

Clinical Notes - Individual Specimen Report
MONTGOMERY ZOO

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LOXODONTA AFRICANA (no subsp)
African elephant
Name: TINA

Sex: Female
Age: 22Y Est.

Acc. #: 3449
Birth: 1.Mar.1985

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2.Apr.2007

Attempted transabdominal ultrasound again. Unable to locate fetus. Any movement seen appeared consistent with intestinal contractions. Attempted from both right and left sides. On right side, briefly located fluid filled viscous, but then she moved. Unable to relocate. (JK)

24.Apr.2007

Attempted trans abdominal ultrasound of fetal evaluation. Images again fuzzy. Need to contact ultrasound manufacturer/training for consult on settings.

Will be unable to perform ultrasound in May due to veterinary staff being out of town. Keepers will continue to work with Tina to maintain conditioning for transabdominal ultrasound. Plan on resuming schedule of attempting ultrasound q 2-3 weeks. . (345)

29.May.2007

Have noted increasing ventral edema. Advised keepers to attempt to increase exercise to twice per day. Blood drawn today for CBC and chemistry profile. Amylase very high (>4000) on in house Chem profile. Sent to Antech for verification. Amylase elevated on Antech testing. Amylase 8951, Lipase <10

R/O: Amylase nonspecific enzyme, can be elevated in GI, Pancreatic, or renal disease. No GI symptoms noted at this time. Pancreatic unlikely due to normal lipase and no GI symptoms noted. Renal disease, not likely due to normal renal values.

Plan: reevaluate CBC + chemistry profile x 2-3 weeks in absence of clinical signs. If continued elevated amylase, will consult with clinical pathologists at Tuskegee and/or Auburn. (JK)

12.Jun.2007

Observed on display, ventral edema does not appear to be worsening. Appears to wax and wane throughout the day---will be more prominent in the AM, less in the PM.

Keepers report are actively attempting to provide more exercise/walking throughout day. When not encouraged, she is observed on display standing in one area, does not walk around display as other elephants and is not swimming as much as she has in the past. Report that Tina is very cooperative with exercise program and seems to enjoy the interaction/attention from keepers. Plan to continue as indicated. (JK)

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.....2006...

20.Sep.2006

Dr. Pate spoke with Dr. Dennis Schmitt today about Tina. He is rather confident that Tina is pregnant and will be expecting around the first of December 2007. She most likely conceived in early February of 2006 when Sdudla first arrived. This is when Sdudla was observed trying to mount Tina- since then he has shown no interest in her (apparently because she's been pregnant). Will be sending serum to the Smithsonian zoo for a prolactin assay to confirm the pregnancy. Dr. Schmitt still wants 1 sample per month for progesterone testing; however blood draws are still to be performed on a WEEKLY basis to keep Tina in the routine. (SS)

28.Sep.2006

TB trunk washes- NEGATIVE- no Mycobacteria was isolated from any of the three tunk washes (National Veterinary Services Laboratories-USDA/APHIS). (SS)

18.Oct.2006

Smithsonian Institution Prolactin Assay results: Her sample was off the curve, meaning it was VERY HIGH. Reported as the maximum concentration of STD curve which was >80ng/ml. They say that this confirms pregnancy thus far. (SS)

.....2007...

7.Feb.2007

Vitamin E results: 0.26 Ug/ml. Serum sent to antech and test performed at animal health diagnostic laboratory at MSU.

Need to begin Vitamin E supplementation.

Will start Vitamin E (Mazuri manufacturer) with initial pulse dose x 30 days, then decrease dose by 1/2. Reevaluated vitamin E levels 3-4 months after starting supplementation, ~ end of June/beginning of July. (SS)

29.Mar.2007

Attempted to perform transabdominal ultrasound to monitor fetus. Noted fluid filled viscious with a large amount of movment suggestive of very active baby. Unable to get saveable clear images of fetus, however possibly imaged ear and trunk. PLAN to attempt again next week.

