

Polo (1947)

Cuicuinati.

██████████, ██████████ - white girl - age 4 ██████████ ██████████

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NOTE - This pt. had no pleocytosis on admission and very questionable neck resistance. Developed much. tsp. rigidity later + pleocytosis 2 days later.

ONSET - 9-2-47 - Headache and fever in A.M. Did not complain of sore throat but it was found to be "red" by doctor. Temp 104° - axillary

(Note - 2 other attacks of red throat with fever for 2 to 3 days - 1 around July 4 and the other around August 4)

Temp. rose to 105° - admitted to hospital same day.

P.X. - Throat - pillars red with hypertrophied lymphoid tissue.

Neck - slight resistance.

No other findings

CSF - clear, no cells, pandy neg
prot. - 15 mg % ; sugar - 7 mg %

Initial diagnosis - acute pharyngitis

10 P.M. - Temp up to 105.4°

9-3 - Temp 101.2 to 99

9-4 - Temp. normal but child irritable
5 P.M. + complaining of pains all over.

Neck found to be stiff + painful on motion.

L.P. - ground glass fluid with
474 WBC - 10% Polys.
Pandy +

9-5 - Moderate nuchal rigidity - slight but definite spinal rigidity, tenderness in muscles of thighs, legs, abdomen. No weakness. ~~App~~ Does not appear ill. looks quite happy

9-5

Blood

Throat swab I

Stool + enema returns I.

9-6

Temp. normal. Looks well + happy. Stands up + walks in bed without difficulty. No nuchal or spinal rigidity by ordinary tests - can kiss knees. "Nissen" sign positive - cannot bend back beyond 90° when thighs + knees are extended.

Throat swab II

Saline Enema returns.

9-9

~~Can bend all the way - even Nissen~~

9-10

Nissen sign still positive - otherwise OK.

*① Special Note:

9/29/47 Phoned [redacted] office re follow-up serum: child is temporarily under the care of [redacted] (who is a patient in hospital), and currently has "a virus sore throat with Temp. over 102°". [redacted] will keep a record of this illness, and will phone me in 2-3 days about having [redacted] for follow-up serum. — Alex J. Steigman

10/6/47. - Serum III taken. - (was originally due to be taken on 9/30/47.)

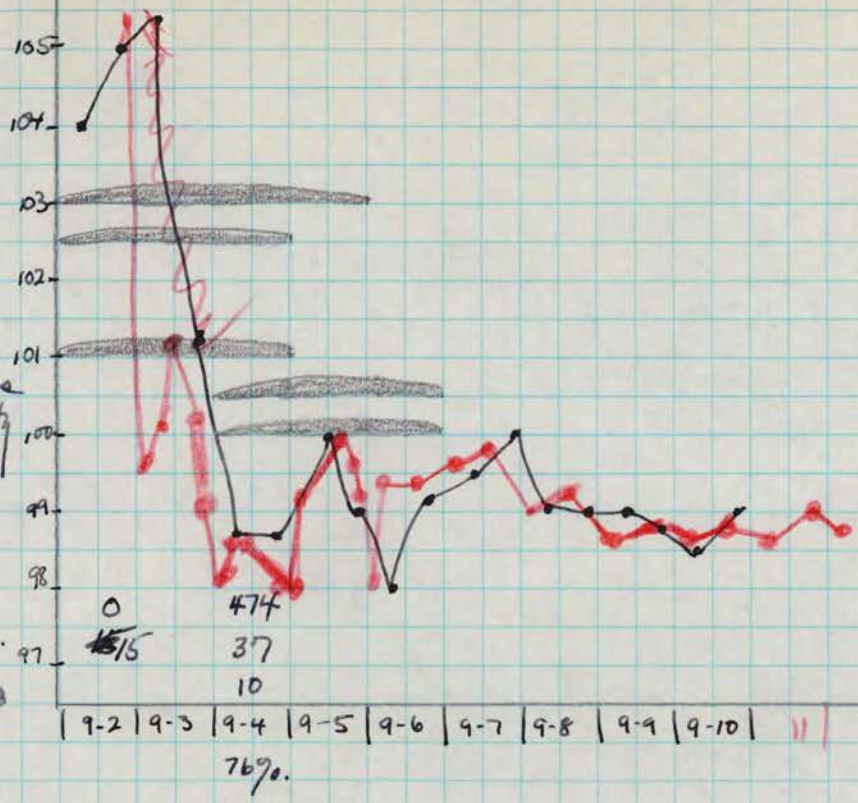
onset 7 AM

Symptoms:
Headache
Irritable

Signs -
Pharyngitis
Muscle Tenderness
Neck-Spine Rigidity

Lab
CSF cells.
mgms Protein.
WBC. - Thousands
% poly.

Virus - Stools.
Throat Swabs.



A. Stools -

Solids Present
Liquid Present
Distilled Water Added

52 gms.
200 cc.
320 cc. } $\pm 10\%$

Blended at low speed for one minute

For Centrifugation
For Refreezing

± 300 cc.
 ± 200 cc.

Volume of First Supernatant = 215 cc.
Amount of Ether Added = 43 cc.

Amount of Untreated Sediment = 60 cc. (For Intranasal Use)

12/12/47. - Final Amount of Treated Stool Susp. = ± 170 cc.
Cult.: (Before final centrifugation) - $\times \pm 20$ col. } Smear
After final centrifugation - $\times \pm 8-10$ col. } gm. neg. Thick rods.

12/13/47. - Re-Etherized - 34.0 cc. Ether Added.

Amount of Suspension = ± 170 cc.

Cult.: $\times 10$ Colonies (Smear = Thick gram. neg. rods)

12/16/47. - Re-Etherized - 34.0 cc. Ether Added.

Amount of Suspension = 140 cc.

Cult.: $\checkmark \checkmark$

7-20-48 Blended stool thawed and 80 cc removed for experiment with
Sausage Polio. Remainder refrozen

7-22-48 ± 4 cc etherized stool frozen in one 10 cc amp. Stored 8-7-9

12-16-48 Stools of 7-22-48 (± 4 cc in a 10 cc amp) Discarded

DEC 11 1947

B. Pharyngeal Swab Material

Am't of Fluid Expressed
Distilled Water Added

2.3 cc

4.0 cc

ether Added

1.5 cc.

12-12-47. - After Removal Top Layer

= 3.9 cc.

After Final Centrifugation

= 3.8 cc

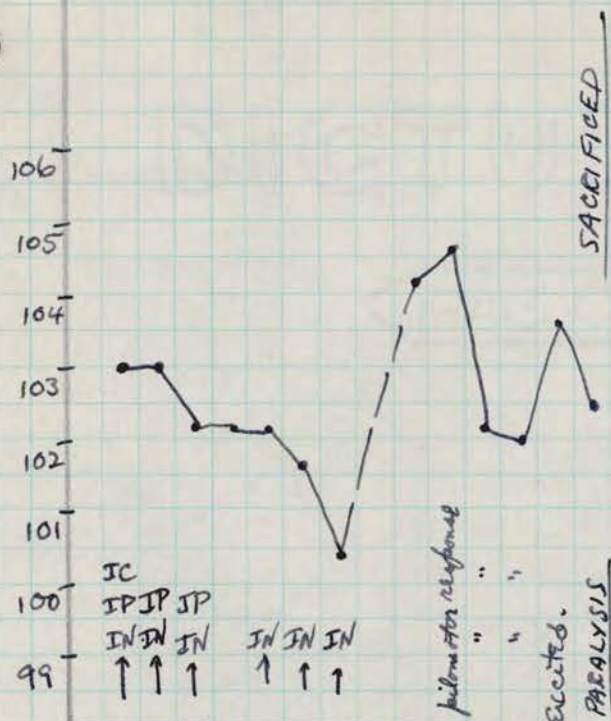
Culture: ✓✓✓

[12-13-47, Frozen (85) until corresponding stools ready for inoculation.]

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Rhesus #36-

Treated pharyngeal swabs IC ✓✓✓
Treated stools. IP. ✓✓✓
Untreated stools IN.



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

12/18/47. Inoculated 1.5 cc IC; 20 cc IP and 1 cc per nostril.

" Mild diarrhea.

12/31/47. - Paralysis - almost complete of left leg; partial of rt. leg, back and arms as well as cranial nerves seem OK. - Sacrificed - (chloroform)

AUTOPSY: - No gross tuberculosis.

CORON CONTENTS: frozen in Lueteroid tube. ("new box-2-7")

FOR HISTOPATHOLOGY: cord roots; medulla; Thalamus; olfactory bulbs (left bulb detached from stalk) - into ZA.

FOR VIRUS: cord-medulla pooled with that of Pl. #37 (over) = 10 gms; made up as 20% susp. (40 cc saline); frozen in 4 ampoules (20 cc each) in B-1-9, B-1-7 & two in B-1-8

Cult: - ✓✓

2-19-48 ampoule of 1 as thawed and 2 cc were removed for passage to two monkeys (Rh⁺ 120 & Rh⁺ 1565) Remainder refrozen in ampoule (now designated as N1:1) and restored - (B-1-9)

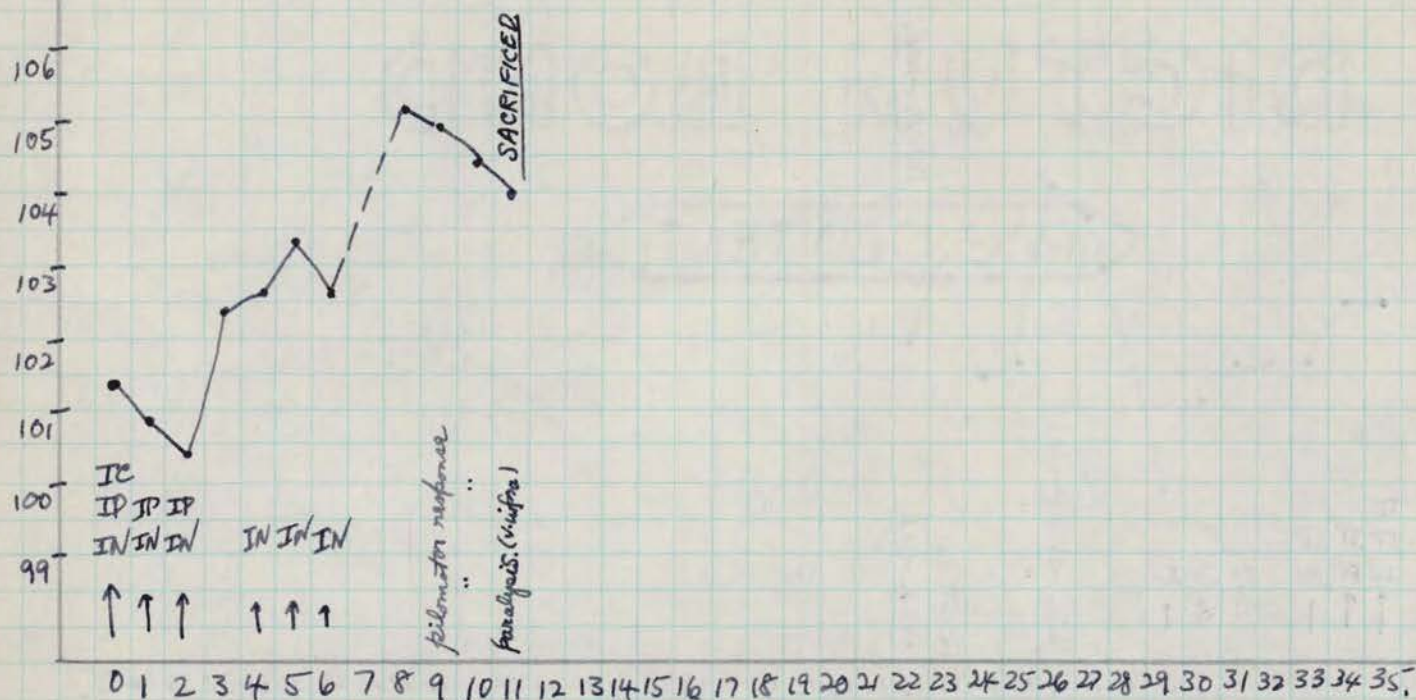
Histology - Polio

Olfactory Bulbs - positive

Ant. perf. subst - not in sections

DEC 18 1947

Phesus # 37 -



12/18/47. Inoculated 1.5 cc IC; 2.0 cc IP and 1 cc per nostril.

12/19/47. - A.M. - Abdomen tender + ? distended; ~~no~~ diarrhea.;

P.M. - Very apathetic; screams on abdominal palpation; is almost prostrated. Given 200,000 u penicillin IP at 5:00 pm.

12/20/47 AM - Much more active; abdomen still seems more tender than normal; Given 200,000 units penicillin IP at 10:00 AM.

12/29/47. - Paralysis - complete of rt. upper; partial of left upper; weakness of back + both lowers; cranial nerves intact. - Sacrificed (chloroform)

AUTOPSY: no gross TBC.

COLON CONTENTS: Frozen in Lusteroid tube.

HISTOPATHOLOGY: Cord levels: medulla; Thalamus; lungs.

Thalamus; olfactory bulbs (left bulb detached from tract.)

ISSUE FOR VIRUS: Cord - medulla frozen in a Lusteroid tube (d-1)

12-31-47 - cord thawed + pooled with Ph # 36 (see over.)

Histology - Polio

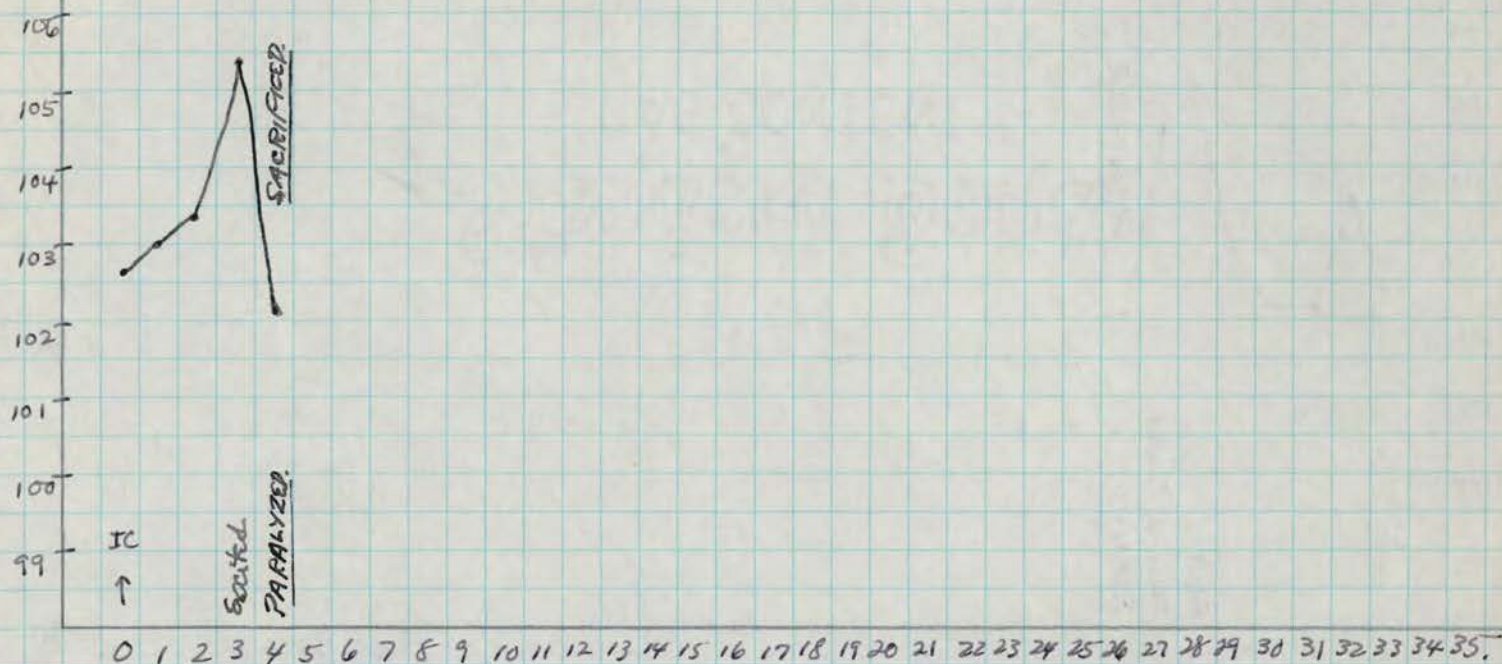
Olfact. bulbs - positive

Ant. perf. subst - not in sections

19
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generation ii

Rh. #120 - normal



2-19-48. Inoc. IC with 1.0×10^6 of 20% in saline [redacted] virus - sent.

