANTELOPE</b>													
Abscess	2	-	-	-	-	-	-	1	-	-	-	-	1
Feces-Microbiologic Exam	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Actinomyces pyogenes</i>	1	-	-	-	-	1	-	-	-	-	-	-	-
<b>ARMADILLO</b>													
Abscess	1	-	-	1	-	-	-	-	-	-	-	-	-
<b>BAT</b>													
Brain-Encephalitis, Rabies	4	-	1	1	1	-	-	-	-	-	-	-	1
Lung-Hemorrhage	1	-	-	-	-	-	-	-	-	1	-	-	-
Lung-Pneumonia, Interstitial	2	-	-	-	-	-	1	-	-	-	1	-	-
Sudden Unexpected Death	6	-	-	-	-	1	-	2	1	1	-	1	-
Toxicosis, Anticoagulant	1	-	-	1	-	-	-	-	-	-	-	-	-
Toxicosis, Lead	2	-	-	-	-	-	-	-	-	-	-	2	-
<b>BEAR</b>													
Neurologic Disorder, Idiopathic	1	-	-	-	1	-	-	-	-	-	-	-	-
Urine-Microbiologic Exam	2	-	1	1	-	-	-	-	-	-	-	-	-
<b>BOBCAT</b>													
Feces-Microbiologic Exam	1	-	-	-	-	-	1	-	-	-	-	-	-
Feline Panleukopenia	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Parasitism, Cestode	1	-	-	-	-	-	-	1	-	-	-	-	-
<b>CAMEL</b>													
Abscess	2	1	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Focal	1	-	-	-	1	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	3	-	-	-	3	-	-	-	-	-	-	-	-
Heart-Myocardial Degeneration	1	-	-	-	-	-	-	1	-	-	-	-	-
Thyroid-Goiter	1	-	-	-	-	-	-	1	-	-	-	-	-

MISCELLANEOUS MAMMALS (cont.)Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>CARIBOU</b>												
Adrenal-Adrenitis	1	-	1	-	-	-	-	-	-	-	-	-
Arthropathy	1	-	-	-	-	-	1	-	-	-	-	-
Blood-Parasitism, <i>Babesia sp.</i>	1	-	-	-	1	-	-	-	-	-	-	-
Esophagus-Esophagitis	1	-	1	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	2	-	-	-	-	-	-	-	1	1	-	-
Intestine-Parasitism, Trichostrongylids	1	-	-	-	-	-	-	-	-	-	-	1
Liver-Parasitism	2	-	-	-	1	-	-	-	-	-	-	1
Lung-Pneumonia, Foreign Body	1	-	-	-	-	-	-	-	-	-	-	1
Parasitism, Tick	1	-	-	-	-	-	-	-	1	-	-	-
Thyroid-Goiter	1	-	-	-	1	-	-	-	-	-	-	-
<b>CHINCHILLA</b>												
Emaciation	1	-	-	-	-	-	-	-	-	-	-	1
Liver-Lipidosis	1	-	-	-	-	-	-	1	-	-	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	1	-	-	1	-	-	-	-	-	-	-	-
Mammary-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	1	-	-	-	-
Septicemia, <i>Klebsiella sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1
Stomach-Gastritis	1	-	-	-	1	-	-	-	-	-	-	-
Uterus-Metritis	1	-	-	-	-	-	-	1	-	-	-	-
<b>DEER</b>												
Bone-Fracture	1	-	-	-	-	-	-	-	-	-	-	1
Brain-Polioencephalomalacia	1	-	-	-	-	-	1	-	-	-	-	-
Emaciation	2	1	-	-	-	-	-	-	-	-	-	1
Grain Overload	1	-	-	-	-	-	-	1	-	-	-	-
Hernia, Diaphragmatic	1	-	-	-	-	-	-	1	-	-	-	-
Intestine-Enteritis, <i>C. perfringens</i> Type C	1	-	-	-	-	-	-	-	-	-	1	-
Intestine-Hemorrhage	2	-	-	-	-	-	2	-	-	-	-	-
Intestine-Parasitism, Coccidia	1	-	-	-	-	-	-	-	-	-	-	1
Intestine-Parasitism, Nematode	2	-	-	-	-	-	1	-	-	-	-	1
Lung-Pneumonia, Foreign Body	1	-	-	-	-	-	1	-	-	-	-	-
Malignant Catarrhal Fever	1	-	-	-	-	-	-	-	-	-	1	-
Meninges-Meningitis, <i>Escherichia coli</i>	1	-	1	-	-	-	-	-	-	-	-	-
Muscle-Myositis	1	-	-	-	1	-	-	-	-	-	-	-
Sudden Unexpected Death	1	-	-	-	1	-	-	-	-	-	-	-

MISCELLANEOUS MAMMALS (cont.) Total

	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>DOLPHIN</b>												
Abortion, Placentitis	1	1	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	1	-	-	1	-	-	-	-	-	-	-	-
Respiratory, Microbiologic Exam	8	-	1	1	2	2	-	1	-	-	-	1
Sudden Unexpected Death	1	1	-	-	-	-	-	-	-	-	-	-
<b>ELK</b>												
Abortion, Bacterial	1	-	-	-	-	-	-	-	-	1	-	-
Abscess	1	-	-	1	-	-	-	-	-	-	-	-
Brain-Parasitism, <i>Neospora sp.</i>	1	-	-	-	-	-	-	1	-	-	-	-
Emaciation	2	-	-	-	-	-	1	1	-	-	-	-
Genital Anomaly, Freemartin	1	-	-	1	-	-	-	-	-	-	-	-
Grain Overload	1	-	-	-	-	1	-	-	-	-	-	-
Heart-Cardiomyopathy	1	-	-	-	-	-	-	-	-	-	1	-
Heart-Parasitism, <i>Sarcocystis sp.</i>	1	-	-	-	-	-	-	-	-	-	1	-
Intestine-Hemorrhage	1	-	-	-	-	-	-	-	-	-	-	1
Intestine-Parasitism, Cestode	1	-	-	-	-	-	1	-	-	-	-	-
Intestine-Parasitism, Trichostrongylids	2	1	-	-	-	-	1	-	-	-	-	-
Liver-Lipidosis	2	-	-	1	-	-	-	-	-	-	-	1
Liver-Parasitism	1	-	-	-	-	-	-	1	-	-	-	-
Lung-Pneumonia, Mycotic	1	-	-	-	-	-	1	-	-	-	-	-
Parasitism	1	-	-	1	-	-	-	-	-	-	-	-
Septicemia, Bacterial	1	-	-	-	-	-	-	-	-	-	-	1
Stomach-Rumenitis	1	-	-	-	-	1	-	-	-	-	-	-
Sudden Unexpected Death	3	1	-	-	-	-	-	-	-	-	1	1
Toxicosis, Copper	1	-	-	-	-	-	-	-	-	1	-	-
<b>FERRET</b>												
Adrenal-Hyperplasia	2	-	-	-	-	1	-	-	-	-	1	-
Adrenal-Neoplasm, Adenoma	1	-	-	1	-	-	-	-	-	-	-	-
Blood-Anemia	1	-	-	-	-	1	-	-	-	-	-	-
Bone Mar.-Neo., Myeloprolifer. Disorder	1	-	1	-	-	-	-	-	-	-	-	-
Bone-Neoplasm, Osteosarcoma	1	-	-	-	-	-	-	1	-	-	-	-
Emaciation	1	-	1	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	1	-	-	-	-	-	-	-	1	-	-	-
Heart-Cardiomyopathy	1	-	-	-	1	-	-	-	-	-	-	-
Intestine-Enteritis, Parvovirus	1	-	1	-	-	-	-	-	-	-	-	-
Intestine-Obstruction	1	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	1	-	1	-	-	-	-	-	-	-	-	-
Kidney-Nephritis	1	-	-	1	-	-	-	-	-	-	-	-

MISCELLANEOUS MAMMALS (cont.)Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn	
<b>FERRET (continued)</b>													
Liver-Lipidosis	6	-	1	1	-	1	-	1	-	-	-	1	1
Lung-Pneumonia, Broncho	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung-Pneumonia, Foreign Body	1	-	-	-	-	1	-	-	-	-	-	-	-
Neoplasm, Adenoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Fibrosarcoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Neoplasm, Mastocytoma	2	-	-	1	1	-	-	-	-	-	-	-	-
Neoplasm, Sebaceous Gland Adenoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Pancreas-Pancreatitis	1	-	-	-	1	-	-	-	-	-	-	-	-
Pituitary-Neoplasm, Adenoma	1	-	-	-	-	1	-	-	-	-	-	-	-
Septicemia, Bacterial	1	-	1	-	-	-	-	-	-	-	-	-	-
Stomach-Ulcer	1	-	-	-	-	-	-	-	1	-	-	-	-
Sudden Unexpected Death	1	-	-	1	-	-	-	-	-	-	-	-	-
Urine-Microbiologic Exam	2	-	-	-	-	-	-	-	-	2	-	-	-
<b>FOX</b>													
Canine Distemper	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Enteritis, Enterovirus	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Parasitism	1	-	-	-	1	-	-	-	-	-	-	-	-
Neurologic Disorder, Idiopathic	1	-	-	1	-	-	-	-	-	-	-	-	-
Parasitism, Mites	1	-	-	-	1	-	-	-	-	-	-	-	-
<b>GUINEA PIG</b>													
Alopecia	1	-	-	1	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	5	-	-	-	-	-	1	2	-	-	2	-	
Lung-Pneumonia	1	-	-	-	-	-	-	-	-	-	-	1	
Mammary-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	-	-	1	-	-	
<b>HAMSTER</b>													
Emaciation	2	-	-	-	1	1	-	-	-	-	-	-	
Feces-Microbiologic Exam	1	-	-	-	-	-	-	-	-	-	1	-	
Sudden Unexpected Death	1	-	-	-	-	-	1	-	-	-	-	-	
<b>LEOPARD</b>													
Kidney-Nephrosis	2	-	-	-	-	-	2	-	-	-	-	-	
Lung-Pneumonia, Foreign Body	1	-	-	-	-	-	1	-	-	-	-	-	
Mineralization, Soft Tissue	1	-	-	-	-	-	1	-	-	-	-	-	
Neoplasm, Mastocytoma	1	-	-	-	-	-	1	-	-	-	-	-	
Toxicosis, Ethylene Glycol	1	-	-	-	-	-	1	-	-	-	-	-	
Urine-Microbiologic Exam	2	-	1	-	-	-	1	-	-	-	-	-	

MISCELLANEOUS MAMMALS (cont.)Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>LLAMA</b>												
Abortion, Idiopathic	5	-	1	-	-	-	-	1	-	2	1	-
Abortion, Placentitis	1	-	-	-	-	-	-	1	-	-	-	-
Anomaly	13	-	4	2	2	2	1	-	-	2	-	-
Blood—Anemia	1	-	-	-	-	-	-	1	-	-	-	-
Deficiency, Copper	1	-	-	-	-	-	-	1	-	-	-	-
Deficiency, Vitamin E	1	-	1	-	-	-	-	-	-	-	-	-
Dermatitis, Diffuse	1	-	-	-	-	-	-	-	-	1	-	-
Emaciation	4	-	-	-	-	-	3	1	-	-	-	-
Feces—Microbiologic Exam	4	-	-	-	-	1	1	-	-	2	-	-
Genital—Anomaly	1	-	-	-	-	-	-	-	-	-	-	1
Heart—Heart Failure, Chronic	1	-	-	1	-	-	-	-	-	-	-	-
Intestine—Parasitism, Coccidia	1	-	-	-	-	1	-	-	-	-	-	-
Intestine—Parasitism, Trichostrongylids	1	-	-	-	-	1	-	-	-	-	-	-
Kidney—Nephritis, Glomerulo	1	-	-	-	-	-	1	-	-	-	-	-
Kidney—Nephritis, Interstitial	1	-	-	-	-	1	-	-	-	-	-	-
Liver—Hepatosi	1	-	-	-	-	-	-	1	-	-	-	-
Lung—Pneumonia, Foreign Body	1	-	-	-	-	-	-	1	-	-	-	-
Mineralization, Soft Tissue	1	-	-	-	-	-	-	1	-	-	-	-
Neonatal Death	1	-	-	-	-	1	-	-	-	-	-	-
Neonatal Weakness	1	-	1	-	-	-	-	-	-	-	-	-
Oral—Dentition Abnormal	1	-	-	-	-	-	1	-	-	-	-	-
Oral—Stomatitis	1	-	-	-	-	-	1	-	-	-	-	-
Peritonitis	1	-	-	-	-	-	1	-	-	-	-	-
Septicemia, <i>Actinomyces pyogenes</i>	1	-	-	-	-	-	-	-	1	-	-	-
Spinal Cord—Myelitis, Non-Suppurative	1	-	-	-	-	-	-	-	-	-	-	1
Stillbirth, Idiopathic	1	-	-	-	-	-	-	-	-	1	-	-
Stomach—Gastritis	2	-	-	-	-	1	-	-	1	-	-	-
Stomach—Ulcer	2	-	-	-	-	-	1	-	1	-	-	-
Sudden Unexpected Death	3	1	-	-	-	1	-	-	-	1	-	-
Toxicosis, Copper	1	-	-	-	-	-	-	-	-	1	-	-
Urine—Microbiologic Exam	2	-	-	-	-	1	-	-	-	-	1	-
Uterus—Metritis	1	-	-	-	-	-	-	-	-	1	-	-
<b>LYNX</b>												
Peritonitis	1	1	-	-	-	-	-	-	-	-	-	-



MISCELLANEOUS MAMMALS (cont.)Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>MINK</b>												
Brain–Encephalitis, Non-Suppurative	1	-	-	-	-	-	-	1	-	-	-	-
Intestine–Enteritis, <i>Escherichia coli</i>	1	-	-	-	-	-	-	-	-	-	1	-
Intestine–Enteritis, <i>Salmonella sp.</i>	1	-	-	-	1	-	-	-	-	-	-	-
Kidney–Nephrosis	1	-	-	-	-	-	-	1	-	-	-	-
Liver–Hepatitis	2	-	-	-	-	-	-	1	1	-	-	-
Liver–Lipidosis	2	-	-	-	1	1	-	-	-	-	-	-
Virus Infection, Aleutian Disease	1	-	-	-	-	-	-	-	-	-	1	-
<b>MISCELLANEOUS SPECIES</b>												
Abscess	1	-	-	-	-	-	-	-	-	-	-	1
Emaciation	1	-	1	-	-	-	-	-	-	-	-	-
Feces–Microbiologic Exam	1	-	1	-	-	-	-	-	-	-	-	-
Intestine–Parasitism	1	-	-	-	-	-	-	-	-	-	-	1
Lung–Hemorrhage	1	-	-	-	-	1	-	-	-	-	-	-
Septicemia, <i>Staphylococcus sp.</i>	1	-	-	-	-	-	-	-	-	-	1	-
<b>MONKEY</b>												
Feces–Microbiologic Exam	1	-	-	-	-	-	1	-	-	-	-	-
Lung–Edema	1	-	-	-	-	-	-	1	-	-	-	-
<b>MOOSE</b>												
Deficiency, Copper	1	-	1	-	-	-	-	-	-	-	-	-
Emaciation	1	-	1	-	-	-	-	-	-	-	-	-
Eye–Conjunctivitis	1	-	-	1	-	-	-	-	-	-	-	-
Feces–Microbiologic Exam	10	7	-	-	-	3	-	-	-	-	-	-
Intestine–Parasitism, <i>Capillaria sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-
Intestine–Parasitism, <i>Cryptosporidium sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1
Intestine–Parasitism, <i>Nematodirus sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-
Intestine–Parasitism, Trichostrongylids	1	1	-	-	-	-	-	-	-	-	-	-
Intestine–Parasitism, <i>Trichuris sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-
Liver–Parasitism	3	-	-	-	1	-	1	1	-	-	-	-
Liver–Parasitism, <i>Fascioloides sp.</i>	2	-	-	-	-	1	-	-	-	1	-	-
Lung–Pneumonia, Broncho	1	-	-	-	1	-	-	-	-	-	-	-
Lung–Thrombosis	1	-	-	-	-	-	-	1	-	-	-	-
Polyserositis	1	-	-	-	1	-	-	-	-	-	-	-
<b>MOUSE</b>												
Respiratory, Microbiologic Exam	1	-	-	1	-	-	-	-	-	-	-	-

MISCELLANEOUS MAMMALS (cont.) Total

Jl Ag Sp Oc Nv Dc Jn Fb Mr Ap My Jn

OTTER

Intestine-Enteritis, <i>Salmonella sp.</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Urine-Microbiologic Exam	4	-	-	-	1	-	1	-	-	-	-	1	1

OX

Granulomas, Generalized	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Intussusception	1	-	-	-	-	-	-	-	-	-	-	-	1

PORCUPINE

Heart-Anomaly	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Cestode	1	-	-	-	-	-	-	1	-	-	-	-	-
Lung-Pneumonia, <i>Salmonella sp.</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Parasitism, Lice	2	-	1	-	-	-	-	-	-	1	-	-	-

PRAIRIE DOG

Lung-Neoplasm, Sarcoma, Metastatic	1	-	1	-	-	-	-	-	-	-	-	-	-
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RABBIT

Brain-Encephalomalacia, Parasitism	1	-	-	-	1	-	-	-	-	-	-	-	-
Brain-Parasitism, <i>Encephalitozoon sp.</i>	4	1	-	-	-	-	-	-	2	-	-	-	1
Emaciation	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Colitis	2	-	-	-	-	1	-	-	-	-	-	-	1
Intestine-Obstruction	1	-	-	-	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Cestode	1	-	1	-	-	-	-	-	-	-	-	-	-
Intestine-Parasitism, Coccidia	3	-	2	-	-	-	-	-	1	-	-	-	-
Intestine-Parasitism, Trichostrongylids	1	-	1	-	-	-	-	-	-	-	-	-	-
Kidney-Nephritis, Interstitial	1	-	-	-	-	1	-	-	-	-	-	-	-
Kidney-Nephrosis	2	-	1	-	-	-	1	-	-	-	-	-	-
Liver-Hepatitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Liver-Hepatositis	1	-	-	-	1	-	-	-	-	-	-	-	-
Liver-Lipidosis	1	-	-	-	1	-	-	-	-	-	-	-	-
Liver-Parasitism	1	-	-	-	1	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho	2	-	1	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	1	-	-	-	1	-	-	-	-	-	-	-	-
Mammary-Neoplasm, Adenocarcinoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Basal Cell Tumor	1	-	-	-	1	-	-	-	-	-	-	-	-
Neoplasm, Carcinoma	1	-	-	-	-	-	-	-	1	-	-	-	-
Parasitism	1	1	-	-	-	-	-	-	-	-	-	-	-
Parasitism, <i>Encephalitozoon sp.</i>	1	-	1	-	-	-	-	-	-	-	-	-	-

MISCELLANEOUS MAMMALS (cont.) Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>RABBIT (continued)</b>												
Sept., <i>Bacillus piliformis</i> (Tyzzer's Disease)	1	1	-	-	-	-	-	-	-	-	-	-
Septicemia, <i>Pasteurella multocida</i>	5	-	1	-	-	3	-	1	-	-	-	-
Stomach-Dilatation	1	-	-	-	-	-	-	-	-	-	1	-
Stomach-Volvulus	1	-	-	-	-	-	-	-	-	-	-	1
Sudden Unexpected Death	3	-	1	-	-	-	-	-	1	-	1	-
Trauma	1	-	-	-	-	-	-	-	-	-	1	-
Urine-Microbiologic Exam	1	-	-	-	-	-	-	-	-	-	1	-
Uterus-Metritis	1	1	-	-	-	-	-	-	-	-	-	-
<b>RACCOON</b>												
Brain-Encephalitis, Distemper	7	-	1	-	1	-	1	-	1	-	1	2
Brain-Encephalitis, Eosinophilic	1	-	-	1	-	-	-	-	-	-	-	-
Brain-Parasitism, <i>Toxoplasma sp.</i>	2	-	-	-	-	-	-	-	2	-	-	-
Canine Distemper	8	-	1	-	1	-	-	1	-	2	1	2
Feces-Microbiologic Exam	1	-	1	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Necrotic	1	1	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Parvovirus	4	1	2	-	1	-	-	-	-	-	-	-
Intestine-Parasitism, Ascaris	1	-	-	-	1	-	-	-	-	-	-	-
Lung-Parasitism	1	-	-	-	-	1	-	-	-	-	-	-
Lung-Pneumonia	1	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, Foreign Body	1	1	-	-	-	-	-	-	-	-	-	-
Septicemia, <i>Salmonella sp.</i>	1	-	-	-	-	-	-	-	-	-	1	-
Spleen-Neoplasm, Plasmacytoma	1	-	-	1	-	-	-	-	-	-	-	-
Trauma	1	-	-	-	-	1	-	-	-	-	-	-
<b>RAT</b>												
Dermatitis, Podo	1	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho	3	-	-	-	-	1	-	-	2	-	-	-
Oral-Dentition Abnormal	1	-	-	-	-	-	-	-	-	-	1	-
Respiratory, Microbiologic Exam	1	-	-	-	-	1	-	-	-	-	-	-
<b>REINDEER</b>												
Emaciation	2	-	-	-	-	-	-	-	-	-	1	1
Grain Overload	1	-	-	-	-	1	-	-	-	-	-	-
Intestine-Colitis	1	-	-	-	-	1	-	-	-	-	-	-
Intestine-Enteritis, Rotavirus	1	-	-	-	-	-	-	-	-	-	1	-
Intestine-Parasitism, <i>Cryptosporidium sp.</i>	1	-	-	-	-	-	-	-	-	-	-	1
Lymph Node-Lymphadenitis	1	-	-	-	1	-	-	-	-	-	-	-

