BioReference LABORATORIES
an OPKO Health Company

FINAL REPORT

DOCTOR
ORSHER, STUART
[redacted] - STUART ORSHER, M.D.
9 EAST 79TH ST,
NEW YORK, NY 10021
Acct #: [redacted] MO
P: [redacted]

PATIENT
EPSTEIN, JEFFREY
DOB: 01/20/1953 Age: 64 Y Sex: M
U/FL: Bed:
Rm:
Patient ID:
Address: 9 EAST 71ST STREET,
NEW YORK, NY 10021
P: [redacted]

SAMPLE
Specimen ID: 104364919
Date Of Report: 09/08/2017 11:30
Date Collected: 08/30/2017 11:58
Date Received: 08/30/2017 23:12
North America Eastern Time

Notes: NON FASTING

CLINICAL REPORT

Clinical Abnormalities Summary: (May not contain all abnormal results; narrative results may not have abnormal flags. Please review entire report.)

Glucose	105 HI	LD	235 HI		
Cholesterol	226 HI	Triglycerides	1510 HI		
IgG BAND 41	Positive *				
Hemoglobin A1C	5.7 HI	HERPES I Ab.(IgG)	7.40 HI	HERPES II Ab.(IgG)	5.70 HI
CK	346 HI	CHLAMYDIA AB. IgG/IgM (30)	SEE BELOW *	ANA SCREEN	Positive *
ANA TITER (IFA)	1:160 HI	PNEUMO Ab TYPE 1 (58)		PNEUMO Ab TYPE 4 (58)	0.6 LO
PNEUMO Ab TYPE 8 (58)	0.4 LO	PNEUMO Ab TYPE 9 (9N) (58)	0.4 LO	PNEUMO Ab TYPE 1: (58)	
PNEUMO Ab TYPE 19 (19F) (58)	0.8 LO	PNEUMO Ab TYPE 23 (23F) (58)		PNEUMO Ab TYPE 2 (58)	0.5 LO
PNEUMO Ab TYPE 56 (18C) (58)	1.3 LO	PNEUMO Ab TYPE 68 (9V) (58)	0.4 LO	B.Henselae IgG (3)	At1:64 *

-------* CHEMISTRY *--------

Test	Result	Reference	Units	Previous Result Date
Total Protein	7.3	5.9-8.4	g/dL	
Albumin	4.5	3.5-5.2	g/dL	
Globulin	2.8	1.7-3.7	g/dL	
A/G Ratio	1.6	1.1-2.9		
Glucose	105 HI	70-99	mg/dL	
Sodium	140	135-147	mmol/L	
Potassium	4.3	3.5-5.5	mmol/L	
Chloride	101	96-108	mmol/L	
CO2	22	22-29	mmol/L	
BUN	20	8-23	mg/dL	
Creatinine	0.92	0.80-1.30	mg/dL	
e-GFR	88	>or=60	mL/min	
e-GFR, African American	102	>or=60	mL/min	
BUN/Creat Ratio	21.7	10.0-28.0		
Calcium	9.7	8.6-10.4	mg/dL	
Uric Acid	7.4	3.4-8.5	mg/dL	
Iron	82	59-158	ug/dL	
Bilirubin, Total	0.5	<1.2	mg/dL	
LD	235 HI	135-225	U/L	
Alk Phos	67	40-156	U/L	

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AST	7		<40	U/L
PHOSPHORUS	3.2		2.7-4.5	mg/dL
ALT	<5		<41	U/L

NOTE: The result for ALT has been confirmed by repeat analysis.

GGTP	23		10-71	U/L

-* CARDIOVASCULAR/LIPIDS *--

Cholesterol	226 HI		<200	mg/dL
Triglycerides	1510 HI		<150	mg/dL

NOTE: The result for Triglycerides has been confirmed by repeat analysis.

HDL CHOL., DIRECT	TNP		>40	mg/dL

Test Not Performed: Unable to perform HDL test due to elevated Triglycerides (>1200).

HDL as % of Cholesterol	TNP		>14	%
Chol/HDL Ratio	TNP		<7.4	
LDL/HDL Ratio	TNP		<3.56	
LDL Cholesterol	Can't Calc		<100	mg/dL

NOTE: Unable to calculate LDL due to a Triglyceride level of greater than 400 mg/dL.