2-22-48. Excited; no pilomotor response; no weakness.

2-23-48. Paralyzed - complete both lower; back & upper and voice weak.

Sacrificed (chloroform-exsanguination) - Autopsy: no gross TBC.

TISSUE FOR PATHOLOGY: cervical and lumbar cord segments (Z-A.)

TISSUE FOR VIRUS: cord. medulla frozen in liquid N₂ tube. (2-2)

Contact Culture of Cord on BAP: - VVV

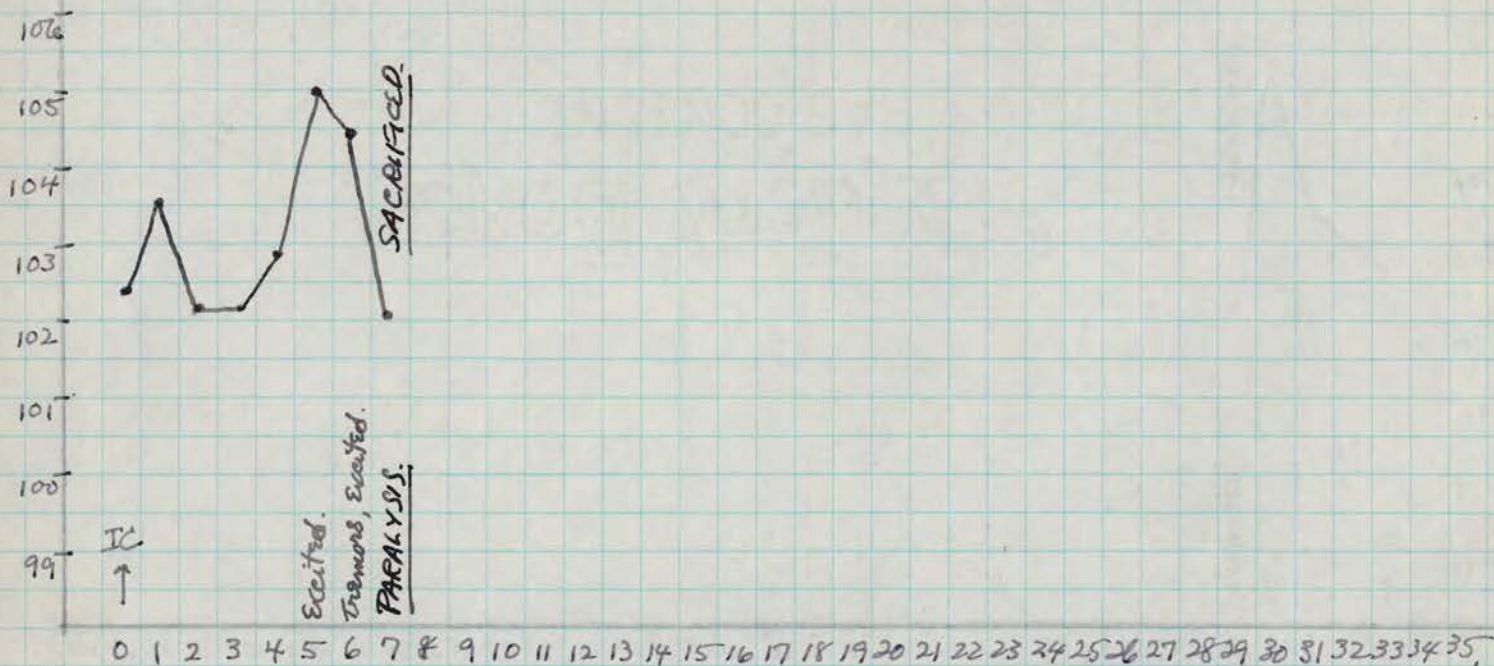
2-26-48. cord. medulla thawed and pooled with that of Rh. #1565 (see over.)

Histology - POLIO

19

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STRAIN - Generation II

Rh. #1565 - splenectomized.

2-19-48. Inoc. I.C. with 1.0 cc of 20% in saline. [redacted] virus-gent.

2-26-48. Paralysis - complete. [redacted] Autopsy: no gross Tbr.

TISSUE FOR SECTION: - cervical and lumbar cord segments. (Z-A.)

TISSUE FOR VIRUS: - cord-medulla fragments and pools with

Thawed cord of Rh. #120 (Age over), combined wt. = 12.8 gm, made up with 52 cc saline as a 20% susp.; final volume = ± 4.5 cc, distributed into 4 20 cc amp. and one 10 cc ampoule. (B-4-1) Cult: ✓

2-27-48. The 10 cc amp. of Hofer's Bm. II virus used for titration; about 2.0 cc of susp. remaining was refrozen. (A-1)

7-22-48. Viral #2 thawed and 0.1 cc removed for interference experiment with Tensing Polio; remainder refrozen (B-4-1)

Histology - Polio

TITRATION OF HUMAN POLIO STRAINS.

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STRAIN - (Gen. II)

Virus used: [redacted] strain (Gen II) 20% virus in saline diluted as indicated in saline.

Factors: Inoculated after dilution, no preliminary incubation.

Monkeys: Rhesus; average ca 6 lbs; 2 monkeys in 10^{-1} ; 3 monkeys / other dilutions.

Inoculum: 1.0 cc IC per monkey.

DILUTION.	MONKEY #	CLINICAL FINDINGS	PATHOLOGY	RESULT
10^{-1}	Rh. 155	P ₅	+	2/2
	Rh. 156	P ₄	+	
10^{-2}	Rh. 135	P ₆	+	3/3
	Rh. 136	P ₁₁	+	
	Rh. 137	?P ₉ (Fever 5) K ₂₈	+ "old"	
10^{-3}	Rh. 138	P ₆	+	3/3
	Rh. 139	P ₉	+	
	Rh. 140	P ₇	+	
10^{-4}	Rh. 144	P ₉	+	3/3
	Rh. 145	P ₇	+	
	Rh. 146	P ₇	+	
10^{-5}	Rh. 148	O: K ₂₈	○	1/3
	Rh. 149	P ₆	+	
	Rh. 150	O: K ₂₈	○	

$10^{-4.7}$

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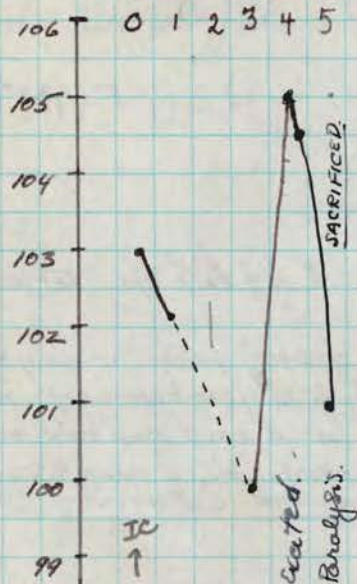
TITRATION OF GENERATION II

STRAIN POLIO.

Monkeys inoc. IC with 1.0 cc.

10⁻¹

Rhesus # 155



3-1-48. Moderate diarrhea noted.

3-3-48. Paralysis both lowers; marked weakness both uppers, with partial paralysis of left upper; aphonic.

Sacrificed (chloroform-exsanguination) Autopsy: No gross th.

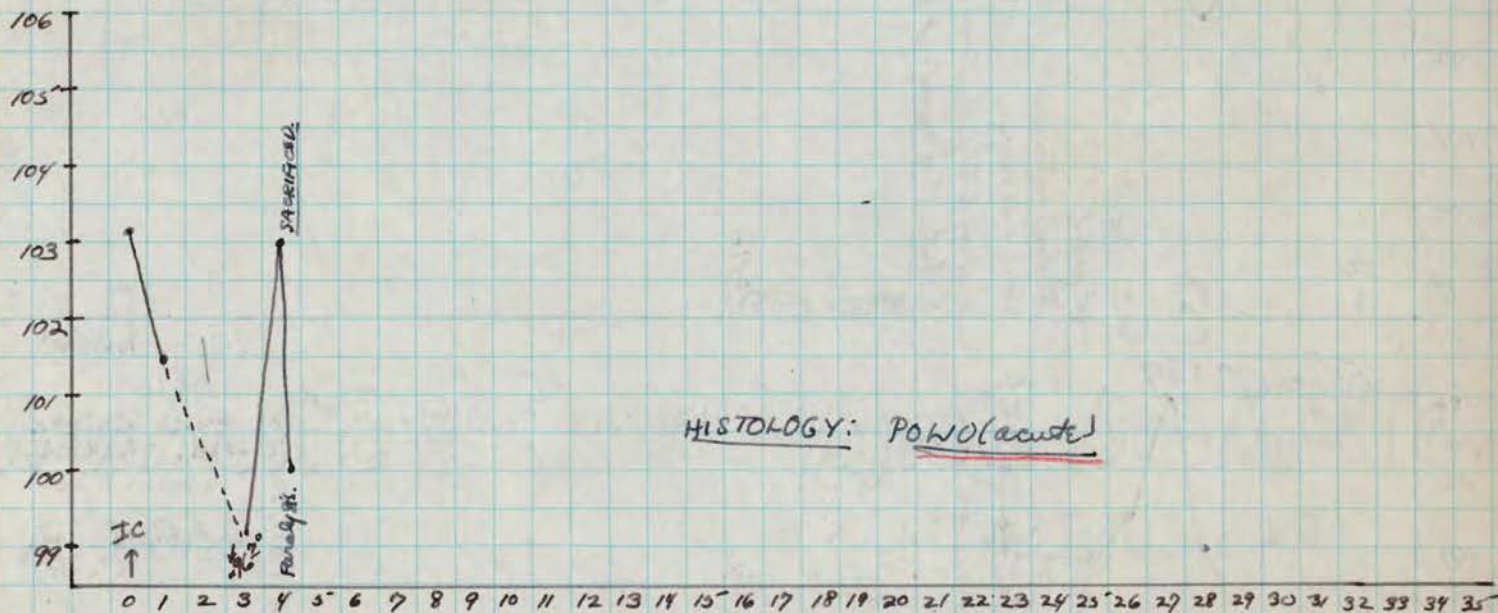
TISSUE FOR SECTION: Cervical + lumbar segments (Z-A).

TISSUE FOR VIRUS: Cord and medulla pooled & that of R#156 (see below). Total wt. = 9.6 gms. Made up as a 20% suspension in (40 cc.) sterile saline. ± 28 cc. of susp. frozen in 2-20 cc. amps, 1-10 cc amp., and 1-5 cc amp. (designated as Vials 1, 2, 3, & 4 respectively) and stored. B+5 Culture: N ✓

HISTOLOGY: Polio (acute)

3-1-48: Moderate diarrhea noted. (see above)

Rhesus # 156



HISTOLOGY: Polio (acute)

3-1-48: Mod. diarrhea noted.

3-2-48: A.M. ? weakness both lowers; T = 103°. P.M. T = 100°, definite partial paralysis both lowers and left upper. Sacrificed (chloroform-exsanguination) - Autopsy: Extensive pulmonary Tbc; also Tbc of peripheral glands.

TISSUE FOR PATHOLOGY: cervical + lumbar cord to Z-A. - TISSUE FOR VIRUS: cord-medulla frozen. Aut: ✓

Tissue for VIRUS: See R#155.

3-3-48. Cord + medulla thawed and pooled with that of R#155 (see above).

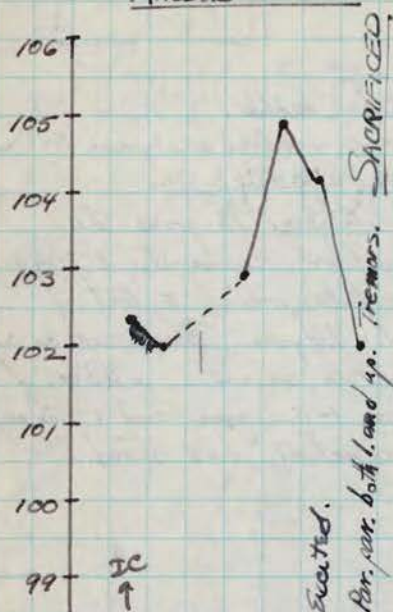
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TITRATION OF GENERATION II

STRAIN POLIO

Inoc. with 1.0 cc. I.C.

Rhesus # 135

 10^{-2} 

Histology - Polio (anti)

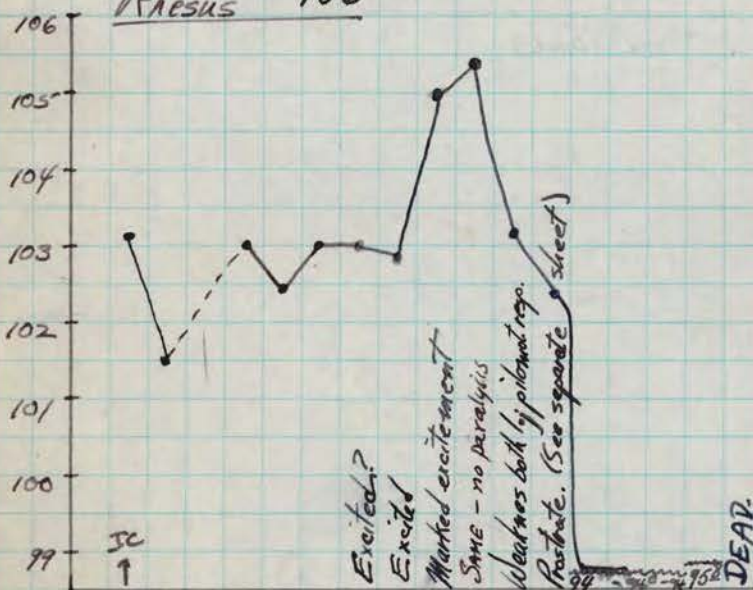
3-4-48: AM.: Per. paralysis both l. & both ap. Tremors.

Temp. = 102°

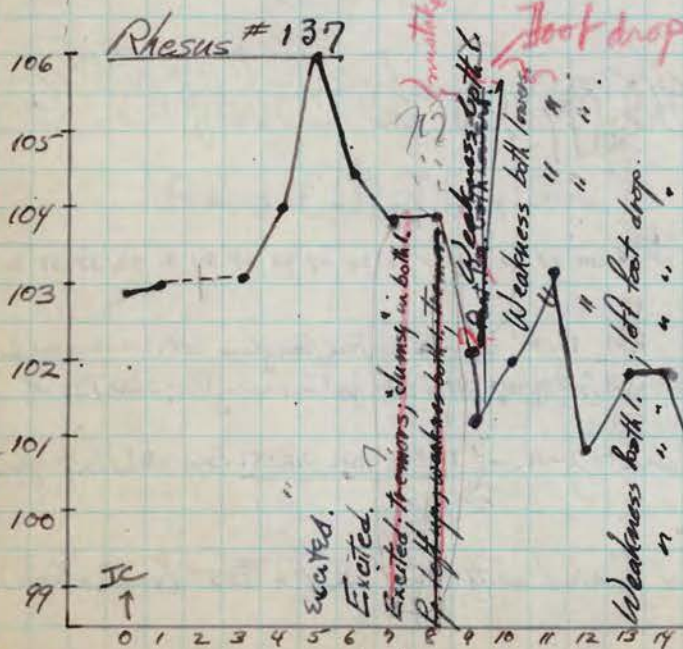
Sacrificed (chloroform-exsanguination). - no gross tx.
Tissue for Histo.: Sections of lumbar & cerv. cord (2x).