Feet examined while in ERD: noted feet appear to be in very good condition, no nail cracking, no deep grooves of sole/pad noted Plan to continue current foot care protocol. (JK)

Clinical Pathology Records - Specimen Report
MONTGOMERY ZOO

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=====
Scientific Name: LOXODONTA AFRICANA (no subsp)           Accession #: 3449
Common Name: African elephant                             Female
Name: TINA                                               Birth: 1.Mar.1985 (Estimated)
                                                         Age: 22Y Est.
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Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Manual restraint used.

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Date of Collection: 29.May.2007
Time of Collection:
Collected by: CM
Sample Collection Site: EAR VEIN

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Hematology >>

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Analysis Information >>
Anticoagulant: EDTA
Storage: Refrigerated < 48 hours
Sample Quality: No quality problems.

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Laboratory: ANTECH
Date of Analysis: 30.May.2007
Time of Analysis:
Analysis by:
Automated analysis.

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Tests and Results >>

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WBC          *10^3/UL      12.1
RBC          *10^6/UL      2.86
HGB          GM/DL        12.4
HCT          %            35.4
MCV          fL           124
MCH          uug          43.4
MCHC         gm/dL       35.0
SEGS        % (*10^3/UL) > 51      (6.171)
BANDS       % (*10^3/UL) < 0
LYMPHOCYTES % (*10^3/UL) 27      (3.267)
MONOCYTES  % (*10^3/UL) 18      (2.178)
EOSINOPHILS % (*10^3/UL) 1       (0.121)
BASOPHILS  % (*10^3/UL) >> 3      (0.363)
PLATE. CNT. *10^3/UL    < 145

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ISIS Reference Values >>

Mean	S.D.	Min.	Max.	(N)
10.50±	2.648	4.500	22.10	(1544)
3.15±	0.40	2.05	4.80	(1480)
13.7±	1.6	7.0	26.1	(1522)
39.5±	4.6	27.0	56.0	(1984)
125.8±	8.1	91.1	190.0	(1466)
43.6±	3.0	34.8	66.8	(1454)
34.7±	2.0	18.4	57.9	(1501)
3.146±	1.695	0.000	11.80	(1224)
0.843±	0.799	0.000	6.530	(605)
4.913±	2.532	0.022	17.40	(1236)
1.513±	1.651	0.000	9.480	(1175)
0.225±	0.273	0.000	2.898	(885)
0.049±	0.081	0.000	0.525	(464)
417±	245	74	1380	(215)

Comments >>

MCV- 124; MCH- 43.4; MCHC- 35.0; amylase- 8,951; lipase- <10

Clinical Pathology Records - Specimen Report
MONTGOMERY ZOO

Scientific Name: *LOXODONTA AFRICANA* (no subsp)
Common Name: African elephant
Name: TINA

Accession #: 3449
Female
Birth: 1.Mar.1985 (Estimated)
Age: 22Y Est.

Collection Information >>

Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Manual restraint used.

Date of Collection: 29.May.2007
Time of Collection:
Collected by: CM
Sample Collection Site: EAR VEIN

Chemistry >>

Analysis Information >>

Chemistry Sample: Whole Blood (Heparin)
Storage: Fresh (<10 hours)
Sample Quality: hemolysis

Laboratory: VETSCAN
Date of Analysis: 29.May.2007
Time of Analysis: 11:12
Analysis by: SH
Automated analysis.

Tests and Results >>

ISIS Reference Values >>

				Mean	S.D.	Min.	Max.	(N)
GLUCOSE	MG/DL		74	84±	15	38	174	(1437)
BUN	MG/DL	<<	3	10±	3	0	22	(1458)
CREAT.	MG/DL		1.4	1.5±	0.5	0.0	11.0	(1405)
BUN/Cr ratio			2.14					
CA	MG/DL		11.4	10.9±	0.6	8.1	15.3	(1434)
PHOS	MG/DL		5.2	4.9±	0.8	2.8	8.2	(1291)
Ca/P ratio			2.19					
NA	MEQ/L	>	137	129±	4	107	182	(1353)
K	MEQ/L		5.3	4.8±	0.5	3.3	7.6	(1368)
Na/K ratio			25.8					
T.PROT. (C)	GM/DL		7.7	7.7±	0.6	5.8	10.5	(1261)
ALBUMIN (C)	GM/DL	<<	2.2	3.6±	0.4	2.4	5.2	(1145)
GLOBULIN (C)	GM/DL	>>	5.5	4.1±	0.5	2.6	6.4	(1135)
Alb/Glob rat			0.400					
ALT (SGPT)	IU/L		5	7±	6	0	40	(547)
T. BILI.	MG/DL	>	0.4	0.2±	0.1	0.0	1.0	(1187)
ALK.PHOS.	IU/L		129	128±	61	32	441	(1404)