VLDL, CALCULATED	Can't Calc		7-32	mg/dL

Can't Calc: One or more components was outside the measurable range. We are unable to calculate.

Test Not Performed: One or more components were not available to perform calculation.

------* HEMATOLOGY *--------

WBC	6.10		3.66-11.99	x10(3)/uL
RBC	5.15		4.20-5.90	x10(6)/uL
HGB	15.4		12.3-17.0	gm/dL
HCT	44.0		39.3-52.5	%
MCV	85.4		80.0-100.0	fL
MCH	29.9		25.0-34.1	pg
MCHC	35.0		29.0-35.0	gm/dL
RDW	14.9		10.9-16.9	%
POLYS	46.9		36.0-78.0	%
LYMPHS	39.0		12.0-48.0	%
MONOS	7.7		0.0-13.0	%

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Test		Result	Reference	Units	Previous Result	Previous Date
EOS		5.4	0.0-8.0	%		
BASOS		0.8	0.0-2.0	%		
IMMATURE GRANULOCYTES		0.2	0.0-1.6	%		
Platelet Count		248	144-400	x10(3)/uL		
MPV		9.6	8.2-11.9	fL		
------* URINALYSIS *--------						
Color		YELLOW	YELLOW, STRAW, AMBER			
Character		CLEAR	CLEAR			
Specific Gravity Ur		1.019	1.003-1.030			
pH Urine		6.5	5.0-8.0			
Protein, Urine		NEGATIVE	NEGATIVE			
Glucose, Urine		NEGATIVE	NEGATIVE			
Ketone, Urine		NEGATIVE	NEGATIVE			
Urobilinogen Urine		0.2	0.2-1.0	mg/dL		
Bilirubin, Urine		NEGATIVE	NEGATIVE			
Blood, Urine		NEGATIVE	NEGATIVE			
Nitrites Urine		NEGATIVE	NEGATIVE			
Leukocyte Esterase		NEGATIVE	NEGATIVE			
Crystals Urine		NONE	NONE			
Crystal Amt. Urine		NONE	NONE	PER HPF		
WBC, Urine		0-4	0-4	PER HPF		
RBC, Urine		NONE SEEN	NONE SEEN	PER HPF		
Epithelial Cells, Ur		NONE	NONE-FEW			
Cast, Hyaline, Urine		0-4	0-4	PER LPF		
Cast, Granular, Ur		NONE SEEN	0-1	PER LPF		
Cast, RBC, Urine		NONE SEEN	0-1	PER LPF		
Bacteria, Urine		NONE	NONE-FEW			
-----* MICROBIOLOGY *-------						
CULTURE, URINE		NO GROWTH	NO GROWTH			

SITE: URINE

-* LYME WB, IgG W/BANDS *---					
IgG BAND 18	Negative		Negative	kDa	
IgG BAND 23	Negative		Negative	kDa	
IgG BAND 28	Negative		Negative	kDa	
IgG BAND 30	Negative		Negative	kDa	
IgG BAND 39	Negative		Negative	kDa	
IgG BAND 41		**Positive ***	Negative	kDa	
IgG BAND 45	Negative		Negative	kDa	
IgG BAND 58	Negative		Negative	kDa	

EFTA00609803

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IgG BAND 66	Negative	Negative	kDa
IgG BAND 93	Negative	Negative	kDa

NOTE: LYME ANTIBODY (IgG) by WESTERN BLOT is considered to be positive if any 5 out of the following 10 bands are present: 18, 23, 28, 30, 39, 41, 45, 58, 66, 93 kDa.

Lyme IgG INTERPRETATION WB	Negative	Negative	

-* LYME WB, IgM W/BANDS *---

IgM BAND 23	Negative	Negative	kDa
IgM BAND 39	Negative	Negative	kDa
IgM BAND 41	Indetermin	Negative	kDa

NOTE: LYME ANTIBODY (IgM) by WESTERN BLOT is considered to be positive if any 2 out of the following 3 bands are present: 23, 39, 41 kDa.

Lyme IgM INTERPRETATION WB	Negative	Negative	

-----* ALLERGENS IgE *------

IgE, SERUM	TNP	<or=114.0	kU/L

Test Not Performed: Specimen is LIPEMIC.