MISCELLANEOUS MAMMALS (cont.) Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>REINDEER (continued)</b>												
Septicemia, <i>Escherichia coli</i>	1	-	-	-	-	-	-	-	-	-	-	1
Stomach-Gastritis, Mycotic	1	-	-	-	-	-	-	-	-	-	1	-
<b>SHREW</b>												
Feces-Microbiologic Exam	2	-	-	-	1	1	-	-	-	-	-	-
<b>SKUNK</b>												
Brain-Encephalitis, Non-Suppurative	1	-	-	1	-	-	-	-	-	-	-	-
Brain-Encephalitis, Rabies	26	-	-	1	2	-	3	5	5	2	5	3
Brain-Parasitism, <i>Neospora sp.</i>	1	-	-	-	-	-	-	1	-	-	-	-
Brain-Polioencephalomalacia	1	1	-	-	-	-	-	-	-	-	-	-
<b>SQUIRREL</b>												
Brain-Encephalomalacia	1	1	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	1	-	-	-	-	-	-	-	1	-	-	-
Thyroid-Goiter	1	-	-	-	-	-	-	-	-	-	1	-
Trauma	2	-	-	-	-	-	1	1	-	-	-	-
<b>TIGER</b>												
Eye-Conjunctivitis	1	-	-	-	-	-	-	-	-	-	1	-
Feces-Microbiologic Exam	2	-	-	-	1	-	-	-	-	-	1	-
Toxicosis, Barbiturate	1	-	-	-	-	-	-	-	1	-	-	-
<b>WALLABY</b>												
Emaciation	1	-	-	-	-	-	1	-	-	-	-	-
Intestine-Parasitism, Coccidia	1	-	-	-	-	-	1	-	-	-	-	-
Intestine-Parasitism, Nematode	1	-	-	-	-	-	1	-	-	-	-	-
<b>WOLF</b>												
Dermatitis, Ulcerative	1	1	-	-	-	-	-	-	-	-	-	-
Feces-Microbiologic Exam	1	-	-	-	1	-	-	-	-	-	-	-
Intestine-Enteritis, Parvovirus	1	1	-	-	-	-	-	-	-	-	-	-
<b>ZEBRA</b>												
Septicemia, <i>Actinobacillus equuli</i>	1	-	-	-	1	-	-	-	-	-	-	-
Septicemia, <i>Rhodococcus equi</i>	1	-	-	-	1	-	-	-	-	-	-	-

**OVINE**

OVINE	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<u>0 Body as a Whole</u>													
Abscess	3	-	1	-	-	-	-	-	1	-	-	-	1
Caseous Lymphadenitis	3	2	-	-	-	-	-	-	-	1	-	-	-
Contagious Ecthyma	3	-	-	1	1	-	-	-	-	1	-	-	-
Emaciation	4	-	1	-	-	-	-	-	2	1	-	-	-
Grain Overload	2	-	-	1	-	-	-	1	-	-	-	-	-
Neonatal Weakness	5	-	-	-	-	-	-	1	1	2	-	1	-
Neoplasm, Carcinoma	1	-	-	1	-	-	-	-	-	-	-	-	-
Neoplasm, Carcinoma, Metastatic	1	-	-	-	-	-	1	-	-	-	-	-	-
Peritonitis	1	-	-	-	-	-	-	-	-	1	-	-	-
Septicemia, Bacterial	1	-	-	-	-	-	-	-	-	1	-	-	-
Septicemia, <i>Escherichia coli</i>	1	-	-	-	-	-	-	-	-	-	-	1	-
Toxicosis, Copper	7	1	-	1	1	-	-	1	1	-	-	-	2
Trauma	2	-	-	-	-	-	-	-	2	-	-	-	-
<u>1 Integumentary</u>													
Anomaly	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Focal	1	-	-	-	-	-	1	-	-	-	-	-	-
Dermatitis, Podo	4	1	-	-	-	-	-	1	-	-	-	-	2
Mammary-Mastitis	2	-	-	-	-	-	-	-	-	-	-	-	2
Mammary-Mastitis, <i>Staphylococcus aureus</i>	1	1	-	-	-	-	-	-	-	-	-	-	-
Neoplasm, Lymphangioma	1	1	-	-	-	-	-	-	-	-	-	-	-
<u>3 Respiratory</u>													
Respiratory Disorders, Total Cases	13	-	2	1	2	2	1	1	1	-	1	-	2
Lung-Abscess	2	-	-	-	-	-	-	1	-	-	1	-	-
Lung-Pneumonia, Broncho	3	-	1	-	1	1	-	-	-	-	-	-	-
Lung-Pneumonia, Ovine Progressive	1	-	-	-	-	-	-	-	-	-	-	-	1
Lung-Pneumonia, <i>Pasteurella hemolytica</i>	5	-	1	1	1	-	1	-	-	-	-	-	1
Lung-Pneumonia, <i>Pasteurella multocida</i>	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Thrombosis	1	-	-	-	-	-	-	-	1	-	-	-	-
Respiratory, Microbiologic Exam	1	-	-	-	-	1	-	-	-	-	-	-	-

OVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>4 Cardiovascular</b>													
Heart-Endocarditis	1	1	-	-	-	-	-	-	-	-	-	-	-
Heart-Heart Failure, Acute	1	-	-	-	-	-	-	1	-	-	-	-	-
Heart-Parasitism, <i>Sarcocystis</i> sp.	1	-	-	-	-	-	-	1	-	-	-	-	-
Heart-Pericarditis	1	-	-	-	1	-	-	-	-	-	-	-	-
<b>5 Hemic and Lymphatic</b>													
Blood-Anemia	1	-	-	1	-	-	-	-	-	-	-	-	-
<b>6 Digestive</b>													
Feces-Microbiologic Exam	4	-	2	1	-	-	-	-	-	1	-	-	-
Intestine-Anomaly	1	-	-	-	-	-	1	-	-	-	-	-	-
Intestine-Enteritis, Idiopathic	2	-	-	-	-	-	1	-	-	1	-	-	-
Intestine-Ent., <i>M. paratuberculosis</i> (Johne's)	2	-	-	1	-	-	1	-	-	-	-	-	-
Intestine-Enteritis, <i>Salmonella</i> sp.	3	-	-	-	1	-	-	-	1	1	-	-	-
Intestine-Parasitism, Coccidia	8	-	2	-	4	-	-	-	-	2	-	-	-
Intestine-Parasitism, <i>Cryptosporidium</i> sp.	2	-	-	-	-	-	-	-	-	-	-	1	1
Intestine-Parasitism, Trichostrongylids	7	-	2	1	3	-	-	-	1	-	-	-	-
Intestine-Volvulus	2	-	-	-	-	-	1	-	-	1	-	-	-
Lip-Chelitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Liver-Abscess	1	-	-	-	-	-	-	-	-	1	-	-	-
Liver-Lipidosis	1	-	-	-	-	-	-	1	-	-	-	-	-
Liver-Parasitism, <i>Fascioloides</i> sp.	1	-	-	-	-	-	-	-	-	1	-	-	-
Stomach-Abomasitis, Mycotic	1	-	-	-	-	-	-	-	1	-	-	-	-
Stomach-Foreign Body	1	-	-	-	1	-	-	-	-	-	-	-	-
Stomach-Parasitism, <i>Haemonchus</i> sp.	1	-	1	-	-	-	-	-	-	-	-	-	-
<b>7 Urogenital</b>													
Reproductive Disorders, Total Cases	19	-	1	1	-	-	2	3	3	5	4	-	-
Abortion, Anomaly	1	-	-	-	-	-	-	-	1	-	-	-	-
Abortion, Bacterial	1	-	-	-	-	-	-	1	-	-	-	-	-
Abortion, Bacterial, <i>Salmonella</i> sp.	1	-	-	-	-	-	1	-	-	-	-	-	-
Abortion, Goiter	1	-	-	-	-	-	-	-	-	-	1	-	-
Abortion, Idiopathic	9	-	-	-	-	-	-	1	1	5	2	-	-
Abortion, Parasitism, <i>Toxoplasma</i> sp.	3	-	-	-	-	-	1	1	-	-	1	-	-
Uterus-Neoplasm	1	-	-	1	-	-	-	-	-	-	-	-	-
Uterus-Perforation	1	-	-	-	-	-	-	-	1	-	-	-	-
Vas Deferens-Normal	1	-	1	-	-	-	-	-	-	-	-	-	-

OVINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>8 Endocrine</b>													
Thyroid-Cyst	1	-	-	-	-	-	-	-	-	-	-	-	1
Thyroid-Goiter	1	-	-	-	-	-	-	-	-	-	1	-	-
<b>9 Nervous</b>													
Neurological Disorders, Total Cases	4	-	-	-	-	-	-	1	-	1	-	1	1
Brain-Abscess	1	-	-	-	-	-	-	-	-	-	-	-	1
Brain-Encephalitis, <i>Listeria sp.</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Neurologic Disorder, Idiopathic	2	-	-	-	-	-	-	1	-	-	-	1	-

**PORCINE**

<b>0 Body as a Whole</b>													
Abscess	5	-	-	1	-	-	1	-	2	-	-	-	1
Anomaly	1	-	-	-	-	-	-	1	-	-	-	-	-
Cannibalism	1	-	-	-	-	1	-	-	-	-	-	-	-
Deficiency, Copper	2	-	-	-	1	1	-	-	-	-	-	-	-
Deficiency, Selenium	2	-	-	-	-	2	-	-	-	-	-	-	-
Deficiency, Vitamin E	2	2	-	-	-	-	-	-	-	-	-	-	-
Deficiency, Zinc	4	-	-	-	3	-	-	-	-	1	-	-	-
Downer Sow	3	-	-	-	1	1	-	-	-	-	-	1	-
Edema Disease	5	-	2	-	-	2	-	-	-	-	1	-	-
Emaciation	11	2	1	-	1	-	-	2	2	-	2	-	1
Growth Retardation	22	1	2	1	3	3	2	-	4	1	5	-	-
Health Evaluation, Normal	5	-	1	-	-	-	2	1	-	-	-	-	1
Hernia, Inguinal	1	-	1	-	-	-	-	-	-	-	-	-	-
Inanition	1	1	-	-	-	-	-	-	-	-	-	-	-
Metabolic Imbalance, Shock	1	-	-	-	-	-	-	-	1	-	-	-	-
Mycotoxiosis, Deoxynivalenol	2	-	1	-	-	1	-	-	-	-	-	-	-
Neonatal Death	1	-	-	-	-	1	-	-	-	-	-	-	-
Neonatal Weakness	38	1	-	2	3	1	2	3	9	5	11	1	-
Neoplasm	4	-	-	1	-	-	-	-	-	-	2	1	-
Omphalitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Peritonitis	3	-	-	-	-	-	-	-	1	1	1	-	-
Polyserositis	60	5	4	3	10	4	-	1	5	5	10	2	11
Porcine Stress Syndrome	5	1	2	-	-	-	-	-	-	-	-	-	2
Septicemia, <i>Actinobacillus equuli</i>	1	-	-	-	-	-	-	-	-	1	-	-	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Septicemia, <i>Actinobacillus suis</i>	17	1	1	4	-	-	2	1	3	1	2	1	1
Septicemia, <i>Actinomyces pyogenes</i>	2	-	-	-	-	-	-	-	1	-	1	-	-
Septicemia, Bacterial	3	-	-	-	1	-	-	-	-	1	1	-	-
Septicemia, <i>Erysipelothrix sp.</i>	13	1	1	-	-	1	-	1	2	4	2	1	-
Septicemia, <i>Escherichia coli</i>	25	3	3	2	-	1	-	2	1	2	6	2	3
Septicemia, <i>Hemophilus parasuis</i>	13	3	1	-	-	-	-	2	-	-	6	-	1
Septicemia, <i>Pasteurella multocida</i>	4	1	-	1	-	-	-	-	-	-	1	1	-
Septicemia, <i>Pasteurella sp.</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Septicemia, <i>Salmonella sp.</i>	107	12	10	16	11	8	8	9	6	8	7	9	3
Septicemia, <i>Streptococcus sp.</i>	7	-	-	1	-	-	1	1	-	3	1	-	-
Septicemia, <i>Streptococcus suis</i>	30	3	4	1	-	3	2	2	5	5	2	1	2
Sudden Unexpected Death	60	4	5	3	4	4	4	5	9	10	7	1	4
Toxicosis, Selenium	5	-	-	-	5	-	-	-	-	-	-	-	-
Toxicosis, Sodium (Water Deprivation)	2	-	-	1	-	-	-	-	-	-	1	-	-
Virus Infection, Circovirus	2	-	-	-	-	-	-	-	-	-	2	-	-
Virus Infection, Por. Repro. & Resp. Syn.	263	6	14	15	35	20	20	21	30	30	31	24	17
Virus Infection, Pseudorabies	2	-	-	-	-	-	-	-	1	-	-	1	-
<b>1 Integumentary</b>													
Cellulitis	1	-	-	-	-	-	-	-	-	-	-	1	-
Dermatitis, Bacterial	2	-	-	-	-	-	-	-	-	1	-	1	-
Dermatitis, Diffuse	10	1	-	-	2	1	-	-	1	1	1	3	-
Dermatitis, Eosinophilic	1	-	-	-	-	-	-	-	-	-	1	-	-
Dermatitis, Exudative Epidermitis	7	1	1	-	-	-	2	-	-	1	1	-	1
Dermatitis, Focal	1	-	-	-	-	-	1	-	-	-	-	-	-
Dermatitis, Pityriasis Rosea	1	-	-	-	-	-	-	-	-	-	1	-	-
Dermatitis, Podo	2	-	-	-	1	-	-	-	-	-	-	-	1
Dermatitis, <i>Staphylococcus sp.</i>	4	-	-	-	2	-	1	-	-	-	1	-	-
Parasitism, Mites	1	-	-	-	-	-	-	-	-	-	1	-	-
Skin-Parakeratosis	5	-	-	-	2	-	1	-	-	1	1	-	-
Virus Infection, Pox	1	-	-	-	-	-	-	-	-	-	-	1	-
<b>2 Musculoskeletal</b>													
Arthritis	12	1	1	-	2	2	2	-	1	1	1	1	-
Arthritis, <i>Actinomyces pyogenes</i>	4	-	1	-	-	1	-	-	-	2	-	-	-
Arthritis, <i>Escherichia coli</i>	4	-	-	-	-	2	-	-	1	-	-	-	1
Arthritis, <i>Hemophilus parasuis</i>	3	1	-	1	-	-	-	-	-	-	-	-	1
Arthritis, Non-Suppurative	1	1	-	-	-	-	-	-	-	-	-	-	-
Arthritis, <i>Staphylococcus aureus</i>	4	-	-	-	-	-	-	1	-	-	1	-	2



PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Arthritis, <i>Staphylococcus</i> sp.	1	-	-	-	-	-	-	-	-	-	-	-	1
Arthritis, <i>Streptococcus</i> sp.	6	1	-	-	2	1	-	1	-	-	-	-	1
Arthritis, <i>Streptococcus suis</i>	7	-	2	-	1	1	1	-	-	-	-	-	2
Arthritis, Suppurative	6	2	1	-	-	-	1	-	-	1	1	-	-
Bone-Fracture	1	-	-	-	-	-	-	-	-	1	-	-	-
Bone-Osteochondrosis	4	1	-	-	2	-	-	-	-	-	1	-	-
Bone-Osteodystrophy	1	-	-	-	-	-	-	-	-	-	-	1	-
Bone-Osteomalacia	1	-	1	-	-	-	-	-	-	-	-	-	-
Muscle-Myositis	1	-	-	-	-	-	-	1	-	-	-	-	-
<b>3 Respiratory</b>													
Respiratory Disorders, Total Cases	1,209	61	88	80	117	109	90	115	136	122	116	90	85
Larynx-Laryngitis	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung-Abscess	2	-	-	-	1	-	-	-	-	-	1	-	-
Lung-Bronchitis	11	3	1	2	2	-	-	1	1	-	-	-	1
Lung-Edema	8	-	-	-	1	-	1	1	1	1	2	1	-
Lung-Hemorrhage	15	-	-	1	3	2	1	2	1	2	1	1	1
Lung-Parasitism, Ascaris (Larvae)	6	-	-	1	-	3	-	-	-	-	-	1	1
Lung-Pneumonia, <i>Actinobacillus equuli</i>	3	1	-	-	-	-	-	1	-	1	-	-	-
Lung-Pneumonia, <i>A. pleuropneumoniae</i>	91	4	3	3	4	4	6	17	11	10	10	8	11
Lung-Pneumonia, <i>Actinobacillus</i> sp.	1	-	-	-	-	-	-	-	-	1	-	-	-
Lung-Pneumonia, <i>Actinobacillus suis</i>	45	2	2	5	4	3	4	4	7	7	2	2	3
Lung-Pneumonia, <i>Actinomyces pyogenes</i>	98	4	5	6	8	13	4	14	11	14	6	7	6
Lung-Pneu., <i>Bordetella bronchiseptica</i>	113	2	6	4	10	14	3	5	15	15	15	10	14
Lung-Pneumonia, <i>Bordetella</i> sp.	1	-	1	-	-	-	-	-	-	-	-	-	-
Lung-Pneumonia, Broncho	82	9	8	8	6	6	6	11	7	6	8	6	1
Lung-Pneumonia, <i>Escherichia coli</i>	1	-	-	-	-	-	-	-	-	1	-	-	-
Lung-Pneumonia, Foreign Body	6	1	1	1	1	-	-	-	-	2	-	-	-
Lung-Pneumonia, <i>Hemophilus parasuis</i>	210	5	11	20	28	16	18	20	25	19	24	12	12
Lung-Pneumonia, Interstitial	65	5	1	8	5	7	3	5	9	3	9	5	5
Lung-Pneu., <i>Mycoplasma hyopneumoniae</i>	42	6	7	-	10	8	2	4	3	-	-	1	1
Lung-Pneumonia, Mycotic	1	-	-	-	-	-	-	-	-	-	1	-	-
Lung-Pneumonia, <i>Pasteurella hemolytica</i>	1	-	-	-	-	-	1	-	-	-	-	-	-
Lung-Pneumonia, <i>Pasteurella multocida</i>	404	16	37	20	41	42	30	42	50	45	24	34	23
Lung-Pneumonia, <i>Pasteurella</i> sp.	1	-	-	-	-	1	-	-	-	-	-	-	-
Lung-Pneu., Por. Repro & Resp Syn. Virus	198	4	11	10	25	14	15	15	23	23	24	17	17
Lung-Pneumonia, <i>Salmonella</i> sp.	96	5	7	8	2	6	7	7	24	11	5	7	7
Lung-Pneumonia, <i>Streptococcus</i> sp.	16	-	-	-	4	1	1	2	2	2	2	2	-
Lung-Pneumonia, <i>Streptococcus suis</i>	312	10	23	18	33	26	27	31	41	35	22	27	19
Lung-Pneumonia, Swine Influenza	74	5	5	5	6	6	7	7	10	9	2	6	6
Lung-Thrombosis	1	1	-	-	-	-	-	-	-	-	-	-	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Nasal-Rhinitis	9	-	1	1	2	-	-	1	2	-	2	-	-
Nasal-Rhinitis, <i>Actinomyces pyogenes</i>	3	-	-	-	-	-	-	-	2	1	-	-	-
Nasal-Rhinitis, Atrophic	3	1	-	-	1	-	-	-	-	1	-	-	-
Nasal-Rhinitis, <i>Bordetella sp.</i>	8	-	2	-	-	-	-	2	3	1	-	-	-
Nasal-Rhinitis, Cytomegalovirus	20	1	1	3	3	-	1	2	4	1	4	-	-
Nasal-Rhinitis, <i>Hemophilus parasuis</i>	7	-	-	-	-	-	-	2	3	1	-	-	1
Nasal-Rhinitis, <i>Pasteurella multocida</i>	17	-	3	-	1	1	1	3	4	1	1	1	1
Nasal-Rhinitis, <i>Streptococcus suis</i>	4	-	-	-	1	-	-	-	1	1	-	-	1
Pleura-Pleuritis	4	1	-	1	-	1	-	-	-	-	-	-	1
Respiratory Infection	38	1	1	3	3	3	2	7	2	5	10	1	-
Respiratory, Microbiologic Exam	21	2	2	1	-	1	3	3	3	2	1	1	2
Respiratory Infection, <i>Pasteurella multocida</i>	11	-	-	-	-	2	-	5	-	1	2	1	-
Trachea-Tracheitis	2	-	-	-	-	1	-	-	1	-	-	-	-
<b>4 Cardiovascular</b>													
Blood Vessel-Arteritis	1	-	-	-	-	-	-	-	-	-	-	1	-
Blood Vessel-Vasculitis	2	-	-	-	-	-	-	-	2	-	-	-	-
Heart-Endocarditis	7	-	-	2	-	2	-	-	-	1	1	-	1
Heart-Epicarditis	2	-	1	-	-	-	-	-	-	-	1	-	-
Heart-Heart Failure, Acute	1	-	-	-	-	-	-	-	-	-	1	-	-
Heart-Mulberry Heart Disease	28	3	3	3	3	4	1	2	-	3	3	3	-
Heart-Myocardial Degeneration	1	-	-	-	-	-	-	-	1	-	-	-	-
Heart-Myocarditis	6	-	1	1	-	-	-	1	1	1	-	-	1
Heart-Pericarditis	14	-	2	2	1	1	1	1	-	-	2	-	4
<b>5 Hemic and Lymphatic</b>													
Blood-Anemia	14	1	3	-	2	-	-	2	1	2	-	-	3
Blood-Hemorrhage, Generalized	3	-	1	1	-	-	-	1	-	-	-	-	-
Immune System-Hypogammaglobulinemia	1	-	1	-	-	-	-	-	-	-	-	-	-
Lymph Node-Reactive	1	-	-	-	1	-	-	-	-	-	-	-	-
Lymph Node-Lymphadenitis	6	-	-	1	-	-	-	2	1	-	1	-	1
Lymph Node-Neoplasm, Lymphosarcoma	1	-	-	-	-	-	1	-	-	-	-	-	-
Spleen-Infarct	2	-	-	-	-	-	-	-	-	2	-	-	-
Spleen-Splenitis	2	-	1	-	-	-	-	-	-	-	1	-	-
Tonsil-Tonsillitis	1	1	-	-	-	-	-	-	-	-	-	-	-
<b>6 Digestive</b>													
Digestive Disorders, Total Cases	913	84	83	74	76	62	55	88	89	86	101	55	60
Feces-Microbiologic Exam	28	2	1	3	1	2	2	5	2	3	3	3	1
Intestine-Anomaly	1	-	-	-	-	-	-	-	-	1	-	-	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
Intestine-Colitis, Non-Specific	60	6	2	10	4	1	4	7	5	1	11	4	5
Intestine-Dilatation	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Enteritis, Adenovirus	2	1	-	-	-	-	-	-	-	-	-	-	1
Intestine-Enteritis, <i>C. perfringens</i> Type C	4	-	-	-	-	1	-	-	1	-	1	1	-
Intestine-Enteritis, <i>C. perfringens</i> Type A	17	2	1	1	1	1	-	5	3	1	1	1	-
Intestine-Enteritis, <i>Enterococcus durans</i>	5	-	-	-	-	1	-	-	-	1	1	2	-
Intestine-Enteritis, <i>Escherichia coli</i>	116	11	16	14	16	4	6	3	11	11	10	5	9
Intestine-Enteritis, Granulomatous	1	-	-	-	-	-	-	-	-	1	-	-	-
Intestine-Enteritis, Hemorrhagic	2	-	-	-	-	-	-	-	-	1	-	1	-
Intestine-Enteritis, Idiopathic	70	8	6	3	4	6	2	10	6	10	9	2	4
Intestine-Enteritis, Lymphoplasmacytic	1	1	-	-	-	-	-	-	-	-	-	-	-
Intestine-Enteritis, Necrotic	17	2	1	3	2	-	-	-	1	3	3	-	2
Intestine-Enteritis, Parvovirus	1	-	-	-	-	-	-	-	-	-	-	-	1
Intestine-Enteritis, Porcine Proliferative	74	10	6	2	7	9	4	9	4	6	7	4	6
Intestine-Enteritis, Rotavirus	232	16	20	22	27	18	12	21	22	20	25	15	14
Intestine-Enteritis, <i>Salmonella sp.</i>	157	16	12	15	4	10	9	20	17	13	19	12	10
Intestine-Enteritis, <i>Serpulina hyodysenteriae</i>	4	-	1	-	-	1	-	1	1	-	-	-	-
Intestine-Enteritis, <i>Serpulina pilosicoli</i>	6	-	-	-	-	1	-	1	-	2	1	-	1
Intestine-Enteritis, Specimen Unsuitable	1	1	-	-	-	-	-	-	-	-	-	-	-
Int.-Enteritis, Transmissible Gastroenteritis	38	-	2	-	2	-	2	4	11	7	6	3	1
Intestine-Enteropathy, Atrophic	46	3	6	3	4	3	4	4	6	2	6	2	3
Intestine-Hemorrhage	24	3	1	1	1	1	2	-	3	3	4	1	4
Intestine-Hemorrhage Syndrome	4	1	1	1	-	-	1	-	-	-	-	-	-
Intestine-Infarction	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Myohypertrophy	1	-	-	-	-	-	-	-	-	-	1	-	-
Intestine-Neoplasm, Adenocarcinoma	1	-	-	-	-	-	-	1	-	-	-	-	-
Intestine-Obstruction	1	-	-	-	-	-	-	-	1	-	-	-	-
Intestine-Parasitism, Ascaris	3	-	1	-	1	-	-	-	-	-	-	1	-
Intestine-Parasitism, Coccidia	118	12	16	17	16	7	9	8	12	8	6	2	5
Intestine-Parasitism, <i>Cryptosporidium sp.</i>	25	2	3	3	4	1	-	-	1	3	3	2	3
Intestine-Parasitism, <i>Trichuris sp.</i>	4	-	-	2	-	-	-	-	1	-	-	1	-
Intestine-Volvulus	1	-	-	-	-	1	-	-	-	-	-	-	-
Liver-Abscess	1	-	-	-	-	-	-	-	-	1	-	-	-
Liver-Hepatitis	7	1	2	-	1	-	-	1	1	-	1	-	-
Liver-Hepatopathy	2	-	-	-	-	-	-	-	-	-	-	2	-
Liver-Hepatositis	10	1	-	-	-	2	-	1	-	1	-	5	-
Liver-Lipidosis	12	4	-	2	2	-	1	-	1	1	1	-	-
Liver-Parasitism, Ascaris (Larvae)	31	3	2	3	2	2	4	2	-	2	5	2	4
Stomach-Ulcer	16	1	2	3	1	2	1	3	1	1	1	-	-
Stomach-Volvulus	1	-	-	-	-	-	-	-	-	1	-	-	-

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>7 Urogenital</b>													
Reproductive Disorders, <b>Total Cases</b>	380	29	25	37	31	40	45	38	33	39	22	23	18
Abortion, Anomaly	3	-	-	-	-	2	-	-	-	1	-	-	-
Abortion, Bacterial	3	1	-	-	-	-	-	-	-	1	1	-	-
Abortion, Bacterial, <i>Actinobacillus sp.</i>	9	1	1	2	1	2	1	-	-	-	-	-	1
Abortion, Bacterial, <i>Actinomyces pyogenes</i>	3	1	-	-	-	-	-	1	-	1	-	-	-
Abortion, Bacterial, <i>Escherichia coli</i>	8	-	2	3	1	-	-	-	1	-	-	1	-
Abortion, Bacterial, <i>Leptospira sp.</i>	23	2	-	-	-	4	17	-	-	-	-	-	-
Abortion, Bacterial, <i>Salmonella sp.</i>	2	1	-	-	-	-	-	1	-	-	-	-	-
Abortion, Bacterial, <i>Staphylococcus aureus</i>	3	-	1	-	-	-	-	2	-	-	-	-	-
Abortion, Bacterial, <i>Staphylococcus sp.</i>	6	-	-	-	1	-	-	-	1	2	-	1	1
Abortion, Bacterial, <i>Streptococcus sp.</i>	10	-	-	1	1	1	1	-	-	4	-	2	-
Abortion, Emphysema	2	-	-	-	-	-	-	1	-	1	-	-	-
Abortion, Encephalitis	1	1	-	-	-	-	-	-	-	-	-	-	-
Abortion, Idiopathic	196	16	13	21	19	21	14	18	17	23	13	12	9
Abortion, Mummified Fetus	17	1	-	1	1	2	3	3	2	1	-	1	2
Abortion, Mycotic Placentitis	1	-	-	-	-	-	-	-	-	-	1	-	-
Abortion, Myocarditis	5	-	-	1	-	-	-	-	-	1	-	3	-
Abortion, Placentitis	9	-	-	2	2	-	1	2	-	-	-	1	1
Abortion, Pneumonia	17	-	1	-	3	4	1	2	3	2	-	-	1
Abortion, Specimen Unsuitable	6	-	-	-	-	-	-	-	1	3	1	-	1
Abortion, Viral, Parvovirus	3	-	1	1	-	-	1	-	-	-	-	-	-
Abortion, Viral, Por. Repro & Resp Syn. Virus 8	8	1	1	-	1	1	2	-	1	1	-	-	-
Genital-Bacteriologic Exam	15	-	-	1	1	-	1	5	3	-	3	-	1
Genital-Infertility	8	-	1	2	-	1	-	-	1	-	3	-	-
Kidney-Infarction	1	-	-	-	-	-	-	-	-	1	-	-	-
Kidney-Neoplasm	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Nephritis	5	-	-	1	-	2	-	-	1	-	-	1	-
Kidney-Nephritis, End Stage	1	1	-	-	-	-	-	-	-	-	-	-	-
Kidney-Nephritis, Glomerulo	7	2	-	-	1	1	-	-	1	1	-	1	-
Kidney-Nephritis, Interstitial	9	-	-	-	-	-	2	2	1	2	1	1	-
Kidney-Nephritis, Pyelo	6	-	1	-	1	-	1	1	1	-	1	-	-
Kidney-Nephrosis	5	-	-	1	-	-	2	-	1	1	-	-	-
Stillbirth, Idiopathic	19	3	3	1	1	3	3	2	2	-	1	-	-
Urinary Bladder-Urocystitis	1	-	-	-	-	1	-	-	-	-	-	-	-
Uterus-Metritis	10	1	-	1	-	-	-	2	2	-	3	-	1
Vagina-Vaginitis	1	-	-	-	-	-	-	-	-	-	-	-	1
Vas Deferens-Normal	5	-	1	-	1	-	-	-	-	-	-	2	1

PORCINE (continued)	Total	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn
<b>9 Nervous</b>													
Neurological Disorders, Total Cases	167	8	12	11	21	16	15	11	13	8	19	16	17
Brain-Abscess	2	1	-	-	-	-	1	-	-	-	-	-	-
Encephalitis, Hemoagglut. Encephalo. Virus	1	-	-	-	-	-	-	1	-	-	-	-	-
Encephalitis, Non-Suppurative	27	2	2	1	7	3	5	1	3	-	1	-	2
Encephalitis, Por. Repro. & Resp. Syn. Virus	6	-	-	1	2	-	-	-	-	1	1	-	1
Encephalomalacia	2	-	-	-	-	-	-	-	1	-	1	-	-
Brain-Polioencephalomalacia	2	-	-	1	-	-	1	-	-	-	-	-	-
Brain-Toxicosis, Sodium (Water Deprivation)	1	-	-	1	-	-	-	-	-	-	-	-	-
Congenital Tremor	4	1	-	-	-	1	-	-	-	-	-	-	2
Edema Disease	3	-	1	-	-	1	-	-	-	-	1	-	-
Meninges-Meningitis	7	-	-	1	-	1	1	1	1	1	1	-	-
Meninges-Meningitis, <i>Actinomyces pyogenes</i>	1	-	-	1	-	-	-	-	-	-	-	-	-
Meninges-Meningitis, <i>Escherichia coli</i>	7	-	-	2	-	1	-	1	1	-	2	-	-
Meninges-Meningitis, <i>Hemophilus parasuis</i>	17	-	1	2	2	2	2	-	3	-	2	2	1
Meninges-Meningitis, Non-Suppurative	2	-	1	-	-	-	-	-	-	-	1	-	-
Meninges-Meningitis, <i>Streptococcus sp.</i>	2	-	-	-	-	-	-	-	1	1	-	-	-
Meninges-Meningitis, <i>Streptococcus suis</i>	37	-	4	1	2	6	1	2	3	4	4	9	1
Meninges-Meningitis, Suppurative	39	2	3	2	6	2	1	3	1	1	4	4	10
Neurologic Disorder, Idiopathic	13	2	-	-	-	-	3	2	1	1	3	1	-
Spinal Cord-Myelitis, Non-Suppurative	1	-	-	-	-	-	1	-	-	-	-	-	-
Spinal Cord-Myelomalacia	2	-	-	-	2	-	-	-	-	-	-	-	-
<b>X Special Senses</b>													
Ear-Necrosis	2	-	-	-	1	1	-	-	-	-	-	-	-
Eye-Conjunctivitis	2	-	-	-	1	-	-	-	-	-	1	-	-

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**MISCELLANEOUS SPECIMENS**

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**MISCELLANEOUS SPECIMENS**    Total        Jl    Ag    Sp    Oc    Nv    Dc    Jn    Fb    Mr    Ap    My    Jn

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**FEED**

Bacteriologic Exam	4	-	-	1	-	-	-	1	1	-	1	-	-
Mycotoxin, Deoxynivalenol	11	-	6	2	1	1	-	1	-	-	-	-	-
Toxin, Ergot	2	-	-	1	-	-	-	-	-	-	1	-	-
Toxin, Selenium	1	-	-	1	-	-	-	-	-	-	-	-	-

**INSECT**

Mites	1	1	-	-	-	-	-	-	-	-	-	-	-
Ticks	2	-	-	1	1	-	-	-	-	-	-	-	-

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**Laboratory Procedures Summary**


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I. Pathology		
A.	Necropsies (whole animals)	5,554
B.	Tissues from field necropsies (accessions)	5,147
C.	Formalin-fixed tissues (surgical or necropsy)	2,797
D.	Cytology (accessions)	640
E.	Electron Microscopy (thin sections)	6
F.	Hematology (specimens)	622
G.	Histopathology (procedures)	53,506
	1) Slides – H & E stain	39,530
	2) Slides – special stain	2,060
	3) Other	11,916
H.	Rabies (specimens)	<u>2,037</u>
	<b>Sub-total</b>	<b>70,309</b>
II. Bacteriology/Mycology		
A.	Specimens cultured (aerobic)	26,808
B.	Specimens cultured (anaerobic)	640
C.	Specimens cultured – special procedures	
	1) Campylobacter	133
	2) Chlamydia (culture & antigen detection ELISA)	274
	3) Milk – quarter samples	2,391
	4) Milk – bulk tank	230
	5) <i>Mycobacterium paratuberculosis</i>	388
	6) Mycoplasma	196
	7) <i>Serpulina spp.</i>	21
	8) Ureaplasma	10
D.	Direct tissue examinations	
	1) Darkfield/phase contrast (specimens)	328
	2) Immunofluorescence – Chlamydia	24
	3) Immunofluorescence – <i>Clostridium spp.</i>	38
	4) Immunofluorescence – <i>E. coli pili</i>	1,099
	5) Immunofluorescence – <i>Leptospira</i>	796
	6) Immunofluorescence – Mycoplasma	717
E.	Microbial susceptibility (cultures = 4,960; drugs = 109,120)	4,960
F.	Mycology (specimens)	1,827
G.	Serotyping	
	1) <i>Actinobacillus pleuropneumoniae</i> (cultures)	91
	2) <i>Pasteurella multocida</i> (cultures)	90
	3) <i>Salmonella spp.</i> (cultures)	462
	4) <i>Streptococcus suis</i> (cultures)	36
H.	Toxin Testing	
	1) <i>Pasteurella multocida</i>	<u>78</u>
	<b>Sub-total</b>	<b>41,637</b>

(continued)

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**Laboratory Procedures Summary** (continued)

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III. Clinical Chemistry (specimens)	1,154
IV. Endocrinology (specimens)	2,246
V. Genetics (specimens karyotyped)	1,038
VI. Immunohistochemistry	20
VII. Immunology/Serology	
A. Immunology (specimens)	969
B. Serology (tests)	<u>273,380</u>
<b>Sub-total</b>	<b>274,349</b>
VIII. Parasitology	
A. Direct Smears	2,140
B. Direct Smears – Cryptosporidium	984
C. Flotation Fecal Exams	725
D. IFA – Cryptosporidium	66
E. Parasite Identification	<u>54</u>
<b>Sub-total</b>	<b>3,969</b>
IX. Toxicology (analytical)/Nutrition	6,750
X. Virology	
A. Tissue immunofluorescence (tests)	15,331
B. Antigen detection ELISA (swine influenza virus)	489
C. Virus identification (electron microscopy)	2,102
D. Virus isolation (cell culture)	12,255
E. Virus isolation special procedure (BVD immunoperoxidase)	<u>811</u>
<b>Sub-total</b>	<b>30,988</b>
<b>TOTAL LABORATORY PROCEDURES</b>	<b>432,460</b>



**Necropsies (Accessions/Whole Animals)**

Species	July	August	September	October	November	December	
Avian-Chicken	15/122	4/24	2/10	9/57	5/56	10/102	
Avian-Miscellaneous	22/54	13/20	26/41	21/43	22/30	14/15	
Avian-Turkey	12/102	10/53	8/57	4/17	8/25	5/17	
Bovine	52/59	41/45	37/43	35/40	45/49	42/47	
Canine	53/57	61/61	59/65	53/58	43/43	54/59	
Caprine	2/2	1/1	3/3	2/2	5/5	6/6	
Equine	14/14	15/15	12/12	15/14	12/12	16/16	
Feline	35/37	41/38	28/28	25/25	28/31	29/28	
Fish-Amphibian-Reptile	1/1	3/3	5/5	4/3	1/1	3/3	
Miscellaneous Mammal	16/17	17/18	9/11	17/18	15/17	9/11	
Ovine	2/2	3/3	5/5	5/5	7/7	4/6	
Porcine	40/119	40/110	53/151	50/159	50/201	48/184	
<b>TOTAL</b>	<b>264/586</b>	<b>249/391</b>	<b>247/431</b>	<b>240/441</b>	<b>241/477</b>	<b>240/494</b>	

