

Hanako

Herpes Information



Department of Pathology

To Holly Reed

Fax 253-404-~~3628~~
3827

Telephone 253-312-4292

From Erin Latimer

Date 11/16/07

Subject EEHV ELISA results

Total pages 3

Message

please let me know if you need anything else.

ORIGINAL

National Zoological Park
Department of Pathology
3001 Connecticut Ave., NW
Washington, DC 20008

National Elephant Endotheliotropic Herpesvirus (EEHV) Laboratory
202-633-4252

EEHV Testing Results

Date 11/16/07
Submitting Institution Point Defiance Zoo
Animal Name/ISIS # Hanako, Suki
Samples submitted serum

PCR positive

negative

primers used 2429/2430 (EEHV 1)
 2433/2434 (EEHV 2)
 6707/6708 (EEHV 3)
 6719/6720 (EEHV 3)
 6710/6711/6712 (EEHV 1, 2, 3)

ELISA

titer _____ please see second page

The EEHV ELISA is in the developmental stage. We are still working on many aspects of the test, including storage conditions for samples, controls to be used, detection systems, and significance of positive/negative titers. We will be using the results over the next six to twelve months to help us determine the optimal ELISA for EEHV. Please keep in mind that your results are part of this developmental process, and may not reflect the elephants' actual EEHV status. Thank you for sending samples for us to use in this endeavor.

Kathleen Larson

From: Latimer, Erin [LatimerE@si.edu]
Sent: Thursday, December 07, 2006 7:36 AM
To: klarson@pdza.org
Subject: RE: Hanako samples

As I was sending the previous email, someone walked in with a box of your samples--so, I just received your newest set of samples--thank you. Erin -----Original Message-----

From: Kathleen Larson [mailto:klarson@pdza.org]
Sent: Sunday, November 12, 2006 3:31 PM
To: Latimer, Erin
Subject: RE: Hanako samples

Let me check and I will get back to you shortly.
Kathy

-----Original Message-----

From: Latimer, Erin [mailto:LatimerE@si.edu]
Sent: Thursday, November 09, 2006 9:59 AM
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Erin,

Do we need to resubmit the survey with the samples from Hanako or can we just send the signed agreement and the serum? The forms are signed and the blood is pulled, but the survey might take awhile. Thanks, Kathy

Email dates 24 Aug - 7 Dec 2006

EEHV 1 ELISA results

Elephant	sample date	ODs/OD+
Hanako	22 Aug 04	grey
Suki	22 Aug 04	low
Hanako	1/22/04	low
Hanako	9/3/04	high
Hanako	4/17/05	grey
Hanako	6/12/05	grey
Hanako	1/21/06	grey
Hanako	6/13/03	high

While we are validating the ELISA, we report the results as "low", "grey", or "high", as compared to the positive control serum. The cut-offs for the low, grey, and high designations may change as we get data on more sera, so we are asking that you not draw any conclusions based on these results yet.

Julie Lemon

From: Latimer, Erin [LatimerE@si.edu]
Sent: Friday, September 28, 2007 7:12 AM
To: Julie Lemon
Subject: RE: fed ex tracking number

*Reply to Hanako
Suki
GEEW
This is duplicate -
see below*

I tested the Hanako and Suki serum samples that were sent on 7/20/07. They were both low in the EEHV ELISA. I will send a paper copy of the results shortly.
Erin

From: Julie Lemon [mailto:JulieL@tacomaparks.com]
Sent: Thursday, July 19, 2007 11:54 AM
To: Latimer, Erin
Subject: RE: fed ex tracking number

Erin,

OK let's try this again. The fed ex tracking# is: 8596 0451 8620.
I packed it in ice packs.

Thanks again!

Julie Lemon, RVT
Point Defiance Zoo & Aquarium
5400 N. Pearl Street
Tacoma, WA 98407
253-404-3653

From: Latimer, Erin [mailto:LatimerE@si.edu]
Sent: Thursday, July 19, 2007 4:17 AM
To: Julie Lemon
Subject: RE: fed ex tracking number

FedEx doesn't have info on this package as of 7:15 am our time. Did it get picked up? I'll check it again in a couple hours.
Erin

From: Julie Lemon [mailto:JulieL@tacomaparks.com]
Sent: Wednesday, July 18, 2007 1:49 PM
To: Latimer, Erin
Subject: fed ex tracking number

*Sample drawn 6 July 07
per Julie L.*

Hi Erin,

Thanks for accepting our annual Elephant serum for EEHV titer testing. The Fed Ex tracking number is: 8599 1983 3022.