TISSUE FOR VIRUS: Remainder of cord and med. made up
2 susp. in (18 cc.) of sterile saline. Wt. of cord = 4.2 gms.
- 10 cc amp. (design as 1015192) frozen & stored. Culture: ✓✓ 13-4-1

Rhesus #136



HISTOLOGY: Polio (acute)



HISTOLOGY: POWID "old"

3-26-48: Autopsy:
no TBC.

НО ТБС

entire spinal
cord; medulla;
midbrain; Thal-
amus and
hypothalamus
(Z-A)

SACRIFICED FOR PATHOLOGY.

No weakness

O.K.

O.K.

14

O.K.

4

10

1

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TITRATION OF GENERATION II

Inoc. with 1.0 cc. I.C.

STRAIN POLIO

10⁻³

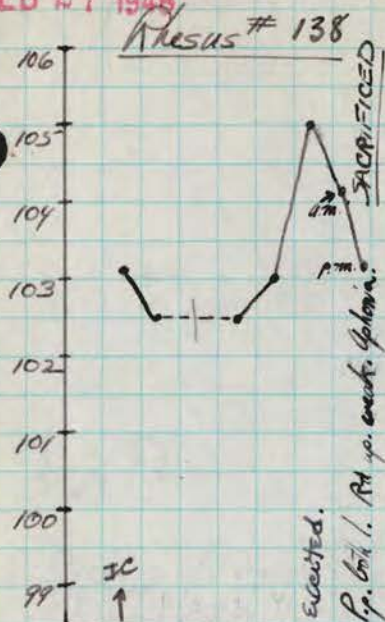
Histology - Polio acute

3-4-48: AM - Par. par. of both ~~up~~ lowers. Weakness of rt. upper. Aphonia. Temp. = AM - 104² PM - 103³

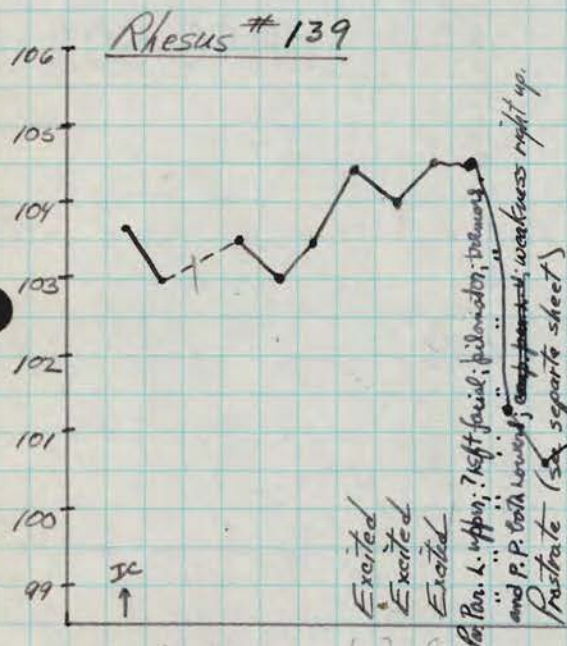
Sacrificed (chloroform - exsanguination) - no tbc.
TISSUE FOR HISTO: Sections of cervical and lumbar cord. (Z-A)

TISSUE FOR VIRUS: Remainder of cord and medulla made up as a 20% susp. in (22 cc.) sterile saline. Wt. of cord - 5.3 gms. ± 18 cc. frozen in 2-20 cc ampoules (designated as Vials 1 and 2), frozen and stored. B-4-1

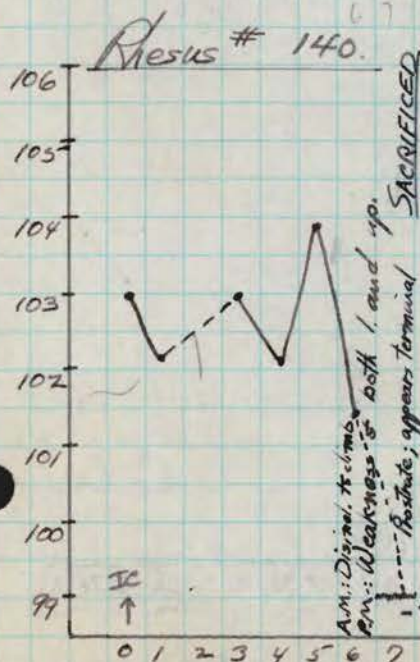
Culture: ✓✓✓



HISTOLOGY: Polio ("old")



3-26-48: Sacrificed.
(chloroform - exsanguination)
Autopsy: no gross tbc.
TISSUE FOR PATHOLOGY:
Spinal cord; medulla;
midbrain; pons; and
hypothalamus. (Z-A)



Histology - Polio acute

3-4-48: AM - Disinclined to climb. Temp. = 101⁴
PM - Weakness of both lowers & uppers.

3-5-48: Prostrate in a.m. - he appears terminal. Complete par. of extremities. Resp. diaph. & very shallow. Quite emaciated.

Monkey died. Autopsy 30 min. later

TISSUE FOR HISTO: Sections of cervical & lumbar cord (Z-A)

TISSUE FOR VIRUS: Remainder of cord & medulla made up as a 20% susp. in (22 cc.) sterile saline. Wt. of cord - 5.1 gms. ± 17 cc. frozen in 2-20 cc ampoules. Stored in (B-3-7)

Culture: ✓✓✓

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

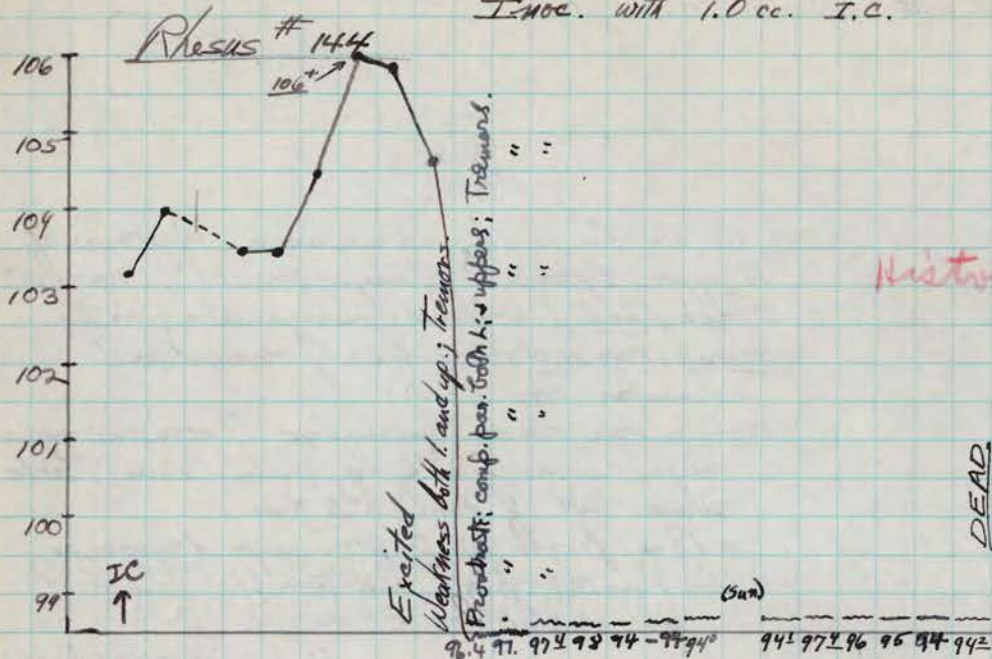
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TITRATION OF GENERATION II

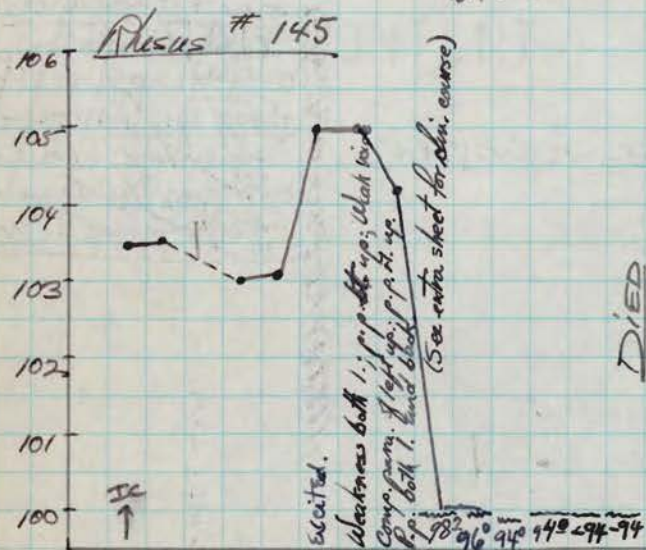
STRAIN POLIO.

Inoc. with 1.0 cc. I.C.

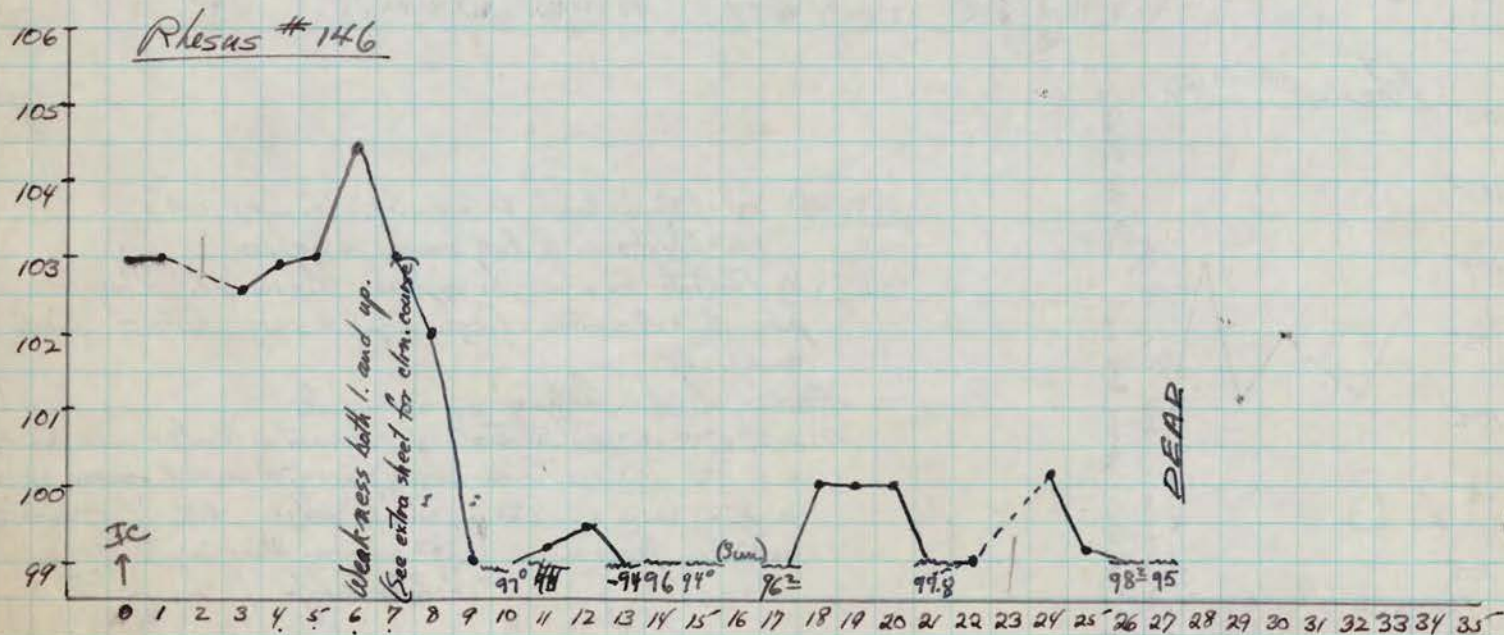
10⁻⁴



Histology - Polio

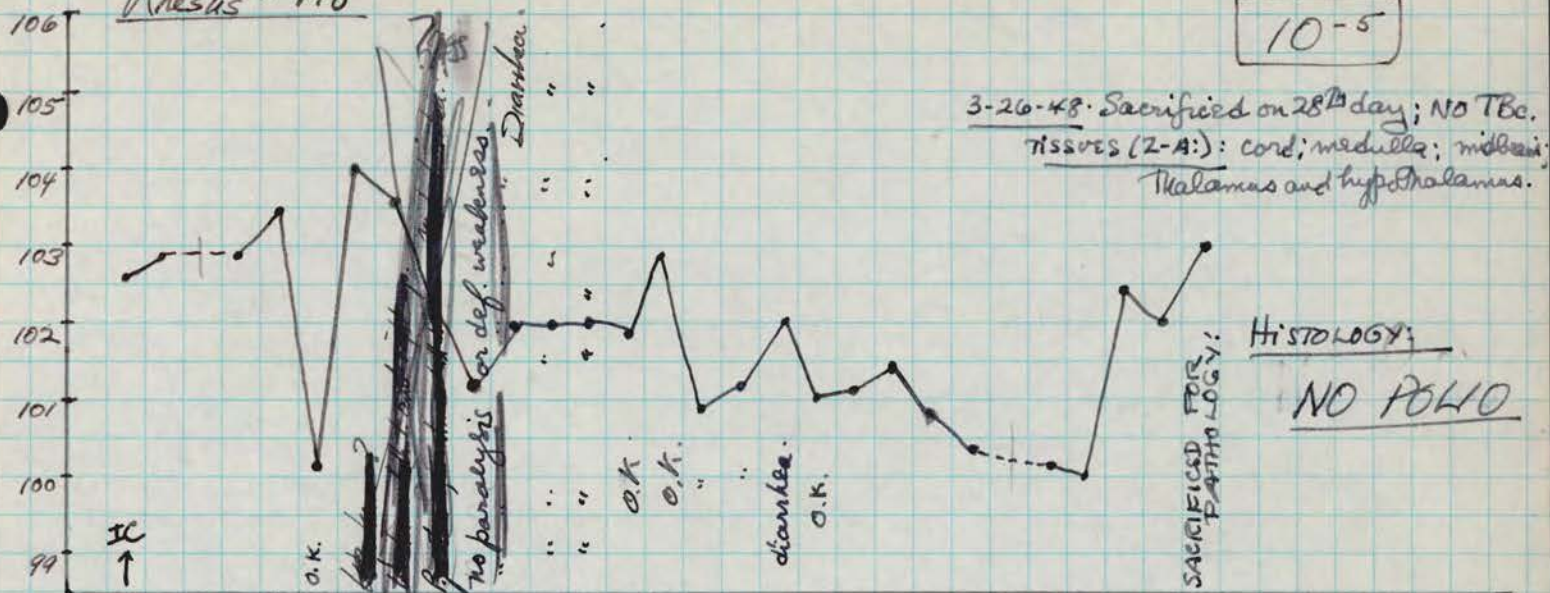


Histology - Polio



STRAIN POLIO.

