

Pdii 1947.



Heron.



Polio - Akron, Ohio. 1947.

white: 8: 10 yrs

Onset: - 8/24/47.

History: On 8/24/47 child felt very tired all over, & soon complained of generalized headache and she was noted to feel feverish. - This continued until 8/26/47 when it was noted that child was clumsy and had difficulty in the use of her right arm. - No other symptoms.

Admission Exam: T. 102°.

very slight nuchal rigidity. spine is quite stiff. - There is marked weakness of rt. upper arm & rt. deltoid soreness. On the left there is moderate weakness of deltoid function and poor left triceps action.

unable to elicit biceps or triceps reflexes in either upper extremity.

C&F: 8/26/47

cells	lymphs	Polys	Glob
85	83%	17%	+

Notes:

8/27/47. - T. 102°. Very marked weakness of rt. shoulder & rt. upper arm; - biceps & triceps reflexes absent. - More nuchal rigidity than yesterday.

8/28/47. - Temp. 100°. - Paralysis as above. Still rather marked nuchal rigidity.

8/29/47. - T. 99° - no change in paralysis. Still has much nuchal rigidity.

8/30/47. T. 100°. - paralysis same; nuchal rigidity a little less.

op & stool

Stool.

8/27	✓	✓ formed.
8/28	✓	-
8/29	✓	Stool thrown away by mother child
8/30		- clear enema discarded
8/31		✓ brownish enema & some solid

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A. Stools -

Estimated Solids Present — 33.0 gms. -
Liquid Present — 75.0 cc.
Distilled Water Added — 125.0 cc.

Blended low speed one minute.

For Centrifugation — ± 200 c.c.
For Re-Freezing — 60 c.c. (old vaccine box)

First Supernatant = 125 c.c.
Ether Added = 25 c.c.

Untreated Sediment = 40.0 cc. (for intranasal)

11/15/47. - Final Amount of Treated Suspension = 96.0 c.c.

Cult: (Before Final Centrifugation) - X 30 large mucoid colonies (8m + rods)
(After Final Centrifugation) - X 4 large mucoid colonies (8m + rods)

11/17/47. - Reculture: - ✓ X 2 large mucoid colonies.

11/17/47. - Re-Etherization - 19.0 cc. Ether Added; shaken; refrigerated.

11/18/47. - Stool suspension used for inoculation (After centrifugation) = 84 cc.
Culture: ✓✓✓

NOV 14 1947

B. Pharyngeal Swab Material -

Fluid Expressed
Distilled water

2.1 c.c.

1.9 cc.

Ether Added

4.0 cc.

1.5 c.c.

11/15/47. After removal top layer = 3.7 c.c.

11/15/47. After Final centrifugation = 3.5 cc. (frozen a-3)

