

130

III

150 PLASMODI AND POLIO

Exp. III

November 3 - 1948

STOCK SOLUTION CONTAINS 10MG. BASE/cc

GROUP	MONKEY No.	WEIGHT GM.	DOSE (BASE)		8 AM. + 2 PM.		8 PM		STOCK SOLUTION
			2mg/Kilo	4mg/Kilo	Stock Solution	DESTILED WATER	STOCK SOLUTION	DESTILED WATER	
I	1016	2833	5.67	11.33	0.57	19.40	1.13	18.87	11/2.
	1017	2610	5.22	10.44	0.52	19.48	1.04	18.96	1887mg. DRUG 100 CC. WATER (DESTILED)
	1017	2833	5.67	11.33	0.57	19.43	1.13	18.87	11/6
	1019	2494	4.99	9.98	0.50	19.50	0.99	19.01	1887mg. DRUG 100 CC. DESTILED WATER
	1020	2721	5.44	10.88	0.54	19.46	1.09	18.91	11/10
	1021	3004	6.00	12.00	0.60	19.40	1.20	18.80	1887mg. DRUG 100 CC. DESTILED WATER
	1022	2381	4.76	9.52	0.48	19.52	0.95	19.05	11/14
II			1mg/Kilo	2mg/Kilo					1887mg. DRUG 100 CC. DESTILED WATER
	1023	2721	2.72	5.44	0.27	19.63	0.54	19.46	
	1024	2946	2.98	5.89	0.30	19.70	0.59	19.41	
	1025	2721	2.72	5.44	0.27	19.63	0.54	19.46	
	1026	2833	2.89	5.67	0.28	19.72	0.56	19.44	
	1027	2833	2.83	5.66	0.28	19.72	0.56	19.44	
	1028	2610	2.61	5.22	0.26	19.74	0.52	19.48	
	1029	2891	2.89	5.78	0.29	19.41	0.58	19.42	

NOV 3 1948 - DRUG STARTED 8 A.M.

III: CONTROL - NO DRUG.

NOV 7 1948 - Monkeys 1016 and 1029
left as drug controls
- no virus

1030 2551

1031 3061

1032 2721

1033 2610

All other monkeys inoculated
with 1cc of Hoferkamp virus
1:500 in right frontal region

Inoculations begun 9:45 AM. - 21 1/2
hrs. after drug - finished 10:45 AM

Drug dissolved in distilled H_2O - 1887mg/100cc at a time
This is enough for 4 days - when fresh batch was prepared.

Drug given 8 AM, 2 PM and 8 P.M.

Temperatures taken at 2 PM - Food given 3-4 PM.

On Nov. 7 - temp. taken at @ 10 A.M. at time of
inoculation of virus

11
Nov. 14 - ^{Rh. 1020-} Paralyzed about 28 hours - extensive both lower & left upper
at 5 P.M.

Rh. 1028 - Paralyzed 3-6 hours - partial both lowers - otherwise
good - climbs etc.

Rh. 1026 - Fever for 5 days - tremors - great involvement of right deltoid

It was decided to increase the total dose
of drug on these monkeys to 24 mg. base/kilo.

6 mg. at 8 AM and 2 PM and 12 mg at 8 PM
beginning with an extra dose at 5 PM.

Rhes. 1020 - 5 PM - $\frac{8\text{mg}}{\text{kilo}}$ - 21.76 mg base or 2.18 cc stock + 17.82 cc H_2O
 8 PM - $\frac{12\text{mg}}{\text{kilo}}$ - 32.65 mg base or 3.26 cc " + 16.74 cc H_2O

 8 A.M. - $\frac{6\text{mg}}{\text{kilo}}$ - 16.33 mg base or 1.63 cc " + 18.37 cc H_2O
 2 P.M. - Same
 8 PM - $\frac{12}{\text{kilo}}$ - 32.65 mg. or 3.26 cc " + 16.74 cc H_2O

Rhes. 1026 - 5 PM - $\frac{10\text{mg}}{\text{kilo}}$ - 28.33 mg base or 2.83 cc stock + 17.17 cc H_2O

 8 PM - $\frac{12\text{mg}}{\text{kilo}}$ - 34 mg base or 3.4 cc " + 16.6 cc "
 8 A.M. - $\frac{6\text{mg}}{\text{kilo}}$ - 17 mg " " 1.7 cc + 18.3 cc "
 2 PM - " " " " "
 8 PM - $\frac{12\text{mg}}{\text{kilo}}$ 3.4 cc + 16.6 cc "