I will be sending more samples for Int'l Elephant Foundation at another time.

Thanks Again!

Julie Lemon, RVT

11/4/2007

Point Defiance Zoo & Aquarium
5400 N. Pearl Street
Tacoma, WA 98407
253-404-3653

000000000000

MA

12

**National Zoological Park
Department of Pathology
3001 Connecticut Ave., NW
Washington, DC 20008**

**National Elephant Endotheliotropic Herpesvirus (EEHV) Laboratory
202-633-4252**

EEHV Testing Results

Date 9/28/07

Drawn 10 July 07
Sent out 18 July 07

Submitting Institution Point Defiance Zoo

Animal Name/ISIS # Hanako 97M 024

Samples submitted Serum 7/6/07

PCR positive

negative

primers used terminase 2429/2430 (Asian elephants)

polymerase 2433/2434 (African elephants)

terminase 3024/3025 (African elephants)

ELISA

titer low

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Allison Case

From: Allison Case [acase@pdza.org]
Sent: Monday, June 25, 2007 4:01 PM
To: 'dolson@elephantconservation.org'
Cc: 'juliel@tacomaparks.com'; 'Kathy Larson'; 'craig.elebarn@pdza.org'; 'Shannon Smith'; 'aimee.elebarn@pdza.org'
Subject: FW: EEHV

Greetings Debbie,

We were not able to collect blood for shipping on the 20th. Are you still interested if we can ship on the 27?

Many thanks,

Allison L. Case, DVM
Associate Veterinarian
Point Defiance Zoo and Aquarium
Senior Veterinarian
Northwest Trek Wildlife Park
253.404.3655 - office
253.404.3827 - fax
acase@pdza.org

Subject: EEHV

Hello everyone - sorry for this duplicate email but some of the emails did not go through so just making sure everyone gets this message.....

Our next call for EEHV elephant whole blood and serum samples is June 20th.

As before, please send the samples via FedEx to:

Erin Latimer/Laura Richman
Smithsonian, National Zoological Park
Department of Pathology
3001 Connecticut Ave. NW
Washington, DC 20008
(202) 633-4252

**Ship overnight with ice packs or dry ice.
Ship Wednesday the 20th for a Thursday June 21st arrival.**

Please put the International Elephant Foundation, c/o Fort Worth Zoo, 1989 Colonial Parkway, Fort Worth, Texas 76110 as the return address for confidentiality reasons.

Please email me your tracking number so I can track shipments to make sure all arrive.

Please let me know if you have any questions. Also, please forward this message on to anyone at your institution that needs to know and if you have someone that

6/25/2007

should be on the email list, please send me their contact information.

The results of the first two quarter's samples were extremely interesting and so we are very, very excited to get additional samples.

Thank you in advance

Deborah Olson
Director of Conservation and Science Programs
Indianapolis Zoo
Executive Director
International Elephant Foundation

6/25/2007

Sent 18 July 07
Request for EEHV testing

Department of Pathology
Smithsonian National Zoo
3001 Connecticut Ave. NW
Washington, DC 20008
(202) 673-4869

COPY

Date 18 July 07

Requestor's name Kathleen Larson, DVM

Institution Point Defiance Zoo & Aquarium

Address 5400 W. Pearl Street
Tacoma, WA 98407

Phone/email 253-404-3639 / KLARSON@PDZA.ORG

Animal Name/ISIS # 97M024 "Hanako"

Age 44 yrs

Species Asian Elephant

Reason for request (i.e. current symptoms of possible EEHV, or possible exposure to EEHV) Surveillance / Monitor

Type of samples being sent Serum collected 16 July 07

Before sending samples, please call Erin Latimer 202-673-4869 (W) 633-4252
703-471-2168 (H)
OK to send 18 July 07

or
Laura Richman 301-398-4741 (W)
301-253-8723 (H)

Please send samples **overnight on dry ice in a sealed cooler**. The best day to send samples is Wednesday, for Thursday delivery.