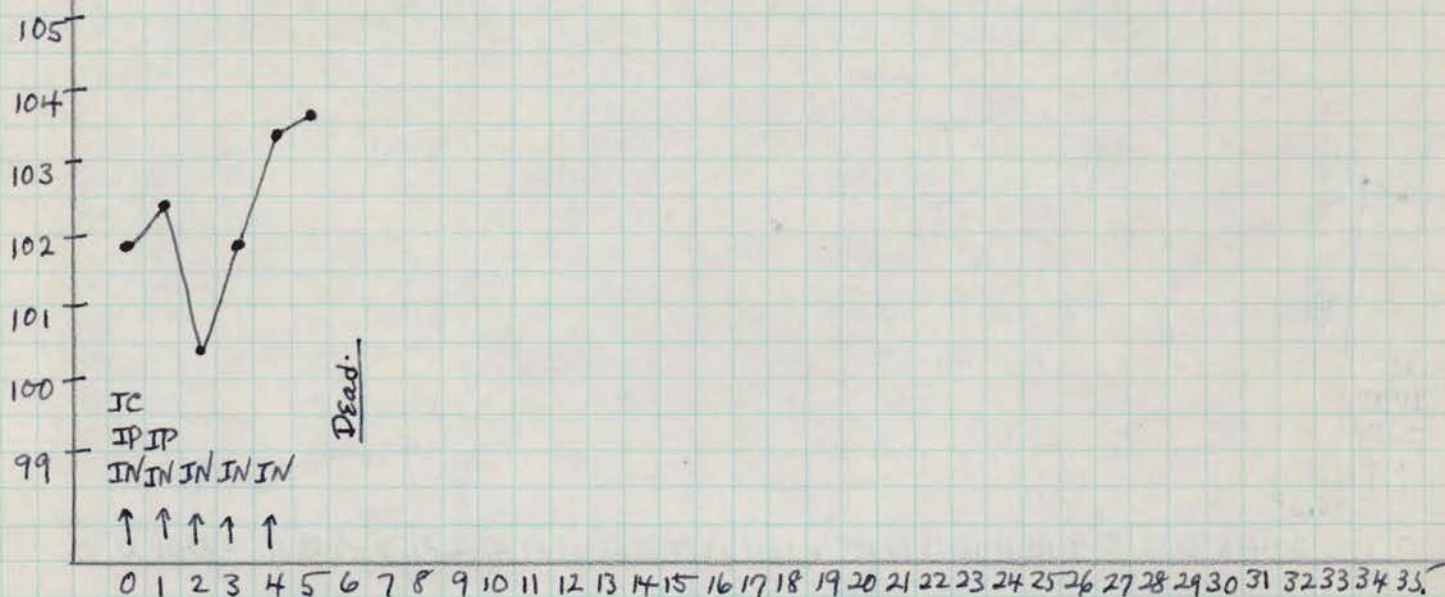
Cultures: - ✓✓✓

11/18/47. - Thawed and used for IC inoc. of monkeys.

NOV 18 1947

Rhesus #8-

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



11/18/47. Inoculated 1.5 cc IC; 20 cc IP; and 1 cc IN per nostril.

11/19/47. The IP dose was 15 cc.

11/23/47. - Temp. 103.6; climbs actively; not excited.

11/24/47. - Found Dead. - Autopsy - 1) Fine fibrinous bands in right hypo. chondriac region of peritoneum; 2) A few small whitish patches of infiltrate scattered thruout lobes of both lungs.

Cult: Peritoneum (saline washing)

% 20 uniform mucoid colonies - 8m reg rods.

Heart Blood: % very many uniform mucoid colonies (8m. reg. rods.)

HISTOPATHOLOGY: - sections of lumbar; Thoracic and cervical cords; medulla; Thalamus; olfactory bulbs,

TISSUE FOR VIRUS: - lumbar; Thoracic and cervical spinal cords; medulla; Thalamus - frozen in a Luoteroid tube. (d-1).

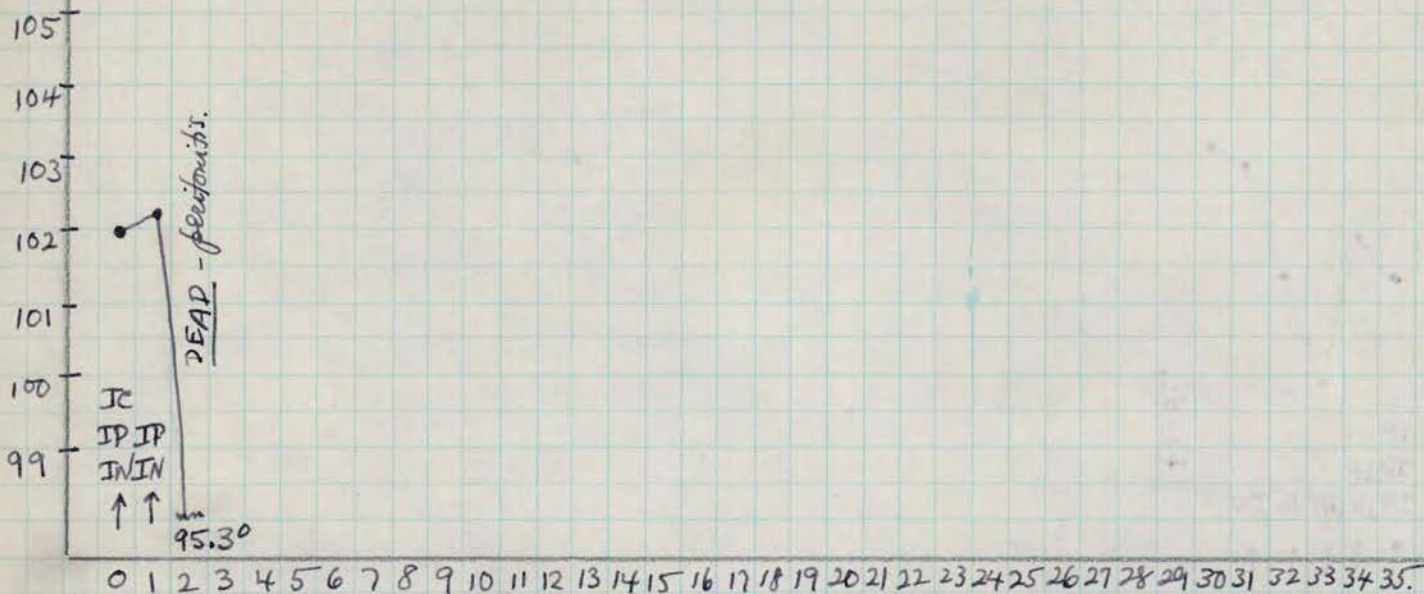
12-12-47 - Spinal cord discarded in view of no histologic evidence of polio.

