



Texas Veterinary Medical Diagnostic Laboratory System



Final Report

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(325)676-6085

Owner's Name:
African Elephant #356

Veterinarian/Submitter: Account ID#: 13826
Abilene Zoological Gardens
2070 ZOO LANE
Abilene, TX 79602

Date specimens received: 10/5/07

Preliminary reports: Fax 10/5/07, Fax 10/5/07, Fax 10/8/07, Fax 10/11/07

Phone reports:

Final report: Fax 10/15/07

Species: Exotic **Age:** 28.00 Years **Animal ID:** ISIS #356
Breed: Elephant **Weight:** **Sex:** Female

Tests Requested: CBC with differential, chem panel, LDH, fecal culture, (PCR if salmonella positive), EMCV titers

Specimens Submitted: whole blood, serum, feces, slides

Clinical History: Preshipment testing. /sp

Clinical Diagnosis:

Previous Cases:

Treatment:

Conclusion/Interpretation of Lab Findings:

Laboratory results as listed.

LABORATORY TEST STATUS:

	Ordered	Current Status
Chem panel (Equine) (C)	10/5/07	Completed 10/5/07
LDH (C)	10/5/07	Completed 10/5/07
Encephalomyocarditis (SN) (V)	10/8/07	Completed 10/11/07
Complete Blood Count (Mammalian) (C)	10/5/07	Completed 10/5/07
Routine culture (B)	10/5/07	Completed 10/8/07
Molecular Genetics Comments: (M)	10/15/07	Completed 10/15/07

Bacteriology

Date completed: 10/8/07

Test: Routine culture

Animal ID: ISIS #356

Specimen	Isolate	Growth
Feces	Yeast	
Feces	Enterics	
Feces	Negative Culture Salmonella	

Comment:

---A. K. Swinford, DVM, MS, DACVM /lak

Clinical Pathology

Completed: 10/5/07

Test: Chem panel (Equine)

Animal ID: ISIS #356

Test	Results	Reference Range	Relative Result Indication		
			Low	Normal	High
Total Serum Protein	8.0	g/dl			
Albumin	3.2	0 g/dl			
Calcium, serum	12.4	0 mg/dl			
Phosphorus, serum	4.65	0 mg/dl			
Glucose	91	0 mg/dl			
BUN	2.3	0 mg/dl			
Creatinine	1.35	0 mg/dl			
Total bilirubin	0.12	mg/dl			
Direct bilirubin	0.05	mg/dl			

ALP	65	0 U/l
CK	356	0 U/l
AST (SGOT)	15	0 U/l
Globulins	4.8	0 g/dl
A/G Ratio	0.67	
GGT	11	0 U/l

Comment

---Submitted on a clot, therefore some results could be falsely high (albumin, total protein, phosphorus, bilirubin, SGOT, CK) and others could be falsely low (glucose).

/bw

---Sample was submitted on a clot which may affect the results.

--- J. Akins, DVM,MS

/bw

Completed: 10/5/07

Test: LDH

Specimen: Serum

Animal ID	Results	Reference Range	Relative Result Indication		
			Low	Normal	High
ISIS #356	376.5	0 IU/l			

Completed: 10/5/07

Animal ID: ISIS #356

Complete Blood Count (Mammalian)

Total WBC's	6,600	/ul
Differential/%		
Neutrophils	26	%
Lymphocytes	29	%
Monocytes	42	%
Eosinophils	3	%
Absolute/ul		
Neutrophils	1716	/ul
Lymphocytes	1914	/ul
Monocytes	2772	/ul
Eosinophils	198	/ul
Red blood cells	3.09	X10e6/ul
Hemoglobin, blood	13.7	g/dl
PCV	40.5	0%
MCV	131.1	f
MCH	44.3	pg
MCHC	33.8	g/dl
Platelet estimate	480	X10e3/ul
Platelet comment	Estimate	