Rhes. 1028 - 5 PM - $\frac{10\text{mg}}{\text{kilo}}$ - 26.1 mg base. or 2.61 cc stock + 17.37 cc

 8 PM - $\frac{12\text{mg}}{\text{kilo}}$ - 33.32 mg " or 3.33 cc " + 16.67 cc

 8 AM - $\frac{6\text{mg}}{\text{kilo}}$ - 16.67 mg base or 1.67 cc " + 18.33 cc
 2 PM - Same
 8 PM. $\frac{12\text{mg}}{\text{kilo}}$ - 3.33 cc + 16.67 cc

ISOLASMOCID ~~AND POLIO~~ ONLY

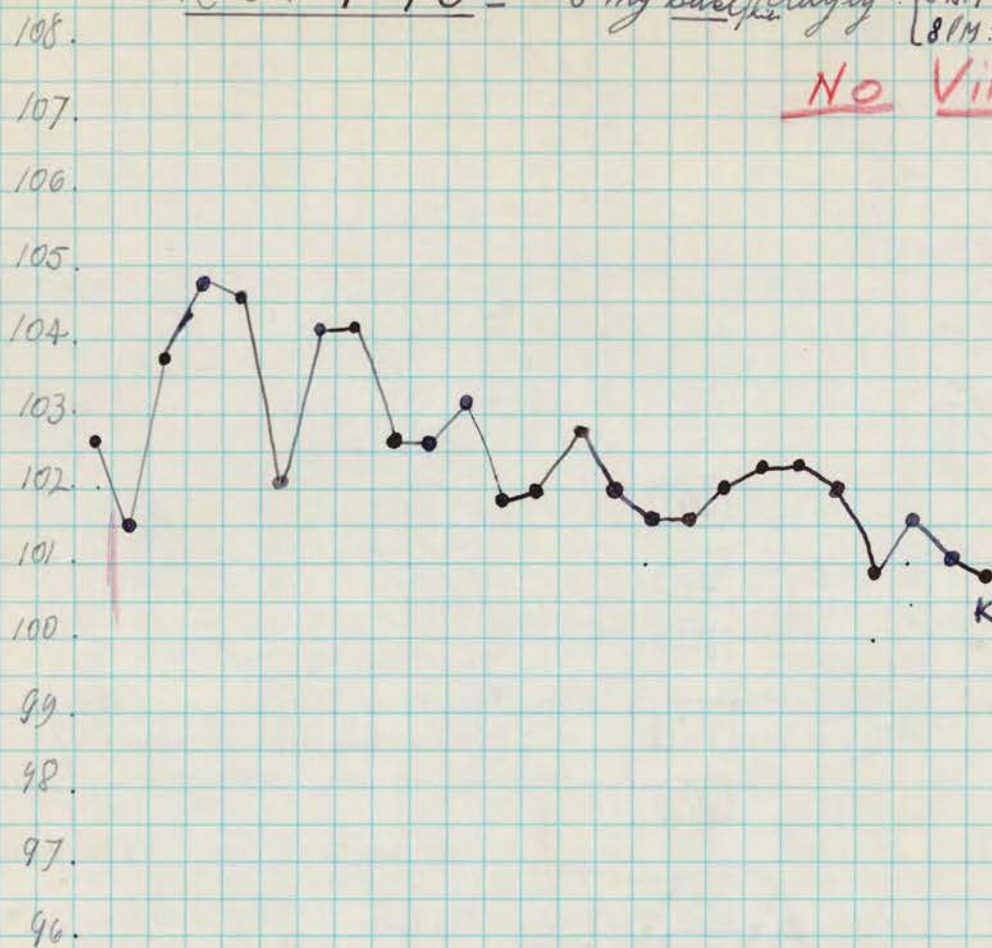
NOVEMBER 3, 48

Rh: 10/6_

8 mg base / day ly

[8 AM and 2 P.M.: 2 mg/kg ib
[8 P.M.: 4 mg/kg ib.

NO VIRUS



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

November 7 8 AM O.K

November 8. am. O. K.

8 PM. Varnishing after get out the castles. $\pm \frac{1}{2}$ total amount.

November 9 8 a.m. Vomiting idem. only $\pm$ 1/5
8 P.M. Vomiting all the fluid. Prepared a
new one and given again - O.K.