Histology - No Polio

NOV 18 1947

Rhesus #1319 - splenectomized.

Treated Pharyngeal Swabs - IC
Treated Stools - IP
Untreated Stools - IN.



11/18/47. Inoculated 1.5 cc IC; 20 cc IP and 1 cc IN per nostril.

11/19/47. The IP dose was 15.0 cc.

11/20/47. A.M. Temp. 95.3; cold, prostrate; abdomen tight and tender, monkey seems lucid. - At 9 P.M. was given 0.5 Gms. of Streptomycin Chloride intraperitoneally. - Died at 3 P.M. - autopsy showed widespread peritonitis with small bowel bound in an inflammatory mass; greater omentum plastered to colon; - no fecal odor; no perforations discovered; character of exudate - very rich in fibrin - Rt. middle lobe rubbery in consistency; no gross evidence for tuberculosis. - Cult Peritoneum: X many mucoid col. (8m neg rods); a few "tiny colonies".
Cult. Heart Blood: X 4 colonies - 8m. + short rod.

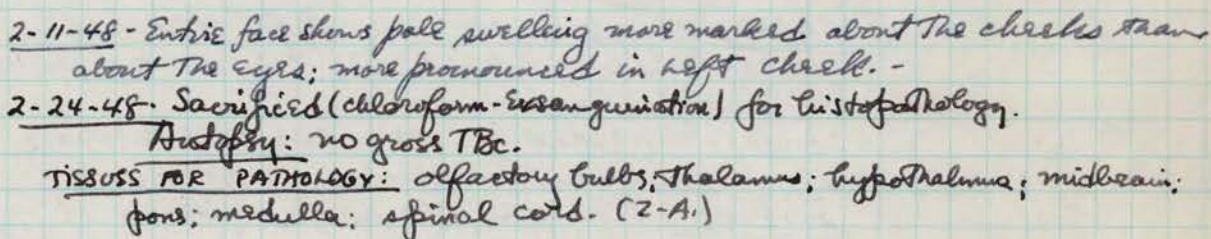
11/21/47. Subcultures: Heart Blood: X raised white colonies - 8m + rod.

Peritoneum - "tiny colonies": heavy growth of typical mucoid colonies - 8m. neg. on smear.

Peritoneum "mucoid colonies": typical mucoid colonies; 8m. neg. on smear.