Report Start Date
1/1/1900

Specimen Report for MONTGOMRY / 3449

Report End Date
6/19/2007



Taxonomic name: *Loxodonta africana*

Family: Elephantidae

Common name: African elephant

Order: Proboscidea

Current information

Sex:	Female	Sire ID:	UNK at Unknown Location
Birth type:	Unknown	Dam ID:	UNK at Unknown Location
Birth Location:	Unknown Location	Rearing:	Unknown
Birthdate-Age:	~ 1985 - 22Y,3M,23D +/-1 Yr.	Hybrid:	Not a hybrid
Time since last Acq:	2Y,8M,11D as of report end date		

<u>Date in</u>	<u>Acquisition - Vendor/local Id</u>	<u>Holder</u>	<u>Disposition - Recipient/local Id</u>	<u>Date out</u>
5 Mar 2004	Purchase from PRIVATE / UNK	MONTGOMRY / 3449	Loan Out to GULF BREZ / A3576	5 Mar 2004
7 Oct 2004	Loan Returned to Us GULF BREZ / A3576	MONTGOMRY / 3449		

<u>Date</u>	<u>Identifier type</u>	<u>Identifier</u>	<u>Location</u>	<u>Comments</u>
7 Oct 2004	House Name	TINA		

<u>Date</u>	<u>Type</u>	<u>Value</u>	<u>Units</u>	<u>Comments</u>
11 Jan 2005	live animal weight	5840	pound	
5 Feb 2005	live animal weight	5960	pound	
24 Feb 2005	live animal weight	5890	pound	
22 Mar 2005	live animal weight	5925	pound	
9 Apr 2005	live animal weight	6150	pound	
26 Apr 2005	live animal weight	5980	pound	
4 Jun 2005	live animal weight	6140	pound	
2 Jul 2005	live animal weight	6080	pound	

<u>Date</u>	<u>Note type</u>	<u>Comments</u>
5 Mar 2004	Acquisition note	WILLIAM G. MORRIS PO BOX 913 GIBSONTON, FL 33534

<u>Date</u>	<u>Sex</u>	<u>Comments</u>
5 Mar 2004	Female	

<u>Date</u>	<u>Rearing</u>	<u>Comments</u>
5 Mar 2004	Unknown	

<u>Date</u>	<u>Parent(s)</u>	<u>local Id</u>	<u>Location</u>	<u>Comments</u>
5 Mar 2004	Sire	UNK	UNKNOWN	
5 Mar 2004	Dam	UNK	UNKNOWN	

ANTECH DIAGNOSTICS 4895 S. Atlanta, Suite A Smyrna GA 30080 Phone: 800-959-1904

Montgomery Zoo
2301 Colliseum Pkwy
Montgomery, AL 36109
Tel: 334-240-4900
Fax: 334-240-4916

Client # 1305185
Chart # 3449,

Accession No. GA14504107	Doctor KOTTWITZ	Owner MONTGOMERY ZO	Pet Name TINA	Received 05/30/2007
Species Mammal	Breed	Sex F	Pet Age	Reported 05/30/2007 09:03 AM