-----Original Message-----
From: Latimer, Erin [mailto:LatimerE@si.edu]
Sent: Wednesday, September 06, 2006 5:31 AM
To: klarson@pdza.org
Subject: RE: Hanako samples

Dr. Larson,
I have attached the IACUC sample request form.
Thank you for your help in this,
Erin

-----Original Message-----
From: Kathleen Larson [mailto:klarson@pdza.org]
Sent: Tuesday, August 29, 2006 6:31 PM
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Please let me know if you have difficulties with this format. I can send a hard copy if needed. Kathy

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Thank you,
Erin

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From: Kathleen Larson [mailto:klarson@pdza.org]
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To: Latimer, Erin
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Erin,

Thank you for such a timely reply. In order for us to send you the additional samples and survey information, I have to run your protocol through our IACUC approval process. Please fill out the attachment and return. The more information you provide, the less questions will be asked, and the sooner we can approve the protocol. Our next meeting is the second Wednesday of the month. Upon approval, we should be able to send you the samples shortly.

Dr. Kathy

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From: Latimer, Erin [mailto:LatimerE@si.edu]
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Kathleen Larson

From: Latimer, Erin [LatimerE@si.edu]
ent: Thursday, December 07, 2006 7:34 AM
To: klarson@pdza.org
Subject: serology results



Pt Defiance Zoo
history.xls (2...

Dr. Larson,

I have attached a spreadsheet that I have made for the Point Defiance elephants. It includes movements, exposure to Africans, serology, etc. I would like to send it to Dr. Ramiro Isaza, who is going to do an EEHV epidemiology study on the North American elephants. Is it OK to release your serology data to him?

Also, I have a note with a question about Bamboo. Do you or have you had an elephant named Bamboo there? I must have come across this name when I was doing a spreadsheet on one of the other N. American zoos.

Thank you,
Erin

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Let me check and I will get back to you shortly.
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Email dates 28 Aug 06 - 7 Dec 07

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From: Kathleen Larson [mailto:klarson@pdza.org]

SB #	sex	dam	1975	1976	1977	1978	1979	1980	1981	1982	1983
Thandi	w	w						Zimbabwe born 1980?	Zimbabwe born 1981?	Zimbabwe captured 1982?	Zimbabwe captured 1983?
George	w	w							Africa born 1981?	Africa	Africa captured 1983?
Moyo	w	w							Zimbabwe born 1981?	Zimbabwe captured 1983?	Zimbabwe captured 1983?
Hanako	39	43	LA	Portland	Portland	Portland	Portland	Portland	Portland	Portland	Portland
Rama	48	40									Portland born 4/1/1983
Suki	w	w	Glen Oak	Glen Oak	Glen Oak	Glen Oak	Glen Oak	Glen Oak	Glen Oak	Glen Oak	Glen Oak
Cindy	212	w	Tacoma	Tacoma	Tacoma	Tacoma	Tacoma	Tacoma	Tacoma	SDWAP	SDWAP

Julie Lemon.

From: Kathleen Larson [klarson@pdza.org]
Sent: Tuesday, November 28, 2006 1:49 PM
To: Julie Lemon
Subject: FW: Hanako samples

copy to Hanako
This email covers
24 Aug 06 - Nov 28, 06

Hey Jules,
Just cleaning my e mail inbox. We sent the one additional historic sample that we had,
right?
Kathy

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Email 24 Aug - 28 Nov

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Thank you for your help in our research.

Erin

Erin Latimer

Research Assistant

Department of Pathology

Smithsonian National Zoo

3001 Connecticut Ave, NW

Washington, DC 20008

202-633-4252 (phone)

202-673-4660 (fax)

latimere@si.edu

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Email 24 Aug - 9 Nov 06

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Thank you for your help in our research.

Erin

Erin Latimer

Research Assistant

Department of Pathology

Smithsonian National Zoo

101 Connecticut Ave, NW

Washington, DC 20008

202-633-4252 (phone)

202-673-4660 (fax)

latimere@si.edu

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Research Assistant

Department of Pathology

Smithsonian National Zoo

3001 Connecticut Ave, NW

Washington, DC 20008

202-633-4252 (phone)

202-673-4660 (fax)

latimere@si.edu

Julie Lemon

*Copy to Hanako
Serum*

From: Latimer, Erin [LatimerE@si.edu]
Sent: Friday, June 02, 2006 5:21 AM
To: Holly Reed
Cc: Julie Lemon
Subject: Hanako elephant serum

Hello,

We're starting to put together elephant histories and EEHV serology results to do a retrospective EEHV study. You sent some serum from Hanako in 2004 and she had a titer to EEHV. She is the only positive elephant that I have found so far who has not been in direct contact with an EEHV case. Do you have any banked serum from her that I could test? I would like it from as far back as you have it, about 1-2 ml, if you can spare it. Also, any history that you have on her would be great—where she has been; any illnesses, lesions, etc