SECOND TRIAL

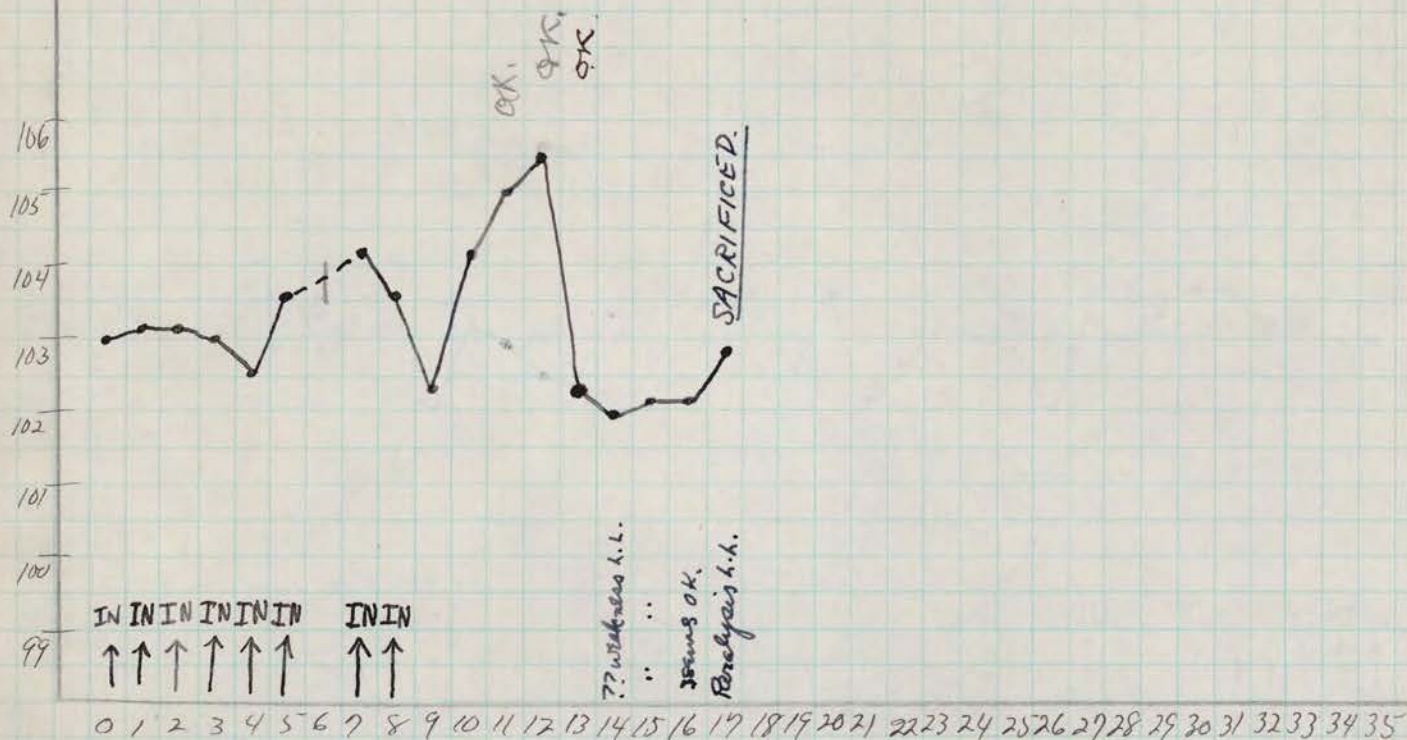
untreated stool - IV. 2^{cs}/nostril



Histology - No Polio

JAN 26 1948

Rh. # 1681 - splenectomized.



2-9-48 - Very questionable weakness of left lower brought out on exercise; re-checked animal with ABS; signs not sufficiently definite to sacrifice the animal.

2-10-48 - very? weakness left lower on cage exercise.

2-11-48 - No weakness or paralysis detected.

2-12-48 - Paralysis left lower, weakness rt. lower; back, uppers and cranial nerves seem intact. - Sacrificed (chloroform) (No gross TBr.)

COLON CONTENTS: - frozen in Lusteroid B-3-6

TISSUE FOR PATHOLOGY: Cord levels; medulla; olf. bulbs.

TISSUE FOR VIRUS: Cord - medulla frozen in Lusteroid B-3-5

2-18-48 Cord + medulla thawed wt. = 9.3 gms, made up as 20% suspension in (18.0%) sterile saline. This material immediately used for passage in two monkeys (Rh#134 & Rh#1516) the remainder ± 11.0% frozen in two 10% ampoules. (B-3-7) Cult: ✓✓✓