ALLERGEN INTERPRETATION:

CONCENTRATION (kUA/L)	INTERPRETATION
<0.10	Absent
0.10 - 0.34	Very Low
0.35 - 0.69	Low
0.70 - 3.49	Moderate
3.50 - 17.49	High
17.50 - >100.00	Very High

-----* MISCELLANEOUS *------

Hemoglobin A1C	**5.7 HI**	<5.7	%	

HEMOGLOBIN A1c AND eAG REFERENCE RANGES

A1c(%)	DIABETES CATEGORY*
<5.7	Normal (non-diabetic)
5.7-6.4	Increased risk of diabetes
=>6.5	Consistent with diabetes

A1c(%)	eAG(ESTIMATED AVERAGE PLASMA GLUCOSE)(mg/dL)
6	126
7	154
8	183
9	212
10	240
11	269
12	298

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*recommended ranges-American Diabetes Association(2010)

NOTE: The amount of glycated hemoglobin as measured by the HbA1c test may be overestimated in African Americans and should not be used as the sole parameter of glycemic burden. Similarly, hemolysis, genetic hemoglobin variants and chemically modified hemoglobin derivatives (as seen in renal failure, smoking, aspirin use) may also affect glycated hemoglobin levels.

ABO/Rh BLOOD TYPE	A Pos		
TSH	TNP	0.178-4.530	uIU/mL

Test Not Performed: Specimen rejected for testing due to moderate or marked hemolysis.

THYROXINE(T4)	TNP	4.9-12.9	ug/dL
T3 UPTAKE (T3U)	TNP	24.3-39.0	%
THYROXINE, FREE (FT4)	TNP	0.80-1.73	ng/dL
FREE T4 INDEX	TNP	1.5-3.8	
T3 (THYRONINE), TOTAL	TNP	72-180	ng/dL
ALBUMIN (SPEP)	TNP	3.29-5.55	g/dL
ALPHA-1-GLOB.(SPEP)	TNP	0.17-0.41	g/dL
ALPHA-2-GLOB.(SPEP)	TNP	0.42-0.99	g/dL
BETA GLOB.(SPEP)	TNP	0.47-1.22	g/dL
GAMMA GLOB.(SPEP)	TNP	0.65-1.67	g/dL
M SPIKE	TNP	Not Detected	g/dL
SPEP GRAPH	TNP	See Graph	

NOTE: Specimen submitted is LIPEMIC. This may cause inaccurate results. Please RESUBMIT a fasting specimen at your earliest convenience.

FERRITIN	TNP	22-322	ng/mL

Test Not Performed: Specimen rejected for testing due to moderate or marked hemolysis.

HEP. A Ab., TOTAL	TNP	Non-Reactive	
HEP. B CORE Ab. IGG	TNP	Non-Reactive	
HEP. B SURF. AB.	TNP	Non-Reactive	
HEP. B SURF. AG	TNP	Non-Reactive	
HEP. BE AB.	TNP	Negative	
HEP. BE AG.	TNP	Non-Reactive	
IgA, SERUM	225	70-400	mg/dL
IgG, SERUM	1047	700-1600	mg/dL
IgM, SERUM	46	40-230	mg/dL
RPR	Non-Reactive	Non-Reactive	Titer

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Test	Result	Reference	Units
HERPES I Ab.(IgG)	7.40 HI	<0.90 AI	

INTERPRETATION OF RESULTS FOR HSV-1 AND HSV-2 IgG ANTIBODY

Antibody Index	Result	Interpretation
<0.90 AI	Negative	No HSV-IgG antibody detected
0.90-1.09 AI	Equivocal	Equivocal result. Repeat in 4-6 weeks
>or=1.10 AI	Positive	IgG antibody detected

***Comment: This assay is type specific and will differentiate between Herpes Simplex 1 and 2 infections. Test results should be interpreted in conjunction with clinical history. The performance of this assay has not been established for pediatric populations, for neonatal screening or for testing the immunocompromised.

Test	Result	Reference	Units
HERPES II Ab.(IgG)	5.70 HI	<0.90 AI	

INTERPRETATION OF RESULTS FOR HSV-1 AND HSV-2 IgG ANTIBODY

Antibody Index	Result	Interpretation
<0.90 AI	Negative	No HSV-IgG antibody detected
0.90-1.09 AI	Equivocal	Equivocal result. Repeat in 4-6 weeks
>or=1.10 AI	Positive	IgG antibody detected

***Comment: This assay is type specific and will differentiate between Herpes Simplex 1 and 2 infections. Test results should be interpreted in conjunction with clinical history. The performance of this assay has not been established for pediatric populations, for neonatal screening or for testing the immunocompromised.