Karen 10 - P.A.M. - O.K.

November 11 - 8 AM - O.K.

November 12 - 8 AM. OK.

2 AM. O.K

SAM O.K

November 13 - 8 AM O.K.

2 AM O.R

P.M. P.M.

Nov. 14 — OK.

Nov. 15 - O.K.

Nov. 16 - O.K.

Nov. 17 - O.K.

Nov. 18 - O.K.

Nov. 19 - O.K.

Nov. 20 - O.K.

Nov. 21 - O.K.

Nov. 22 - O.K.

Nov. 23 - O.K.

Nov. 24 - O.K.

Nov. 25 - 12 A.M. Diarrhea.

Nov. 26 - 2 P.M. In order to study the changes because the drug only, this monkey was sacrificed (ether at the beginning of the washing and perfusion).

- Glass tube in left ventricle - Washing: 1,200 cc dropped in 15 minutes.

- No syringe was used

- Only gravity

- 1 hour 20 minutes Trendelenburg.

- 35 minutes caudad down.

- Fixation: 1780 cc Saline
200 Formaldehyde sol. } 2500 cc.
20 Acetic acid.

2500 cc dropped in 1 hour 55 minutes.

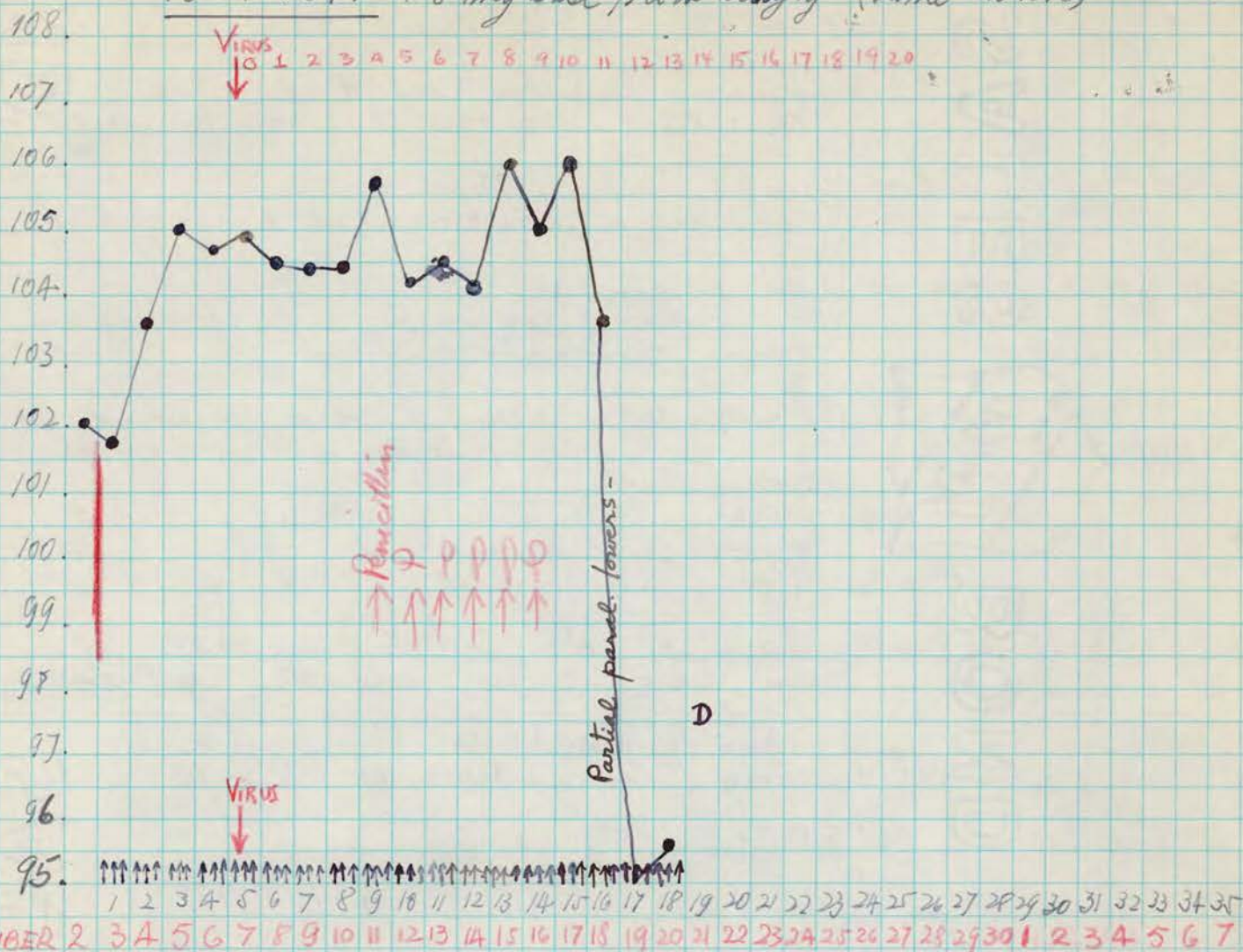
Good fixation was obtained.