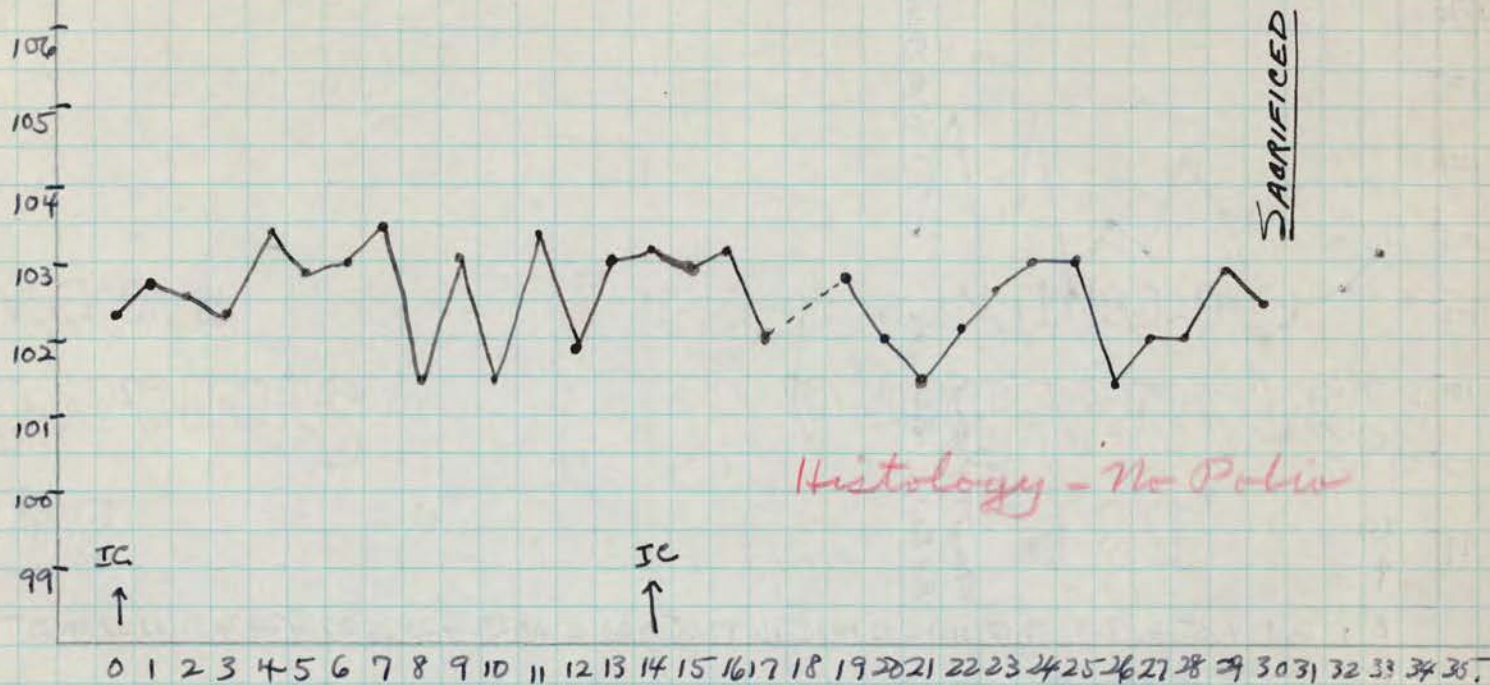
72-16-48 No more Flu + Virus available

Histology - Polio (acute); olf. bulbs +.

FEB 18 1948

Generation II

Rhesus #134 - normal.



2-18-48 - Inoc. I.C. with 1.0 cc of 20% in saline [redacted] virus - Gen. I

3-3-48 - Inoc. I.C. with 1.0 cc of 20% in saline [redacted] virus - Gen. I

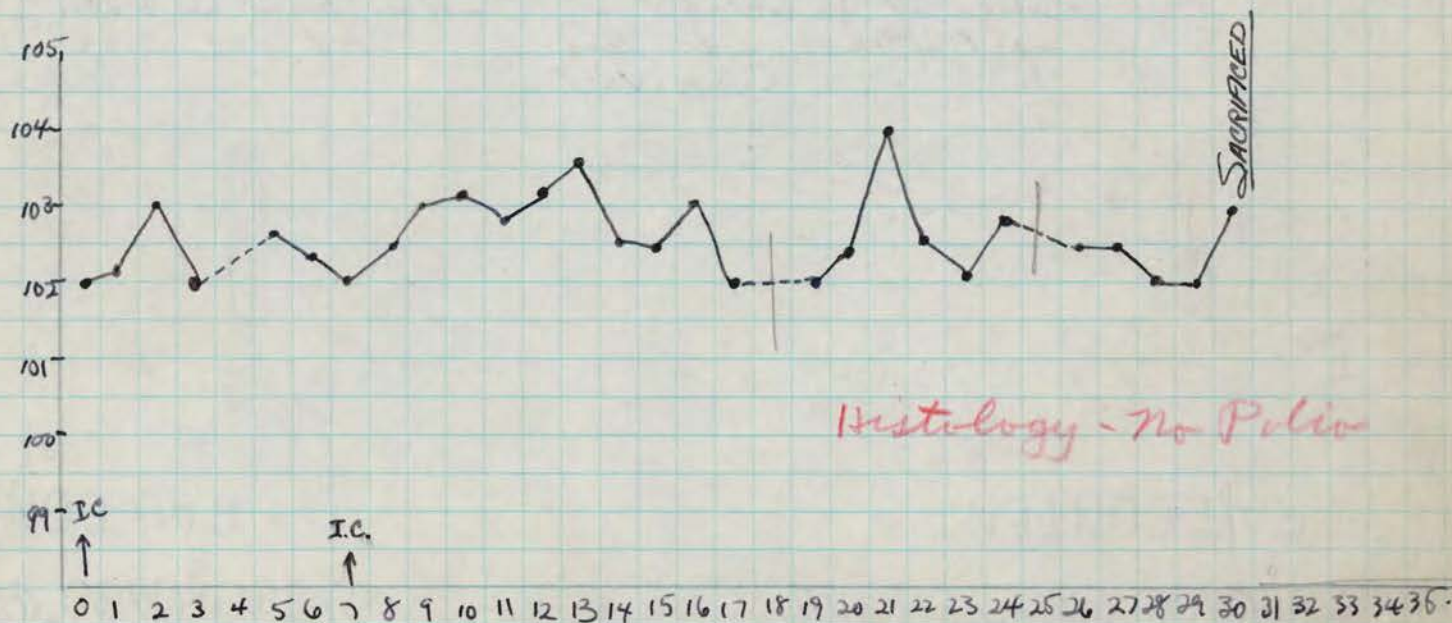
3-19-48: Sacrificed (chloroform-exsanguination). Autopsy: No gross tbc.