Species	January	February	March	April	May	June	TOTALS
Avian-Chicken	7/55	6/53	7/75	17/199	7/45	6/66	95/864
Avian-Miscellaneous	23/29	15/19	12/16	19/22	12/20	15/20	214/329
Avian-Turkey	9/56	2/14	8/43	7/79	12/96	5/38	90/597
Bovine	51/59	53/71	55/63	56/71	50/56	34/34	551/637
Canine	56/59	43/46	50/61	60/60	43/43	50/54	625/666
Caprine	4/4	3/4	4/4	2/3	2/2	3/4	37/40
Equine	18/18	11/11	23/23	19/19	27/27	20/20	202/201
Feline	39/39	32/31	34/35	35/34	34/38	23/25	383/389
Fish-Amphibian-Reptile	5/6	3/3	3/3	-/-	2/2	3/4	33/34
Miscellaneous Mammal	17/18	16/18	7/8	13/12	20/25	22/25	178/198
Ovine	10/14	8/10	14/15	13/14	3/4	3/3	77/88
Porcine	40/94	40/127	58/136	26/87	28/84	25/59	498/1,511
<b>TOTAL</b>	<b>279/451</b>	<b>232/407</b>	<b>275/482</b>	<b>267/600</b>	<b>240/442</b>	<b>209/352</b>	<b>2,983/5,554</b>

### Tissue Accessions

Species	Tissues from Field Necropsies	Formalin Fixed Tissues Only (Surgical or Necropsy)
Avian-Chicken	20	9
Avian-Miscellaneous	180	97
Avian-Turkey	55	8
Bovine	1,994	27
Canine	201	2,001
Caprine	32	3
Equine	107	94
Feline	66	439
Fish-Amphibian-Reptile	5	2
Miscellaneous Mammal	88	28
Miscellaneous Specimen	10	2
Ovine	45	4
Porcine	2,344	83
<b>TOTAL</b>	<b>5,147</b>	<b>2,797</b>

### Positive Rabies Cases

Species	Jl	Ag	Sp	Oc	Nv	Dc	Jn	Fb	Mr	Ap	My	Jn	Total	Percent Total
Bat	-	1	1	1	-	-	-	-	-	-	-	1	4	10.0
Bovine	-	-	1	-	1	-	1	1	-	-	-	-	4	10.0
Canine	-	-	-	1	-	-	-	-	-	-	-	1	2	5.0
Equine	1	-	-	-	-	-	-	-	-	-	-	1	2	5.0
Feline	-	1	1	-	-	-	-	-	-	-	-	-	2	5.0
Skunk	-	-	1	2	-	3	5	5	2	5	-	3	26	65.0
<b>TOTAL</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>6</b>	<b>6</b>	<b>2</b>	<b>5</b>	<b>-</b>	<b>6</b>	<b>40</b>	<b>100.0</b>

<b>Rabies Examinations*</b>									
<b>Species</b>	<b>Human Exposure</b>				<b>Non-Human Exposure</b>				<b>TOTALS</b>
	<b>Pos</b>	<b>Neg</b>	<b>No Test</b>	<b>Total</b>	<b>Pos</b>	<b>Neg</b>	<b>No Test</b>	<b>Total</b>	
Bat	3	96	4	103	1	49	-	50	153
Bear	-	1	-	1	-	-	-	-	1
Bobcat	-	-	-	-	-	1	-	1	1
Bovine	2	40	-	42	2	74	-	76	118
Canine	1	652	3	656	1	51	2	54	710
Caprine	-	3	-	3	-	2	-	2	5
Chipmunk	-	5	-	5	-	-	-	-	5
Coyote	-	5	-	5	-	-	-	-	5
Deer	-	1	-	1	-	2	-	2	3
Donkey	-	-	-	-	-	1	-	1	1
Equine	1	2	-	3	1	13	-	14	17
Feline	2	597	-	599	-	43	-	43	642
Ferret	-	17	-	17	-	-	-	-	17
Fox	-	12	-	12	-	12	-	12	24
Gerbil	-	3	-	3	-	1	-	1	4
Hamster	-	3	-	3	-	1	-	1	4
Llama	-	1	-	1	-	1	-	1	2
Mink	-	1	-	1	-	1	-	1	2
Mole	-	5	-	5	-	-	-	-	5
Mouse	-	6	1	7	-	-	-	-	7
Mule	-	-	-	-	-	1	-	1	1
Muskrat	-	8	-	8	-	9	-	9	17
Opossum	-	2	-	2	-	3	-	3	5
Ovine	-	3	-	3	-	1	-	1	4
Pocket Gopher	-	2	-	2	-	-	-	-	2
Porcine	-	1	-	1	-	-	-	-	1
Rabbit	-	7	-	7	-	-	-	-	7
Raccoon	-	89	-	89	-	56	1	57	146
Rat	-	3	-	3	-	1	-	1	4
Shrew	-	2	-	2	-	-	-	-	2
Skunk	6	26	-	32	20	31	-	51	83
Squirrel	-	21	-	21	-	3	-	3	24
Weasel	-	2	-	2	-	-	-	-	2
Wolf	-	2	-	2	-	-	-	-	2
Woodchuck	-	3	-	3	-	8	-	8	11
<b>TOTAL</b>	<b>15</b>	<b>1,621</b>	<b>8</b>	<b>1,644</b>	<b>25</b>	<b>365</b>	<b>3</b>	<b>393</b>	<b>2,037</b>

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

### Clinical Chemistry Laboratory Summary\*

Test	No. of Tests
<b>Serum Profiles</b>	
Avian	15
Large Animal	240
Small Animal	69
1. canine	55
2. feline	14
CX3	2
Renal	2
2-4 Test	29
5-8 Test	20
Trypsin-like Immunoreactivity (TLI)	135
<b>Serum Individual Tests</b>	
Bile Acids	137
Blood Urea Nitrogen (BUN)	9
Lipase	39
Phenobarbitol	200
Protein, Total	2
Sorbitol Dehydrogenase (SDH)	23
Triglycerides	10
Miscellaneous Chemistries	45
<b>Feces</b>	
Fecal Occult Blood	10
Fecal Fat/Starch	2
<b>Spinal Fluid</b>	
CSF-Creatine Kinase	1
CSF-Protein	10
<b>Urine</b>	
Urinalysis	38
Creatinine	17
Protein/Creatinine Ratio	26
Sediment only	2
Miscellaneous Chemistries	2
<b>TOTAL</b>	<b>1,154</b>

\*Dr. Victor Perman, Laboratory Supervisor

### Cytology Laboratory Summary\*

Species	Avian	Canine	Caprine	Equine	Feline	Misc. Mammal	Porcine	TOTAL
No. of Specimens	1	449	3	15	162	9	1	640

\*Dr. Victor Perman, Laboratory Supervisor

**Endocrinology Laboratory Summary**

Species	Adrenocortico- trophic hormone (ACTH)	ACTH Stimulation	Cortisol	Dexamethasone Suppression Low Dose	Dexamethasone Suppression High Dose	Digoxin
Avian	-	-	-	-	-	-
Bovine	-	-	-	-	-	-
Canine	39	326	14	59	7	26
Caprine	-	-	-	-	-	-
Equine	-	-	-	3	-	-
Feline	-	7	2	3	-	5
Misc. Mammal	-	-	-	-	-	-
Porcine	-	-	-	-	-	-
<b>TOTAL</b>	<b>39</b>	<b>333</b>	<b>16</b>	<b>65</b>	<b>7</b>	<b>31</b>

Species	Gonadotropin Releasing Hormone (GnRH) Response	Human Chorionic Gonadotropin (HCG) Response	Insulin	Progesterone	Testosterone	Thyroid Profile
Avian	-	-	-	-	-	-
Bovine	-	-	-	3	-	-
Canine	-	-	18	267	2	14
Caprine	-	-	-	-	1	-
Equine	1	5	-	29	9	-
Feline	1	-	3	5	3	2
Misc. Mammal	-	-	2	19	10	-
Porcine	-	-	-	7	-	-
<b>TOTAL</b>	<b>2</b>	<b>5</b>	<b>23</b>	<b>330</b>	<b>25</b>	<b>16</b>

Species	Thyroid Stimulating Hormone (TSH)	Free Thyroxin (FT4D)	Thyroxin (T-4)	Triiodothyronine (T-3)	T-3 Suppression	<b>TOTALS</b>
Avian	-	-	2	-	-	2
Bovine	-	-	-	-	-	3
Canine	10	11	679	26	-	1,498
Caprine	-	-	-	-	-	1
Equine	-	-	95	45	-	187
Feline	-	14	456	10	3	514
Misc. Mammal	-	-	2	1	-	34
Porcine	-	-	-	-	-	7
<b>TOTAL</b>	<b>10</b>	<b>25</b>	<b>1,234</b>	<b>82</b>	<b>3</b>	<b>2,246</b>

### Hematology Laboratory Summary\*

Test	No. of Tests
Blood Typing	11
Bone Marrow	7
Buffy Coat	4
<b>Coagulation Profile</b>	4
Activated Partial Thromboplastin Time (APTT)	2
Fibrinogen	12
Prothrombin Time (PT)	2
Complete Blood Cell Count (CBC)	292
Complete Body Fluids	15
Differential	21
Hematocrit	27
Hemoglobin (Hb)	67
Packed Cell Volume (PCV)	19
Platelet count	4
Reticulocytes	3
Total Plasma Protein (TPP)	11
<b>Screens</b>	
Anaplasma	1
Babesia	82
Eperythrozoon	13
Ehrlichia	2
Hemobartonella	4
White Blood Cell Count (WBC)	15
Miscellaneous	4
<b>TOTAL</b>	<b>622</b>

\*Dr. Victor Perman, Laboratory Supervisor

### Histotechnique Laboratory Summary

Slides (H&E Stain)	Special Stains	Unstained Slides	Frozen Unstained	Recut Block	Decalcification	Block Embedded Only	TOTALS
39,530	2,060	6,822	29	448	311	4,306	53,506

<b>Bacterial Cultures - Susceptibilities</b>				
<b>Species</b>	<b>Accessions</b>	<b>Aerobic Cultures</b>	<b>Anaerobic Cultures</b>	<b>Antimicrobial Susceptibility</b>
Avian—Chicken	107	959	2	59
Avian—Miscellaneous	265	293	25	54
Avian—Turkey	164	1,038	37	91
Bovine	2,356	6,040	54	843
Canine	1,798	2,162	157	975
Caprine	80	171	4	22
Equine	681	1,013	107	240
Feline	670	899	10	231
Fish—Amphibian—Reptile	51	114	11	28
Miscellaneous Mammal	278	727	43	74
Miscellaneous Specimen	73	154	26	-
Ovine	124	339	47	28
Porcine	2,591	12,899	117	2,315
<b>TOTAL</b>	<b>9,238</b>	<b>26,808</b>	<b>640</b>	<b>4,960</b>

<b>Bacterial Cultures – Special Procedures (Campylobacter and Mycobacterium)</b>												
<b>Species</b>	<i>Campylobacter spp.</i>								<i>Mycobacterium paratuberculosis</i>			
	<b>Samples</b>	<b>coli</b>	<b>fetus-fetus</b>	<b>hyoint.</b>	<b>jejuni</b>	<b>sputorum</b>	<b>upsal.</b>	<b>misc.</b>	<b>Access</b>	<b>Samples</b>	<b>Pos</b>	
Avian—Chicken	-	-	-	-	-	-	-	-	-	-	-	
Avian—Miscellaneous	2	-	-	-	-	-	-	-	-	-	-	
Avian—Turkey	-	-	-	-	-	-	-	-	-	-	-	
Bovine	40	2	-	-	-	-	-	-	144	366	86	
Canine	43	-	-	-	-	-	13	4	-	-	-	
Caprine	3	-	-	-	-	-	-	-	6	7	3	
Equine	-	-	-	-	-	-	-	-	-	-	-	
Feline	7	-	-	-	-	-	-	2	-	-	-	
Miscellaneous Mammal	12	1	-	-	-	-	-	4	10	12	5	
Ovine	23	-	-	-	-	-	-	-	3	3	-	
Porcine	3	-	-	-	-	-	-	-	-	-	-	
<b>TOTAL</b>	<b>133</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>15</b>	<b>8</b>	<b>163</b>	<b>388</b>	<b>94</b>	

<b>Bacterial Cultures – Special Procedures (Mycoplasma, Ureaplasma and Chlamydia)</b>												
Species	Mycoplasma			Ureaplasma			Chlamydia (culture)			Chlamydia (Antigen Detection ELISA)		
	Access	Samples	Pos	Access	Samples	Pos	Access	Samples	Pos	Access	Samples	Pos
Avian–Chicken	1	3	-	-	-	-	-	-	-	-	-	-
Avian–Misc.	13	29	8	-	-	-	125	148	1	94	94	6
Avian–Turkey	4	8	-	-	-	-	-	-	-	-	-	-
Bovine	11	26	6	-	-	-	-	-	-	3	4	-
Canine	43	44	19	7	7	1	-	-	-	1	1	-
Caprine	1	1	-	-	-	-	2	3	-	2	2	-
Feline	3	3	1	1	1	-	1	1	-	5	12	1
Equine	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Mammals	6	8	-	-	-	-	-	-	-	-	-	-
Ovine	3	4	-	-	-	-	-	-	-	3	3	-
Porcine	38	70	30	1	2	-	-	-	-	5	6	-
<b>TOTAL</b>	<b>123</b>	<b>196</b>	<b>64</b>	<b>9</b>	<b>10</b>	<b>1</b>	<b>128</b>	<b>152</b>	<b>1</b>	<b>113</b>	<b>122</b>	<b>7</b>

<b>Bacterial Immunofluorescence in Tissues* (Clostridia)</b>							
Species	Accessions	Samples	Positives				
			<i>C. chauvoei</i>	<i>C. septicum</i>	<i>C. novyi</i>	<i>C. sardelli</i>	
Bovine	30	32	7	6	10	3	
Feline	1	1	-	-	-	-	
Equine	2	3	-	-	1	-	
Porcine	1	1	-	-	-	-	
Miscellaneous	1	1	-	-	1	-	
<b>TOTAL</b>	<b>35</b>	<b>38</b>	<b>7</b>	<b>6</b>	<b>12</b>	<b>3</b>	

\*Frozen Section or Tissue Imprints

<b>Bacterial Immunofluorescence in Tissues* (<i>Escherichia coli</i> Pilus Antigens)</b>							
Species	Accessions	K88		K99		987P	
		Samples	Positive	Samples	Positive	Samples	Positive
Bovine	208	6	-	248	46	1	-
Porcine	302	314	127	261	1	261	3
Miscellaneous	2	-	-	7	-	1	-
<b>TOTAL</b>	<b>512</b>	<b>320</b>	<b>127</b>	<b>516</b>	<b>47</b>	<b>263</b>	<b>3</b>

\*Frozen Section or Tissue Imprints



<b>Bacterial Immunofluorescence in Tissues* (Chlamydia, Leptospira and Mycoplasma)</b>									
Species	<i>Chlamydia psittaci</i>			<i>Leptospira sp.</i>			<i>Mycoplasma hyopneumoniae</i>		
	Accessions	Samples	Pos	Accessions	Samples	Pos	Accessions	Samples	Pos
Avian	-	-	-	-	-	-	-	-	-
Bovine	-	-	-	7	8	-	-	-	-
Canine	1	2	-	4	8	1	-	-	-
Caprine	-	-	-	1	2	-	-	-	-
Equine	-	-	-	1	1	-	-	-	-
Feline	11	22	-	-	-	-	-	-	-
Misc. Mammals	-	-	-	2	3	-	-	-	-
Ovine	-	-	-	2	2	-	-	-	-
Porcine	-	-	-	342	772	18	349	717	4
<b>TOTAL</b>	12	24	-	359	796	19	349	717	4

\*Frozen Section or Tissue Imprints

<b>Bovine Mastitis Cultures and Drug Susceptibility Tests</b>					
Number of Bovine Mastitis Cultures: 2,391					
Number with Significant Isolates: 781 (32.7%)					
Number with No growth: 1,610 (67.3%)					
Number of Bulk Tank Samples: 230					
Isolate	Percent Susceptible				
	Number Isolated	Number Tested	Amikacin	Ampicillin	Cephalothin
<i>Actinomyces pyogenes</i>	20	0	-	-	-
<i>Bacillus spp.</i>	3	3	100	0	100
<i>Citrobacter spp.</i>	1	1	100	0	100
<i>Corynebacterium spp.</i>	17	0	-	-	-
<i>Enterobacter spp.</i>	5	5	100	20	0
<i>Enterococcus spp.</i>	11	9	33	89	33
<i>Escherichia coli</i>	19	19	100	84	37
<i>Klebsiella spp.</i>	19	18	100	0	94
<i>Listeria monocytogenes</i>	1	1	100	100	100
<i>Pasteurella multocida</i>	4	2	0	100	100
<i>Pseudomonas spp.</i>	18	9	100	0	0
<i>Serratia spp.</i>	16	10	100	20	0
<i>Staphylococcus spp.</i> -coagulase neg.	101	58	100	71	100
<i>Staphylococcus spp.</i> -coagulase pos.	307	108	100	61	100
<i>Streptococcus agalactiae</i>	140	0	-	-	-
<i>Streptococcus bovis</i>	18	18	39	94	83
<i>Streptococcus dysgalactiae</i>	60	40	70	100	100
<i>Streptococcus spp.</i> -Group G	1	1	100	100	100
<i>Streptococcus uberis</i>	64	47	40	100	100
Yeasts	6	0	-	-	-

(Continued)

**Bovine Mastitis Cultures and Drug Susceptibility Tests** (continued)

Isolate	Percent Susceptible				
	Erythromycin	Gentamycin	Neomycin	Novobiocin	Penicillin
<i>Actinomyces pyogenes</i>	-	-	-	-	-
<i>Bacillus spp.</i>	100	100	100	0	0
<i>Citrobacter spp.</i>	0	100	100	0	0
<i>Corynebacterium spp.</i>	-	-	-	-	-
<i>Enterobacter spp.</i>	0	80	60	0	0
<i>Enterococcus spp.</i>	33	67	33	11	89
<i>Escherichia coli</i>	0	100	89	0	0
<i>Klebsiella spp.</i>	0	100	67	0	0
<i>Listeria monocytogenes</i>	100	100	100	100	100
<i>Pasteurella multocida</i>	100	100	100	50	100
<i>Pseudomonas spp.</i>	0	100	56	0	0
<i>Serratia spp.</i>	0	100	100	0	0
<i>Staphylococcus spp.</i> -coagulase neg.	72	100	98	93	71
<i>Staphylococcus spp.</i> -coagulase pos.	69	100	99	100	61
<i>Streptococcus agalactiae</i>	-	-	-	-	-
<i>Streptococcus bovis</i>	83	72	44	11	94
<i>Streptococcus dysgalactiae</i>	55	85	55	5	100
<i>Streptococcus spp.</i> -Group G	100	100	100	0	100
<i>Streptococcus uberis</i>	66	72	53	15	100
Yeasts	-	-	-	-	-

Isolate	Percent Susceptible					
	Oxacillin	Pirlimycin	Streptomycin	Sulfachloro-pyridazine	Tetracycline	TripleSulfa
<i>Actinomyces pyogenes</i>	-	-	-	-	-	-
<i>Bacillus spp.</i>	-	67	100	100	100	100
<i>Corynebacterium spp.</i>	-	-	-	-	-	-
<i>Enterobacter spp.</i>	-	20	80	80	80	80
<i>Enterococcus spp.</i>	-	33	0	11	33	0
<i>Escherichia coli</i>	-	0	74	95	95	95
<i>Citrobacter spp.</i>	-	0	100	100	100	100
<i>Klebsiella spp.</i>	-	0	78	94	89	89
<i>Listeria monocytogenes</i>	-	0	0	0	100	0
<i>Pasteurella multocida</i>	-	0	0	100	100	100
<i>Pseudomonas spp.</i>	-	0	0	22	0	22
<i>Serratia spp.</i>	-	0	90	90	0	90
<i>Staphylococcus spp.</i> -coagulase neg.	98	93	84	79	81	64
<i>Staphylococcus spp.</i> -coagulase pos.	100	96	94	87	94	79
<i>Streptococcus agalactiae</i>	-	-	-	-	-	-
<i>Streptococcus bovis</i>	-	61	5	22	39	28
<i>Streptococcus dysgalactiae</i>	-	58	63	58	20	48
<i>Streptococcus spp.</i> -Group G	-	100	100	100	0	100
<i>Streptococcus uberis</i>	-	74	17	6	57	6
Yeasts	-	-	-	-	-	-

***Actinobacillus pleuropneumoniae* Serotyping\***

	Serotype*						Total
	1	3	5	7	9	Untypable	
Number of Accessions	42	-	15	11	-	23	91
Percent	46.1	-	16.5	12.1	-	25.3	100.0