Test	Result	Reference	Units
TESTOSTERONE, TOT.,S.	TNP	193.0-740.0	ng/dL

NOTE: Patients receiving the drug Nandrolone cannot be tested for TESTOSTERONE, total using the EIA method (test code 0379-8) due to a strong interference from the drug. Clinicians are asked to request Testosterone, Total by LC/MS/MS (test code J451-6) for these patients.

Test	Result	Reference	Units
CK	346 HI	39-308	U/L
H.PYLORI Ab.,IgG	0.34	See Below	
H.PYLORI Ab.,IgA	0.49	See Below	
H.PYLORI Ab.,IgM	0.29	See Below	
LYME DISEASE Ab.	0.44	<0.91	
Babesia microti IgM IFA (58)	<1:20	<1:20	
Babesia microti IgG (58)	<1:64	<1:64	

Sera from patients shown to have been infected by other tick-borne pathogens, Babesia duncani, Rickettsia rickettsii and Borrelia burgdorferi, were screened and found negative by the B. microti IgG IFA.
*This test was developed and its performance characteristics determined by Viracor Eurofins. It has not been cleared or approved by the U.S. Food and Drug Administration.
Testing Performed At:
Viracor Eurofins

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1001 NW Technology Drive
Lee's Summit, MO 64086
[redacted]
CLIA# 26D-0983643

Tetanus Antibody IgG (58)	1.37	>0.1	IU/mL

*This test was developed and its performance characteristics determined by Viracor Eurofins. It has not been cleared or approved by the U.S. Food and Drug Administration.
Testing Performed At:
Viracor Eurofins
1001 NW Technology Drive
Lee's Summit, MO 64086
[redacted]
CLIA# 26D-0983643

Diphtheria Antibody IgG (58)	0.31	>0.1	IU/mL

Testing Performed At:
Viracor Eurofins
1001 NW Technology Drive
Lee's Summit, MO 64086
[redacted]
CLIA# 26D-0983643

HIV Ag/Ab	TNP	Non-Reactive

Test Not Performed: Unable to perform HIV testing, specimen is LIPEMIC.

Assay Information: Assay for the detection of HIV p24 antigen and antibodies to Human Immunodeficiency Virus Type 1,including Group O (HIV-1 + "O") and/or Type 2 (HIV-2)
Method: Chemiluminescence (Siemens Healthcare Diagnostics)

CHLAMYDIA AB. IgG/IgM (30) **SEE BELOW ***

C. pneumoniae IgM Titer	<1:20		<1:20
C. trach IgM Titer	<1:20		<1:20
C. psittaci IgM Titer	<1:20		<1:20
C. pneumoniae IgG Titer	1:128	H	<1:64
C. trach IgG Titer	<1:64		<1:64
C. psittaci IgG Titer	<1:64		<1:64

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--INTERPRETIVE INFORMATION: C. psittaci IgG Titer
--The Chlamydia antibody test contains both species- and genus-
--specific antigens, and serological cross-reactions may be seen in

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--both acute and convalescent samples (less than 1:128). A C.
--pneumoniae-specific reaction will exhibit titers twofold or
--greater than titers observed with the C. trachomatis or C.
--psittaci serology. Any IgG titer may indicate past exposure to
--that particular species. IgG titers in recently infected
--individuals are typically greater than or equal 1:512.
--The Chlamydia microimmunofluorescent assay slides utilize C.
--psittaci, C. pneumoniae, and nine serotypes of C. trachomatis. The
--LGV strains of C. trachomatis are not included in this assay.
--Test developed and characteristics determined by ARUP
--Laboratories. See Compliance Statement A: aruplab.com/CS
--www.aruplab.com, Julio Delgado, MD - Lab. Director