Plasma protein	8.0	0 g/dl
Fibrinogen	500	0 mg/dl

RBC Morphology
Normal

WBC Morphology
Normal

Hemoparasites
None seen

Comments:
/bw

--- J. Akins, DVM,MS
/ja/bw

§Molecular Diagnostics

Date Completed: 10/15/07

Molecular Genetics Comments:
PCR cancelled per bacteriology results. --Dr. Sneed/et

✿Virology

Date completed: 10/11/07

Test: Encephalomyocarditis (SN)

Animal ID	Result
ISIS #356	Neg. <4

Veterinary Bulletin:

Sheep and Goat parasite Anthelmintic Resistance:

Rainfall in Texas has been exceptional for much of the state this year and grass is above normal in most pastures. Unfortunately good rains and good pastures can quickly lead to heavy populations of gastrointestinal parasites. Recently, TVMDL has received several small ruminants (both sheep and goats) for postmortem examination. During the same time period, fecal samples submitted to TVMDL from small ruminants have had high trichostrongyle egg counts. The cause of these recent deaths and rising egg counts can be attributed solely to *Haemonchus contortus*. Pasture populations of *H. contortus* are markedly elevated now because weather conditions have been perfect for this species.

Unfortunately *H. contortus* has become highly resistant to all classes of anthelmintics. Ivermectin, Moxidectin as well as all of the benzimidazoles appear to have little or no effect at this time. To further compound this problem there are no new drugs in the pipeline which will provide any relief for the *Haemonchus* problem in the near future.

In the mean time sheep and goats, particularly those in small groups should be maintained on the highest and driest areas available

and when possible animals should be fed quality feed in bunkers off the ground.

Additional Note: We have had some evidence that Llamas are also a species experiencing severe intestinal parasite problems with apparent resistance to currently used anthelmintics.

Brucella Abortus Testing

1) Porcine and Domestic Bovine testing is performed at both the Amarillo and College Station TVMDL Laboratories.

2) Samples submitted for the purpose of:

- a. Bovine export (International or Interstate)
- b. Bovine herd testing (Certification and Validation)
- c. Private sale (Official Brucella Certificate)

Should be sent directly to:

State/ Federal Brucellosis Laboratory
4501 Springdale Rd. Suite B
Austin, TX 78723
Phone 512.933.0441

EIA Testing using Global Vet Link - College Station Lab only.

TVMDL is now accepting specimens for Equine Infectious Anemia testing using an electronic submission process provided by Global Vet Link. If you want to open an account or need information on the submission process you can view their web site at www.globalvetlink.com or call them at 515-296-0860.

Presently only the College Station Laboratory is able to provide results through Global Vet Link. By default TVMDL will run the ELISA test protocol for all routine EIA testing. For TVMDL the ELISA test provides you with the least cost and the quickest "turn around" for your testing results.

If you require the AGID test you must select the AGID test in the Global Vet Link submission process and you must also include a separate TVMDL standard submission form stating you require the AGID tests for export or other special purpose. If you have questions you may call toll free 888-646-5623.

EIA Testing Protocol Using the standard hand written VS Form 10-11:

Please note the default Equine Infectious Anemia test for TVMDL is the ELISA test. The ELISA test is the LEAST EXPENSIVE, MOST SENSITIVE, and has the QUICKEST "turnaround time" when compared to the AGID test.

If you require the AGID test for export or some other special purpose, you must request the AGID test in Box 6 of the VS Form 10-11 AND ALSO provide a completed standard TVMDL submission form. You must note in the Clinical History section of the TVMDL submission form the "AGID test is required for Export" or similar instructions.

We apologize for the confusion surrounding this issue. For many years the AGID test was preferred, mainly based on cost and many clients automatically continue to select that test when the ELISA test is preferred in almost all situations.

August 24, 2007

Tanya Urinalysis

Sick:

Leukocytes = Negative
Nitrate = Negative
Urobilinogen = Negative
Protein = Trace
pH = 8.5
Blood = Negative
Specific Gravity = 1.010
Ketone = Negative
Bilirubin = Negative
Glucose = Negative

Sediment:

Calcium Oxylate crystals ++++
RBC = Neg
WBC = +