10-5



106
105
104
103
102
101
100
99

IC
↑

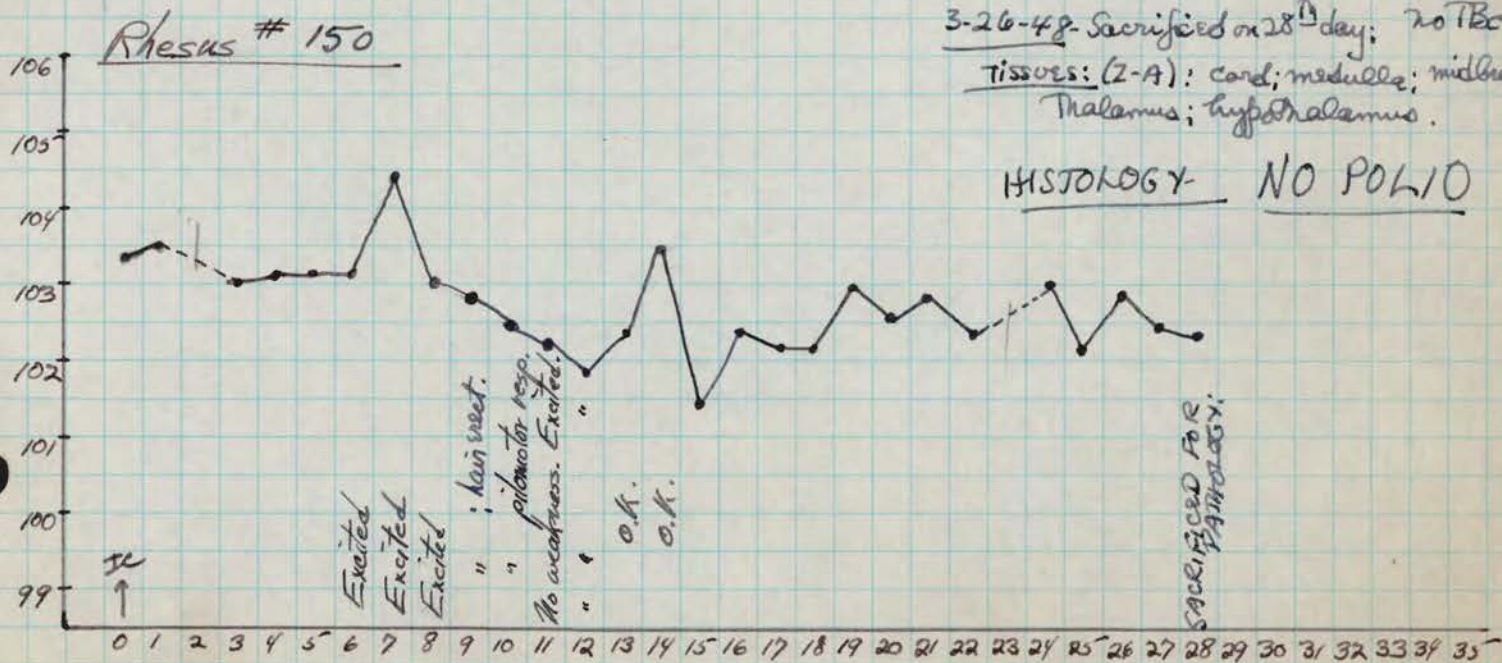
A.M.: Weakness of both l.
P.M.: Per. of both l. and up. Q. l. omia. T. omia.
See extra sheet for clin. course

99.2 99.3 94 94 96 95.2 99 96.4 -94

DEAD

3-26-48. Sacrificed on 28th day; no TBc.
TISSUES: (Z-A): cord; medulla; midbrain;
Thalamus; hypothalamus.

HISTOLOGY - NO POLIO



Ph #136: - Clinical course:

- 3-4-48: ? Excited.
3-5-48: Definitely excited.
3-6-48: Marked excitement.
3-7-48: " " ; no paralysis.
3-8-48: Weakness both lower extremities. Pilomotor response.
3-9-48: Par. par. all 4 extremities. Neck weakness. No facial, nystag.
3-10-48: Complete paralysis both lowers. Par. par. both upper.
No facial.
3-11-48: Condition unchanged. Moves head & tail.
3-12-48: Condition worse. No longer moves head or tail. Abdomen
distended, firm. Refuses food. Feels very cold.
3-13-48: Improved considerably. Passed large amt. of stool during the
night - no longer any abd. distension. Can move head
and tail fairly well. No facial weakness. Flexes right
forearm on arm spontaneously following & independent of
a preceding stimulus (extension).
3-14-48 - Dead. - Autopsy: - cord very soft, no cord taken for
virus. - ; sections of lumbar; Thoracic, cervical cord
and medulla for Z-A.

Rh #137: Clinical course.

3-3-48: Temp. up to 106°. ?Excited.
 3-4-48: Temp. = 104 $\frac{1}{2}$. Definitely excited.
 3-5-48: Temp. = 103 $\frac{2}{3}$. Excited. Tremors. "Clumsy" in both lowers. (ABS + HHH)
 3-6-48: Temp. = 103 $\frac{2}{3}$. " " Weakness both lowers (ABS + HHH)
 AM - P.p. left upper (HHH)
 3-7-48: AM-Temp. = 102 $\frac{2}{3}$. PM-Temp. = 101 $\frac{2}{3}$ Weakness both lowers (ATS).
 3-8-48: Temp. = 102°. Weakness both lowers (ATS + HHH). Left foot drop (ABS).
 3-9-48: Temp. = 103 $\frac{2}{3}$. " " " " " "
 3-10-48: Temp. = 100 $\frac{2}{3}$. " " " " " " Left foot drop. (ATS + HHH).
 3-11-48: Temp. = 101 $\frac{2}{3}$. " " " " " "
 3-12-48: Temp. = 101 $\frac{2}{3}$. " " " " " "
 3-13-48: Temp. = 100 $\frac{2}{3}$. " " " " " " (but less than on 3-12-48)
 3-14-48: Temp. = 101 $\frac{2}{3}$ Weakness left foot only.
 3-15-48: Temp. = 102 $\frac{2}{3}$. " " " " " "
 3-16-48: Weakness left foot.
 3-17-48: " " " " " "
 3-18-48: No weakness of foot, or other clinical signs.
 3-19-48: O.K.
 3-20-48: O.K.
 3-22-48: O.K.
 3-23-48: O.K.
 3-24-48: O.K.
 3-26-48: Sacrificed (28th day) for histopathology.

Rh #139: - Clinical course.

- 3-4-48: Excited.
3-5-48: "
3-6-48: "
3-7-48: Par. par. left upper; ?facial weakness; pilomotor response; tremors.
3-8-48: Same as 3-7-48 plus par. par. both lowers and weakness of right upper.
3-9-48: Prostrate. Paralysis of all four extremities. ?left facial. Back paralyzed. Neck weak only. No nystagmus.
3-10-48: Complete paralysis of both uppers and lowers. Moves head and jaws well.
3-11-48: Condition unchanged.
3-12-48: Slight head movements. Occ. spontaneous twitchings of right upper. Had a severe generalized convulsion lasting ± 10 min. at 10:30 a.m. accompanied in its early phase by screaming. Respiration ceased shortly thereafter. Was given 5 min. artificial resp. by Dr. Steigman - revived.
 pm. - Condition as before convulsion.
3-13-48: Occasional convulsive twitchings. Respiration shallow. No head or tail movements. Complete par. of all 4 extremities.
3-15-48: No more convulsions. Otherwise condition unchanged. (Moves head sl.)
3-16-48: Can move head, tail slightly. Respiration full, partially intercostal. Complete paralysis of all 4 extremities.
3-17-48: Condition unchanged.
3-18-48: "
3-19-48: Improving rapidly. Can move head, tail jaws well, back partially.
3-20-48: Condition unchanged.
3-22-48: Appetite excellent. Same.
3-23-48: Condition unchanged.
3-24-48: "
3-25-48: "
3-27-48: Slight improvement; sl. movements of both forearms.
3-29-48: Markedly worse. No movements at all. Breathing very shallow, slow. Too weak to chew. - Died ca 3:00 p.m. - Postmortem: Emaciated; no fat at all; fusiform granulomata of both lower lobes;

TISSUE FOR PATHOLOGIC CONFIRMATION: Cord & medulla levels; lung. (Z-A).

Rh #144: - Clinical course -

- 3-4-48: Temp. = 106⁽⁺⁾
3-5-48: " = 105⁸. Excited.
3-6-48: " = 104². Tremors. Weakness both lowers & uppers.
3-7-48: " = 96⁴. Prostrate. Complete paralysis both lowers and uppers. Tremors. No facial weakness, nystagmus.
3-8-48: Condition unchanged. Back & neck paralyzed. No tremors.
3-9-48: " " "
3-10-48: " " "
3-11-48: " " " Can move tail & neck to slight extent.
3-12-48: " " " " " " "
3-13-48: " " " Jaw movements weak & ineffectual.
3-15-48: Resp. partially intercostal. No facial ptosis, nystagmus. Muscles of mastication very weak bilaterally. Tongue movements sluggish. Otherwise condition unchanged.
3-16-48: Extreme weakness of m. of mastication. Otherwise unchanged.
3-17-48: Can partially open mouth and use masseters, though weakly — improved over 3-16-48.
3-18-48: Condition unchanged.
3-19-48: " " " Given 2 i.p. saline infusions (25cc each).
3-20-48: Breathing very weakly - shallow. Unable to close lids. Right eye beginning to show some corneal clouding accompanied by ragged, large, white-opaque bits of material floating in the anterior chamber.

DIED - 10 a.m. On administering artificial respiration, copious amounts of a brown, translucent watery liquid came from the nose.

Autopsy: No gross tbc. Trachea & large bronchi filled with the material, same as that found coming from nose. Material found in esophagus very similar to that in the trachea. Abdomen negative. Right eye removed and put into formalin for future section.

TISSUE FOR SECTION: Sections of lumbar, thoracic, cervical cord and medulla taken. (Z-A). Right eye into formalin.

Rh #145: Clinical course:-3-3-48: Excited. Temp. = 105°3-4-48: Weakness of both lowers; partial paralysis of left up.
Voice weak
Temp. = 105°3-5-48: Complete paralysis of left upper; par. par. rt. upper.
Par. par. both lower and back.
Temp. = 104°3-6-48: Prostrate. Complete par. both up. & lowers (sl. twitchings).
Almost complete par. of back and neck muscles.
Respirations chiefly diaphragmatic.
No ptosis, facial weakness, ptosis; cran. nerves O.K.3-7-48: T = 96°. prostrate; complete paralysis neck, back, all extremities;
no cranial nerve involvement; respirations diaphragmatic.
Chews and swallows O.K.3-8-48: Temp. = 94°. Clinical picture unchanged.3-9-48: Temp. = 94°3-10-48: Temp. = 94°. Extreme weakness. Respirations very shallow.
Eyelids are the only observable sign of life (other than diaphragmatic respirations).3-11-48: A.M. - Condition unchanged. Temp. = 94°
P.M. - Found dead.

Autopsy: No gross thc. No pneumonia or other gross pulmonary pathology. Adrenals, kidneys, spleen, liver, G.E. tract grossly negative.

TISSUE FOR SECTION: - Sections of cervical, thoracic, & lumbar cord. (2A)

TISSUE FOR VIRUS: Remainder of cord-medulla made up into a 20% susp. in (20cc.) sterile saline.
Wt. of cord = 5.0 gms. ± 18 cc. frozen in 2-20cc amps and stored. Culture: ✓ (3-11-48)12-16-48 Suspension Discarded

to be discarded

Rh #146 - Clinical course:

3-4-48: Weakness of both lower extremities and both upper ext.
 3-5-48: Complete paralysis of both lowers.
 Complete " " " uppers.
 Complete " " neck and back muscles. Can move tail.
 Respirations almost all abdominal (diaphragmatic).
 Head - Alert expression; no facial weakness; repeated chewing movements.
 No ptosis; no nystagmus.
 Cranial nerves intact.
 Temp. = 103°.

3-6-48: Temp. = 102. Condition unchanged. No facial weakness, nor nystagmus, ptosis. Tongue & jaw movements O.K.

3-7-48: T: 99°. Complete paralysis all 4 extremities; neck and back. - Respirations are diaphragmatic; cranial nerves seem O.K.; chews & swallows O.K.

3-8-48: Temp. = 97°. Clinical condition unchanged.

3-9-48: Temp. up to 99.1 " " otherwise.

3-10-48: Temp. = 99.1. Condition unchanged. Jaw movements still O.K.

3-11-48: Temp. = 94° " "

3-12-48: Temp. = 96. Slight return of intercostal respiration. Comp. paralysis of all 4 extremities. No facial weakness.

3-13-48: Can move head to a limited extent. Condition unchanged.

3-15-48: Can move head, jaws well. Alert expression. Making grunting noises common to more normal monkeys - first time they have been heard from any of the prostrate group since onset of complete paralysis of extremities.

3-16-48: Condition unchanged.

3-17-48: " "

3-18-48: " "

3-19-48: " "

3-20-48: Improving, though there is still complete paralysis of all 4 extremities.

3-22-48: Condition unchanged.

3-23-48: " "

3-24-48: Seems slightly weaker.

3-25-48: DEAD.

Autopsy: No gross lcs. Large, dark patchy areas of apparently pneumonic infiltrate found in both bases posteriorly. Trachea clear. Viscera otherwise negative. Kidneys, liver, adrenals - neg. grossly.

TISSUE FOR SECTION: Portions taken of lumbar, thoracic, cervical cord, and medulla. (Z-A)

HISTOLOGY:

POLIO "old"

Rh #149 - Clinical course:

3-4-48: AM-temp = 104° - Weakness of both lowers.
PM-temp = 104° - Partial paralysis of both lowers and uppers.
Tremors; aphonia.

3-5-48: Almost complete paralysis of both lowers & uppers. Temp = 102° .
SRT. lower: some movement of foot.
Left lower: " " " whole leg - slight.
Complete paralysis of back muscles; neck weak. Can move tail.
Respirations almost all diaphragmatic.
Head: Alert expression, though has a partial rt. facial paralysis.
No ptosis; no nystagmus.
Tongue & jaw movements O.K.; swallowing O.K.

3-6-48: Complete paralysis of both up. & lowers.
Otherwise no change from 3-5-48. Temp. = 102° .

3-7-48: Complete paralysis all 4 extremities; neck & back paralyzed; respirations are diaphragmatic; chews very feebly when offered food.

3-8-48: Temp. = 98° . Only change in clinical condition is progression from a partial rt. facial weakness to a complete rt. facial.

3-9-48: Temp up to 99° . Otherwise no change.

3-10-48: Temp = 99° . ?-return of some intercostal muscle respiration.

3-11-48: Temp. = 94° . Interoostal movement slight. Otherwise unchanged.

3-12-48: Temp. = 94° . Resp. increasingly intercostal. " " "

3-13-48: Interoostal respiration. Right facial persists. Jaw movements O.K.

3-15-48: Condition unchanged.

3-16-48: " " "

3-17-48: " " "

3-18-48: Right eye covered with thick purulent exudate. Debris removed; eye washed w/ warm saline and PCN (1000 U/cc) solution. PCN ointment instilled. Eye left uncovered. PCN in oil & wax (300,000 U) into inner aspect left thigh (im). Aqueous PCN (100,000 U in 10cc saline) into peritoneal cavity.

3-19-48: Dead. Autopsy: No gross thc. Trachea, all bronchial branches, & lung substance found to contain a frothy, thin, white material resembling milk. Abdominal exam neg. Eye (see above) removed and examination revealed no post. chamber involvement. Corneal perforation, severe iritis.
TISSUE FOR SECTION: Sections taken of lumbar, thoracic, & cervical cord, and medulla. (2-A).

MAR 15 1948

- Neutralization Test in Monkeys -

STRAIN POLIO

VS. HOFERKAMP

VIRUS USED: Generation II of [redacted] strain polio - titered on 2-27-48.

SERA USED: two sera from [redacted]

ACUTE: 9/5/47 - 4th day of illness.CONVALESCENT: 12/2/47 - 92nd day of illness.

INCUBATION: Serum-virus mixtures at room temp. (78°F) for one hour; Then into refrigerator overnight (15 hrs. at 3°C); Then into an ice-bath during incubation the morning of 3-16-48.

MONKEYS: Rhesus, 3 per indicated final dilution.

INOCULUM: 0.5 cc. intracerebrally, serum-virus, - and saline virus control, as indicated below.