- Viscera: Pieces of liver, spleen (big), kidney and adrenals in L.A.
- C.N.S. - Pieces of spinal cord - different levels, medulla, mid brain, cerebellum, thalamus and brain - cerebral cortex - in L.A.

Isoplasma and Polio

11/3/48

Rh. 1017 - 8 mg base / kilo daily (same Rh 1016)



November 5 - PM - Culture of blood - from vein, left lower - in:

	1	6	11	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Broth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Agar		0		0	0																	

November 7 - PAM. O.K. - soft stool - Ice virus 1:500

November 8 - O.K.

November 9 - O.K.

November 10 - P.A.M. O.K. some lesions (biting?) both lowers.

November 11 - This monkey presented edema on his left foot, soft and hot. A chain of red lesions from his left foot toward his thigh, on internal region of his leg, appears like a pleuritis. *Piodermis* on both lowers. *Penicillina* 150,000 U. was given intrap-

intratoneally, at 15²⁰ 3²⁰ P.M.

Mouse all extremities. - Somewhat weak. Can climb.

November 12 - 8 AM - Same condition - Penicillin
100.000 U. i. peritoneally.

2 P.M. - lesions on his leg looks better.
Penicillin 200.000 U. i. peritoneally.

8 P.M. - Same condition -
Penicillin 200.000 U. i. peritoneally.

November 13 - 1.30 AM - Same condition.
Penicillin 200.000 U. i. peritoneally.
Mouse all extremities
Can climb.

November 14 - 2 P.M. - Looks better - edema diminished on foot.
Penicillin: 200.000 U. i. p.

Same condition.

8 AM Penicillin 200.000 U. i. p.

2 P.M. Penicillin 200.000 U. i. p.

8 P.M. Penicillin 200.000 U. i. p.

November 15 - 8 AM - Edema, white and cold, on
his face and neck, symmetric.

Oedema disappeared when chain unleashed.
8 P.M. Penicillin: 400.000 U. i. p.

November 16 - Thin -

2 P.M. Penicillin: 400.000 U. i. p.

November 17 - Edema remain yet but
he can use his both paws.
He climbs.

Thin - Usually hunched over.

November 18 - 8 AM - Partial paralysis both
paws. questionable partial
paralysis on right upper.

November 19 - 8 AM - Cannot sit up.
Complete paralysis both paws
and left upper. Partial para-
lysis on right upper.

8 P.M. - Complete paralysis four extremities

November 20 - Same condition.