\*Serotyping conducted by Dr. Carlos Pijoan

***Pasteurella multocida* Serotyping\***

Species	Number of Accessions	Serotype*						Total	Percent
		3	3X4	4	Untypable	A	D		
Avian-Chicken	2	1	-	-	1	-	-	2	2.2
Avian-Turkey	11	5	5	1	-	-	-	11	12.2
Avian-Misc.	1	-	-	-	1	-	-	1	1.1
Bovine	1	-	-	-	-	1	-	1	1.1
Porcine	24	-	-	-	1	67	7	75	83.4
<b>TOTAL</b>	<b>39</b>	<b>6</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>68</b>	<b>7</b>	<b>90</b>	<b>100.0</b>
Percent		6.7	5.5	1.1	3.3	75.6	7.8	100.0	

\*Serotyping conducted by Dr. K. Nagaraja

***Streptococcus suis* Serotyping\* (Porcine Origin)**

Source	Serotype*											Total	Percent		
	1	1-2	2	3	4	5	6	7	8	9	10			11	Untypable
Brain/Meninges	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heart	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Joint	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kidney	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liver	-	-	-	1	-	-	-	-	-	-	-	-	-	1	2.8
Lung	-	1	7	2	1	-	-	-	-	-	-	-	8	19	52.8
Nasal Turbinates	-	-	-	-	-	-	-	-	-	-	-	-	7	7	19.4
Other	-	1	4	3	-	-	-	-	1	-	-	-	-	9	25.0
Spleen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>	<b>-</b>	<b>2</b>	<b>11</b>	<b>6</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>15</b>	<b>36</b>	<b>100.0</b>
Percent	-	5.5	30.5	16.7	2.8	-	-	-	2.8	-	-	-	41.7	100.0	

\*Serotyping conducted by Dr. Carlos Pijoan

<b>Salmonella Serotyping*</b>											
<b>Serotype</b>	Avian		Avian	Bovine	Canine	Equine	Feline	Ovine	Porcine	Misc.	<b>TOTAL</b>
	Chicken	Turkey	Misc.							Species	
<i>agona</i>	1	5	-	1	-	-	-	-	9	-	16
<i>albany</i>	-	-	-	1	-	-	-	-	-	-	1
<i>anatum</i>	-	-	-	1	-	-	-	-	8	-	9
<i>arizona</i>	-	-	2	2	1	1	-	2	-	3	11
<i>bardo</i>	-	1	-	-	-	-	-	-	-	-	1
<i>bareilly</i>	-	1	-	-	-	-	-	-	-	-	1
<i>berta</i>	-	1	-	-	-	-	-	-	1	-	2
<i>brandenburg</i>	-	2	-	5	-	-	-	-	11	-	18
<i>bredney</i>	-	1	-	-	-	-	-	-	3	-	4
<i>cerro</i>	-	-	-	2	-	-	-	-	-	-	2
<i>c. kuzendorf</i>	-	-	-	-	-	-	-	-	53	-	53
<i>cubana</i>	-	-	-	-	-	-	-	-	1	-	1
<i>derby</i>	-	-	-	-	-	-	-	-	18	-	18
<i>drypool</i>	-	-	-	1	-	-	-	-	-	-	1
<i>dublin</i>	-	-	-	7	-	-	-	-	-	-	7
<i>enteritidis</i>	-	-	-	-	-	1	-	-	4	1	6
<i>hadar</i>	-	4	-	-	-	-	-	-	-	-	4
<i>havana</i>	-	-	-	1	-	-	-	-	-	-	1
<i>heidelberg</i>	1	5	2	4	-	-	1	-	38	-	51
<i>infantis</i>	-	1	-	-	-	-	-	-	1	-	2
<i>java</i>	-	-	-	-	-	-	-	-	-	1	1
<i>johannesburg</i>	-	-	-	1	1	-	-	-	-	-	2
<i>lille</i>	-	-	-	1	-	-	-	-	-	-	1
<i>london</i>	-	-	-	-	-	-	-	-	1	-	1
<i>mbandaka</i>	-	-	-	9	-	-	-	-	4	-	13
<i>meleagridis</i>	1	-	-	7	-	-	-	-	-	-	8
<i>montevideo</i>	-	-	-	23	-	1	-	-	2	-	26
<i>muenchen</i>	-	1	-	3	-	-	-	-	1	-	5
<i>mueuster</i>	-	1	-	1	-	-	-	-	-	-	2
<i>newbrunswick</i>	-	-	-	1	-	-	-	-	-	-	1
<i>newington</i>	-	-	-	3	-	-	-	-	1	-	4

<b>Salmonella Serotyping*</b> (continued)											
Serotype	Avian			Bovine	Canine	Equine	Feline	Ovine	Porcine	Misc.	TOTAL
	Chicken	Turkey	Misc.							Species	
<i>newport</i>	-	-	-	-	-	-	-	-	-	2	2
<i>ohio</i>	-	-	-	-	-	-	-	-	2	-	2
<i>oranienburg</i>	-	-	-	-	-	-	-	-	1	-	1
<i>orion</i>	-	-	-	-	-	1	-	-	-	-	1
<i>panama</i>	-	-	-	1	-	-	-	-	-	-	1
<i>parera</i>	-	-	-	-	-	-	-	-	-	1	1
<i>schwarzengrund</i>	-	-	-	-	-	-	-	-	2	-	2
<i>senftenberg</i>	-	6	-	-	-	-	-	-	3	-	9
<i>st. paul</i>	-	-	-	-	-	-	-	-	1	-	1
<i>thompson</i>	-	-	1	-	1	-	-	-	-	-	2
<i>typhimurium</i>	-	2	-	26	-	2	-	-	25	1	56
<i>t. copenhagen</i>	-	-	2	48	1	1	1	-	32	1	86
<i>worthington</i>	-	-	-	1	-	-	-	-	5	-	6
<i>9,12 non-motile</i>	-	-	-	5	-	-	-	-	-	-	5
Multiple serotypes	-	-	-	-	-	-	-	-	1	-	1
Untypable	-	-	1	4	-	-	-	-	8	-	13
<b>TOTAL</b>	<b>3</b>	<b>31</b>	<b>8</b>	<b>159</b>	<b>4</b>	<b>7</b>	<b>2</b>	<b>2</b>	<b>236</b>	<b>10</b>	<b>462</b>

\*Serotyping conducted by National Veterinary Services Laboratory – Ames, IA.

<b>Pasteurella multocida Toxin Testing*</b>				
Species	Accessions	Samples	Positives	Percent
Porcine	27	78	1	1.3

\*Toxin testing conducted by Dr. Carlos Pijoan

**In Vitro Antimicrobial Drug Susceptibility Tests\***

**Avian (Chicken and Turkey)**

Isolate	No. Tested	Percent Susceptible					
		Ampicillin	Apramycin	Erythromycin	Gentamicin	Neomycin	Penicillin
<i>Bordetella spp.</i>	3	67	0	0	100	100	0
<i>Erysipelothrix rhusiopathiae</i>	2	100	-	50	50	-	100
<i>Escherichia coli</i>	55	80	81	0	72	69	0
<i>Pasteurella hemolytica</i>	17	88	76	6	100	76	76
<i>Pasteurella multocida</i>	6	100	50	0	100	100	100
<i>Salmonella spp.</i>	35	69	83	0	60	77	0
<i>Staphylococcus aureus</i>	9	89	100	100	100	100	56

Isolate	Percent Susceptible					
	Spectinomycin	Sulfachloro-pyridazine	Sulfa dimethoxine	Tetracycline	Trimethprim Sulfa	Tylosin
<i>Bordetella spp.</i>	0	100	67	100	100	0
<i>Erysipelothrix rhusiopathiae</i>	100	0	0	50	0	-
<i>Escherichia coli</i>	9	26	4	19	94	0
<i>Pasteurella hemolytica</i>	24	6	0	6	94	6
<i>Pasteurella multocida</i>	0	0	0	67	100	0
<i>Salmonella spp.</i>	0	6	0	37	97	0
<i>Staphylococcus aureus</i>	0	33	11	22	100	100

\*The susceptibility section of this report is not inclusive and only reflects the major microbes and antimicrobial agents tested.

**In Vitro Antimicrobial Drug Susceptibility Tests** (continued)

<b>Bovine</b>							
<b>Isolate</b>	<b>No. Tested</b>	<b>Percent Susceptible</b>					
		<b>Amikacin</b>	<b>Ampicillin</b>	<b>Apramycin</b>	<b>Ceftiofur</b>	<b>Cephalothin</b>	<b>Clindamycin</b>
<i>Actinomyces pyogenes</i>	85	-	100	-	98	100	76
<i>Escherichia coli</i>	223	100	26	82	87	41	0
<i>Haemophilus somnus</i>	40	-	92	-	97	98	26
<i>Listeria monocytogenes</i>	14	92	100	67	7	100	7
<i>Pasteurella hemolytica</i>	92	97	80	40	93	98	4
<i>Pasteurella multocida</i>	94	94	97	36	96	98	0
<i>Salmonella spp.</i>	241	100	50	92	92	87	0

<b>Isolate</b>	<b>Percent Susceptible</b>						
	<b>Enrofloxacin</b>	<b>Erythromycin</b>	<b>Gentamicin</b>	<b>Neomycin</b>	<b>Novobiocin</b>	<b>Penicillin</b>	<b>Spectinomycin</b>
<i>Actinomyces pyogenes</i>	-	84	98	-	-	100	95
<i>Escherichia coli</i>	95	0	71	24	0	0	0
<i>Haemophilus somnus</i>	-	64	85	-	-	87	59
<i>Listeria monocytogenes</i>	67	100	93	100	100	100	21
<i>Pasteurella hemolytica</i>	98	5	97	70	6	76	5
<i>Pasteurella multocida</i>	99	1	96	87	88	95	10
<i>Salmonella spp.</i>	99	0	94	50	0	0	0

<b>Isolate</b>	<b>Percent Susceptible</b>						
	<b>Sulfachloro- pyridazine</b>	<b>Sulfa dimethoxine</b>	<b>Tetracycline</b>	<b>Tiamulin</b>	<b>Tilmicosin</b>	<b>Trimethprim Sulfa</b>	<b>Tylosin</b>
<i>Actinomyces pyogenes</i>	12	6	46	100	85	76	-
<i>Escherichia coli</i>	14	0	12	0	0	57	0
<i>Haemophilus somnus</i>	67	21	87	100	62	95	-
<i>Listeria monocytogenes</i>	43	36	71	36	36	100	100
<i>Pasteurella hemolytica</i>	16	10	76	19	87	97	6
<i>Pasteurella multocida</i>	15	11	81	14	84	93	5
<i>Salmonella spp.</i>	8	0	47	0	0	97	0

**In Vitro Antimicrobial Drug Susceptibility Tests** (continued)

**Canine and Feline**

Isolate	No. Tested	Percent Susceptible				
		Amikacin	Ampicillin	Amoxicillin/ Clavulanic Acid	Carbenicillin	Cefoxitin
<i>Bordetella bronchiseptica</i>	16	100	19	69	69	0
<i>Enterococcus spp.</i>	93	7	95	97	96	3
<i>Escherichia coli</i>	351	99	69	70	74	93
<i>Klebsiella pneumoniae</i>	14	100	0	79	0	100
<i>Pasteurella multocida</i>	76	95	99	97	98	98
<i>Proteus mirabilis</i>	76	91	82	87	88	91
<i>Pseudomonas aeruginosa</i>	92	87	0	0	86	3
<i>Salmonella spp.</i>	15	100	40	47	45	100
<i>Staphylococcus aureus</i>	21	100	48	100	63	100
<i>Staphylococcus intermedius</i>	193	99	63	97	73	97
<i>Streptococcus spp. -beta</i>	111	95	99	99	100	98

Isolate	Percent Susceptible					
	Ceftiofur	Cephalothin	Chloramphenical	Clindamycin	Enrofloxacin	Erythromycin
<i>Bordetella bronchiseptica</i>	0	50	93	0	79	0
<i>Enterococcus spp.</i>	0	4	86	4	41	34
<i>Escherichia coli</i>	98	55	94	0	99	0
<i>Klebsiella pneumoniae</i>	100	86	64	0	92	0
<i>Pasteurella multocida</i>	93	97	100	6	99	24
<i>Proteus mirabilis</i>	87	88	87	0	83	0
<i>Pseudomonas aeruginosa</i>	2	0	4	0	33	0
<i>Salmonella spp.</i>	92	80	88	0	100	0
<i>Staphylococcus aureus</i>	86	95	84	95	93	68
<i>Staphylococcus intermedius</i>	99	98	98	85	97	79
<i>Streptococcus spp. -beta</i>	100	99	99	92	83	92



**In Vitro Antimicrobial Drug Susceptibility Tests** (continued)

**Canine and Feline** (continued)

Isolate	Percent Susceptible					
	Gentamicin	Neomycin	Nitrofurantoin	Oxacillin	Penicillin	Sulfa dimethoxine
<i>Bordetella bronchiseptica</i>	100	100	7	-	0	43
<i>Enterococcus spp.</i>	11	11	57	-	30	0
<i>Escherichia coli</i>	96	92	99	-	0	3
<i>Klebsiella pneumoniae</i>	100	100	91	-	0	0
<i>Pasteurella multocida</i>	99	97	100	-	96	33
<i>Proteus mirabilis</i>	74	85	13	-	26	13
<i>Pseudomonas aeruginosa</i>	68	62	5	-	0	0
<i>Salmonella spp.</i>	93	42	85	-	0	0
<i>Staphylococcus aureus</i>	100	100	100	100	16	7
<i>Staphylococcus intermedius</i>	95	99	100	99	22	21
<i>Streptococcus spp.</i> -beta	94	88	99	-	98	15

Isolate	Percent Susceptible				
	Sulfa dimethoxine/ ormetoprim	Tetracycline	Ticarcillin	Ticarcillin/ Clavulanic Acid	Trimethoprim Sulfa
<i>Bordetella bronchiseptica</i>	54	100	71	93	57
<i>Enterococcus spp.</i>	97	65	81	69	96
<i>Escherichia coli</i>	94	81	76	89	90
<i>Klebsiella pneumoniae</i>	91	93	0	91	100
<i>Pasteurella multocida</i>	100	100	100	100	100
<i>Proteus mirabilis</i>	70	3	77	96	83
<i>Pseudomonas aeruginosa</i>	3	7	84	84	83
<i>Salmonella spp.</i>	90	33	38	50	83
<i>Staphylococcus aureus</i>	100	71	57	100	100
<i>Staphylococcus intermedius</i>	95	54	73	99	90
<i>Streptococcus spp.</i> -beta	100	64	100	100	97

**In Vitro Antimicrobial Drug Susceptibility Tests** (continued)**Equine**

Isolate	No. Tested	Percent Susceptible				
		Amikacin	Ampicillin	Amoxicillin/ Clavulanic Acid	Cefoxitin	Ceftiofur
<i>Actinobacillus equuli</i>	4	100	100	100	100	100
<i>Actinobacillus suis</i>	22	100	86	100	90	90
<i>Escherichia coli</i>	24	100	48	61	95	90
<i>Pseudomonas aeruginosa</i>	12	100	0	0	0	0
<i>Rhodococcus equi</i>	6	100	33	67	25	50
<i>Salmonella spp.</i>	7	100	71	86	100	100
<i>Staphylococcus aureus</i>	10	100	30	80	80	70
<i>Streptococcus equi</i>	24	96	100	100	96	100
<i>Streptococcus zooepidemicus</i>	58	89	100	100	98	100

Isolate	Percent Susceptible					
	Cephalothin	Chloramphenical	Enrofloxacin	Erythromycin	Gentamicin	Nitrofurantoin
<i>Actinobacillus equuli</i>	100	100	100	0	100	100
<i>Actinobacillus suis</i>	100	100	100	10	100	100
<i>Escherichia coli</i>	57	63	100	0	65	100
<i>Pseudomonas aeruginosa</i>	0	0	55	0	58	0
<i>Rhodococcus equi</i>	0	67	83	100	100	0
<i>Salmonella spp.</i>	86	100	100	0	86	100
<i>Staphylococcus aureus</i>	80	90	100	70	90	100
<i>Streptococcus equi</i>	100	100	21	100	100	100
<i>Streptococcus zooepidemicus</i>	98	100	56	95	97	100

Isolate	Percent Susceptible				
	Penicillin	Sulfa dimethoxine	Tetracycline	Ticarcillin	Trimethoprim Sulfa
<i>Actinobacillus equuli</i>	100	25	100	100	100
<i>Actinobacillus suis</i>	86	76	90	83	95
<i>Escherichia coli</i>	0	5	57	50	45
<i>Pseudomonas aeruginosa</i>	0	0	0	80	0
<i>Rhodococcus equi</i>	14	25	67	75	17
<i>Salmonella spp.</i>	0	0	71	83	86
<i>Staphylococcus aureus</i>	0	50	90	40	90
<i>Streptococcus equi</i>	100	4	96	96	96
<i>Streptococcus zooepidemicus</i>	98	2	83	100	100

**In Vitro Antimicrobial Drug Susceptibility Tests** (continued)

**Ovine**

Isolate	No. Tested	Percent Susceptible				
		Amikacin	Ampicillin	Apramycin	Ceftiofur	Cephalothin
<i>Escherichia coli</i>	5	100	50	75	75	25
<i>Pasteurella hemolytica</i>	5	100	100	20	100	100
<i>Salmonella spp.</i>	4	100	75	100	100	75

Isolate	Percent Susceptible					
	Clindamycin	Enrofloxacin	Erythromycin	Gentamicin	Neomycin	Novobiocin
<i>Escherichia coli</i>	0	100	0	75	25	0
<i>Pasteurella hemolytica</i>	0	100	0	100	100	0
<i>Salmonella spp.</i>	0	100	0	100	75	0

Isolate	Percent Susceptible					
	Penicillin	Spectinomycin	Sulfachloro- pyridizine	Sulfa dimethoxine	Tetracycline	Trimethoprim Sulfa
<i>Escherichia coli</i>	0	0	25	0	25	50
<i>Pasteurella hemolytica</i>	100	0	40	40	80	100
<i>Salmonella spp.</i>	0	0	25	0	75	100

**In Vitro Antimicrobial Drug Susceptibility Tests** (continued)

**Porcine**

Isolate	No. Tested	Percent Susceptible					
		Amikacin	Ampicillin	Apramycin	Carbadox	Ceftiofur	Cephalothin
<i>Actinobacillus pleuro.</i>	124	95	80	85	-	97	94
<i>Actinobacillus spp.</i>	70	99	94	89	-	99	100
<i>Actinomyces pyogenes</i>	108	-	100	-	-	100	100
<i>Bordetella bronchisept.</i>	142	100	3	7	-	1	13
<i>Erysipelothrix rhusio.</i>	15	-	100	-	-	100	100
<i>Eschericia coli</i>	324	99	59	61	-	92	48
<i>Haemophilus parasuis</i>	247	-	97	-	-	100	100
<i>Pasteurella multocida</i>	480	97	97	39	-	94	98
<i>Salmonella spp.</i>	294	99	65	87	50	92	86
<i>Staphylococcus hyicus</i>	15	100	20	100	-	100	100
<i>Staph. spp.-coag. pos.</i>	16	100	13	88	-	81	88
<i>Streptococcus suis</i>	387	94	81	67	-	96	99
<i>Streptococcus spp.-beta</i>	56	93	85	100	-	98	98

Isolate	Percent Susceptible						
	Clindamycin	Enrofloxacin	Erythromycin	Gentamicin	Neomycin	Novobiocin	Penicillin
<i>Actinobacillus pleuro.</i>	5	92	4	99	86	19	76
<i>Actinobacillus spp.</i>	0	100	0	100	92	8	90
<i>Actinomyces pyogenes</i>	47	-	67	100	-	-	100
<i>Bordetella bronchisept.</i>	0	92	0	99	96	21	0
<i>Erysipelothrix rhusio.</i>	64	-	80	7	-	-	100
<i>Eschericia coli</i>	0	100	0	64	51	0	0
<i>Haemophilus parasuis</i>	51	-	96	100	-	-	96
<i>Pasteurella multocida</i>	0	99	0	100	98	96	97
<i>Salmonella spp.</i>	0	100	0	87	68	0	0
<i>Staphylococcus hyicus</i>	53	100	53	93	100	100	13
<i>Staph. spp.-coag. pos.</i>	56	94	56	94	94	88	0
<i>Streptococcus suis</i>	20	97	21	96	87	99	84
<i>Streptococcus spp.-beta</i>	41	100	48	96	98	98	96