Thank you,
 Erin

Erin Latimer
 Research Assistant
 Department of Pathology
 Smithsonian National Zoo
 3001 Connecticut Ave, NW
 Washington, DC 20008
 202-633-4252 (phone)
 202-673-4660 (fax)
 latimere@si.edu

From: Holly Reed [mailto:hreed@pdza.org]
Sent: Friday, April 28, 2006 12:27 PM
To: Latimer, Erin
Cc: Julie Lemonshark
Subject: RE: elephant serum

Erin,

I can't believe this week. I have passed your info to our tech Julie and she might be contacting you about quantities of dry ice necessary to keep the samples good. In one week we have had 2 (yours is the 3rd) disastrous Fed EX shipments that have ruined important serum samples for animals that are waiting shipments and diagnostic information. We may also start using UPS. We will get other samples to you. Thanks for letting us know.

Holly

Holly Reed, DVM
 Head Veterinarian
 Point Defiance Zoo & Aquarium
 5400 N. Pearl St.
 Tacoma, WA 98407

11/4/2007

(253) 404-3639 (o)
(253) 404-3631 (to be contacted by radio)
(253) 591-5448 (FAX)

-----Original Message-----

From: Latimer, Erin [mailto:LatimerE@si.edu]
Sent: Friday, April 28, 2006 9:07 AM
To: hreed@pdza.org
Subject: elephant serum

I just received serum from Bamboo and Suki. Unfortunately, the dry ice was gone and they were warm. Can you send it again next week, with more dry ice? Adding some ice packs can help too.
Thank you,
Erin

Erin Latimer
Research Assistant
Department of Pathology
Smithsonian National Zoo
3001 Connecticut Ave, NW
Washington, DC 20008
202-633-4252 (phone)
202-673-4660 (fax)
latimere@si.edu

Julie Lemon

From: Latimer, Erin [LatimerE@si.edu]
Sent: Thursday, May 25, 2006 4:08 AM
To: Julie Lemon
Subject: EEHV results

* Copy to Hanako Record
* " Suki Record

Yes, the testing is done. I mailed results on 5/13/06 to:

Holly Reed
Pt Defiance Zoo
5400 N. Pearl St
Tacoma, WA 98407.

Let me know if you don't get them, and I can mail them again.

COPY

Both elephants were low in the EEHV ELISA, so they are not making EEHV antibodies at the current time. This does not mean that they have never been exposed though--I have had a few elephants with a high titer in the past, which no longer have a titer.

We send the following disclaimer with all of our ELISA results:

The EEHV ELISA is in the developmental stage. We are still working on many aspects of the test, including storage conditions for samples, controls to be used, detection systems, and significance of positive/negative titers. We will be using the results over the next six to twelve months to help us determine the optimal ELISA for EEHV.

Please keep in mind that your results are part of this developmental process, and may not reflect the elephants' actual EEHV status. Thank you for sending samples for us to use in this endeavor.

We classify the ELISA results into three groups based on the OD: "low", grey zone", and "high".

Please call or email if you have any questions.

Erin

-----Original Message-----

From: Julie Lemon [mailto:JulieL@tacomaparks.com]
Sent: Wednesday, May 24, 2006 6:48 PM
To: Latimer, Erin
Subject: RE: Out of Office AutoReply: fed ex tracking number

Erin,
I was wondering if the results were in for our elephant herpes testing sent on 3 may 06. We were hoping to be shipping her out very soon and need those results to confirm a date for shipment.
Thanks

Julie Lemon, RVT
Point Defiance Zoo & Aquarium
253-404-3653

-----Original Message-----

From: Latimer, Erin [mailto:LatimerE@si.edu]
Sent: Thursday, May 04, 2006 12:34 PM
To: Julie Lemon
Subject: Out of Office AutoReply: fed ex tracking number

I am out of the lab. I will be back on Monday, May 8. If you have an elephant with possible EEHV, please call Laura Richman (301) 398-4741 or me (703) 855-9611.

Thank you,
Erin

Request for EEHV testing

Department of Pathology
Smithsonian National Zoo
3001 Connecticut Ave. NW
Washington, DC 20008
(202) 673-4869

Date 27 April 06
Requestor's name Holly Reed, DVM
Institution Point Defiance Zoo & Aquarium
Address 5400 W. Pearl Street
Tacoma, WA 98407
Phone/email 253-404-3639 breed@ptza.org

Animal Name/ISIS # "Haruko" 97M024
Age 41 yrs
Species Asian Elephant

Reason for request (i.e. current symptoms of possible EEHV, or possible exposure to EEHV) Surveillance

Type of samples being sent Serum (2.0 ml)

Before sending samples, please call Erin Latimer 202-673-4869 (W)
703-471-2168 (H)

or

Laura Richman 301-398-4741 (W)
301-253-8723 (H)

Please send samples **overnight on dry ice in a sealed cooler**. The best day to send samples is Wednesday, for Thursday delivery.