B QUINTANA AB G/M (30) SEE BELOW

B. quintana Ab, IgM < 1:16
--
--
--
--INTERPRETIVE INFORMATION: Bartonella quintana Ab, IgM
-- Less than 1:16 ..... Negative-No significant level of
-- Bartonella quintana IgM antibody
-- detected.
-- 1:16 or greater ..... Positive-Presence of IgM antibody
-- to Bartonella quintana detected,
-- suggestive of current or recent
-- infection.
--The presence of IgM antibodies suggests recent infection. Low
--levels of IgM antibodies may occasionally persist for more than 12
--months post-infection.
--Test developed and characteristics determined by ARUP
--Laboratories. See Compliance Statement A: aruplab.com/CS
--www.aruplab.com, Julio Delgado, MD - Lab. Director
B. quintana Ab, IgG <1:64
--
--
--
--INTERPRETIVE INFORMATION: Bartonella quintana Antibody, IgG
-- Less than 1:64 ..... Negative: No significant level of
-- Bartonella quintana IgG antibody
-- detected.
-- 1:64 - 1:128 ..... Equivocal: Questionable presence
-- of Bartonella quintana IgG
-- antibody detected. Repeat testing
-- in 10-14 days may be helpful.
-- 1:256 or greater ..... Positive: Presence of IgG
-- antibody to Bartonella quintana
-- detected, suggestive of current
-- or past infection.
--A low positive suggests past exposure or infection, while high
--positive results may indicate recent or current infection, but is
--inconclusive for diagnosis. Seroconversion between acute and

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--convalescent sera is considered strong evidence of recent
--infection. The best evidence for infection is a significant change
--on two appropriately timed specimens where both tests are done in
--the same laboratory at the same time.
--Test developed and characteristics determined by ARUP
--Laboratories. See Compliance Statement A: aruplab.com/CS

HEP. C Ab.	TNP	Non-Reactive

Test Not Performed: We were unable to perform the Hepatitis test(s) requested due to lipemia. Please resubmit a fasting specimen.

HEP C Ab. (S/CO RATIO)	TNP	<0.80

(30)
Performed by: ARUP
500 Chipeta Way
Salt Lake City, UT 84108

(58)
Performed by: Viracor Eurofins Clinical Diagnostic
1001 NW Technology Drive
Lees Summit, MO 64086

Test Not Performed: One or more components were not available to perform calculation.

H.PYLORI (IgG, IgA, IgM) REFERENCE RANGES

RESULT (UNITS)	INTERPRETATION
<0.89	NEGATIVE
0.89-0.99	EQUIVOCAL
>0.99	POSITIVE

NOTE: This is a screening test for H.PYLORI. The diagnosis of gastritis and peptic ulcers should be assessed with the patients medical history and clinical symptoms. Results in the equivocal range should be rechecked with a new specimen in 2-5 weeks.

NOTE: The H. Pylori, IgM test was developed and its performance characteristics were determined by BioReference Laboratories. It has not been cleared by the U.S. Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. This test is used for clinical purposes. It should not be regarded as investigational or for research. This lab has been approved by CLIA 88 and designated as a high complexity laboratory and is qualified to perform this test.

ASSAY INFORMATION: Method ELISA

NOTE: A result of equivocal or positive for B.burgdorferi (Lyme Ab) should not be interpreted without supplemental Western Blot testing.

Lyme Antibody ranges (IgG/IgM)
<0.91 = Negative
0.91-1.09 = Equivocal

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>1.09 = Positive

Hepatitis B Result Interpretation
(for reference use only)

Marker	LI/EA*	Acute	Past	Chronic	HBV Vacc.
HBsAg	+	+	-	+	-
HBeAg	+	+	-	+/-	-
HEP.B.CORE AB,IgM	-	+	-	-	-
HEP.B.CORE AB.	-	+	+	+	-
HBeAb	-	-	+/-	+/-	-
HBsAb	-	-	+/-	-	+

*Late Incubation/Early Acute

NOTE: In remote past infection, HBsAb level may be Negative or Non-Reactive in some patients.

ANA SCREEN		**Positive ***	Neg=<1:80	
CRP	0.2		<0.5	mg/dL
ESR (Sed-Rate)	15		<21	mm/hr
FOLIC ACID	TNP		>5.38	ng/mL

Test Not Performed: Specimen rejected for testing due to moderate or marked hemolysis.

Folic Acid Range

	Units (ng/mL)
Normal	>5.38
Borderline deficient	3.38-5.38
Deficient	0.35-3.37
Excessive	>24.00

VITAMIN B12	TNP		211-911	pg/mL

Test Not Performed: Specimen rejected for testing due to moderate or marked hemolysis.