Isolate	Percent Susceptible						
	Spectinomycin	Sulfachloro-pyridizine	Sulfa dimethoxine	Tetracycline	Tiamulin	Trimethoprim Sulfa	Tylosin
<i>Actinobacillus pleuro.</i>	24	51	16	22	73	89	8
<i>Actinobacillus spp.</i>	2	66	64	58	53	100	8
<i>Actinomyces pyogenes</i>	97	18	12	32	99	89	-
<i>Bordetella bronchisept.</i>	0	28	24	96	1	33	0
<i>Erysipelothrix rhusio.</i>	80	0	0	19	94	31	-
<i>Eschericia coli</i>	2	20	2	9	1	84	0
<i>Haemophilus parasuis</i>	99	64	5	92	100	89	-
<i>Pasteurella multocida</i>	2	9	6	77	3	96	1
<i>Salmonella spp.</i>	0	10	0	21	0	97	0
<i>Staphylococcus hyicus</i>	0	20	27	7	100	53	53
<i>Staph. spp.-coag. pos.</i>	0	50	31	6	81	88	56
<i>Streptococcus suis</i>	44	20	19	6	94	97	20
<i>Streptococcus spp.-beta</i>	59	43	40	17	69	96	58

**Mycology (Specimens Cultured)**

Species	Total Cultures
Avian—Chicken	6
Avian—Miscellaneous	33
Avian—Turkey	7
Bovine	521
Canine	407
Caprine	10
Equine	184
Feline	40
Fish—Amphibians—Reptiles	2
Miscellaneous Mammals	40
Miscellaneous Specimens	24
Ovine	20
Porcine	533
<b>TOTAL</b>	<b>1,827</b>

**Genetics Laboratory Summary**

Species Breed	No. of specimens Karyotyped	No. with abnormal Chromosomes	Chromosomal Defect
Bovine			
Charolais	59	6	1/29 Robertsonian Translocation
Holstein	836	137	Freemartin / 1/21 R. Translocation
Simmental	3	1	14/20 Robertsonian Translocation
Canine	23	2	Sex Chromosome Abnormalities
Equine	20	6	Sex Chromosome Abnormalities
Feline	3	1	Sex Chromosome Abnormalities
Llama/Alpaca	90	26	"Minute" Chromosome
Miscellaneous	4	1	Various Abnormalities
<b>TOTAL</b>	<b>1,038</b>	<b>180</b>	

**Parasitology (Microscopic Examinations)**

Species	No. of Accessions	No. of Samples	Direct smear exams	Flotation exams	Cryptosporidium sp. exams			
					Carbol fuscin stain		IFA	
					Samples	Positive	Samples	Positive
Avian-Chicken	54	66	66	-	-	-	-	-
Avian-Miscellaneous	115	142	116	26	2	-	1	-
Avian-Turkey	79	99	95	1	3	-	-	-
Bovine	1,158	1,366	716	287	903	381	5	-
Canine	181	185	57	117	4	-	20	3
Caprine	28	34	8	25	8	-	-	-
Equine	59	62	15	37	18	2	-	-
Feline	92	95	48	48	1	-	3	-
Fish-Amphi.-Reptile	35	36	13	12	5	-	17	-
Misc. Mammals	146	166	79	76	22	4	20	-
Ovine	41	48	14	34	10	2	-	-
Porcine	667	970	913	62	8	-	-	-
<b>TOTALS</b>	<b>2,655</b>	<b>3,269</b>	<b>2,140</b>	<b>725</b>	<b>984</b>	<b>389</b>	<b>66</b>	<b>3</b>

**Parasitology (Special Examinations)**

Host Species	Ectoparasites	No. Cases	Endoparasites	No. Cases
<b>Avian-Chicken</b>			<i>Eimeria tennella</i>	1
<b>Avian-Miscellaneous</b>			<i>Capillaria sp.</i>	1
			Fluke ova	1
<b>Bovine</b>			<i>Buxtonella sulcata</i>	1
			<i>Cryptosporidium sp.</i>	1
			<i>Eimeria sp.</i>	1
			<i>Moniezia sp.</i>	1
			<i>Nematodirus sp.</i>	1
			<i>Ostertagia ostertagi</i>	1
			Trichostrongylid ova	1

<b>Parasitology—Special Examinations*</b> (continued)				
<b>Host Species</b>	<b>Ectoparasites</b>	<b>No. Cases</b>	<b>Endoparasites</b>	<b>No. Cases</b>
<b>Canine</b>	<i>Cuterebra</i> sp.	1	<i>Alaria</i> sp.	1
	<i>Ixodes scapularis</i>	1	<i>Cryptosporidium</i> sp.	2
	Lathridiid beetle	1	<i>Dipylidium caninum</i>	1
	<i>Rhipicephalus sanguineus</i>	1	<i>Dirofilaria immitis</i>	2
			<i>Dracunculus</i> sp.	2
			<i>Giardia</i> sp.	1
			<i>Paragonimus</i> sp.	1
			<i>Saccharomyces</i> sp.	3
<b>Equine</b>	<i>Setaria</i> sp.	1	<i>Strongylus edentatus</i>	1
<b>Feline</b>	<i>Cuterebra</i> sp.	1	<i>Giardia</i> sp.	1
			<i>Spirometra</i> sp.	1
			<i>Toxocara cati</i>	1
<b>Fish-Amphibian-Reptile</b>	<i>Caligus</i> sp.	1	Pinworm ova	1
			Spirurid larva	1
<b>Miscellaneous Mammals</b>	<i>Cephenemyia</i> sp.	1	<i>Capillaria</i> sp.	1
	<i>Dermacentor albipictus</i>	1	<i>Fascioloides magna</i>	1
	<i>Eutrichophilus setosus</i>	1	<i>Haemonchus contortus</i>	1
			<i>Monoecocestus</i>	1
			<i>erethizonii</i>	1
			<i>Nematodirus</i> sp.	1
			<i>Tetratrichomonas</i> sp.	2
			Trichostrongylid ova	1
<b>Porcine</b>			<i>Sarcoptes scabiei</i>	2
<b>Miscellaneous</b>	Gall mites	1		
<b>Pseudoparasites</b>	<i>Ixodes scapularis</i>	1		
	Oligocheate worms	1		
	Reduviid bugs	1		
	Snail ova	1		

\*54 total examinations conducted by Gary Averbek/Dr. Bert Stromberg

**Serology Test Summary by Species**

Species Disease/Agent	Procedure	No. of Samples	Positive Titre	No. of Positives	Percent Positive
<b>Avian—Chicken</b>					
Avian Influenza	AGID	40	N/A	-	-
Hemorrhagic Enteritis (HE)	AGID	79	N/A	23	29.1
Infectious Bronchitis (Arkansas)	HI	467	≥8	387	82.9
Infectious Bronchitis (Massachusetts)	HI	491	≥8	487	99.2
Mycoplasma gallisepticum (MG)	Plate	728	NA	142	19.5
	HI	289	≥80	14	4.8
Mycoplasma synoviae (MS)	Plate	668	NA	57	8.5
	HI	347	≥80	1	0.3
Newcastle Disease (NDV)	HI	467	≥8	374	80.1
Ornithobacterium (ORT)	Plate	20	N/A	-	-
Salmonella pullorum	Plate	23	N/A	-	-
<b>Avian—Turkey</b>					
Avian Influenza	AGID	558	N/A	15	2.7
Bordetella avium (BART)	Plate	578	N/A	9	1.6
Hemorrhagic Enteritis (HE)	AGID	460	N/A	151	32.8
Mycoplasma gallisepticum (MG)	Plate	793	NA	38	4.8
	HI	216	≥80	47	21.8
Mycoplasma meleagridis (MM)	Plate	775	NA	7	0.9
	HI	75	≥80	16	21.3
Mycoplasma synoviae (MS)	Plate	931	NA	438	47.0
	HI	680	≥80	6	0.9
Newcastle Disease (NDV)	HI	736	≥8	337	45.8
Ornithobacterium (ORT)	Plate	373	N/A	67	18.0
Salmonella gallinarum	Plate	10	N/A	-	-
Salmonella pullorum	Plate	23	N/A	-	-
Salmonella typhimurium	Plate	23	N/A	-	-
<b>Avian—Miscellaneous</b>					
Avian Influenza	AGID	67	N/A	-	-
Chlamydia	CF	6	≥10	-	-
Hemorrhagic Enteritis (HE)	AGID	33	N/A	7	21.2
Mycoplasma gallisepticum (MG)	Plate	82	NA	29	35.4
	HI	46	≥80	15	32.6
Mycoplasma synoviae (MS)	Plate	82	NA	20	24.4
	HI	4	≥80	-	-
Newcastle Disease (NDV)	HI	101	≥8	45	44.6
Paramyxovirus-2	HI	2	≥8	-	-
Paramyxovirus-3	HI	3	≥8	-	-
Salmonella pullorum	Plate	27	N/A	-	-
Salmonella typhimurium	Plate	15	N/A	-	-



**Serology Test Summary by Species** (continued)

Species Disease/Agent	Procedure	No. of Cases	No. of Samples	Positive Titre	No. of Positives	Percent Positive
<b>Bovine</b>						
Anaplasmosis*	Card/CF	471	2,500	NA/≥5	77	3.1
Blue Tongue	AGID/ELISA	212	1,010	NA/≥50	11	1.1
Borrelia burgdorferi (Lyme)	IFA	4	13	≥320	-	-
Bovine Adenovirus	SN	4	13	≥8	10	76.9
Bovine Herpesvirus DN 599	IFA	30	214	≥20	128	59.8
Bovine Herpes Mammillitis	SN	30	180	≥8	37	20.6
Bovine Leukosis	AGID	426	1,269	N/A	229	18.0
Bovine Parainfluenza-3	HI	142	339	≥40	205	60.5
Bovine Parvovirus	HI	2	6	≥128	-	-
Bovine Respiratory Syncytial Virus	SN	108	312	≥8	294	94.2
Bovine Viral Diarrhea	SN	845	2,133	≥8	1,362	63.9
Brucella abortus*	CF	58	317	≥10	3	0.9
Chlamydia	CF	6	13	≥10	1	7.7
Epizootic Hemorrhagic Disease	AGID	21	28	N/A	1	3.6
Infectious Bovine Rhinotracheitis	SN	844	2,068	≥8	1,300	62.9
Leptospirosis	MA	500	1,037	≥100	480	46.3
Mycobacterium paratuberculosis (Johne's disease)	AGID	778	1,273	N/A	444	34.9
	ELISA	144	1,182	N/A	83	7.0
	CF	35	242	≥32	1	0.4
Toxoplasmosis*	IHA/Latex	6	6	≥64	1	16.7
Vesicular Stomatitis IN	SN	37	666	≥8	-	-
Vesicular Stomatitis NJ	SN	37	666	≥8	-	-
<b>Canine</b>						
Borrelia burgdorferi (Lyme)	IFA	131	168	≥320	25	14.9
Brucella canis	Card/Tube	438	644	NA/≥50	11	1.7
Canine Parvovirus	HI	18	32	≥128	19	59.4
Leptospirosis	MA	27	211	≥100	116	55.0
Toxoplasmosis	IHA/Latex	2	2	≥64	1	50.0
<b>Caprine</b>						
Caprine Arthritis Encephalitis	AGID	50	338	N/A	160	47.3
Leptospirosis	MA	7	28	≥100	6	21.4
Toxoplasmosis	IHA/Latex	1	1	≥64	-	-
<b>Equine</b>						
Borrelia burgdorferi (Lyme)	IFA	42	42	≥320	1	2.4
Equine Infectious Anemia	AGID	1,208	2,537	N/A	3	0.1
	CELISA	36	48	N/A	2	4.2
Equine Viral Rhinopneumonitis	SN	24	30	≥8	22	73.3
Leptospirosis	MA	41	64	≥100	43	67.2

\*Data includes several species of ruminants

**Serology Test Summary by Species** (continued)

Species Disease/Agent	Procedure	No. of Cases	No. of Samples	Positive Titre	No. of Positives	Percent Positive
<b>Feline</b>						
Feline Immunodeficiency Virus	ELISA		11			
Feline Infectious Peritonitis	ELISA	20	21	N/A	10	47.6
Feline Leukemia Virus	ELISA		4			
Toxoplasmosis	IHA/Latex	16	17	≥64	6	35.3
<b>Ovine</b>						
Chlamydia	CF	2	5	≥10	2	40.0
Leptospirosis	MA	8	11	≥100	1	9.1
Ovine Progressive Pneumonia	AGID	82	1,474	N/A	171	11.6
Toxoplasmosis	IHA/Latex	10	13	≥64	1	7.7
<b>Porcine</b>						
Brucellosis	CF	8	238	≥10	-	-
Encephalomyocarditis	SN	21	161	≥32	3	1.9
Eperythrozoonosis	IHA	58	517	≥80	2	0.4
Hemagglutinating Encephalomyelitis	HI	9	112	≥80	72	64.3
Leptospirosis	MA	669	9,307	≥100	5,429	58.3
Mycoplasma hyopneumoniae	ELISA	222	5,126	N/A	1,218	23.8
Porcine Parvovirus	HI	549	7,831	≥128	4,805	61.4
Porcine Repro. & Resp. Syndrome	ELISA	2,627	47,214	N/A	23,736	50.3
American strain	IFA	125	3,427	≥16	510	14.9
European/Lelystad strain	IFA	7	173	≥16	6	3.5
Pseudorabies	ELISA	157	4,662	N/A	330	7.1
	GPI ELISA	2,601	60,793	N/A	2,955	4.9
	GPX ELISA	175	3,666	N/A	539	14.7
	LAT	3,521	76,087	N/A	3,138	4.1
	SN	34	1,288	≥4	181	14.1
Swine Influenza Virus	HI	790	13,188	≥40	3,557	27.0
Toxoplasmosis	IHA/Latex	9	122	≥64	7	5.7
Transmissible Gastroenteritis	SN	303	7,951	≥8	3,929	49.4
<b>Miscellaneous</b>						
Leptospirosis	MA	9	11	≥100	6	54.5
<b>TOTAL SEROLOGY</b>			18,797*	273,380		

\*Total cases reported do not include the avian section.

**Serology by Species (Accessions/Specimen by month)**

Species	July	August	September	October	November	December	January
Avian (totals)	8/567	11/338	16/157	18/227	5/117	5/91	4/99
Avian—Chicken	1/45	4/265	4/34	1/10	2/68	1/28	1/70
Avian—Miscellaneous	1/50	3/4	2/2	4/4	-/-	2/23	1/1
Avian—Turkey	6/472	4/69	10/121	13/213	3/49	2/40	2/28
Bovine	155/712	174/612	164/828	171/533	166/966	113/339	144/362
Canine	45/50	56/121	52/140	57/201	41/50	45/86	56/56
Caprine	9/17	8/112	6/67	5/46	3/3	6/8	4/14
Equine	151/245	119/252	114/272	100/308	32/44	22/46	44/86
Feline	3/3	2/2	8/9	1/1	4/4	3/3	4/4
Fish—Amp.—Rept.	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Misc. Mammal	8/23	10/22	15/38	6/10	11/35	10/23	12/53
Ovine	9/133	5/78	9/136	4/44	13/149	5/137	2/19
Porcine	1,280/18,475	1,083/19,057	474/11,816	527/12,580	376/9,564	517/13,272	471/14,868
<b>TOTAL</b>	<b>1,668/20,225</b>	<b>1,468/20,594</b>	<b>858/13,463</b>	<b>889/13,950</b>	<b>651/10,932</b>	<b>726/14,005</b>	<b>741/15,561</b>

Species	February	March	April	May	June	TOTALS	%TOTAL
Avian (totals)	8/103	6/70	7/121	6/65	7/86	101/2,041	0.8/1.1
Avian—Chicken	-/-	-/-	1/50	-/-	-/-	15/570	0.1/0.3
Avian—Miscellaneous	3/13	2/14	1/1	3/19	3/30	25/161	0.2/0.1
Avian—Turkey	5/90	4/56	5/70	3/46	4/56	61/1,310	0.5/0.7
Bovine	113/332	140/453	176/649	145/390	164/896	1,825/7,072	15.7/3.7
Canine	61/84	50/69	47/53	46/66	46/58	602/1,034	5.2/0.6
Caprine	7/34	6/39	5/27	2/4	8/40	69/411	0.6/0.2
Equine	80/156	128/266	185/397	216/368	138/244	1,329/2,684	11.4/1.4
Feline	-/-	1/2	2/2	1/1	1/1	30/32	0.3/0.0
Fish—Amp.—Rept.	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Misc. Mammal	24/42	18/57	3/5	7/17	3/3	127/328	1.1/0.2
Ovine	2/31	15/267	10/201	6/49	12/241	92/1,485	0.8/0.8
Porcine	504/14,958	514/15,668	639/16,796	497/14,057	560/12,989	7,442/174,100	64.1/92.0
<b>TOTAL</b>	<b>799/15,740</b>	<b>878/16,891</b>	<b>1,074/18,251</b>	<b>926/15,017</b>	<b>939/14,558</b>	<b>11,617/189,187</b>	<b>100.0/100.0</b>

**Leptospirosis Serology (serotyping)\***

Species	Bratislava	Canicola	Grippotyphosa	Hardjo	Icterohemorrhagica	Pomona
Bovine	45	283	277	171	170	244
Canine	43	82	40	2	63	3
Equine	38	12	13	2	18	12
Porcine	4,576	2,070	2,131	794	3,676	1,890
Misc. Species	2	1	6	2	1	-
<b>TOTAL</b>	<b>4,704</b>	<b>2,448</b>	<b>2,467</b>	<b>971</b>	<b>3,928</b>	<b>2,149</b>

\*positive results by Microscopic Agglutination Test

**Immunology**

Species	Antinuclear Antibody	Antiplatelet Antibody	Direct Coombs	Immunoglobulins Fetal Fluid
Bovine	-	-	-	221
Canine	24	44	32	-
Caprine	-	-	-	1
Equine	-	-	7	9
Feline	6	-	22	-
Miscellaneous Mammal	-	-	-	1
Miscellaneous Specimen	-	-	-	-
Ovine	-	-	-	7
Porcine	-	-	-	328
<b>TOTAL</b>	<b>30</b>	<b>44</b>	<b>61</b>	<b>567</b>

Species	Immunoglobulins Serum	LE Clot	Rheumatoid Factor	Immuno-Fluorescent Antibody (IgG, C <sub>3</sub> )
Bovine	12	-	-	
Canine	-	10	6	
Caprine	5	-	-	
Equine	4	-	-	Kidney: -
Feline	-	-	-	
Miscellaneous Mammal	1	-	-	Marrow: 2
Miscellaneous Specimen	3	-	-	
Ovine	-	-	-	Skin: 3
Porcine	221	-	-	
<b>TOTAL</b>	<b>246</b>	<b>10</b>	<b>6</b>	<b>5</b>

**Analytical Toxicology/Nutrition\***

Analyses	Avian		Bovine		Canine		Caprine		Equine	
	Access	Sample	Access	Sample	Access	Sample	Access	Sample	Access	Sample
Alkaloids	1	1	3	3	81	81	-	-	2	2
Ammonia	-	-	1	1	-	-	-	-	-	-
Anticoagulants	1	1	2	2	70	70	1	2	1	1
Arsenic	5	7	59	88	7	7	3	4	12	12
Barbiturates	-	-	-	-	-	-	-	-	-	-
Brodifacoum	1	1	-	-	6	2	-	-	-	-
Bromadiolone	-	-	-	-	1	2	-	-	-	-
Cadmium	5	7	58	141	7	7	3	4	12	12
Calcium	-	-	8	75	-	-	2	2	3	3
Chloradane	-	-	2	2	-	-	-	-	-	-
Cholinesterase	3	3	15	17	35	35	1	1	2	2
Cobalt	5	7	56	83	7	7	3	4	12	12
Copper	14	17	212	307	39	39	8	9	17	21
Cyanide	-	-	1	1	-	-	-	-	-	-
Deoxynivalenol	-	-	-	-	-	-	-	-	-	-
Diphacinone	-	-	-	-	3	4	-	-	-	-
Ergotamine	-	-	-	-	-	-	-	-	-	-
Ethylene Glycol	-	-	-	-	11	11	-	-	-	-
Iodine	-	-	1	5	-	-	-	-	-	-
Iron	7	9	87	206	15	15	3	4	12	16
Lead	121	121	241	330	144	183	5	6	23	23
Magnesium	5	7	67	107	7	7	3	4	11	11
Manganese	5	7	58	83	10	10	3	4	13	13
Methanol	-	-	-	-	1	1	-	-	-	-
Mold	-	-	-	-	-	-	-	-	-	-
Molybdenum	4	6	60	83	10	10	3	4	13	13
Monensin	-	-	2	3	-	-	-	-	1	1
Mycotoxins	-	-	-	-	-	-	-	-	-	-
Nitrates	-	-	28	30	1	1	-	-	1	1
pH	-	-	44	46	-	-	1	1	-	-
Poison Plants	-	-	-	-	-	-	-	-	-	-
Potassium	-	-	8	75	-	-	2	2	-	-
Reinsch	11	13	89	92	65	65	1	1	4	4
Selenium	10	17	344	375	4	4	10	12	22	25
Silver	-	-	-	-	-	-	-	-	-	-
Sodium	-	-	9	76	-	-	-	-	-	-
Sulfates	-	-	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	1	1	-	-	-	-
Total Diss. Solids	-	-	-	-	-	-	-	-	-	-
Vitamin A	-	-	2	19	-	-	-	-	1	5
Vitamin E	3	3	105	203	-	-	10	10	14	14
Zinc	39	78	132	239	37	37	25	27	15	19
Zinc Phosphide	-	-	-	-	1	1	-	-	-	-
<b>TOTAL</b>	<b>240</b>	<b>305</b>	<b>1,694</b>	<b>2,692</b>	<b>563</b>	<b>600</b>	<b>87</b>	<b>101</b>	<b>191</b>	<b>210</b>

\*Positive Results are reported in the *Disease Diagnoses by Animal Species* section.