FINAL VIRUS CONCENTRATIONS:

	10 ⁻¹	10 ⁻²	10 ⁻³	10 ⁻⁴	10 ⁻⁵	10 ⁻⁶
<u>SALINE</u> <u>CONTROL</u>				RA.184 O:K ₅₆ RA.185 P ₈ RA.186 O:K ₂₈	RA.187 O:K ₂₈ RA.188 O:K ₂₉ RA.189 O:K ₂₉	RA.190 O:K ₂₉ RA.191 O:K ₂₉ RA.192 O:K ₂₇
ACUTE SERUM (4 th day)	RA.172 P ₈ RA.173 O:K ₂₇ RA.174 P ₈	RA.175 P ₈ RA.176 P ₆ RA.177 P ₁₀	RA.178 O:K ₂₈ RA.179 P ₈ RA.180 P ₇	RA.181 P ₂₀ RA.182 O:K ₂₈ RA.183 O:K ₂₈		
CONVALESCENT SERUM (92 nd day)	RA.160 P ₉ RA.161 P ₈ RA.162 P ₈	RA.163 P ₁₂ RA.164 O:K ₂₇ RA.165 P ₁₃	RA.166 O:K ₂₇ RA.167 P ₉ RA.168 O:K ₂₇	RA.169 O:K ₂₇ RA.170 O:K ₂₇ RA.171 O:K ₂₇		

MAR 16 1948

HOMOLOGOUS

NEUTRALIZATION TEST

R#160:

CONVULSANT
~~Ante~~ Serum10⁻¹

Date	Day	Remarks
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	T=104 [°] . ✓
3-25-48	9	T=103 - Part. paralysis left upper; weakness R.U. and both lowers.
3-26-48	10	T=100 [°] - Compl. par. rt. lower; part. par. both uppers + left lower; weakness of neck; back + voice.
3-27-48	11	Compl. paralysis both lowers; partial both uppers; neck-back-voice weak.
3-28-48	12	No change.
3-29-48	13	"
3-30-48	14	Quadruplegia. Voice absent.
<u>Sacrificed:</u> (chloroform-exsanguination) Autopsy: No gross lcs. <u>TISSUE FOR SECTION:</u> Portions of lumbar, thoracic, and cervical cord. (2-A)		
<u>HISTOLOGY:</u> POLIO (acute)		

MAR 16 1948

HOMOLOGOUS

NEUTRALIZATION TEST

Rh #161:

CONTRAPARENT
serum10⁻¹

Date	Day	Remarks
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	T=104°. Excited, pilomotor response, tremors.
3-24-48	8	T=103°. Par. par. both uppers. Weakness both lowers and back.
3-25-48	9	T=100°. Quadriplegia; ptosis bilateral; voice, neck & back all weak.
Sacrificed: (chloroform-exsanguination) Autopsy: No gross les.		
TISSUE FOR SECTION: Portions of cervical & lumbar cord (2-A).		
TISSUE FOR VIRUS: Remainder of cord-medulla pooled with that of Rh #162 and Rh #167 to make a 20% susp. in sterile saline.		
Wt. pooled (3) cords-medulla = 16.3 gms.		
Saline added = 64 cc.		
± 58 cc. frozen 6-20cc amps and stored. (B-4-9)		
Cultures: ✓✓		

HISTOLOGY! POLIO (acute)

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

CONVARIANT

Elate serum

10⁻¹

Rh #162:

Date Day

Remarks

3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓

3-23-48 7 T=103². Weakness both lowers. Bilateral ptosis.
 3-24-48 8 T=104⁶. Part par. both lowers and left upper. Weakness rt. upper, back, & neck.
 3-25-48 9 T=99². Complete paralysis both lowers; weakness of back & uppers.

Sacrifice: (chloroform-exsanguination) Autopsy: No gross tbc.

TISSUE FOR SECTION: Portions of cervical & lumbar cord (Z-A).

TISSUE FOR VIRUS: Remainders of cord-medulla pooled with that of Rh #167 and Rh #161 to make a 20% susp in sterile saline (see notes under Rh #161).

Histology - Polio (acute)

MAR 16 1948

HOMOLOGOUS

NEUTRALIZATION TEST

Rh #163:

CONVALESCENT

~~acute~~ serum

10-2

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	T=102.8 Excited in A.M. -- P.M. compl. par. both lowers, partial left facial; and weakness both uppers. Excited.
3-26-48	10	T=104.6 AM Chummy; easily fatigued. - P.M. Same.
3-27-48	11	Coarse tremors; pilomotor response; weakness both uppers and lowers.
3-28-48	12	Complete par. both lowers; part. par. both uppers; back very weak.
3-29-48	13	No change.
3-30-48	14	" "

Sacrificed; (chloroform-exsanguination) Autopsy; No tbc.
ISSUE FOR SECTION: Portions of lumbar, thoracic,
 and cervical cord. (2-A)

Histology - Polio (acute)

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

R# 164:

CONVALESCENT
serum10⁻²

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	T=103 ² A.M. ? excited.
3-26-48	10	T=101 A.M. ? excited. P.M. same.
3-27-48	11	T=101 ⁴ ✓
3-28-48	12	✓
3-29-48	13	✓
3-30-48	14	Excited, pilomotor response. T=102 ⁸
3-31-48	15	T=102 ⁵ . Pilomotor response.
4-1-48	16	T=102 ⁰ . Excited. ✓
4-2-48	17	T=101 ⁶ ✓
4-3-48	18	T=101 ³ ✓
4-4-48	19	✓
4-5-48	20	T=99.6 ✓
4-6-48	21	T=99.2 ✓
4-7-48	22	T=100 ⁴ ✓
4-8-48	23	T=99 ² ✓
4-9-48	24	T=100 ✓
4-10-48	25	T=102 ⁸ ✓
4-11-48	26	✓
4-12-48	27	T=101 ✓

SACRIFICED (chloroform-exsanguination) Autopsy: No gross thr.
 TISSUE FOR SECTION: Thalamus, hypothalamus, pons, midbrain,
 medulla, and cord levels (2-A).

HISTOLOGY: NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

R#165:

CONVULSANT
~~serum~~ serum10⁻²

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	T=104° A.M. ? Excited.; P.M. sh. tremors noted.
3-26-48	10	T=103° A.M. seems O.K. P.M. - O.K.
3-27-48	11	✓
3-28-48	12	Clumsy?; no weakness or paralysis.
3-29-48	13	T=103°. Par. par. both up and lower. Tremors; pilomotor response.
3-30-48	14	T=100. Same.

Sacrificed: (chloroform-exsanguination) Autopsy: No tbc.
TISSUE FOR SECTION: Portions of lumbar, thoracic,
and cervical cord (L-A)

HISTOLOG V: POLIO (acute)

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

R#166:

CONVULSANT
~~State~~ Serum10⁻³

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	T=103 ⁴ Excited.
3-26-48	10	T=102 ⁶ -A.M. ? Excited. P.M. - Same.
3-27-48	11	T=103 ⁸ - ? Excited.
3-28-48	12	✓
3-29-48	13	T=104 ² Excited.
3-30-48	14	T=101 ² "
3-31-48	15	T=102 ² "
4-1-48	16	T=103 ² "
4-2-48	17	T=103 ⁶ "
4-3-48	18	T=102 ² O.K.
4-4-48	19	✓
4-5-48	20	T=103 ² ✓
4-6-48	21	T=101 ² ✓
4-7-48	22	T=102 ² ✓
4-8-48	23	T=103 ² ✓
4-9-48	24	T=102 ² ✓
4-10-48	25	T=102 ³ ✓
4-11-48	26	✓
4-12-48	27	T=103 ² ✓

SACRIFICED (chloroform-exsanguination) Autopsy: No the
 TISSUE FOR SECTION: Hypothalamus, thalamus, midbrain, pons,
 medulla, and cord levels. (Z-A)

HISTOLOGY: NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

CONVARIANT

Rh # 167:

~~serum~~ serum10⁻³

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	T = 105 ⁶ . Excited.
3-23-48	7	T = 105 ² . Excited.
3-24-48	8	T = 104 ² . Excited.
3-25-48	9	T = 102 ⁴ AM Partial paralysis left upper & left lower; weakness Rt. lower. P.M. Comp. par. l. upper & l. lower; part. par. rt. lower; weak rt. upper; complete l. facial.

Sacrificed: (chloroform - exsanguination) Autopsy: No gross tbc.

TISSUE FOR SECTION: Portions of cervical & lumbar cord (2-A).

TISSUE FOR VIRUS: Remainder of cord-medulla pooled with that of Rh # 162 and Rh # 161 to make a 20% susp. in sterile saline (see notes under Rh # 161).

HISTOLOG-1: POLIO (acute)

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

RA #168:

CONVULSANT
~~serum~~ serum

10-3

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	T=101 ² A.M.? clumsy. P.M. seems OK.
3-26-48	10	T=101 ⁶ ✓ (mod. severe diarrhea)
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	✓
3-30-48	14	T=101 ² ✓
3-31-48	15	T=102 ² ✓
4-1-48	16	T=102 ⁸ ✓
4-2-48	17	T=101 ³ ✓
4-3-48	18	T=101 ⁸ ✓
4-4-48	19	✓
4-5-48	20	T=101 ⁵ ✓
4-6-48	21	T=100 ² ✓
4-7-48	22	T=101 ⁴ ✓
4-8-48	23	T=101 ⁸ ✓
4-9-48	24	T=101 ⁸ ✓
4-10-48	25	T=101 ⁴ ✓
4-11-48	26	✓
4-12-48	27	T=100 ⁴ ✓

SACRIFICED (Microform-exsanguination) Autopsy: No gross les.
TISSUE FOR HISTOPATHOLOGY: Hypothalamus, thalamus, midbrain,
pons, medulla, and cord levels. (Z-A)

HISTOLOGY: NO POLIO

MAR 16 1948

HOMOLOGOUS

NEUTRALIZATION TEST

Rh #169:

CONVARIANT
~~Plate~~ serum

10-4

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	T=101 ⁸ ✓
3-26-48	10	T=103 ⁰ ✓
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	✓
3-30-48	14	T=102 ⁴ ✓
3-31-48	15	T=102 ⁵ ✓
4-1-48	16	T=102 ⁷ ✓
4-2-48	17	T=102 ⁷ ✓
4-3-48	18	T=102 ⁴ ✓
4-4-48	19	✓
4-5-48	20	T=102 ³ ✓
4-6-48	21	T=101 ⁹ ✓
4-7-48	22	T=102 ⁴ ✓
4-8-48	23	T=102 ³ ✓
4-9-48	24	T=102 ⁵ ✓
4-10-48	25	T=102 ⁶ ✓
4-11-48	26	✓
4-12-48	27	T=103 ✓

SACRIFICED: (chloroform-exsanguination)

Autopsy: No gross lbc.

TISSUE FOR SECTION: Hypothalamus, thalamus,
midbrain, pons, medulla, cord levels. (Z-A)HISTOLOGY: NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh #170:

CONVULSANT

Serum

10-4

DATE DAY REMARKS

3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	T=103° ✓
3-26-48	10	T=103° ✓
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	✓
3-30-48	14	T=102° ✓
3-31-48	15	T=103° ✓
4-1-48	16	T=102° ✓
4-2-48	17	T=102° ✓
4-3-48	18	T=104° (O.K.) ✓
4-4-48	19	✓
4-5-48	20	T=102° ✓
4-6-48	21	T=102° ✓
4-7-48	22	T=102° ✓
4-8-48	23	T=104° ✓
4-9-48	24	T=103° ✓
4-10-48	25	T=103° ✓
4-11-48	26	✓
4-12-48	27	T=102° ✓

SACRIFICED: (chloroform-exsanguination)

Autopsy: No gross thc.

Tissue for section: Hypothalamus, thalamus, midbrain, pons, medulla, cord levels. (Z-A)

HISTOLOGY:NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

CONVALESCENT
Cere serum

10-4

R#171:

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	$T=102^{\pm}$ ✓
3-26-48	10	$T=102^{\circ}$ ✓
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	✓
3-30-48	14	✓
3-31-48	15	$T=102^{\pm}$ ✓
4-1-48	16	$T=101^{\frac{1}{2}}$ ✓
4-2-48	17	$T=101^{\frac{3}{8}}$ ✓
4-3-48	18	$T=101^{\frac{1}{2}}$ ✓
4-4-48	19	✓
4-5-48	20	$T=101^{\frac{1}{2}}$ ✓
4-6-48	21	$T=100^{\frac{5}{8}}$ ✓
4-7-48	22	$T=103^{\frac{1}{2}}$ ✓
4-8-48	23	$T=102^{\frac{3}{8}}$ ✓
4-9-48	24	$T=101^{\frac{1}{2}}$ ✓
4-10-48	25	$T=102^{\circ}$ ✓
4-11-48	26	✓
4-12-48	27	$T=101^{\frac{3}{8}}$ ✓

SACRIFICED: (chloroform-exsanguination)
Autopsy: No gross the.
TISSUE FOR SECTION: Hypothalamus, thalamus,
 midbrain, pons, medulla, cord levels (I-A)

HISTOLOGY: NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

R# 172:

~~Convalescent~~ ^{ACUTE} serum10⁻¹

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	T=99 ⁺ . Weakness both up. and lowers, back and neck. Rt. facial. Ptosis.
3-25-48	9	T=98 ⁺ . Quadriplegia; complete rt. facial; aphonia.
3-26-48	10	T=95 ⁺ . - Quadriplegia; complete rt. facial; aphonia.
3-27-48	11	Moribund. - Sacrificed (chloroform - exsanguination) - Autopsy - no TB. TISSUES FOR HISTOPATHOLOGY: Cerebral; Thoracic; lumbar cord levels (2-A.)

Histology - Polio (acute)

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh# 173:

~~Convalescent~~ Acute Serum10⁻¹

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	T=102 ⁶ . A.M. Excited. P.M. ? excited.
3-26-48	10	T=102 ⁴ A.M. ? voice hoarse, otherwise O.K.
3-27-48	11	T=101 ⁸ - ? pilomotor response; voice O.K.
3-28-48	12	? excited.
3-29-48	13	T=104 ¹ ? excited.
3-30-48	14	T=101 ² ? " & ? pilomotor response.
3-31-48	15	T=101 ⁰ ? excited.
4-1-48	16	T=102 ⁰ ? excited.
4-2-48	17	T=103 ⁰ ? excited.
4-3-48	18	T=102 ⁸ O.K. ✓
4-4-48	19	✓
4-5-48	20	T=102 ⁶ ✓
4-6-48	21	T=102 ⁴ ✓
4-7-48	22	T=102 ² ✓
4-8-48	23	T=102 ⁰ ✓
4-9-48	24	T=102 ³ ✓
4-10-48	25	T=101 ⁵ ✓
4-11-48	26	✓
4-12-48	27	T=102 ² ✓

SACRIFICED: (chloroform-exsanguination)
 Autopsy: No gross tbc.
 TISSUE FOR SECTION: Hypothalamus, thalamus,
 midbrain, pons, medulla, cord levels (Z-A)

HISTOLOGY: NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

R# 174:

~~Culture~~ serum10⁻¹

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	T=104 ⁸ . Tremors. Weak voice. Weakness both lowers.
3-24-48	8	T=102°. Comp. par. all 4 extremities. P.p. rt. up. Jaw muscles weak. Resp. diaphr.
3-25-48	9	T=99°. Quadriplegia; aphonia.
3-26-48	10	T=98°. Quadriplegia; aphonia; back, neck, jaws weak.
3-27-48	11	No change.
3-28-48	12	No change.
3-29-48	13	" "
3-30-48	14	Sacrificed (abdomen-exsanguination) Autopsy: no gross the TISSUE FOR SECTION: Portions of lumber, thoracic, and cervical cord. (2-A)

4

HISTOLOGYPOLIO (acute)

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

R#175:

~~Circumferential~~ ^{Acute} serum

10-2

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	T=104 ⁶ Voice weak. Flaps over. Vitomotor response and tremors. Intermittent
3-24-48	8	T=102 ² Comp. par. rt. up.; p.p. left up. Par. par. both lowers, back, and neck. resp. Voice absent! Intercostal respirations chiefly.
3-25-48	9	T=98 ⁸ Quadriplegia; aphonia; intercostal respirations only.
3-26-48	10	T=99 ⁸ Quadriplegia; aphonia; Thoracic breathing.
3-27-48	11	No change.
3-28-48	12	No change
3-29-48	13	" "
3-30-48	14	Found <u>DEAD</u> . Autopsy; No gross tbc. No other gross pathology. <u>TISSUE FOR SECTION:</u> Portions of lumbar, thoracic, and cervical cord. (Z-A.)