TISSUE FOR SECTION: Sections from lumbar, thoracic, cervical cord and medulla. (2-A)
Also pons, midbrain, thalamus, + hypothalamus, + remainder of cord.

MAR 3 1948

Rhesus #143 - normal -

STRAIN - GEN. II



3-3-48. Inoc. I.C. with 1.0 cc of 20% in saline Kaugher virus Gen. I. (under test "Set")

3-10-48: Rev. inoc. with 1.0 cc of 20% " " " "

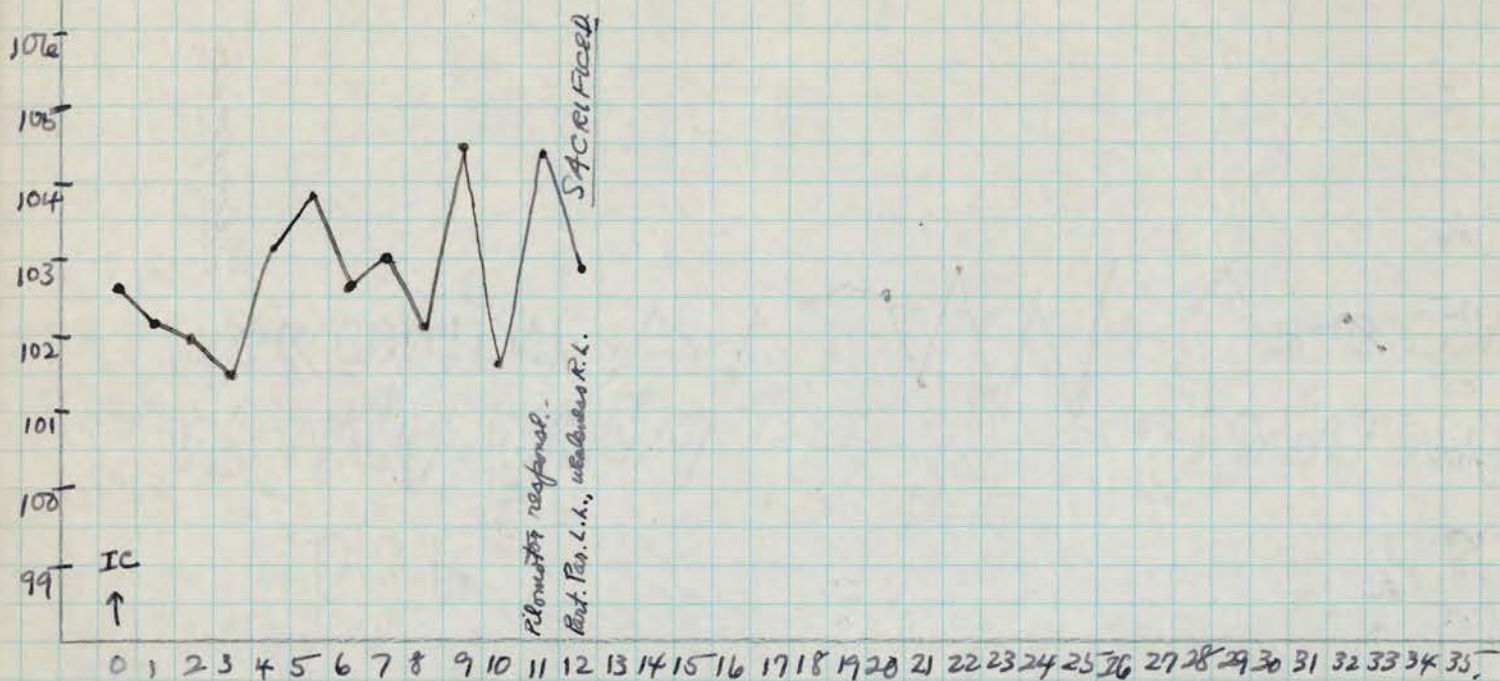
4-2-48: Sacrificed (chloroform-exsanguination). Autopsy: No gross tbc.

TISSUE FOR SECTION: Hypothal., thalamus, midbrain, pons, medulla, + cord levels (2-A).

FEB 18 1948

STRAIN - Generation II

Rh. # 1516 - splenectomized.



2-18-48. - Mor. IC with 1.0 cc of 20% in saline virus - Gln. T

2-29-48. - Pilot response; excited.

3-1-48. - Partial paralysis left lower; weakness Rt. lower; otherwise O.K.

Sacrificed (chloroform - exsanguination)

TISSUE FOR PATHOLOGY: Cervical and lumbar cord segments (2-A.)