25OH, VITAMIN D	TNP		32.0-100.0	ng/mL

Test Not Performed: Unable to perform testing, specimen is LIPEMIC.

VITAMIN D,25-OH TEST INFORMATION

Range (ng/mL)	Suggested Interpretation
<20.0	Deficient
20.0-31.9	Insufficient
32.0-100.0	Sufficient
>100.0	Possible Adverse Effects

VIT D1,25DIHYDROXY	TNP		19.9-79.3	pg/mL

Test Not Performed: Unable to perform testing, specimen is LIPEMIC.

BioReference LABORATORIES
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FINAL REPORT

DOCTOR	PATIENT	SAMPLE
ORSHER, STUART [redacted] - STUART ORSHER, M.D. 9 EAST 79TH ST, NEW YORK, NY 10021 Acct #: [redacted] MD P: [redacted]	EPSTEIN, JEFFREY DOB: 01/20/1953 Age: 64 Y Sex: M U/FL: Bed: Rm: Patient ID: Address: 9 EAST 71ST STREET, NEW YORK, NY 10021 P: [redacted]	Specimen ID: 104364919 Date Of Report: 09/08/2017 11:30 Date Collected: 08/30/2017 11:58 Date Received: 08/30/2017 23:12 North America Eastern Time

CLINICAL REPORT

MUMPS VIRUS Ab.(IgG)	3.07	Immune=>1.09	
LEAD, BLOOD (CHILD)	<1.0	See Below	ug/dL

RANGES FOR LEAD, BLOOD

	Reference Range (ug/dL)
Adult/Child	<5.0
Occupational	<40.0

NOTE: Lead risk guidelines conform to CDC Guidelines. BioReference is an OSHA-APPROVED lab for lead testing.
NOTE: Blood lead levels in the range 5.0-9.9 ug/dL have been associated with adverse health effects in children aged 6 years and younger.
NOTE: All Lead results =/>5.0 ug/dL are confirmed by repeat analysis.
NOTE: Capillary and microtainer blood levels =/>5.0 ug/dL may be due to contamination from lead found on the finger surface and requires confirmation on venous blood.
NOTE: This test for LEAD was developed and its performance characteristics were determined by BioReference Laboratories. It has not been cleared by the U.S. Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. This test is used for clinical purposes. It should not be regarded as investigational or for research. This lab has been approved by CLIA 88 and designated as a high complexity laboratory and is qualified to perform this test.
ASSAY INFORMATION: ICP-MS

Immunotyping,Serum	TNP	Negative	

NOTE: Specimen submitted is LIPEMIC. This may cause inaccurate results. Please RESUBMIT a fasting specimen at your earliest convenience.

MERCURY, BLOOD (30)	8	0-10	ug/L

INTERPRETIVE INFORMATION: Mercury, Blood
Blood mercury levels predominantly reflect recent exposure and are most useful in the diagnosis of acute poisoning as blood mercury concentrations rise sharply and fall quickly over several days after ingestion. Blood concentrations in unexposed individuals rarely exceed 20 ug/L. The provided reference interval relates to inorganic mercury concentrations. Dietary and non-occupational exposure to organic mercury forms may contribute to an elevated total mercury result. Clinical presentation after toxic exposure to organic mercury may include dysarthria, ataxia and constricted vision fields with mercury blood concentrations from 20 to 50 ug/L.
Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement B: aruplab.com/CS
www.aruplab.com, Julio Delgado, MD - Lab. Director

RUBEOLA/MEASLES(IgG)	1.81	Immune=>1.09	

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Test	Result	Reference	Units	Previous Result	Date
VARICELLA ZOSTER,IgM (3)	< 0.91	< 0.91			

REFERENCE RANGE for Varicella-zoster IgM Abs:
Less than 0.91 .....Negative
0.91 - 1.09 .....Equivocal
Greater than 1.09 .....Positive

Results from any one IgM assay should not be used as a sole determinant of a current or recent infection. Because an IgM test can yield false positive results and low levels of IgM antibody may persist for more than 12 months post infection, reliance on a single test result could be misleading. Acute infection is best diagnosed by demonstrating the conversion of IgG from negative to positive. If an acute infection is suspected, consider obtaining a new specimen and submit for both IgG and IgM testing in two or more weeks.