HISTOLOGY. POLIO (acute)

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh # 176:

~~Chronic~~ Acute serum10⁻²

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	AM: T=106°. Par. par. right upper. PM: Same + clumsy both lowers.
3-23-48	7	T=104°. Par. par. both uppers. Tremors, weak voice. Weakness both l., back, & neck.
3-24-48	8	T=100°. Comp. par. all 4 exten. and back. Voice absent. Resp. chiefly diaphrag.
3-25-48	9	T=98°. Quadriplegia; aphonia; no intercostal breathing.
3-26-48	10	T=94°. - Quadriplegia; weakness of back & neck; aphonia.
3-27-48	11	Unchanged.
3-28-48	12	No change.
3-29-48	13	" "
3-30-48	14	Found <u>DEAD</u> . Autops.: No gross tbc, or other gross pathology. TISSUE FOR SECTION: Portions of lumbar, thoracic, and cervical cord. (2-A).

HISTOLOGY: POLIO (acute)

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

R# 177:

~~Convalescent~~ Acute Serum10⁻²

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	T=103 ⁸ . Tremors, pilomotor response.
3-25-48	9	T=102 ¹⁴ . excited; clumsy; flops over easily; no def. paralysis.
3-26-48	10	T=104 ⁰ - Partial paralysis left lower; weakness rt. lower and both uppers; weakness of neck & back.
3-27-48	11	Partial paralysis left lower; weakness rt. lower & both uppers; neck and back very weak.
3-28-48	12	Complete par. L.L.; part. par. Rt. lower; - weakness both uppers.
3-29-48	13	No change.
3-30-48	14	T=104 ⁵ . No change.
Sacrificed: (chloroform-ensanguination) Autopsy: No gross les.		
TISSUE FOR SECTION: Portions of lumbar, thoracic, and cervical cord. (2-A)		

HISTOLOGY: POLIO (acute)

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh # 178:

~~Convalescent~~ ^{Acute} serum10⁻³

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	T=102 ² ✓
3-26-48	10	T=102 ² ✓
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	✓
3-30-48	14	T=102 ⁶ ✓
3-31-48	15	T=102 ³ ✓
4-1-48	16	T=102 ² ✓
4-2-48	17	T=102 ✓
4-3-48	18	T=102 ² ✓
4-4-48	19	✓
4-5-48	20	T=102 ⁴ ✓
4-6-48	21	T=101 ² ✓
4-7-48	22	T=102 ² ✓
4-8-48	23	T=103 ¹ ✓
4-9-48	24	T=102 ⁴ ✓
4-10-48	25	T=101 ⁷ ✓
4-11-48	26	✓
4-12-48	27	T=102 ✓
4-13-48	28	T=102 ✓

SACRIFICED: (chloroform-exsanguination)

Autopsy: No gross tbc.

TISSUE FOR SECTION: Hypothalamus, thalamus, midbrain, pons, medulla, cord levels (Z-A).

HISTOLOGY: NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

R#179:

~~Chick~~ ^{Acute} serum10⁻³

DATE DAY REMARKS

3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	T=104 ³ . Flaps over, but no specific weakness.
3-24-48	8	T=103 ⁴ . Comp. par. both up. Weakness both l. Voice weak. Prosis bilat. Sits up.
3-25-48	9	T=101 ² . Quadriplegia; bil. prosis; aphonia.
3-26-48	10	T=98 [*] - Quadriplegia; bilateral prosis; aphonia.
3-27-48	11	No change.
3-28-48	12	No change.
3-29-48	13	No change.
3-30-48	14	No change.

Sacrificed: (chloroform-exsanguination) Autopsy: No tbc.
TISSUE FOR SECTION: Portions of lumbar, thoracic, and cervical cord (Z-A)

HISTOLOGY: POLIO (acute)

MAR 16 1948

Rh #180:

~~Convalescent~~ Acute serum10⁻³

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	A.M. - ✓ P.M.: T=105 ⁴ . Excited.
3-23-48	7	T=103 ⁸ . Par. par. both uppers. Weakness both lowers. Definite left facial.
3-24-48	8	T=100 ² . Comp. par. all 4 extrem. and back. Left facial. Voice absent. St. phos.
3-25-48	9	T=100 ² . Quadriplegia; aphonia; horiz. nystagmus slow to rt. quick to left; h. facial, partial.
3-26-48	10	T=99 ⁴ . -Complete quadriplegia; aphonia; no nystagmus. - no facial weakness.
3-27-48	11	Prostrate. - No change.
3-28-48	12	No change.
3-29-48	13	"
3-30-48	14	"
Sacrificed: (chloroform-asphyxiation) Autopsy: No gross the.		
TISSUE FOR SECTION: Portions of lumbar, thoracic, and cervical cord (2-A).		

HISTOLOGY:POLIO (acute)

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh # 181:

~~Subacute~~ ^{Acute} serum

10-4

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	✓
3-26-48	10	T=102.5 - A.M. excited; pilomotor response; coarse tremors. P.M. " " " " " "
3-27-48	11	T=102.0 - only shows ? excitement and pilomotor response; no tremors.
3-28-48	12	Excited.
3-29-48	13	T=103.4 ? pilomotor response.
3-30-48	14	T=102.2 " "
3-31-48	15	T=102.0 ✓
4-1-48	16	T=102.4 ✓
4-2-48	17	T=102.4 ✓
4-3-48	18	T=102.4 ✓
4-4-48	19	✓
4-5-48	20	T=103.8 ✓ ^{Complete} PM: left facial paralysis noted.
4-6-48	21	T=104.2 Left facial (complete) persists - no other suggestion of weakness, or of paralysis. Shows a moderate pilomotor response.
4-7-48	22	T=105.6 Partial paralysis of both uppers. Complete left facial. Weakness of back and neck.
4-8-48	23	Found DEAD in a.m. Autopsy: No gross tte. TISSUE FOR SECTION: Portions of cervical, thoracic, and lumbar cord. (Z-A)

HISTOLOGY: POLIO (acute)

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh #182:

~~Chorion~~ ^{Acute} serum10⁻⁴

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	✓
3-26-48	10	✓ (T=101.2)
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	✓
3-30-48	14	T=101.2 ✓
3-31-48	15	T=101.2 ✓
4-1-48	16	T=103.0 ✓
4-2-48	17	T=101.5 ✓
4-3-48	18	T=102.3 ✓
4-4-48	19	✓
4-5-48	20	T=103.4 ✓
4-6-48	21	T=101.5 ✓
4-7-48	22	T=101.2 ✓
4-8-48	23	T=102.3 ✓
4-9-48	24	T=101.5 ✓
4-10-48	25	T=101.4 ✓
4-11-48	26	✓
4-12-48	27	T=101.5 ✓
4-13-48	28	T=101.5 ✓

SACRIFICED: (chloroform-exsanguination)

Autopsy: No gross tbc.
TISSUE FOR SECTION: Hypothalamus, thalamus, midbrain,
pons, medulla, cord levels (2-A)HISTOLOGY: NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh # 182:

~~Concentrated~~ ^{Acute} serum10⁻⁴

DATE DAY REMARKS

3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	✓
3-26-48	10	✓ T=102 ⁸
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	✓
3-30-48	14	T=102 ⁹ ✓
3-31-48	15	T=103 ⁹ ✓
4-1-48	16	T=102 ⁹ ? excited.
4-2-48	17	T=103 ⁹ Excited.
4-3-48	18	T=103 ⁹ ? excited.
4-4-48	19	??? Excited.
4-5-48	20	T=104 ✓ (very ? excited)
4-6-48	21	T=103 ⁵ ✓
4-7-48	22	T=101 ⁹ ✓
4-8-48	23	T=102 ⁹ ✓
4-8-48	24	T=103 ⁹ ✓
4-10-48	25	T=102 ² ✓
4-11-48	26	✓
4-12-48	27	T=102 ⁸ ✓
4-13-48	28	T=102 ⁶ ✓

Sacrificed: (chloroform-exsanguination)
Autopsy: No gross lcs.
 TISSUE FOR SECTION: Hypothalamus, thalamus,
 midbrain, pons, medulla, cord levels (2-A)

HISTOLOGY! NO POLIO

MAR 16 1948

HOMOLOGOUS. NEUTRALIZATION TEST

Rh #184:

Saline control

10⁻⁴

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓ (T=102)
3-25-48	9	T=102 ³ ✓
3-26-48	10	T=102 ² ✓ {Pregnancy noted on abd. examination - fetus viable}
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	T=102 ⁵ ✓
3-30-48	14	T=101 ² ✓
3-31-48	15	T=101 ⁵ ✓
4-1-48	16	T=102 ⁰ ✓
4-2-48	17	T=101 ⁸ ✓ {Pregnancy verified by x-ray - 1 fetus present}
4-3-48	18	T=100 ⁴ ✓
4-4-48	19	✓
4-5-48	20	T=101.2 ✓
4-6-48	21	T=100 ⁴ ✓
4-7-48	22	T=99.9 ✓
4-8-48	23	T=100 ⁸ ✓
4-9-48	24	T=99 ² ✓
4-10-48	25	T=99 ⁸ ✓
4-11-48	26	✓
4-12-48	27	T=100 ✓
4-13-48	28	✓
4-14-48	29	✓
4-15-48	30	✓
4-16-48	31	✓
4-17-48	32	✓ {EKG}
5-11-48	56	Sacrificed after hysterotomy. Tissue for section: cord; medulla; pons; midbrain; Thalamus and hypothalamus (Z-A.)

Pregnancy Record: Active fetal movements felt until A.M. of 5-11-48 when no longer felt; therefore hysterotomy was done; male fetus - dead; wt. = 265 gms. There was much hemorrhage about eyes, nose, upper lip + a marked frontal cephal. - Fetus embalmed in 10% formalin via umbilical vessels, after preliminary saline perfusion.

HISTOLOGY: NO POLIO

MAR 16

HOMOLOGOUS NEUTRALIZATION TEST

Rh #185:

Saline control

10⁻⁴

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	T=104° Tremors. Chums. flops over.
3-24-48	8	T=98° Prostrate. Complete par. all 4 extremities, and back. Diaph. resp. <u>SACRIFICED</u> : (Eukrotoxin-exsanguination) Autopsy: Gross evidence of pulmonary th; severe mesenteric adenitis - thc. Pleura and and parietal peritoneal surfaces not grossly involved. (Z-A) <u>TISSUE FOR SECTION</u> : Portions of lumbar and cervical cord. (Z-A) <u>TISSUE FOR VIRUS</u> : Remainder of cord-medulla frozen in a tustoroid tube. Culture: ✓✓✓ (D-9)
4-16-48		Cord-medulla of Rh #185 thawed and made into a 20% suspension in (20cc) sterile saline. Wt. of cord-medulla = 5.0 gms. ± 17 cc. frozen in 2-20cc. aups (Vials 1, 2) and stored. Culture: ✓✓✓ B-7-3

HISTOLOGY POLIO (amstel)

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh #186:

Saline control10⁻⁴

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓ (T=102 ²)
3-25-48	9	T=101 ²
3-26-48	10	T=102 ⁴ ✓
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	T=103 ✓
3-30-48	14	T=102 ² ✓
3-31-48	15	T=102 ² ✓
4-1-48	16	T=102 ² ✓
4-2-48	17	T=102 ² ✓
4-3-48	18	T=102 ² ✓
4-4-48	19	✓
4-5-48	20	T=103 ² ✓
4-6-48	21	T=102 ² ✓
4-7-48	22	✓
4-8-48	23	T=102 ² ✓
4-9-48	24	T=102 ² ✓
4-10-48	25	✓
4-11-48	26	✓
4-12-48	27	T=102 ² ✓
4-13-48	28	T=103 ✓

SACRIFICED (chloroform-exsanguination)
 (Autopsy) No gross lcs.
 TISSUE FOR SECTION: Hypothalamus, thalamus, midbrain,
 pons, medulla, cord levels. (Z-A)

HISTOLOGY: NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh #187:

Saline control 10^{-5}

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	T=102.8° ✓
3-26-48	10	T=102.2° A.M. ? excited. P.M. same.
3-27-48	11	✓
3-28-48	12	? excited.
3-29-48	13	T=102.8° ✓
3-30-48	14	T=102.2° ✓
3-31-48	15	T=103.2° ✓
4-1-48	16	T=102.8° ✓
4-2-48	17	T=103.2° ✓
4-3-48	18	T=102.8° ✓
4-4-48	19	✓
4-5-48	20	T=103.2° ✓
4-6-48	21	T=103.2° ✓
4-7-48	22	✓
4-8-48	23	T=103.8° ✓
4-9-48	24	T=103.2° ✓
4-10-48	25	✓
4-11-48	26	✓
4-12-48	27	T=103 ✓
4-13-48	28	T=103 ✓

SACRIFICED: (chloroform-exsanguination)
 Autopsy: No gross the.
 TISSUE FOR SECTION: Hypothalamus, thalamus,
 midbrain, pons, medulla, cord levels (I-A)

HISTOLOGY: NO POLIO

MAR 16 1948 / #188:

Saline control

10-5

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	✓
3-26-48	10	T=103' ✓
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	T=102 ✓
3-30-48	14	✓
3-31-48	15	✓
4-1-48	16	✓
4-2-48	17	✓
4-3-48	18	✓
4-4-48	19	✓
4-5-48	20	T=102.2 ✓
4-6-48	21	✓
4-7-48	22	✓
4-8-48	23	T=100.9 ✓
4-9-48	24	T=103.2 ✓
4-10-48	25	T=104.2 ? mild excitement.
4-11-48	26	T=103.6 ? " "
4-12-48	27	T=103.4 ? " "
4-13-48	28	T=102.8 ✓
4-14-48	29	T=103 ✓

SACRIFICED (chloroform-exsanguination) Autopsy: No gross thc.
 TISSUE FOR SECTION: Hypothalamus, thalamus, midbrain,
 pons, medulla, cord levels. (Z-A)

HISTOLOGY:NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh #189:

Saline control

10⁻⁵

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	✓
3-26-48	10	T=103. ✓
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	T=102.2 ✓
3-30-48	14	✓
3-31-48	15	✓
4-1-48	16	✓
4-2-48	17	✓
4-3-48	18	✓
4-4-48	19	✓
4-5-48	20	T=103.2 ✓
4-6-48	21	✓
4-7-48	22	✓
4-8-48	23	T=101.2 ✓
4-9-48	24	T=102.6 ✓
4-10-48	25	✓
4-11-48	26	✓
4-12-48	27	T=102.8 ✓
4-13-48	28	T=102.3 ✓
4-14-48	29	T=102.8 ✓

SACRIFICED: (chloroform-exsanguination) Autopsy: No the
TISSUE FOR SECTION - Hypothalamus, thalamus, midbrain,
pons, medulla, cord lvs. (2-A.)

HISTOLOGY: NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh #190:

Saline control

10⁻⁶

DATE	DAY	REMARKS.
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	✓
3-26-48	10	T=102° A.M. Excited.
3-27-48	11	T=102° - ? Excited.
3-28-48	12	? Excited.
3-29-48	13	? Excited. T=102°
3-30-48	14	✓
3-31-48	15	Temp.=102° ✓
4-1-48	16	✓
4-2-48	17	✓
4-3-48	18	✓
4-4-48	19	✓
4-5-48	20	T=102 ✓
4-6-48	21	✓
4-7-48	22	✓
4-8-48	23	T=102° ✓
4-9-48	24	T=102° ✓
4-10-48	25	✓
4-11-48	26	✓
4-12-48	27	T=103 ✓
4-13-48	28	T=102° ✓
4-14-48	29	T=101° ✓

SACRIFICED: (chloroform-exsanguination) Autopsy, No gross the.
 TISSUE FOR SECTION: - Hypothalamus, thalamus, midbrain,
 pons, medulla, cerebellum. (Z-A).