TISSUE FOR VIROS: - Cord-medulla frozen in isothermic tube. (B-3-5)

Culture: ✓✓

3-13-48: Cord-medulla thawed and made into a 20% susp. in (26cc) sterile saline. Wt. of cord = 6.7 gms. ± 19 cc. frozen in 2-20cc aups (Vial #1 and 2) and stored. (B-4-4)

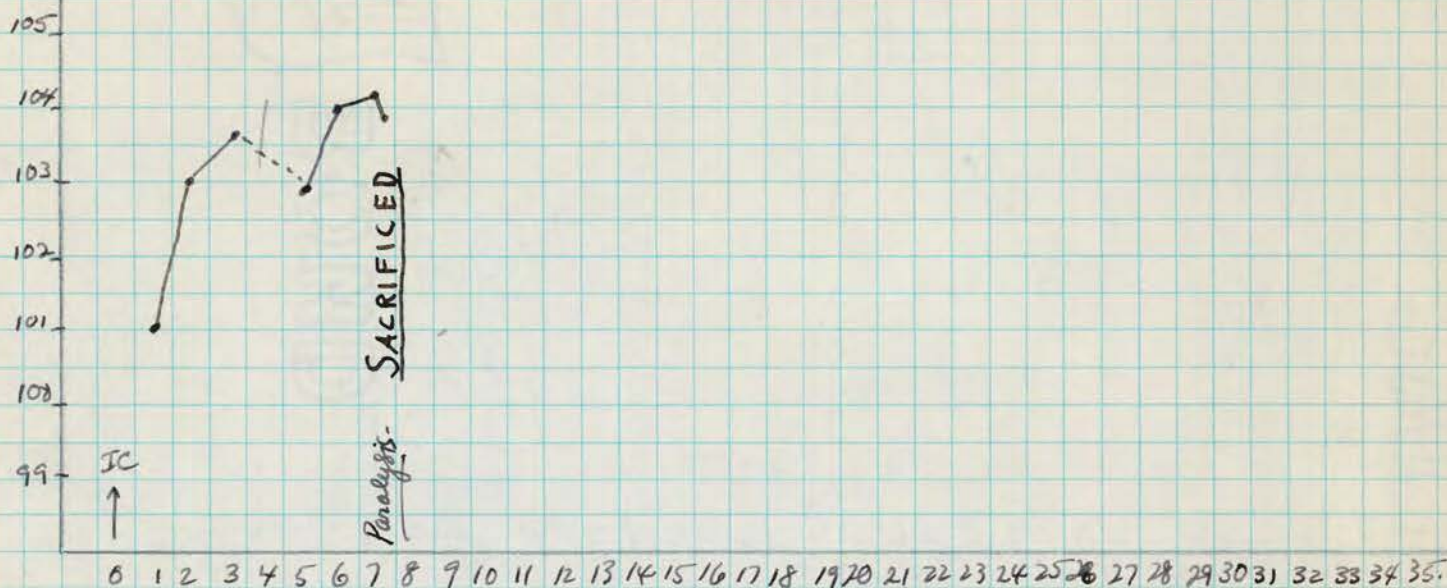
Culture: ✓✓✓

Histology - Polio

MAY 12 1948

STRAIN - Generation III

Ph. # 311



5-12-48 2nd IC with 1.0 cc of 20% in saline Verid - 6211

5-18-48 A.M. Pilomotor +, excited.

5-19-48 Part. par. R.V.; weakness both lowers; pilomotor +; excited.

SACRIFICED (chloroform-exsanguination)

AUTOPSY to gross the

TISSUE FOR VIRUS Remainder of cord and medulla frozen in a lusteroid tube. (C8)

TISSUE FOR SECTION Sections of cord levels and medulla (Z A)

6-2-48: Cord-medulla of Ph 311 thawed and made up as a 20% susp. in (18cc.) sterile saline.
Wt. of cord = 4.3 gms. $\pm$ 15 cc. frozen in 1-10 cc amp. and 1-20 cc amp. (Vials 1 and 2 respectively) and stored. Culture: ✓✓✓ B-2-57

HISTOLOGY: Single segments of lumbar, thoracic, cervical and medulla - show extensive acute neuronophagia and PV infiltration.