VARICELLA ZOS.(IgG)	3.46	Immune=>1.09			
PTH(3), INTACT	TNP	13.8-85.0	pg/mL		

Test Not Performed: Specimen rejected for testing due to moderate or marked hemolysis.

RHEUMATOID (RF) TITER	<10	<14	IU/mL		
RUBELLA,IgG	TNP	Immune=>9.9	IU/mL		

Test Not Performed: Specimen rejected for testing due to moderate or marked hemolysis.

INTERPRETATION OF RESULTS FOR RUBELLA IgG ANTIBODY

Results (IU/mL)	Interpretation	
< 5.0	Negative	Non-Immune
5.0 - 9.9	Equivocal	Retest
> 9.9	Positive	Immune

NOTE: Results interpreted as EQUIVOCAL indicate a level of antibody below the Positive (Immune) cut off. Repeat testing on a new specimen is suggested to assess antibody response after a booster shot or a viral syndrome.

ASSAY INFORMATION: Method Chemiluminescence (Siemens Diagnostics)

ANA TITER (IFA)	1:160 HI	<1:80	Titer		

ANA PATTERN = HOMOGENEOUS AND SPECKLED

Antibodies To	Association	Frequency
ANA (Antinuclear Ab,	Screening test for SLE in symptomatic patients.	95-100%

DOCTOR
ORSHER, STUART
[redacted] - STUART ORSHER, M.D.
9 EAST 79TH ST,
NEW YORK, NY 10021
Acct #: [redacted] MD
P: [redacted]

PATIENT
EPSTEIN, JEFFREY
DOB: 01/20/1953 Age: 64 Y Sex: M
U/FL: Bed:
Rm:
Patient ID:
Address: 9 EAST 71ST STREET,
NEW YORK, NY 10021
P: [redacted]

SAMPLE
Specimen ID: 104364919
Date Of Report: 09/08/2017 11:30
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CLINICAL REPORT

indirect assay)		
ANA	Assist with diagnosis of Scleroderma (Systemic Sclerosis).	60-80%
ANA	Sjogren's Syndrome.	40-70%
ANA	Idiopathic Inflammatory Polymyositis or Dermatomyositis.	30-80%
	Antibodies to specific (Extractable) Nuclear Antigens (ENA)/Proteins	
dsDNA	Characteristic of SLE. Rare in other CTDs. Highly associated with active disease.	25-85%
Sm(Smith)	Highly specific for SLE. Uncommon in other diseases.	15-30%
SS A (Ro)	Associated with SLE, Neonatal Lupus and Sjogren's Syndrome.	35-60%
SS B (La)	Associated with SLE.	15%
SS B (La)	Associated with Sjogren's Syndrome.	40-60%
Scl-70	(anti DNA Topoisomerase) Associated with Diffuse Scleroderma and rarely co exists with anti-Centromere Abs which are associated with Limited Scleroderma Disease.	34-40%
Jo-1	Associated with Polymyositis or Dermatomyositis.	20-25%
Centromere	Identified by staining pattern. Their presence is associated with CREST Syndrome (Limited Systemic Sclerosis).	80%
U1 nRNP	Used to categorize Mixed Connective Tissue Disease (MCTD).	High Correlation
Histone Proteins	(Chromatin) Associated with drug induced LE.	90-100%

ref:Kavanaugh,A(et al.):Guidelines for Clinical Use of the Antinuclear Antibody Test and Tests for Specific Autoantibodies to Nuclear Antigens. Arch.Pathol Lab Med. Vol.124,Jan 2000.

PNEUMO Ab TYPE 1 (58)		**<0.3 LO**	**>1.3**	ug/mL	
PNEUMO Ab TYPE 3 (58)	1.4		>1.3	ug/mL	
PNEUMO Ab TYPE 4 (58)		**0.6 LO**	**>1.3**	ug/mL	
PNEUMO Ab TYPE 8 (58)		**0.4 LO**	>1.3	ug/mL	
PNEUMO Ab TYPE 9 (9N) (58)		**0.4 LO**	**>1.3**	ug/mL	
PNEUMO Ab TYPE 12 (12F) (58)		**<0.3 LO**	>1.3	ug/mL	
PNEUMO Ab TYPE 14 (58)	23.2		**>1.3**	ug/mL	
PNEUMO Ab TYPE 19 (19F) (58)		**0.8 LO**	>1.3	ug/mL	
PNEUMO Ab TYPE 23 (23F) (58)		**<0.3 LO**	**>1.3**	ug/mL	
PNEUMO Ab TYPE 26 (68) (58)		**0.5 LO**	>1.3	ug/mL	
PNEUMO Ab TYPE 5 (58)	7.8		**>1.3**	ug/mL	
PNEUMO Ab TYPE 51 (7F) (58)	1.5		>1.3	ug/mL	
PNEUMO Ab TYPE 56 (18C) (58)		**1.3 LO**	**>1.3**	ug/mL	
PNEUMO Ab TYPE 68 (9V) (58)		**0.4 LO**	>1.3	ug/mL	