HISTOLOGY: NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

PK #191:

Saline control

10⁻⁶

DATE	DAY	REMARKS.
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	✓
3-26-48	10	✓ (T=104°)
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	T=102 ³
3-30-48	14	✓
3-31-48	15	✓
4-1-48	16	✓
4-2-48	17	✓
4-3-48	18	✓
4-4-48	19	✓
4-5-48	20	T=103 ⁵ ✓
4-6-48	21	✓
4-7-48	22	✓
4-8-48	23	T=102 ⁶ ✓
4-9-48	24	T=103 ³ ✓
4-10-48	25	✓
4-11-48	26	✓
4-12-48	27	T=103 ⁵ ✓
4-13-48	28	T=103 ⁰ ✓
4-14-48	29	T=102 ⁶ ✓

SACRIFICED (chloroform-exsanguination) Autopsy: No Hb.
 TISSUE FOR SECTION — Hypothalamus, thalamus,
 midbrain, pons, medulla, cord levels (Z-A)

HISTOLOGY: NO POLIO

MAR 16 1948

HOMOLOGOUS NEUTRALIZATION TEST

R#192:

Saline control

10-6

DATE	DAY	REMARKS
3-16-48	0	✓
3-17-48	1	✓
3-18-48	2	✓
3-19-48	3	✓
3-20-48	4	✓
3-21-48	5	✓
3-22-48	6	✓
3-23-48	7	✓
3-24-48	8	✓
3-25-48	9	✓
3-26-48	10	✓
3-27-48	11	✓
3-28-48	12	✓
3-29-48	13	✓ T=102°
3-30-48	14	✓
3-31-48	15	✓
4-1-48	16	✓
4-2-48	17	✓
4-3-48	18	✓
4-4-48	19	✓
4-5-48	20	✓
4-6-48	21	✓
4-7-48	22	✓
4-8-48	23	T=102° ✓
4-9-48	24	✓
4-10-48	25	✓
4-11-48	26	✓
4-12-48	27	✓

SACRIFICED: (chloroform-exsanguination, Autopsy: No gross lbc.
 TISSUE FOR SECTION: Hypothalamus, thalamus, midbrain,
 pons, medulla, cord levels (2-A)

HISTOLOGY: NO POLIO

NEUTRALIZATION TESTS IN MONKEYS

STRAIN POLIO OS.

SERA.

MAY 20 1948

Virus used: Generation ii of [redacted] strain polio - titrated on 2-27-48.

Sera used: Two sera from [redacted]
 INTERMEDIATE: - 10/6/47 (35th day of illness)
 FINAL: - 5/13/48 ($\pm 8\frac{1}{2}$ mos. after onset)
 255 days

Incubation: Serum-virus mixtures at room temperature (77°F) for one hour — then into refrigerator overnight (15 hours) — then into an ice bath during the inoculations on 5-21-48.

Monkeys: Normal rhesus; 3 per indicated final dilution.

Inoculum: 0.5 cc intracerebrally, serum-virus, and saline-virus, as indicated below.

	10 ⁻¹	10 ⁻²	10 ⁻³	10 ⁻⁴
Saline control			Rh 421 P6 +	Rh 481 P11 +
			Rh 508 P6 +	Rh 482 P9 +
			Rh 480 P7 +	Rh 483 O, K27 0
Intermediate serum (1 mo.)	Rh 484 P7 +	Rh 487 P6 +	Rh 490 509 P12 +	Rh 493 O, K28 0
	Rh 485 P6 +	Rh 488 P13	Rh 491 510 P6 +	Rh 494 O, K27 0
	Rh 486 P7 +	Rh 489 P7	Rh 492 P12 +	Rh 495 O, K27 0
Final serum (8 1/2 mos.)	Rh 496 P8 +	Rh 499 ?K311 +	Rh 502 O, K27 0	Rh 505 O, K28 0
	Rh 497 P7 +	Rh 500 P10 +	Rh 503 P20 +	Rh 506 O, K28 0
	Rh 498 P8 +	Rh 501 P6 +	Rh 504 O, K28 0	Rh 507 O, K28 0

MAY 21 1948

Rh 421.

Saline control 10^{-3}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
5-27-48	6	Part. par. GPH lower; back weak; weakness left upper.
5-28-48	7	<u>SACRIFICED</u> : (chloroform-exsanguination) Autopsy: No gross les.
		TISSUE FOR SECTION - Single sections of lumbar and cervical cord. (ZA)
		TISSUE FOR VIRUS - Remainder of cord-medulla cut into small pieces and put into glycerin for Dr. Debre.

MAY 21 1948

Rh 508.

Saline control 10^{-3}

DATE	DAY	REMARKS
5-21-48	0	✓ (Severe facial edema - following trauma to head).
	1	✓ PCN: IP (100,000u) and IM (300,000u) (Paralut conjunctivitis - left eye)
	2	✓ PCN: 389 (100,000u) (Definite improvement)
	3	✓ Much less swelling. $T=100^{\circ}$.
	4	✓ Improved $T=100^{\circ}$.
	5	✓ " Still not very active.
	6	Complete paralysis both lowers; weakness both uppers; voice is weak. $T=100^{\circ}$.
	7	Quadriplegia; moves head + neck.
	8	5-29-48 DEAD: Autopsy: No gross thc.
TISSUE FOR SECTION - Lumbar, cervical, & thoracic cord levels - single sections of each (Z-A)		

MAY 21 1948

Rh 480.

Saline control 10^{-3}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
	6	✓
5-28-48	7	Partial par. of both uppers & both lowers; voice weak.
5-29-48	8	Par. par. all 4 extremities. Weak back, neck, voice.
5-30-48	9	Compl. par. both lowers; part. both uppers; weak voice.
5-31-48	10	No change.
6-1-48	11	" "
6-2-48	12	" "
	13	" "
	14	" "
6-5-48	15	Compl. par. both lowers and left upper. Part par. right upper. weak voice
	16	unchanged.
	17	" "
	18	" "
	19	" "
	20	" "
	21	" "
	22	" "
	23	" "
6-14-48	24	Compl. par. both lowers; part. both uppers. Voice O.K.
	25	No change
6-16-48	26	Compl. par. both lowers & left upper. Part Par right upper. Weak voice
	27	No change
	28	No change.
6-21-48	31	<u>Bled for serum</u>
7-17-48	39	No change
7-21-48	41	<u>Bled for serum</u>
7-22-48	42	Compl. par. both lowers. Part Par. both uppers.
8-5-48	76	No change
8-20-48	91	Compl. Par. both lowers. Part. Par. both uppers.
8-21-48		<u>Challenged by IC inoculation (Rt. frontal lobe) of 1.0 cc of</u> 20% Hofferkamp virus (generation II); simultaneously with control Rh. #731 (g.v.).
8-23-48		<u>Died. - (see details on Re-Inoculation Record).</u>
		HISTOLOGY:
		<u>Polio "old"</u>

MAY 21 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh 481.

Saline control 10^{-4}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
	6	✓
	7	✓
5-29-48	8	? excited.
	9	✓
5-31-48	10	Chums; weakness of all 4 extremities.
6-1-48	11	Complete par. of both lowers; par. par. both uppers. Voice weak.
6-2-48	12	" " " " " and left upper. Par. par. rt. upper
6-3-48	13	No change
	14	" "
	15	" "
	16	unchanged.
	17	" "
	18	" "
	19	" "
	20	" "
	21	" "
	22	" "
	23	" "
6-14-48	24	Compl. par. both lowers; part. both uppers; compl. bilat. wrist drop.
	25	No change
6-16-48	26	Quadriplegia
	27	"
	28	Compl. par. both lowers & left upper; part. par. rt. upper; still has complete bilat. wrist drop.
6-21-48	31	No change but also has a bone sinus on the right wrist. Given 100,000 units of Penicillin I.P. - Bled for serum.
7-17-48	59	No change - but eats a little weaker
7-21-48	61	Bled for serum
7-22-48	62	Quadriplegia
8-7-48		Attributed
		P.M. FOUND DEAD
		AUTOPSY: No gross
		TISSUE FOR SECTION Single segments of lumbar, thoracic and cervical
		cord; medulla, thalamus and midbrain (Z.A.)
		11-23-48 Tissues discarded.

MAY 21 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh 482.

Saline control 10^{-4}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
	6	✓
5-28-48	7	Pilomotor +; occ. generalized tremors.
5-29-48	8	Clumsy; easily fatigued. Disincl. to climb. Voice weak. Pilomotor response. $T = 103^{\circ}$.
5-30-48	9	Partial paralysis both lowers; uppers weak, - voice weak.
5-31-48	10	No change.
6-1-48	11	Par. par. all 4 extremities. Voice weak.
6-2-48	12	Comp. par. both lowers; par. par. both uppers.
	13	No change
	14	" "
	15	" "
	16	unchanged.
	17	" "
	18	" "
	19	" "
	20	" "
	21	" "
	22	" "
	23	" "
6-14-48	24	Compl. par. both lowers; both uppers show weakness only.
	25	No change
	26	" "
	27	" "
	28	No change.
6-21-48	31	<u>Bled for serum.</u>
7-6-48		Comp. par. left lower; part par right lower; weakness uppers
7-17-48	57	Compl. par. left lower; part. par. right lower; weakness uppers.
7-21-48	61	<u>Bled for serum</u>
7-22-48		No change
8-5-48		Compl. Par. left lower; Part. par. right lower
8-20-48	91	No Change
8-21-48		Challenged by inoc. IC (rt. frontal) of 1.0×10^5 of 20% H ₂ S ₂ virus (Gen. II) - simultaneously with control Rh. #731 (g.v.).
8-21-48		<u>Bled for serum</u> 8-31-48 serum of 8-21-48 thawed and .4 cc removed for testing N.T.

6-9-48 - Bled for serum 8-31-48 serum of 6-7-48 thawed and .4 cc removed for testing N.T.

MAY 21 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh 483.

Saline control 10^{-4}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
	6	✓
	7	✓
	8	✓
	9	✓
	10	✓
6-1-48	11	Severe diarrhea.
6-2-48	12	Diarrhea.
	13	✓
	14	✓
6-5-48	15	diarrhea
	16	✓
	17	✓
	18	✓
	19	✓
	20	✓
	21	✓
	22	✓
	23	✓
	24	✓
	25	✓
	26	✓
6-17-48	27	✓

SACRIFICED (chloroform-exsanguination)

AUTOPSY No gross the

Tissue For Section Single segments of lumbar, thoracic and cervical cord; medulla, midbrain & thalamus (2A)

HISTOLOGY:

Above levels show no pathological changes.

DIAGNOSIS: NO POLIO.

MAY 21 1948

HOMOLOGOUS NEUTRALIZATION TEST

Rh 484.

Intermediate serum (1 mo.) 10^{-1}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
5-27-48	6	Weakness left upper; p. motor t.
5-28-48	7	Part. par. left upper; p. p. both lowers; weakness r. upper, neck, back.
5-29-48	8	Comp. par. both lowers; par. par. both uppers. Weak neck, back. (Vone ok)
5-30-48	9	Unchanged.
5-31-48	10	"
6-1-48	11	"
6-2-48	12	Quadriplegia.
6-3-48	13	Comp. par. both lowers; part. par. both uppers. Weak neck back
	14	No change
	15	"
	16	Unchanged.
	17	Quadriplegia
	18	"
	19	" (can move head and neck) 6-9-48. Bled for serum.
	20	"
	21	"
	22	"
	23	"
	24	Compl. paralysis both lowers; part. par. both uppers.
	25	No change
6-16-48	26	Compl. paralysis both lowers; Part par. both uppers; Compl. bilat. wrist drop
	27	No change
	28	No change.
6-21-48	31	Bled for serum.
7-17-48	57	No change
7-21-48	61	Bled for serum
7-22-48		Quadriplegia
8-7-48		FOUND DEAD

AUTOPSY - no gross tbc

TISSUE FOR SECTION - Single segments of lumbar, thoracic and cervical cord; medulla, midbrain + thalamus + (2 ft)
(tissues almost pulsatious in consistency).

HISTOLOGY: Very poor fixation of tissues, so that fine detail not possible. There is however - robust degeneration of spinal cord levels with dense glial foci in ant. horn of cervical (?) medulla shows minimal PV cuffing, with glial infiltrate in reticular formation; periaqueductal area of midbrain is available and this area and thalamus show glial infiltration - and extremely sparse PV cuffing.

DIAGNOSIS: POLIO (old)

MAY 21 1948

Rh 486.

Intermediate serum (1 mo.) 10⁻¹

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
5-27-48	6.	Clumsy; weakness all 4 exts.
5-28-48	7.	Part. par. all 4 exts; complete left facial.
5-29-48	8	Comp. par. both lowers; par. par. both uppers. Comp. left facial. Weak voice.
5-30-48	9	unchanged.
5-31-48	10	"
6-1-48	11	Quadriplegia. Comp. left facial paralysis. Voice weak.
6-2-48	12	No change.
6-3-48	13	No change.
6-4-48	14	FOUND DEAD

AUTOPSY. No gross lbc
TISSUE FOR SECTION Single sections of lumbar & cervical ^{spinal cord} in (2A)
 (cord extremely soft and friable.)

MAY 21 1948

Rh 487.

Intermediate serum (1 mo.) 10^{-2}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
5-27-48	6	Part. par. Rt. upper; weakness other 3 Extre; aphonia.
5-28-48	7	Part. par. both lowers & rt. upper; weakness l. upper; aphonia.
5-29-48	8	Comp. par. both lowers & rt. upper; par. par. left up. Can make weak sounds & voice very weak.
5-30-48	9	no change.
5-31-48	10	"
6-1-48	11	" "
6-2-48	12	" "
6-3-48	13	" "
	14	" "
	15	" "
	16	No change.
6-7-48	17	Moribund.

SACRIFICED (chloroform - exsanguination) Autopsy: No grossly
 TISSUE FOR SECTION - single sections of lumbar & cervical cord (2A)

HOMOLOGOUS NEUTRALIZATION TEST

Intermediate serum (1 mo.) 10^{-2}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
	6	✓
	7	✓
	8	✓
	9	✓
	10	✓
6-1-48	11	Clonus; weakness of all 4 extremities.
6-2-48	12	" " " " " " Occ. tremors.
6-3-48	13	Part par. of rt. upper; weakness of both lowers. Occ tremors
	14	No change
	15	" "
	16	No change.
	17	" "
6-8-48	18	Part. par. of right upper. Weakness of left upper.
	19	" " " " " " 6-9-48 Bled for serum.
	20	No change
	21	" "
	22	" "
6-13-48	23	No change
	24	Partial par. rt. upper.
	25	No change
	26	" "
	27	" "
	28	Part. par. rt. upper.
6-21-48	31	Bled for serum.
7-6-48		Part par rt upper
7-17-48	57	Part par. rt. upper
7-21-48	61	Bled for serum
7-22-48	62	No change
7-24-48	64	severe diarrhea thru
7-28-48	68	A.M. very thin prostatic
		P.M. <u>FOUND DEAD</u>
		Autopsy: No gross the
		<u>TISSUE FOR SECTION</u> several segments of lumbar thoracic
		and cervical cord; medulla thalamus & midbrain
		11-23-48 Tissues discarded.

MAY 21 1948

Rh 489.

Intermediate serum (1 mo.) 10^{-2}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
	6	✓
5-28-48	7	Part. par. contractions; weakness both lowers.
5-29-48	8	Quadruplegia — can still move head, neck. <i>Gp. house.</i>
	9	unchanged; severe bleeding gums.
	10	"
	11	"
	12	"
	13	"
6-4-48	14	FOUND DEAD
		AUTOPSY No gross the
		TISSUE FOR SECTION single sections of lumbar & cervical (2A)
		(cord extremely soft and friable)

MAY 21 1948

Rh 490

Intermediate serum (1 mo.) 10^{-3}

DATE DAY REMARKS

5-21-48

0

✓

5-23-48

2

Found DEAD in cage, strangled by chain of Rh 491.

Autopsy: No gross th.

TISSUE FOR SECTION - Thalamus, hypothalamus, midbrain, pons, medulla, cord levels (Z-A)

Rh 490

HISTOLOGY:

NO EVIDENCE FOR POLIO.