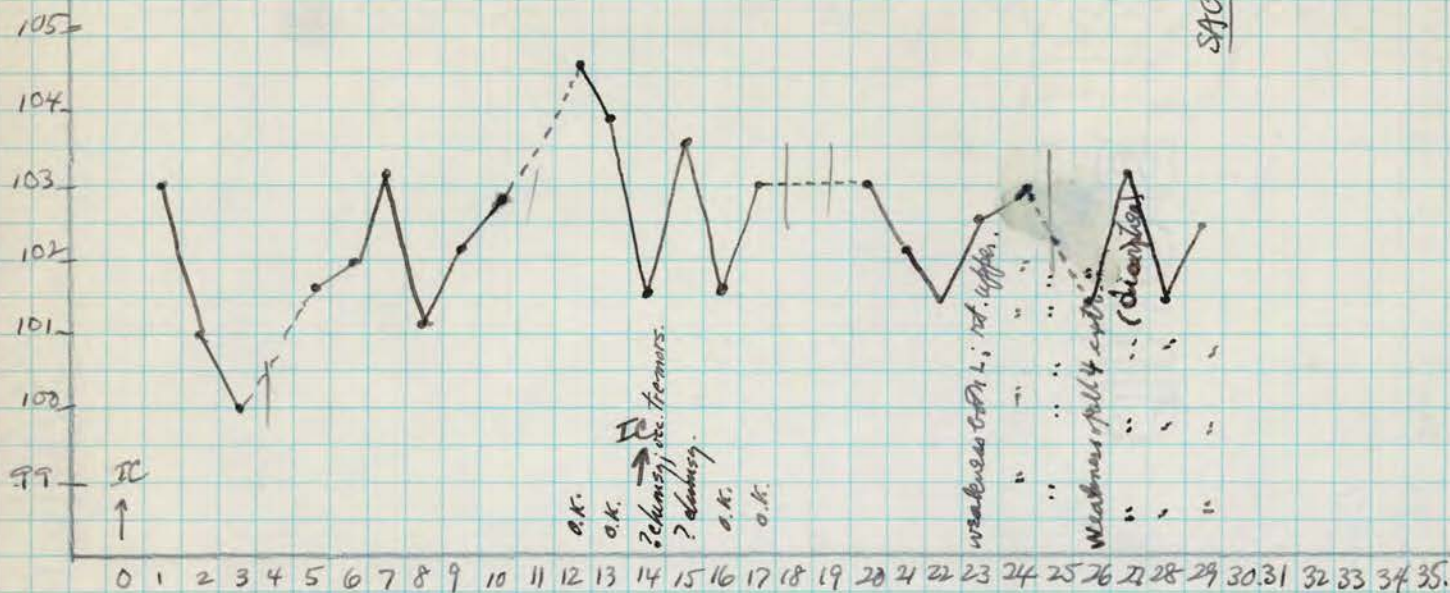
DIAGNOSIS: POLIO (acute)

MAY 12 1948

STRAIN - Generation III

Rh. #362-

SACRIFICED



5-12-48 - Rec IC with 1.0^{ES} of 20% in saline [redacted] Virus - Gen II

5-18-48. mild diarrhea.

5-22-48 - Diarrhea continues; animal thin.

5-26-48 - Re-inoc. IC = 1.0^{ES} of 20% in saline Haugh Virus - Gen II

6-10-48 - Monkey has had weakness for past 7 days, but no definite paralysis and hence was not sacrificed to have his spinal cord pooled with that of Rh. 311 (over)

SACRIFICED - Chloroform - asanguination

TISSUES FOR HISTOPATHOLOGY: Levels of lumbar; thoracic; cervical cord; medulla; midbrain (Z-A.)

HISTOLOGY: lumbar cord shows root degeneration; neuronal outfall; PV infiltration; discrete glial nodules in ant. horn. - Cervical & thoracic while showing no root degeneration show neuronal outfall, and glial infiltration of ant. and post. horns with PV infiltration. - Medulla - mod. PV infiltration, with numerous dense glial foci in floor of 4th ventricle. Midbrain - heavy PV infiltration, with diffuse glial infiltr. ventral to aqueduct.

DIAGNOSIS: POLIOMYELITIS "old"

POLIO - 1949. MONKEY HISTORY

<u>M.K.#.</u>	<u>Lumbar</u>	<u>Thoracic</u>	<u>Cervical</u>	<u>Medulla</u>	<u>Medulla</u>	<u>Hypothal.</u>	<u>Cyl. Bulb.</u>	<u>Other</u>	<u>DIAGNOSIS</u>
	<u>PRIMARY ISOLATION (1st attempt)</u>								
Rh. 8.	0	0	0	0	—	—	—	—	No. Polio.
	<u>PRIMARY ISOLATION (2nd Trial)</u>								
Rh. 109	0	0	0	0	0	0	0	0	No. Polio
	<u>GENERATION II</u>								
Rh. 1681	NH; Pt.	(poor) NH	NH	Pt.	—	—	—	—	Polio
	<u>GENERATION II</u>								
Rh. 134	0	0	0	0	0	0	0	—	No. Polio
Rh. 143	0	0	0	0	0	0	0	—	No. Polio.
Rh. 1516	NH; P#	—	NH, PH	—	—	—	—	—	Polio.
	<u>GENERATION III</u>								

Rh. 311

Rh. 362