Test Requested	Results	Reference Range	Units
AMYLASE			
Amylase	8951		U/L
Verified by repeat analysis.			
LIPASE			
Lipase	<10		U/L
Verified by repeat analysis.			
COMPLETE BLOOD COUNT			
✓ Hemoglobin	12.4	10.0-13.0	g/dL
✓ Hematocrit	35.4	34.0-44.0	%
✓ WBC	12.1	8.0-15.0	10 ³ /μL
✓ RBC	2.86	2.00-4.00	10 ⁶ /μL
MCV	124		fl
MCH	43.4		pg
MCHC	35.0		g/dl
✓ Platelet Count	145		10 ³ /μL
Platelet Estimate	Adequate		
Differential	Absolute		
✓ Neutrophils	6171		%
✓ Bands	0		0
✓ Lymphocytes	3267		27
✓ Monocytes	2178		18
✓ Eosinophils	121		1
✓ Basophils	363		3

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===== VETSCAN =====
05/29/07 11:12 AM
ANIMAL TYPE: SPECIES 1
PATIENT #: 3449
COMPREHENSIVE DIAGNOSTIC
ROTOR LOT #: 7034AB5
OPERATOR #: 2-
SERIAL #: 0000005875
.....
✓ ALB 2.2 G/DL
✓ ALP 129 U/L
✓ ALT 5 U/L
AMY ↑↑↑ U/L
✓ TBIL 0.4 MG/DL
✓ BUN 3 MG/DL
✓ CA++ 11.4 MG/DL
✓ PHOS 5.2 MG/DL
✓ CRE 1.4 MG/DL
✓ GLU 74 MG/DL
✓ NA+ 137 MMOV/L
✓ K+ 5.3 MMOV/L
✓ TP 7.7 G/DL
✓ GLOB 5.5 G/DL

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QC OK
HEM 1+, LIP 0, ICT 0

Amylase 1100

Clinical Pathology Records - Specimen Report
MONTGOMERY ZOO

Scientific Name: LOXODONTA AFRICANA (no subsp)
Common Name: African elephant
Name: TINA

Accession #: 3449
Female
Birth: 1.Mar.1985 (Estimated)
Age: 22Y Est.

Collection Information >>
Health Status: Normal
Fasting Time: < 8 hours
Activity: Calm
Manual restraint used.

Date of Collection: 19.Mar.2007
Time of Collection:
Collected by: CM
Sample Collection Site: EAR VEIN

Hematology >>

Analysis Information >>
Anticoagulant: EDTA
Storage: Refrigerated < 48 hours
Sample Quality: hemolysis

Laboratory: ANTECH
Date of Analysis: 20.Mar.2007
Time of Analysis:
Analysis by:
Automated analysis.

Tests and Results >>

ISIS Reference Values >>

				Mean	S.D.	Min.	Max.	(N)
WBC	*10 ³ /UL	<	7.1	10.50±	2.648	4.500	22.10	(1544)
RBC	*10 ⁶ /UL	>>	4.57	3.15±	0.40	2.05	4.80	(1480)
HGB	GM/DL	>>	19.9	13.7±	1.6	7.0	26.1	(1522)
HCT	%	>>	55.4	39.5±	4.6	27.0	56.0	(1984)
MCV	fL		121	125.8±	8.1	91.1	190.0	(1466)
MCH	uug		43.5	43.6±	3.0	34.8	66.8	(1454)
MCHC	gm/dL		35.9	34.7±	2.0	18.4	57.9	(1501)
SEGS	% (*10 ³ /UL)		59 (4.189)	3.146±	1.695	0.000	11.80	(1224)
BANDS	% (*10 ³ /UL)	<	0	0.843±	0.799	0.000	6.530	(605)
LYMPHOCYTES	% (*10 ³ /UL)	<	31 (2.201)	4.913±	2.532	0.022	17.40	(1236)
MONOCYTES	% (*10 ³ /UL)		9 (0.639)	1.513±	1.651	0.000	9.480	(1175)
EOSINOPHILS	% (*10 ³ /UL)		1 (0.071)	0.225±	0.273	0.000	2.898	(885)
BASOPHILS	% (*10 ³ /UL)		0	0.049±	0.081	0.000	0.525	(464)
PLATE. CNT.	*10 ³ /UL	<	85	417±	245	74	1380	(215)

Comments >>

MCV- 121; MCH- 43.5; MCHC- 35.9; blood parasites- none seen
Note: platelet clumps noted at the side and edges of the smear.
Platelet clumping prevents precise determination of platelet count (by any method) and falsely decreases the platelet number. The reported count reflects the MINIMUM platelet number. The platelet estimate reflects the estimated contribution of the platelet clumps.