MAY 25 1948

Rh 509 -

Intermediate Serum (1 mth.) 10^{-3}

On 5-24-48 - 0.6 cc of corresponding [redacted] serum mixed with 0.6 cc of same [redacted] Gen II virus used for the neutralization test set up 5-20-48, and subjected to same factors. - On 5-25-48 0.5 cc of mixture incc. I.C. into Rh. 509 and Rh. 510 (overleaf) to replace Rh. 490 and 491. -

5-25-48

0

✓

1

✓

2

✓

3

✓

4

✓

5

✓

6

✓

7

✓

8

✓

9

✓

10

✓

11

✓

6-6-48

12

Part. par. Left lower. weakness 3 other.

6-7-48

13

Par. of both lowers. Part. par. of uppers. Complete ^{right} facial. aphonia

6-8-48

14

Compl. par. of both lowers and rt. upper; Part par left upper.

Complete ^{right} facial; aphonia.

15

No change

6-9-48 - Bled for serum.

16

"

17

"

18

"

19

No change.

6-14-48

20

Complete quadriplegia; rt. facial paralysis (complete) - aphonia

21

No change

22

"

6-17-48

23

Moribund

24

"

; Eating however.

6-21-48

27

Quadriplegia; compl. rt. facial; alert; Eating O.K.

6-25-48. Bled for serum.

7-12-48

47

FOUND DEAD

Autopsy: No gross th.

TISSUE FOR SECTION Single segments of lumbar and cervical cord (Z-A)

MAY 21 1948

~~Rh 491.~~Intermediate serum (1 mo.) 10^{-3}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
5-23-48	2	Found DEAD in cage, strangled by chain of Rh 490. Autopsy. No gross the.
Rh. 491 HISTOLOGY:		TISSUE FOR SECTION - Thalamus, hypothalamus,
NO EVIDENCE FOR POLIO		midbrain, pons, medulla, cord levels (2-A)

Rh. #510.- Intermediate serum (1 mo.) 10^{-3}
(see overleaf Rh. 509 for details of inoculation)

5-25-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
5-31-48	6	Par. par. rt. lower; weakness of other 3 extrem, back, voice.
6-1-48	7	Quadriplegia - aphasia.
6-2-48	8	No change. Par. back and neck.
6-3-48	9	Found Dead
		Autopsy. No gross the
		TISSUE FOR SECTION. single sections of lumbar, cervical (2A)

MAY 21 1948

Rh 492.

Intermediate serum (1 mo.) 10^{-3}

5-21-48

0 ✓
1 ✓
2 ✓
3 ✓
4 ✓
5 ✓
6 ✓
7 ✓

8 Severe diarrhea.
9 " " continues.

6-1-48

11

Chnsg. Weakness of both lowers. Occ. tremors; pilomotor response.

6-2-48

12

Par. par. all 4 extremities. Vicia weak.

6-3-48

13

A.M. Quadriplegia; Comp. par. of all extremities

P.M. Moribund SACRIFICED (chloroform-exsanguination)

AUTOPSY no gross lcs.

TISSUE FOR SECTION. single sections of lumbar, cervical (2A)

MAY 21 1948

HOMOLOGOUS NEUTRALIZATION TEST

R# 493.

Intermediate serum (1 mo.) 10^{-4}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
	6	✓
	7	✓
	8	✓
	9	✓
	10	✓
	11	✓
	12	✓
	13	✓
	14	✓
	15	✓
	16	✓
	17	✓
	18	✓
	19	✓
	20	✓
	21	✓
	22	✓
	23	✓
	24	✓
	25	✓
	26	✓
6-17-48	27	✓ SACRIFICED (chloroform-essanguination)
6-18-48	28	✓ AUTOPSY No gross the Tissue for section single segments of lumbar thoracic and cervical cord; medulla, midbrain & thalamus (2A)

6-17-48

27

✓ SACRIFICED (chloroform-essanguination)

6-18-48

28

✓ AUTOPSY No gross the
Tissue for section single segments of lumbar thoracic and
cervical cord; medulla, midbrain & thalamus (2A)HISTOLOGY

NO PO210

MAY 21 1948

HOMOLOGOUS

NEUTRALIZATION TEST

Rh 494.

Intermediate serum (1 mo.) 10^{-4}

DATE	DAY	REMARKS
------	-----	---------

5-21-48

0

✓

1

✓

2

✓

3

✓

4

✓

5

✓

6

✓

7

✓

8

✓

9

✓

10

✓

11

✓

12

✓

13

✓

14

✓

15

✓

16

✓

17

✓

18

✓

19

✓

20

✓

21

✓

22

✓

23

✓

24

✓

25

✓

26

✓

6-17-48

27

✓

SACRIFICED (chloroform-exsanguination)

AUTOPSY No gross obs

TISSUE FOR SECTION: Single segments of lumbar, thoracic and cervical cord; medulla, midbrain & thalamus (ZA)

HISTOLOGY - NO POLIO

MAY 21 1948

Rh 495.

Intermediate serum (1 mo.) 10^{-4}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓ T ₂ 102°
	4	✓
	5	✓
	6	✓
	7	✓
	8	✓
	9	✓
	10	✓
	11	✓
	12	✓
	13	✓
	14	✓
	15	✓
	16	✓
	17	✓
	18	✓
	19	✓
	20	✓
	21	✓
	22	✓
	23	✓
	24	✓
	25	✓
	26	✓
6-16-48	27	✓ SACRIFICED (chloroform-exsanguination)
		AUTOPSY: No gross lbc
		TISSUE FOR SECTION Single segments of lumbar thoracic and cervical cord; medulla, midbrain & thalamus (Z A)
		HISTOLOGY: NO POLIO

MAY 21 1948

Rh 496.

FINAL SERUM (8½ mos.) 10^{-1}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
5-27-48	6	Excited; ? pilomotor +.
5-28-48	7	Coarse tremors; clumsy; pilomotor +.
5-29-48	8	Comp. par. both uppers; par. par. both lowers. Weak voice, neck, back.
5-30-48	9	Paralysis, weak voice.
5-31-48	10	No change.
6-1-48	11	" " Can still move head.
6-2-48	12	" " " " " Edema of st. lid.
6-3-48	13	" " " " " " " "
6-4-48	14	FOUND DEAD

AUTOPSY No gross thcTISSUE FOR SECTION Single sections of lumbar & cervical (2A)

MAY 21 1948

Rh 497.

Final serum (8 1/2 mos.) 10^{-1}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
5-27-48	6	Disinclined to climb.
5-28-48	7	Part. par. both lowers; weakness both uppers + weak.
5-29-48	8	Quadriplegia - aphonia.
5-30-48	9	No change
5-31-48	10	" "
6-1-48	11	" "
6-2-48	12	Quadriplegia - aphonia. Comp. nt. local.
6-3-48	13	No change
	14	A.M. " "
		P.M. FOUND DEAD
		AUTOPSY Th from the
		<u>TISSUE FOR SECTION</u> single sections of lumbar & cervical (Z A)

MAY 21 1948

Rh 498

Final serum (8 1/2 mos) 10^{-1}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
	6	✓
	7	✓
5-29-48	8	Par. par. both lowers; weakness both uppers. Voice weak.
	9	No change.
	10	" "
6-1-48	11	Comp. par. both lowers; par. par. both uppers. Voice weak.
6-2-48	12	No change.
6-3-48	13	" "
	14	" "
	15	" "
	16	No change.
	17	" "
	18	" "
6-9-48	19	Comp. par. of both lowers; part. par. both uppers. (can move upper part of back also head and neck)
	20	No change
	21	" "
	22	" "
	23	No change.
6-14-48	24	Comp. par. both lowers; part. par. both uppers.
	25	" " " " " " " " Weak voice
	26	No change
	27	" "
	28	Comp. par. both lowers; part. par. both uppers.
6-21-48	31	Bled for serum.
7-17-48	57	No change
7-21-48	61	Bled for serum
7-22-48		No change
8-20-48	91	Comp. Par. both lowers; Part. par. left upper
8-21-48		Challenged by vir. F.C. (rt. frontal) of 1.0 cc of 20% Heferkamp pot. virus (Gen. II) - simultaneously with control Rh. 731 (g.v.)
8-21-48		Bled for serum

8-31-48 serum of 6-9-48 thawed & .4 cc removed for testing N.T.

6-9-48 - Bled for serum.
(can move upper part of back also head and neck)

8-31-48 serum of 8-21-48 thawed and .4 cc removed for testing N.T.

MAY 21 1948 Rh 499.

Final serum (8 1/2 mos.) 10^{-2}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
5-27-48	6	Clumsy; excited; pilomotor +.
5-28-48	7	" " ; occ. tremors. $T = 102^{\circ}$
5-29-48	8	Clumsy; excited; pilomotor response. $T = 103^{\circ}$
5-30-48	9	Excited; pilomotor +.
5-31-48	10	Same.
6-1-48	11	Clumsy; excited; pilomotor response. $T = 102^{\circ}$
6-2-48	12	" ; weakness all 4 exten.; pilomotor response. $T = 101^{\circ}$
6-3-48	13	" " " " " " $T = 102^{\circ}$
	14	" " " " " "
	15	No change
	16	Clumsy; weakness but not partial paralysis - all 4 extremities; excited; will not attempt to climb; pilomotor +.
	17	Unchanged
	18	excitement
	19	"
6-10-48	20	✓
	21	✓
	22	✓
	23	✓
	24	✓
	25	✓
	26	✓
	27	✓
	28	✓
	29	✓
	30	✓
6-21-48	31	✓ SACRIFICED - (chloroform - exsanguination) - Autopsy: no gross lcs. Tissue for section: lumbar, thoracic; cervical cord levels; medulla, midbrain; Thalamus. (2-4)

HISTOLOGY: POLIO "old"

MAY 21 1948

Rh 500.

Final serum (87 mos.) 10^{-2}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
5-27-48	6	Excited; pilomotor +.
5-28-48	7	? Excited.
5-29-48	8	? excited. Definite pilomotor response. $T=106^{\circ}(1)$
5-30-48	9	Excited; pilomotor +.
5-31-48	10	Par. par. all 4 extremities. Weakness back, neck, voice.
6-1-48	11	Comp. par. both lowers; par. par. both uppers. Voice weak.
6-2-48	12	Same + marked left facial edema.
6-3-48	13	Comp par. of all extremities " " " ; can move head & neck
	14	No change
	15	" "
	16	No change.
	17	" "
	18	" "
	19	Quadriplegia - aphonia (can move head and neck 6-9-48 Bled for serum)
	20	No Change
	21	" "
	22	" "
	23	" "
	24	Prostrate; cannot move head + neck.
6-15-48	25	<u>Dead</u> - <u>Autopsy</u> - no gross TBC.

TISSUE FOR SECTION: segments of lumbar Thoracic and cervical cord. (Z-A.)

MAY 21 1948

Rh 501.

Final serum (8 1/2 mos.) 10^{-2}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
5-27-48	6	Part. par. both lowers; weakness both uppers + voice.
5-28-48	7	Part. par. all 4 extremities; weak voice, neck, back.
5-29-48	8	Comp. par. both lowers; par. par. both uppers, back. Voice weak.
5-30-48	9	Unchanged.
5-31-48	10	"
6-1-48	11	"
6-2-48	12	"
6-3-48	13	Quadriplegia
6-4-48	14	FOUND DEAD

AUTOPSY No gross lbc

TISSUE FOR SECTION Single sections of lumbar & cervical (2 A)

MAY 21 1948

Ph 502.

Final serum (8 1/2 mos.) 10^{-3}

DATE DAY REMARKS

5-21-48

0

✓

1

✓

2

✓

3

✓

4

✓

5

✓

5-27-48

6.

? Excited;

5-28-48

7

? excited.

5-29-48

8

? excitement. ? pilomotor resp. $T=103^{\circ}$

5-30-48

9.

? Excited.

10

✓

11

✓

12

✓

13

✓

14

✓

15

✓

16

✓

17

✓

18

✓

19

✓

20

✓

 $T=103^{\circ}$

21

✓

22

✓

23

✓

24

✓

25

✓

26

✓

6-17-48

27

✓

SACRIFICED (chloroform-exsanguination)

Autopsy No gross abn

TISSUE FOR SECTION Single segments of lumbar thoracic and cervical cord; medulla midbrain & thalamus (Z.A.)

HISTOLOGY: NO FOWD

MAY 21 1948

Rh 503.

Final serum (8 1/2 mos.) 10^{-3}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
	6	✓
	7	✓
	8	✓
	9	✓
	10	✓
	11	✓
	12	✓
	13	✓
	14	✓
	15	✓
	16	✓
	17	✓
	18	✓
6-9-48	19	Weakness of right upper; clumsy T=104 1/2
6-10-48	20	Part. Paralysis of all 4 extremities T=102 5/8
6-11-48	21	Par. both lowers; Part. par. both uppers; weak voice
	22	Same
	23	Quadriplegia - (with feeble movements of both wrists preserved)
6-14-48	24	Unchanged except now has complete rt. facial paralysis and aphonia, as well.
	25	No change
	26	Prostrate - with Compl. right facial and Part. left facial
6-17-48	27	AM. Moribund PM. Found <u>DEAD</u> Autopsy: No gross the <u>TISSUE FOR SECTION</u> Single segments of lumbar & cervical cord (2A)

MAY 21 1948

Rh 504

Final serum (8 1/2 mos.) 10^{-3}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
	6	✓
	7	✓
	8	✓
	9	✓
	10	✓
	11	✓
	12	✓
	13	✓
	14	✓
	15	✓
	16	✓
	17	✓
	18	✓
	19	✓
	20	✓
	21	✓
	22	✓
	23	✓
	24	✓
	25	✓
	26	✓
	27	✓
6-18-48	28	✓

SALIFICED (chloroform-exsanguination)AUTOPSY: No gross lbcTISSUE FOR SECTION: Single segments of lumbar, thoracic and cervical cord; medulla, midbrain & thalamus (2A)HISTOLOGY: NO POLIO

MAY 21 1948

Rh 505.

Final serum (8 1/2 mos.) 10^{-4}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
	6	✓
	7	✓
	8	✓
	9	✓
	10	✓
	11	✓
	12	✓
	13	✓
	14	✓
	15	✓
	16	✓
	17	✓
	18	✓
	19	✓
	20	✓
	21	✓
	22	✓
	23	✓
	24	✓
	25	✓
	26	✓
	27	✓
6-18-48	28	✓

SACRIFICED (chloroform-exsanguination)

AUTOPSY: No gross lbc

TISSUE FOR SECTION: Single segments of lumbar thoracic
and cervical cord, medulla midbrain & thalamus (2A)HISTOLOGY:NO POND

MAY 21 1948 Ph 506.

Final serum (8¹/₂ mos.) 10^{-4}

DATE DAY REMARKS

5-21-48

0

✓

1

✓

2

✓

3

✓

4

✓

5

✓

6

✓

7

✓

8

✓

9

✓

10

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24

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25

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26

✓

27

✓

6-18-48

28

✓

SACRIFICED: (chloroform-exsanguination)

Autopsy: To gross the

TISSUE FOR SECTION Single segments of lumbar, thoracic and cervical cord; medulla midbrain & thalamus (2A)

HISTOLOGY:NO POAIO

MAY 21 1948

Ph 507.

Final serum (8 1/2 mos.) 10^{-4}

DATE	DAY	REMARKS
5-21-48	0	✓
	1	✓
	2	✓
	3	✓
	4	✓
	5	✓
	6	✓
	7	✓
	8	✓
	9	✓
	10	✓
	11	✓
	12	✓
	13	✓
	14	✓
	15	✓
	16	✓
	17	✓
	18	✓
	19	✓
	20	✓
	21	✓
	22	✓
	23	✓
	24	✓
	25	✓
	26	✓
	27	✓
6-18-48	28	✓

SACRIFICED (chloroform-lysanguination)

AUTOPSY: No gross lbc

TISSUE FOR SECTION: Single segments of lumbar, thoracic and cervical cord; medulla, midbrain & thalamus (1A)

HISTOLOGY: NO POLIO