<b>Analytical Toxicology/Nutrition</b> (continued)												
<b>Analyses</b>	<b>Feline</b>		<b>Misc. Animal</b>		<b>Misc. Non-Ani.</b>		<b>Ovine</b>		<b>Porcine</b>		<b>TOTALS</b>	
	<b>Access</b>	<b>Sample</b>	<b>Access</b>	<b>Sample</b>	<b>Access</b>	<b>Sample</b>	<b>Access</b>	<b>Sample</b>	<b>Access</b>	<b>Sample</b>	<b>Access</b>	<b>Sample</b>
Alkaloids	10	10	8	8	4	5	-	-	-	-	109	110
Ammonia	-	-	-	-	-	-	-	-	-	-	1	1
Anticoagulants	-	-	-	-	5	5	1	2	3	3	84	86
Arsenic	2	1	33	73	4	6	1	1	10	11	136	210
Barbiturates	-	-	-	-	1	1	-	-	-	-	1	1
Brodifacoum	-	-	-	-	-	-	-	-	-	-	7	3
Bromadialone	-	-	-	-	-	-	-	-	-	-	1	2
Cadmium	2	1	30	73	4	6	1	1	9	10	131	262
Calcium	1	1	1	2	3	4	1	1	4	31	23	119
Chloradane	-	-	-	-	-	-	-	-	-	-	2	2
Cholinesterase	-	-	4	7	4	4	-	-	16	17	80	86
Cobalt	1	1	32	81	4	6	1	1	9	42	130	244
Copper	7	70	84	145	9	19	20	36	38	80	448	743
Cyanide	-	-	-	-	-	-	-	-	-	-	1	1
Deoxynivalenol	-	-	-	-	66	105	-	-	-	-	66	105
Diphacinone	-	-	-	-	-	-	-	-	-	-	3	4
Ergotamine	-	-	-	-	8	8	-	-	-	-	8	8
Ethylene Glycol	-	-	-	-	-	-	-	-	-	-	11	11
Iodine	-	-	-	-	-	-	-	-	-	-	1	5
Iron	3	3	50	90	7	12	1	1	37	127	222	483
Lead	27	76	116	265	8	12	15	15	12	16	712	1,047
Magnesium	2	2	36	81	4	6	1	1	13	10	149	236
Manganese	1	1	36	81	4	6	1	1	9	10	140	216
Methanol	-	-	-	-	-	-	-	-	-	-	1	1
Mold	-	-	-	-	1	1	-	-	-	-	1	1
Molybdenum	1	1	36	81	4	6	1	1	9	10	141	215
Monensin	-	-	-	-	5	5	-	-	-	-	8	9
Mycotoxins	-	-	-	-	38	54	-	-	-	-	38	54
Nitrates	-	-	3	3	19	50	-	-	-	-	52	85
pH	-	-	5	7	-	-	-	-	-	-	50	54
Poison Plants	-	-	-	-	1	2	-	-	-	-	1	2
Potassium	-	-	1	2	2	3	1	1	4	31	18	114
Reinsch	11	11	32	35	3	3	4	4	5	8	225	236
Selenium	1	1	53	106	15	19	6	6	71	100	536	665
Silver	-	-	-	-	2	60	-	-	-	-	2	60
Sodium	-	-	1	2	13	16	1	1	9	33	33	128
Sulfates	-	-	-	-	8	13	-	-	-	-	8	13
Thallium	-	-	-	-	-	-	-	-	-	-	1	1
Total Diss. Solids	-	-	-	-	4	4	-	-	-	-	4	4
Vitamin A	-	-	8	13	-	-	-	-	-	-	11	37
Vitamin E	-	-	25	27	19	20	5	5	55	103	236	385
Zinc	7	75	46	75	3	6	6	10	48	133	358	699
Zinc Phosphide	-	-	-	-	1	1	-	-	-	-	2	2
<b>TOTAL</b>	<b>76</b>	<b>254</b>	<b>640</b>	<b>1,257</b>	<b>273</b>	<b>468</b>	<b>67</b>	<b>88</b>	<b>361</b>	<b>775</b>	<b>4,192</b>	<b>6,750</b>

**Viral Immunofluorescence in Tissues\***

Species Virus for Isolation	No. of Cases/ No. of Samples	No. of Procedures	No. of Positives	Percent Positive
<b>Bovine</b>	1,248/2,372			
Bovine Coronavirus		1,009	123	12.2
Bovine DN599		1	-	-
Bovine Parainfluenza-3		586	-	-
Bovine Respiratory Syncytial		420	4	1.0
Bovine Rotavirus		990	4	0.4
Bovine Virus Diarrhea		1,704	11	0.6
Infectious Bovine Rhinotracheitis		1,184	15	1.3
Porcine Pseudorabies		1	-	-
<b>Subtotal</b>		<b>5,895</b>	<b>157</b>	
<b>Canine</b>	17/26			
Canine Distemper		25	-	-
Canine Parvovirus		3	-	-
<b>Subtotal</b>		<b>28</b>	<b>-</b>	
<b>Caprine</b>	1/2			
Bovine Virus Diarrhea		2	-	-
<b>Subtotal</b>		<b>2</b>	<b>-</b>	
<b>Equine</b>	53/87			
Equine Adenovirus		8	-	-
Equine Rhinopneumonitis		89	6	
<b>Subtotal</b>		<b>97</b>	<b>6</b>	
<b>Feline</b>	22/38			
Feline Infectious Peritonitis		5	-	-
Feline Rhinotracheitis		33	-	-
<b>Subtotal</b>		<b>38</b>	<b>-</b>	
<b>Llama</b>	3/4			
Bovine Parainfluenza-3		1	-	-
Bovine Virus Diarrhea		1	-	-
Equine Rhinopneumonitis		4	-	-
Infectious Bovine Rhinotracheitis		1	-	-
<b>Subtotal</b>		<b>7</b>	<b>-</b>	

\*Frozen Sections or Tissue Imprints

**Viral Immunofluorescence in Tissues** (continued)

Species Virus for isolation	No. of Cases/ No. of Samples	No. of Procedures	No. of Positives	Percent Positive
<b>Miscellaneous</b>	14/21			
Bovine Coronavirus		4	-	-
Bovine Parainfluenza-3		2	-	-
Bovine Respiratory Syncytial		1	-	-
Bovine Rotavirus		2	-	-
Bovine Virus Diarrhea		14	-	-
Canine Distemper		2	2	100.0
Equine Rhinopneumonitis		1	-	-
Infectious Bovine Rhinotracheitis		6	-	-
<b>Subtotal</b>		<b>32</b>	<b>2</b>	
<b>Ovine</b>	2/2			
Bovine Parainfluenza-3		2	-	-
Bovine Respiratory Syncytial		2	-	-
<b>Subtotal</b>		<b>4</b>	<b>-</b>	
<b>Porcine</b>	2,111/5,951			
Porcine Parvovirus		769	8	1.0
Porcine Reovirus		13	2	15.4
Porcine Rotavirus		1,926	155	8.0
Porcine Repro. & Resp. Syndrome		2,822	301	10.7
Pseudorabies		435	3	0.7
Swine Influenza		1,339	25	1.9
Transmissible Gastroenteritis		1,924	98	5.1
<b>Subtotal</b>		<b>9,230</b>	<b>592</b>	
<b>TOTALS</b>	<b>3,471/8,503</b>	<b>15,331</b>	<b>757</b>	<b>4.9</b>



<b>Virus Antigen Detection (Swine Influenza Virus)</b>			
<b>Species</b>	<b>Accessions</b>	<b>Samples</b>	<b>No. Positive</b>
Equine	2	2	-
Porcine	451	487	62
<b>TOTAL</b>	<b>453</b>	<b>489</b>	<b>62</b>

<b>Virus Identification* (Electron Microscopy)</b>							
<b>Species</b>	<b>Accessions</b>	<b>Specimens</b>	<b>No. Positive</b>	<b>Adenovirus</b>	<b>Calicivirus</b>	<b>Coronavirus</b>	<b>Enterovirus</b>
Avian	148	192	48	8	-	7	-
Bovine	768	778	236	-	-	74	-
Canine	162	167	53	-	-	2	1
Caprine	9	9	1	-	-	-	-
Equine	23	23	1	-	-	-	-
Feline	65	65	21	-	1	4	-
Miscellaneous	52	57	7	-	-	-	-
Ovine	7	7	1	-	-	-	-
Porcine	739	804	267	3	-	11	1
<b>TOTAL</b>	<b>1,973</b>	<b>2,102</b>	<b>635</b>	<b>11</b>	<b>1</b>	<b>98</b>	<b>2</b>

<b>Species</b>	<b>Paramyxovirus</b>	<b>Parvovirus</b>	<b>PRRS virus</b>	<b>Pox Virus</b>	<b>Reovirus</b>	<b>Rotavirus</b>	<b>TOTALS</b>
Avian	-	-	-	2	-	31	48
Bovine	-	-	-	3	1	185	263
Canine	-	50	-	-	-	-	53
Caprine	-	-	-	1	-	-	1
Equine	-	-	-	-	-	1	1
Feline	-	16	-	-	-	-	21
Miscellaneous	1	5	-	-	-	1	7
Ovine	-	-	-	1	-	-	1
Porcine	-	1	13	1	-	243	273
<b>TOTAL</b>	<b>1</b>	<b>72</b>	<b>13</b>	<b>8</b>	<b>1</b>	<b>461</b>	<b>668</b>

\*Fecal or Tissue Specimens

**Virus Isolation (Cell Culture)**

<b>Virus</b>	<b>No. Procedures*</b>	<b>No. Positive</b>	<b>Percent Positive</b>
Avian-Miscellaneous	24	1	4.2
Border Disease	18	-	-
Bovine Herpesvirus DN599	1	3	100.0
Bovine Herpes Mammillitis	1	-	-
Bovine Parainfluenza-3	2,141	-	-
Bovine Respiratory Syncytial	3	-	-
Bovine Viral Diarrhea	2,177	73 **	3.4
Canine Distemper	1	-	-
Canine Herpesvirus	19	-	-
Equine Adenovirus	2	-	-
Equine Influenza	1	-	-
Equine Rhinotracheitis	67	-	-
Feline Calicivirus	15	1	6.7
Feline Rhinopneumonitis	17	-	-
Infectious Bovine Rhinotracheitis	2,212	4	0.2
Porcine Circovirus	2	-	-
Porcine Parvovirus	5	-	-
Porcine Repro. & Resp. Syndrome	4,555	217	4.8
Pseudorabies	982	3	0.3
Swine Influenza	11	2	18.2
Miscellaneous	1	-	-
<b>TOTAL</b>	<b>12,255</b>	<b>304</b>	<b>2.4</b>

\* The number of procedures indicated include only those initially designated for virus isolation at time of receiving

\*\* 22 cytopathic and 49 non-cytopathic viruses identified

**Special Procedure – Antigen Detection ELISA or Immunoperoxidase (Bovine Viral Diarrhea Virus)**

<b>Species</b>	<b>Accessions</b>	<b>Samples</b>	<b>No. Positive</b>
Bovine	47	811	76
<b>TOTAL</b>	<b>47</b>	<b>811</b>	<b>76</b>

**APPENDIX**

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**Minnesota Brucellosis Testing Laboratory (Personnel)**

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William Hartmann, DVM, MS	Supervisor
Robert Tiller	Laboratory Supervisor
David Wiklund	Medical Laboratory Technician
Brent Furlano	Medical Laboratory Technician

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**Minnesota Brucellosis Testing Laboratory (Laboratory Procedures)**

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I. Cattle		
A. Serum		
1) On Farm	16,400	
2) Market	69,999	
3) Slaughter Surveillance	<u>494,536</u>	
<b>Sub-Total</b>		580,935
B. Milk Ring Tests		22,115
II. Swine (Slaughter Surveillance)		38,795
III. Other Species		
A. Canine	100	
B. Deer	235	
C. Elk	829	
D. Goats	137	
E. Horses	4	
F. Llamas	206	
G. Miscellaneous	<u>31</u>	
<b>Sub-Total</b>		1,542
<b>TOTAL</b>		643,387

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**Minnesota Poultry Testing Laboratory (Personnel)**

Willmar, Minnesota

Dr. Dale C. Lauer	Supervisor
Lucinda Dalberg	Senior Laboratory Technician
Lisa DeVaan	Senior Laboratory Technician
Diane Hermann	Junior Laboratory Technician
Stacy Pollock	Senior Laboratory Technician
Joanne B. Slagter	Senior Laboratory Technician

**Minnesota Poultry Testing Laboratory (Laboratory Procedures)**

	<u>Serology</u>	<u>Cultures</u>
I. Pullorum – Typhoid Program		
A. Chickens – Commercial	2,393	
B. Turkeys	32,963	
C. Waterfowl and Game Birds	7,144	129
D. Exhibition Testing	<u>13,160</u>	
<b>Sub-Total</b>	55,660	<u>129</u>
II. <i>Salmonella enteritidis</i> Program		
Sanitation Monitoring of		
Chicken Breeding Flocks/Hatcheries	2,393	2,355
III. Cooperative Program for the control of		
<i>Salmonella</i> in Turkeys		
(includes <i>Salmonella typhimurium</i> )		
A. Blood Samples	32,963	
B. Cloacal Swabs		44,130
C. Environmental/Hatchery		<u>4,270</u>
<b>Sub-Total</b>	32,963	48,400
IV. Mycoplasma Program		
A. Turkey		
1) <i>M. gallisepticum</i>	75,584	
2) <i>M. meleagridis</i>	69,593	
3) <i>M. synoviae</i>	69,656	
B. Chicken		
1) <i>M. gallisepticum</i>	21,347	
2) <i>M. synoviae</i>	22,307	
C. Wild/Exhibition Turkeys		
1) <i>M. gallisepticum</i>	311	
2) <i>M. meleagridis</i>	110	
3) <i>M. synoviae</i>	<u>129</u>	
<b>Sub-Total</b>	259,037	
V. Avian Influenza Monitoring Program		
Turkey and Broilers	49,420	
<b>TOTAL</b>	399,473	50,884

**Departmental Courses**

Quarter	Course	Title	Lect/Lab Hours	Credits	No. of Students	Instructor
<b>Summer Session 96</b>						
	VDM 5011	Veterinary Hospital Necropsy	0/340	2.0	20	Hayden Johnson Walser
	VDM 5111	Diagnostic Medicine	0/140	2.0	19	Shaw* VDM Faculty
	VDM 5611	Advanced Veterinary Toxicology	80/0	4.0	4	Murphy
	VDM 5622	Problems in Diagnostic Virology	4/16	4.0	2	Goyal
	Grad 8777	Masters Thesis			1	Singh
					3	Shaw
	Grad 8888	Doctoral Thesis			1	Collins
					2	Goyal
					1	Singh
<b>Fall 96</b>						
	VDM 3001	Basic Environmental Toxicology	20/0	3.0	3	Singh
	VDM 5012	Veterinary Hospital Necropsy	0/340	2.0	16	Hayden Johnson Walser
	VDM 5112	Diagnostic Medicine	0/140	2.0	16	Shaw* VDM Faculty
	VDM 5164	Toxicology of Poisonous Plants	18/0	1.0	75	Murphy
	Grad 8777	Masters Thesis			1	Singh
					2	Shaw
	Grad 8888	Doctoral Thesis			1	Collins
					2	Goyal
					1	Singh
<b>Winter 97</b>						
	VDM 5002	Ecotoxicology	20/0	3.0	3	Singh
	VDM 5013	Veterinary Hospital Necropsy	0/360	2.0	19	Hayden Johnson Walser
	VDM 5113	Diagnostic Medicine	0/140	2.0	19	Shaw* VDM Faculty
	Grad 8777	Masters Thesis			1	Singh
					2	Shaw
	Grad 8888	Doctoral Thesis			2	Goyal
					1	Singh
<b>Spring 97</b>						
	VDM 5014	Veterinary Hospital Necropsy	0/340	2.0	16	Hayden Johnson Walser
	VDM 5114	Diagnostic Medicine	0/140	2.0	16	Shaw* VDM Faculty
	VDM 5165	Veterinary Toxicology	36/0	3.0	75	Murphy
	VDM 5503	Diagnostic Pathology	32/0	3.0	75	O'Leary* VDM Faculty
	VDM 5620	Scientific Writing and Speaking	48/0	2.0	16	Goyal
	Grad 8777	Masters Thesis			1	Singh
					2	Shaw
	Grad 8888	Doctoral Thesis			2	Goyal
					1	Singh

\*Course Coordinator

## VDM Faculty Participation in Other Courses

Quarter	Course	Title	Lect/Lab Hours	Credits	No. of Students	Instructor
<b>Summer Session 96</b>						
	VPB5021	Clinical Hematology and Cytology	20/20	2.0	11	Aird
	VPB 8531	Hospital Pathology	0/10	1.0	1	Collins
<b>Fall 96</b>						
	CAPS 5612	Swine Disease Diag. and Therapy	1/0	1.0	14	Collins
	CAPS 5952	Directed Studies	1/0		6	Collins
	CVM 5100	Intro. to Veterinary Medicine	1/0	2.0	75	Ruth
	CVM 5671	Swine Medicine	1/0	1.0	15	Goyal
	SACS 5162	Clinical Oncology Rotation	2/0		6	Hayden
	Txcl 5215	Organ System Toxicology	18/0	4.0	6	Murphy
	Txcl 8101	Toxicology Seminar	.7/0	1.0	4	Murphy
	VPB 5022	Clinical Hematology and Cytology	40/40	2.0	22	Aird
	VPB 5502	Systemic Veterinary Pathology	40/54	6.0	72	Walser* VDM Faculty
	VPB 5703	Veterinary Virology	1/1	3.0	72	Goyal
	VPB 5722	Poultry Health Rotations	4/0	4.0	8	Shaw
	VPB 8531	Hospital Pathology	1/0	1.0	1	O'Leary
	VPB 8533	Problems: Pathology	1/0	1.0	1	Hayden
<b>Winter 97</b>						
	CAPS 3502	Animal Health and Disease	2/0	5.0	24	Murphy
	CAPS 5162	Large Animal Medicine	1/0	6.0	71	Murphy
	CAPS 5570	Reprod. Diseases of Dom. Animals	2/0	5.0	70	Collins
	PubH 5171	Environmental Microbiology	5/2	3.0	13	Goyal
	SACS 5163	Clinical Oncology Rotation	1/0		6	Hayden
	Txcl 5216	Chemical and Environ. Toxicology	3/0	4.0	6	Singh
	VPB 5023	Clinical Hematology and Cytology	20/20	2.0	24	Aird
	VPB 5504	Veterinary Clinical Pathology	0/60	4.0	73	Aird
	VPB 5702	Pathogenic Bacteria and Fungi	1/0 .5/0 1/0	5.0	75	Bergeland Collins Murphy
	VPB 5704	Avian Diseases	2/0 4/0	3.0	72	Shaw Walser
	VPB 8500	Seminar: Veterinary Pathology	1/0	1.0	1	O'Leary
	VPB 8533	Problems: Pathology	3/0	1.0	2	Hayden O'Brien O'Leary
<b>Spring 97</b>						
	CAPS 5160	Large Animal Medicine	2/0	6.0	75	Bergeland
	CAPS 5271	Law, Economics & Ethics	1/0	2.0	75	Ruth
	CAPS 5276	Adv. Zoo Animal Medicine	1/0	2.0	30	O'Leary
	CAPS 5544	Dairy-Therio Management	2/0	4.0	12	Collins
	Txcl 5214	Principles of Toxicology	4/0 18/0	4.0	6	Murphy Singh
	VPB 5501	Basic Veterinary Pathology	28/57	5.0	72	Walser* VDM Faculty

### Residents/Graduate Students

Name	Program	Degree Sought	Degree Granted	Advisor/Co-advisor
Deborah Carr	Pathobiology	M.S.	M.S.	Shaw
Arshad Dar	Microbiology	Ph.D.		Goyal
Bret Rings	Pathology	M.S.		Shaw
Kurt Rossow	Pathology	Ph.D.	Ph.D.	Collins
M. Anwar Sheik	Vet. Medicine	Ph.D.		Goyal
Dina Spassova	Toxicology	Ph.D.		Singh
Stephanie Sprenger	Pathobiology	M.S.		Shaw
Thomas White	Toxicology	M.S.		Singh

### Research Projects (Principal or Co-Investigator)

Benfield, D. A., Rowland, R.R. and Collins, J.E. 1997. *Mechanisms of persistence of porcine reproductive and respiratory syndrome virus*. USDA-National Research Initiative Competitive Grants. \$210,553.