Montgomery Zoo
 2301 Colliseum Pkwy
 Montgomery, AL 36109
 Tel: 334-240-4900
 Fax: 334-240-4916

Client # 1305185
 Chart # 3449

Accession No. ME00360236	Doctor	Owner MONTGOMERY ZO	Pet Name TINA	Received 03/20/2007
Species X	Breed	Sex F	Pet Age	Reported 03/20/2007 07:47 AM

Test Requested	Results	Reference Range	Units
COMPLETE BLOOD COUNT			
✓ Hemoglobin	19.9	*No Species	g/dL
✓ Hematocrit	55.4	*No Species	%
✓ WBC	7.1	*No Species	10 ³ /μL
✓ RBC	4.57	*No Species	10 ⁶ /μL
MCV	121	*No Species	fl
MCH	43.5	*No Species	pg
MCHC	35.9	*No Species	g/dl
✓ Platelet Count	85	*No Species	10 ³ /μL

Platelet clumps are noted at the side and edges of the smear. Platelet clumping prevents precise determination of a platelet count (by any method) and falsely decreases the platelet number. The reported count reflects the MINIMUM platelet number. The platelet estimate reflects the estimated contribution of the platelet clumps.

Platelet Estimate	Adequate		*No Species
Differential	Absolute	%	
✓ Neutrophils	4189	59	
✓ Bands	0	0	
✓ Lymphocytes	2201	31	
✓ Monocytes	639	9	
✓ Eosinophils	71	1	
Basophils	0	0	
Blood Parasites	None Seen		



Facsimile Transmission

Smithsonian Institution
National Zoological Park
Conservation and Research Center
1500 Remount Road
Front Royal, VA 22630

General Vet Hospital Tel: (540) 635-6521
Endocrine Office Tel: (540) 635-6570
Fax: (540) 635-6571

To: VET HOSPITAL STACY	Fax: 334-240-4916
	Date: 10.18.06
From: NICOLE ABBONDANZA	Pages:
Re:	CC:

Urgent For Review Please Comment Please Reply Please Recycle

Comments:

Thank you for your patience in waiting for TINA'S PROLACTIN Results. HER SAMPLE WAS off the curve, meaning it was VERY HIGH. I will report it as the MAXIMUM concentration of OUR STD CURVE which WAS:

TINA PROLACTIN concentration < 80ng/ml
ON 9/26/06 ~~10/26/06~~

I would say she is PREGNANT. CONGRATS.

TINA'S PROLACTIN WAS VERY HIGH &
READING OFF THE CURVE.

HER PROLACTIN CONCENTRATION WAS

>80ng/ml on 9.26.06

I would say this confirms
PREGNANCY SO FAR, BUT ~~if you~~
feel free to send in another
sample if you want. Congrats!!

ANTECH DIAGNOSTICS 2433 Globe Cove Rd Southaven MS 38671 Phone: 888-397-8378

Montgomery Zoo
2301 Colliseum Pkwy
Montgomery, AL 36109
Tel: 334-240-4900
Fax: 334-240-4916

Client # 1305185
Chart # 3449



Accession No. MP24707060	Doctor	Owner MONTGOMERY ZO	Pet Name TINA	Received 01/31/2007
Species Mammal	Breed	Sex F	Pet Age	Reported 02/07/2007 01:50 PM

Test Requested	Results	Reference Range	Units
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VITAMINE E	0.26		Ug/MI
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Interpretation:
We've measured serum vitamin E in several hundred elephants of unknown nutritional background. The median concentration is about 1 ug/ml with a range from 25th to 75th percentile of 0.75 to 1.3 ug/ml.
TEST PERFORMED AT ANIMAL HEALTH DIAGNOSTIC LABORATORY AT MSU