Testing Performed At:
Viracor Eurofins
1001 NW Technology Drive
Lee's Summit, MO 64086
[redacted]
CLIA# 26D-0983643

ARSENIC, BLOOD	2	2-23	ug/L	

BioReference
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FINAL REPORT

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A.Phagocytophila IgG Ab (24)	<1:64			
A.Phagocytophila IgM Ab (24)	<1:20			
B.Henselae IgG Ab (3)	1:64 *		< 1:64	titer
B.Henselae IgM Ab (3)	<1:20		< 1:20	titer

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Nichols Institute Valencia. It has not been cleared or approved by the US Food and Drug Administration. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

Interpretation (24) SEE NOTE

ANTIBODY NOT DETECTED

REFERENCE RANGE IgG <1:64
IgM <1:20

Anaplasma phagocytophilum is the tick-borne agent causing Human Granulocytic Ehrlichiosis (HGE). HGE is distinct and separate from Human Monocytic Ehrlichiosis (HME), caused by Ehrlichia chaffeensis. Serologic crossreactivity between A. phagocytophilum and E. chaffeensis is minimal (5-15%).

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Infectious Disease. It has not been cleared or approved by the U.S. Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

Quest Infectious Disease
33608 Ortega Hwy
(3)
Performed by: Quest Diagnostics Nichols Institute of Valencia
27027 Tourney Road
Valencia, CA 91355-5386
(24)
Performed by: Quest Infectious Disease
33608 Ortega Highway
San Juan Capistrano, CA 92675
*Medical Director Hollis J. Batterman, MD
(30)
Performed by: ARUP
500 Chipeta Way
Salt Lake City, UT 84108
(58)
Performed by: Viracor Eurofins Clinical Diagnostic

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FINAL REPORT

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ORSHER, STUART [redacted] - STUART ORSHER, M.D. 9 EAST 79TH ST, NEW YORK, NY 10021 Acct #: ([redacted]) MO P: [redacted]	EPSTEIN, JEFFREY DOB: 01/20/1953 Age: 64 Y Sex: M U/FL: Bed: Rm: Patient ID: Address: 9 EAST 71ST STREET, NEW YORK, NY 10021 P: [redacted]	Specimen ID: 104364919 Date Of Report: 09/08/2017 11:30 Date Collected: 08/30/2017 11:58 Date Received: 08/30/2017 23:12 *North America Eastern Time*

CLINICAL REPORT

1001 NW Technology Drive
Lees Summit, MO 64086

INTERPRETATION OF RESULTS FOR RUBEOLA(MEASLES),MUMPS,VARICELLA VIRUS ABS.

Range		Interpretation
< or = 0.90	Negative	Non-Immune
0.91 - 1.09	Equivocal	Retest
> or = 1.10	Positive	Immune

Results interpreted as EQUIVOCAL indicate a level of antibody below the positive (Immune) cut off. Repeat testing on a new specimen is suggested to assess antibody response after a booster shot or a viral syndrome.

NOTE: The following tests: SERUM SELENIUM, SERUM CHROMIUM, ARSENIC BLOOD and CADMIUM BLOOD were developed and their performance characteristics were determined by BioReference Laboratories. They have not been cleared by the U.S. Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. These tests are used for clinical purposes. They should not be regarded as investigational or for research. This lab has been approved by CLIA 88 and designated as a high complexity laboratory and is qualified to perform these tests.

NOTE: The specimen submitted was MARKEDLY hemolyzed. Some results may be affected. Please resubmit as needed.

NOTE: Specimen submitted is LIPEMIC. This may cause inaccurate results. Please resubmit a fasting specimen at your earliest convenience.