Bergeland, M.E., Aird, E.A., Collins, J.E., Goyal, S.M., Hayden, D.W., Kurtz, H.J., Murphy, M.J., O'Brien, T., O'Leary, T.P., Ruth, G.R., Shaw, D.P., Singh, A.K. and Walser, M.M. 1996. *Veterinary Diagnostic Investigation*. Minnesota Agricultural Experiment Station (MN V-65-006).

Ruth, G.R., Buoen, L.C., Zhang, T.Q., Sequin, B. and Weber, A.F. 1996. *Method to identify 1/21 centric fusion (CF) positive Holstein-Friesian cases in the USA*. College of Veterinary Medicine, University of Minnesota. \$10,000.

Collins, J.E., Benfield, D.A. 1997. *Pathogenesis of Porcine Reproductive and Respiratory Syndrome*. Boehringer-Ingelheim. \$131,000.

DiCostanzo, A., Johnston, L., Murphy, M., Felice, L. 1996. *Vomitoxin in Feedlot Steers*. Minnesota Beef Council Co-PI Funding. \$5,000.

Ames, T.R., Bullock, P.M., Mellencamp, M.E. and Hayden, D.W. 1997. *Seroprevalence of Ehrlichia equi in endemic and non-endemic tick counties in Minnesota and Wisconsin*. Minnesota Racing Commission. \$7,900.

Johnston, L., Robinson, A., Goyal, S.M., Clanton, C. 1997. *Reducing environmental and odor concerns from dead pig disposal*. College of Agriculture, Food and Environmental Sciences. \$67,000.

Joo, H.S., Pijoan, C., Bey, R. and Collins, J.E. 1996. *Interaction between PRRS virus and swine influenza virus in young pigs*. National Pork Producers. \$5,000.

Murphy, M.J., DiCostanzo, A. 1996. *Use of municipal waste as bedding for livestock*. Praireland Solid Waste Management. \$10,000.

Shaw, D.P., Carr, D.C. and Halvorson, D.A. 1996. *Cellulitis in turkeys*. Minnesota Turkey Growers Association. \$7,000.

Trent, A.M. and Goyal, S.M. 1996. *Excellence and diversity in teaching*. Bush Faculty-development Program. \$4,900.



Weber, A.F., Johnson, L.W., Ruth, G.R., Buoen, L.C., Wolf, C.B., Zhang, T.Q. and King, V.L. 1996. *The minute chromosome in llamas: relation to embryo death and genetic defects*. Morris Animal Foundation. \$13,000.

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### Service and Research Contracts

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Bergeland, M.E. et al. 1996-1997. Minnesota Poultry Testing Laboratory. MN Board of Animal Health, \$195,000.

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### Publications: Refereed Journals

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Buoen, L.C., Zhang, T.Q., Weber, A.F., Turner, T., Bellamy, J., and Ruth, G.R. 1997. Arthrogryposis in the foal and its possible relation to autosomal trisomy. *Equine Vet. J.* 29:60-62.

Carr, D., Shaw, D., Halvorson, D.A., Rings, B. and Roepke, D. 1996. Excessive mortality in market-age turkeys associated with cellulitis. *Avian Diseases* 40:737-741.

Hayden, D.W., Henson M.S. 1997. Gastrin secreting Pancreatic endocrine tumor in a dog (putative Zollinger-Ellison syndrome). *JVDI* 9:100-103.

Johnston, L.J., Ajariyakhajorn, C., Goyal, S.M., Robinson, R.A., Clanton, C.J., Evans, S.D. and Warnes, D.D. 1996. Survival of bacteria and viruses in ground pig carcasses applied to cropland for disposal. *Swine Hlth. Prod.* 4:189-194.

Johnston, L.J., Clanton, C.J., Goyal, S.M. and Robinson, R.A. 1996. Homogenization of piglet carcasses for disposal: a field trial. *Recent Adv. Swine Prod. Hlth.* 6:1-4.

Mech, L.D., Kurtz, H.J. and Goyal, S.M. 1997. Death of a wild wolf from canine parvoviral enteritis. *J. Wildl. Diseases* 33(2).

Rossow, K.D., Benfield, D.A., Goyal, S.M., Nelson, E.A., Christopher-Hennings, J., and Collins, J.E. 1996. Chronological immunohistochemical detection and localization of porcine reproductive and respiratory syndrome virus in gnotobiotic pigs. *Vet. Pathol.* 33:551-556.

Waters, D.J., Hayden, D.W., Bell, F.W., Klausner, J.S., Qian, J., Bostwick, D.G. 1997. Prostatic intraepithelial neoplasia in dogs with spontaneous prostatic cancer. *The Prostate* 30:92-97.

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### Publications: Abstracts

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Benfield, D.A., Rowland, R., Nelson, J., Neiger, J., Nelson, E., Rossow, K. and Collins, J.E. 1996. *A model for the study of persistent PRRSV infection*. 77<sup>th</sup> Annual Meeting of the Conference of Research Workers in Animal Disease, Chicago, IL.

Carr, D.A., Shaw, D.P., Halvorson, D.A., Rings, B., Roepke, D. 1996. *Further studies on cellulitis in turkeys*. Annual Meeting of the American Association of Avian Pathologists, Louisville, KY.

Kamyab, A., Shaw, D.P., Noll, S.L. and El-Halawani, M. 1996. *The effect of management on the occurrence of breast lesions in market tom turkeys*. Annual Meeting of the Poultry Science Association, Louisville, KY.

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Noll, S.L., Halvorson, D. and Shaw, D.P. 1996. *Trouble-shooting poult performance problems—a decision case approach*. Annual Meeting of the Poultry Science Association, Louisville, KY.

Murphy, M.J. 1997. *Cymodothea trifolii* infested clover associated with secondary photosensitization in horses. International Symposium of Poisonous Plants, San Angelo, TX.

Murphy, M.J. 1997. *Hoary alyssum (Berteroa incane) toxicosis*. International Symposium of Poisonous Plants, San Angelo, TX.

Park, B.K., Collins, J.E., Goyal, S.M. and Joo, H.S. 1996. *Comparison of respiratory pathogenicity of porcine reproductive and respiratory syndrome virus isolates in vitro and in vivo*. 77<sup>th</sup> Annual Meeting of the Conference of research Workers in Animal Disease, Chicago, IL.

Rings, B., Halvorson, D. and Shaw, D.P. *The effects of a Minnesota isolate of infectious bronchitis virus in laying hens*. Annual Meeting of the American Association of Avian Pathologists, Louisville, KY.

Rowland, R.R., Rossow, K.D., Collins, J.E., Christopher-Hennings, J., Nelson, E.A. and Benfield, D.A. 1996. *Persistence of PRRS virus replication in the lung and lymph nodes*. 15<sup>th</sup> Annual Meeting of the American Society of Virology, London, Ontario.

Shaw, D.P., Halvorson, D.A., Carr, D., Murphy, M. 1996. *Methionine toxicity in broiler chickens*. 47<sup>th</sup> North Central Avian Disease Conference, Columbus, OH.

Spasojevic, R., Newman, J., Shaw, D.P. 1996. *Adenovirus group I infection in turkeys co-infected with B. avium*. Annual Meeting of the American Association of Avian Pathologists, Louisville, KY.

Valberg, S.J., Bullock, P., Hogetvedt, T.W., Ames, T.A., Hayden, D.W. and Ott, K. 1996. *Myopathies associated with Streptococcus equi infections in horses*. Proceedings of the 42<sup>nd</sup> Annual American Association of Equine Practitioners, Denver, CO, pp 292-293.

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### **Publications: Books, Book Chapters and Monographs**

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Murphy, M.J., and Reagor, J.C. 1997. Toxic Plants. In *Current Therapy in Equine Medicine IV*, Robinson, N.E. ed. W. B. Saunders, Philadelphia, PA, pp 649-652.

Murphy, M.J. 1997. Rodenticide Anticoagulant Poisoning. In the *5 Minute Veterinary Consult*. Williams and Wilkins, Philadelphia, PA, pp 1044-1045.

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### **Publications: Proceedings**

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Johnston, L.J., Robinson, R.A., Clanton, C.J., Ajariyakhajorn, C., Goyal, S.M., Evans, S.D. and Warnes, D.D. 1996. Disposal of dead piglets using homogenization. *Proceedings of the Annual Meeting of the Minnesota Veterinary Medical Association*, Bloomington, MN, February 1-3, p 143.

Johnston, L.J., Robinson, R.A., Clanton, C.J., Ajariyakhajorn, C., Goyal, S.M., Evans, S.D. and Warnes, D.D. 1996. Disposal of dead piglets using homogenization. *Proceedings of the Annual Meeting of the American Association of Swine Practitioners*, Nashville, TN, March 2-5, p 427.

Wilson, J., Hayden, D. and Valberg, S. 1996. Congenital hypothyroidism and musculoskeletal defects. *Proceedings of the Annual Fall Conference of the Minnesota American Veterinary Association*, St. Paul, MN, October 25, pp 58-65.

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### **Publications: Miscellaneous**

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Aird, E.A. 1996. Anemias. *The College of Veterinary Medicine Reporter*, 1.8:14-15.

Carr, D.A., Shaw, D.P., Halvorson, D.A. 1996. Cellulitis in turkeys. *Gobbles* 53:13.

Collins, J.E., Dee, S.D., Freese, W., Jones, R., Mohr, M., and Patterson, S. 1966. Economic management of porcine reproductive and respiratory syndrome and mycoplasmal pneumonia in pigs, part 3. *Agri-Practice*, 17.9:11-13.

Collins, J.E., Dee, S.D., Freese, W., Jones, R., Mohr, M., and Patterson, S. 1966. Economic management of porcine reproductive and respiratory syndrome and mycoplasmal pneumonia in pigs, part 2. *Agri-Practice* 17.8:11-15.

Collins, J.E., Dee, S.D., Freese, W., Jones, R., Mohr, M., and Patterson, S. 1966. Economic management of porcine reproductive and respiratory syndrome and mycoplasmal pneumonia in pigs, part 1. *Agri-Practice* 17.7:10-14.

Collins, J., Dee, S., Halbur, P., Keffaber, K., Lautner, B., McCaw, M., Rodibaugh, M., Sanford, E. and Yeske, P. 1996. Laboratory diagnosis of porcine reproductive and respiratory syndrome (PRRS) virus infection. *Swine Health and Production* 4:33-35.

Murphy, M.J. 1996. Toxicology. *The College of Veterinary Medicine Reporter*, 1.10:16-17.

Murphy, M.J. 1997. From the Diagnostic Laboratory. *The College of Veterinary Medicine Reporter*, 1.11:19-20.

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### **Continuing Education Presentations for Veterinarians**

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Aird, E.A. February, 1997. *Diagnostic cytology*. Annual Meeting of the Minnesota Veterinary Medical Association, Bloomington, MN.

Aird, E.A. February, 1997. *Diagnostic cytology and techniques*. Annual Meeting of the Minnesota Veterinary Medical Association, Bloomington, MN.

Aird, E.A. October, 1997. *Cytology techniques*. College of Veterinary Medicine, University of Minnesota, St. Paul, MN.

Bergeland, M.E. and Henry, S.C. September 21, 1996. *Laboratory diagnostics for the practitioner*. Allen D. Leman Swine Conference, St. Paul, MN.

Collins, J.E. August 14, 1996. *Fetal pathology and diagnostic sampling*. Swine Reproductive Symposium, American College of Theriogenologists, Kansas City, MO.

Collins, J.E. August 14, 1996. *Infectious causes of embryo/fetal loss*. Swine Reproductive Symposium, American College of Theriogenologists, Kansas City, MO.

Collins, J.E. August 14, 1996. *Reproductive disease of the boar*. Swine Reproductive Symposium, American College of Theriogenologists, Kansas City, MO.

Murphy, M.J. February 7, 1996. *Update on diagnostic lab cases*. Equine Section, Annual Meeting of the Minnesota Veterinary Medical Association, Bloomington, MN.

Ruth, G.R. October 21, 1996. *Diagnostic lab and practitioners*. Brooks, MN.

Ruth, G.R. February, 1997. *Interesting bovine cases*. Annual Meeting of the Minnesota Veterinary Medical Association, Bloomington, MN.

Shaw, D.P. February 8, 1996. *Case studies from the Diagnostic Laboratory*. Annual Meeting of the Minnesota Veterinary Medical Association, Bloomington, MN.

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### Lecture, Seminar and Workshop Presentations

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Aird, E.A. September, 1996. Annual Hematology and Cytology short Course. College of Veterinary Medicine, University of Minnesota, St. Paul, MN.

Collins, J.E. October 1-31, 1996. Guest expert for "Ask the Expert" about porcine reproductive and respiratory syndrome (PRRS). Website of the National Pork Producers Council, Des Moines, IA.

Morrison, R.A., Wetzel, T., Barsch, M. and Collins, J.E. Swine respiratory diseases. The Morrison Group, Continuing Education Department of the College of Veterinary Medicine, University of Minnesota, St. Paul, MN.

Murphy, M.J. 1996. A pet owners guide to common animal poisons. Website of the American Veterinary Medical Association.

Ruth, G.R. October 22, 1996. What the Minnesota Veterinary Diagnostic Laboratory can do for you. Bagley, MN.

Ruth, G.R. April 5, 1997. Veterinary histology. Minnesota State Histology Society Meeting, Bloomington, MN.

Shaw, D.P. December 10, 1996. Cellulitis in turkeys. Decision Makers in Turkey Production, Willmar, MN.

Shaw, D.P. August 15-16, 1996. Preventative medicine. Midwest Gamebird and Hunting Preserve Conference, Bloomington, MN.

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### Scientific Meeting Presentations

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Guarino, H., Goyal, S.M. and Murtaugh, M.P. October, 1996. *Detection of genomic heterogeneity of PRRSV by RT-PCR and Southern hybridization*. 15<sup>th</sup> Panamerican Congress, Sao Paulo, Brazil.

Murphy, M.J. May 20, 1997. *Hoary alyssum (Berteroa incane) toxicosis*. International Symposium of Poisonous Plants, San Angelo, TX.

Murphy, M.J. May 23, 1997. *Secondary photosensitization in horses ingesting Cymodothea trifolii infested clover*. International Symposium of Poisonous Plants, San Angelo, TX.

Shaw, D.P. and Murphy, M.J. September 29-October 1, 1996. *Methionine toxicity in broiler chickens*. 47<sup>th</sup> North Central Avian Disease Conference, Columbus, OH.

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## Awards and Citations

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Joki, Ronald	Carl W. Edborg III Award – Outstanding Service to the College
Roback, Richard	Civil Service Longevity Award – 30 years
Arendt, Tom	Civil Service Longevity Award – 20 years
Smith, Patricia	Civil Service Longevity Award – 15 years
Lindeman, Cynthia	Civil Service Longevity Award – 15 years
Slagter, Joanne	Civil Service Longevity Award – 10 years

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## Professional Organizations

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Bergeland, Martin E.	American Association of Veterinary Laboratory Diagnosticians Board of Governors Foundation – Board member Laboratory Directors Committee Long-Range Planning Committee – Chair USDA Emergency Disease Liaison Committee
	Minnesota Board of Animal Health Pseudorabies Advisory Committee – Consultant
	Minnesota Veterinary Medical Association CVM Liaison Committee Governmental Affairs Committee
Collins, James E.	American Association of Swine Practitioners Subcommittee on Porcine Reproductive and Respiratory Syndrome – Chair
	American Association of Veterinary Laboratory Diagnosticians Long Range Planning Committee
	Minnesota Veterinary Medical Association Liaison Committee – Chair Program Committee – Co-chair of swine program
Goyal, Sagar M.	American Association of Veterinary Laboratory Diagnosticians Diagnostic and Interpretative Serology Committee Diagnostic Virology Committee Disposal of Biological Waste Committee Laboratory Safety Committee
Murphy, Michael J.	American Association of Veterinary Laboratory Diagnosticians/ Veterinary Analytical Advisory Committee – Chair
	American Organization of Analytical Chemists Drug Residue and Related Topics Committee



**Department of Veterinary Diagnostic Medicine**  
**Departmental Income**  
**July 1, 1996 – June 30, 1997**

I.	Instruction		
	University Operations and Maintenance Fund		\$ 388,329
II.	Research		
	A. Minnesota Pork Producers	\$ 12,500	
	B. Minnesota Zoo Board Contract	1,389	
	C. South Dakota State University/USDA	<u>1,105</u>	
			14,994
III.	Services		
	A. State Special Appropriation		
	Minnesota Veterinary Diagnostic Laboratory	1,772,781	
	B. Laboratory User Fees		
	1) Veterinary Diagnostic Laboratory		
	a) Public	1,340,599	
	b) Other University Departments	166,868	
	c) Interest Income	<u>8,118</u>	
			3,288,366
IV.	Other		
	A. Minnesota Poultry Testing Laboratory – Willmar		
	1) Contract, Board of Animal Health	158,082	
	2) Other	9,848	
	B. Private Gifts		
	1) Fenstermacher Fund		
	a) Contributions	5,443	
	b) Endowment Earnings	3,980	
	2) W.T.S. Thorp Fellowship in		
	Veterinary Diagnostic Pathology		
	a) Endowment Earnings	7,236	
	3) Research		
	a) Contributions	4,000	
	b) Educational Sales	144,231	
	c) Interest Income	<u>1,148</u>	
			333,968
	<b>TOTAL</b>		<u>\$4,025,657</u>

## **Administration**

### University of Minnesota

Thomas Reagan – Chair, Board of Regents  
Nils Hasselmo – President  
Frank Cerra – Academic Health Center Provost  
David G. Thawley – Dean, College of Veterinary Medicine

### Board of Animal Health

Russell Wirt – President  
John A. Howe – Vice President  
Sharon Baker  
Theodore G. Huisinga  
Joni Scheffel  
Thomas J. Hagerty – Executive Secretary

### University of Minnesota

#### College of Veterinary Medicine Advisory Council Executive Committee Members

Michael McMenemy – Chair, Small Animal Practice, Minneapolis, Minnesota  
Dean Compart, Minnesota Farm Bureau, Nicollet, Minnesota  
Warren Hartman, Mixed Animal Practice, Wadena, Minnesota  
Milton Stensland, Small Animal Practice, Austin, Minnesota