TO: Elephant Barn Staff

FROM: Holly Reed, DVM

DATE: 18 April 2006

SUBJECT: SAMPLE COLLECTION SCHEDULE FOR BAMBOO

The following samples will need to be collected for Bamboo's preshipment requirements:

1. Trunk Washes
 - a. Three samples – can be collected on consecutive days
 - b. The samples must be frozen immediately after collection
 - c. Deliver to Julie the day of collection.
 - d. Julie will arrange to send them off all together (just Bamboo's) on dry ice by overnight express to National Veterinary Services Lab. Request mycobacterial culture with speciation (using VS form 10-4)
2. Blood has to be taken in the same week that the trunk washes are collected.

TEST	LAVENDER	TIGER
RT/MAPIA(Disney)		2
EEHV		2
CBC	2	
Chemistry		1
Vit E levels		2
Disney Serum Bank		10
TOTAL	2 ml = 1 lavender topped tube	17 ml serum = 51 ml whole blood = 13 tiger topped tubes

April 19, 2006
SR/CAW/Chuck
WJZ

3. Fecal Exam – direct, floatation, and sedimentation collected every 7 days for three weeks. This needs to be coordinated with Julie's schedule and can be done in-house or sent out to Phoenix Lab.

Wed April 19	Wed April 26	Wed May 3	Wed May 10	Wed May 17
SR/CAW	SR/CAW	AD/CAW	AD/CAW	

per Dr. H

4. Fecal Cultures – collect one each day for three days. Collect by finding the freshest fecal ball, crack open with gloved hands and insert culturette swab. Julie, please request that the culture include salmonella testing and that the swab be placed in salmonella enhancement broth.

Wed April 19	Thurs April 20	Fri April 21
SR/CAW	SR/CC	SR/AD

5. Arrange to vaccinate all elephants with tetanus toxoid (1ml IM) administered after blood work taken.

Request for EEHV testing

Department of Pathology
Smithsonian National Zoo
3001 Connecticut Ave. NW
Washington, DC 20008
(202) 673-4869

COPY

COPY

Date 10 Sept 04
Requestor's name Holly Reed, DVM
Institution Point Defiance Zoo & Aquarium
Address 5400 N. Pearl Street
Tacoma, WA 98407
Phone/email 253-404 3639 /

Animal Name/ISIS # "Haruko" 97m024
Age 41
Species Asian Elephant

Reason for request (i.e. current symptoms of possible EEHV, or possible exposure to EEHV) Surveillance

Type of samples being sent Serum

Before sending samples, please call Erin Latimer 202-673-4869 (W)
703-471-2168 (H)

or

Laura Richman 301-398-4741 (W)
301-253-8723 (H)

Please send samples **overnight on dry ice in a sealed cooler**. The best day to send samples is Wednesday, for Thursday delivery.

=====
scientific Name: *ELEPHAS MAXIMUS INDICUS*
Common Name: Indian elephant
Name: HANAKO

=====
Accession #: 97M024
Female
Birth: 24.Sep.1963
Age: 40Y 9M 25D
=====

Clinical Note:

SOAP: Veinapuncture performed again to collect more blood for teh
Elephant SSP Research protocol as outlined in previous entry. Cbc and
serum chem also run. (HHR) 16.Aug.200.

=====
Scientific Name: *ELEPHAS MAXIMUS INDICUS*
Common Name: Indian elephant
Name: HANAKO

Accession #: 97M024
Female
Birth: 24.Sep.1963
Age: 40Y 6M 29D
=====

Clinical Note:

19.Jul.2004

SOAP: Veinapuncture performed as part of routine monitoring and to collect samples requested by the Elephant SSP in their Revision of the Elephant Research and Tissue Request Protocol. Blood to be submitted for cbc/chem/PDZA serum bank and Protocols for elephant endotheliotropic herpes virus to Dr. Laura Richman, West Nile virus to Cornell University Lab, for the national elephant serum bank at Disney's Animal Kingdom and mycobacterial ELISA for Dr. Scott Larsen at UC Davis. (HHR)