November 21 - 8 AM - Dead - Rigor mortis

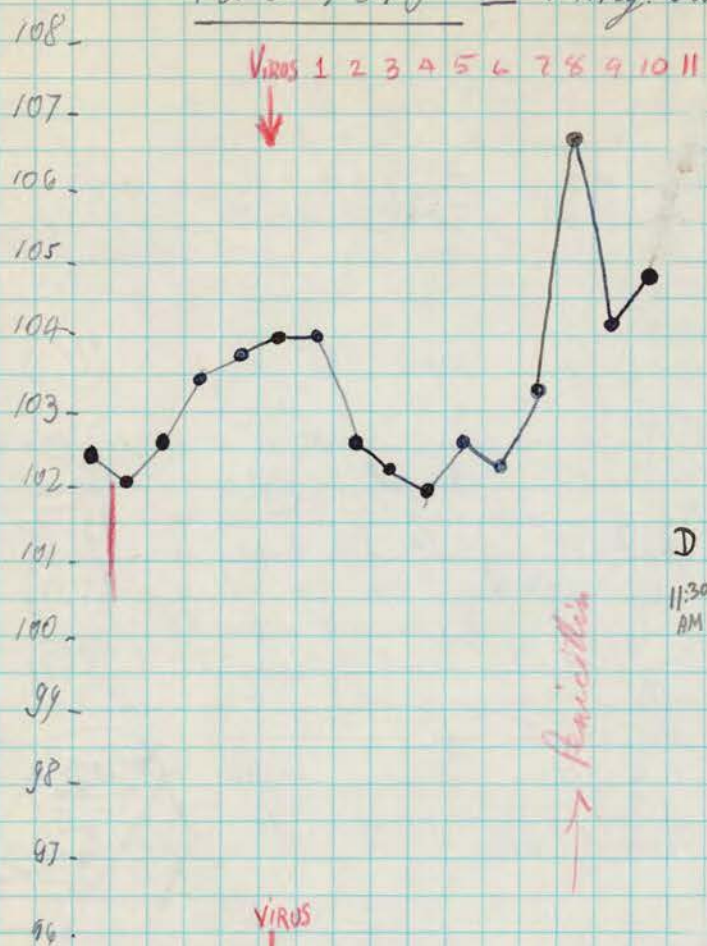
autopsy - lungs, C.N.S. in L.A.

No gross pathological
changes on viscera.
lungs. Pneumonia right upper
lobe.

Geoplasma acid + Polio

11/3/48

Rh. 1018 — 8 mg. base/kilo daily, same findings as Rh. 1016.



D

11:30 AM

Pericarditis

VIRUS

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

NOVEMBER 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 1 2 3 4 5 6 7 DEC.

November 7 — 8 A.M. — O.K. — soft stool — 1cc virus 1:500

November 8 — O.K.

November 9 — O.K.

November 10 — P.A.M. — O.K.

November 11 — Thin.

November 12 — Same condition.

November 13 — Same condition

November 14 — same condition

November 15 — 8 A.M. — Same condition.

2 P.M. — Same condition.

5 P.M. — Cough

8 P.M. — Cough

Pericarditis: 400,000 Uip.

Nov. 16 - O. K.

Nov. 17 - O. K.

Nov. 18 - dyspnoea. Difficulty
in respiration. Pale.
auscultation of thorax: Bron-
chial breathing on both fields,
more intense on right hemi-
thorax. -
NO PARALYSIS. -
Perrillier: 400.000 U. v. p.

8:30 AM - Sitting up in cage - ashen gray
markedly labored respiration
No paralysis. Does not cry
when stimulated but cannot
tell whether it is due to
paralysis of vocal cords or
respiratory difficulty. No
other suspicious cranial nerve
involvement.

11 AM - Condition same; still sitting up

12 noon - found dead in sitting position.

Perfusion attempted but not successful.

Lungs - markedly distended & did not collapse
on opening thorax - marked pulmonary
oedema - several small areas of atelectasis
No pneumonia.
Other viscera O.K.

Fixed in 2. A.

Polio

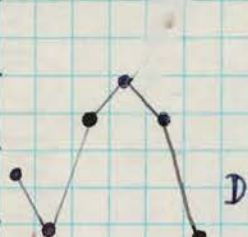
Rh. 1019 — 8 mg kasip/kita, same findings as Rh. 1016.

108.
107.
106.
105.
104.
103.
102.
101.
100.
99.
98.
97.
96.

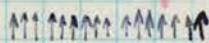
0 1 2 3 4 5 6 7 8 9 10



Extensive hemorrhage in thalamus and throughout ventricular system. Death can be considered inoculation accident.



Virus



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

NOVEMBER 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 1 2 3 4 5 6 7

November 7 — 8 A.M. O.K. — soft stool — 1cc Virus 1:500

November 8: Cold.

2 P.M. — Dead, Rigor mortis. Mild cyanosis. Both upper extremities, foam lightly pink around the mouth. Blood culture from heart.

(15:30) 3 P.M. — Perfusion with saline. Formaldehyde-acetic acid, after washed with saline.

Supra perfusion: Spleen normal size — lungs: at cut: much foam, lightly pink. Bowels and viscera: no gross pathological changes, but perforation on rectum, with tumor. ragged lesion. Adhesions between omentum and ascendent colon.

Pulmonary oedema

After perfusion: lungs piece in Linker a.a.

C.N.S.:

Blood culture (Broth)

Tubes:	9	10	11	12	13
	I II	I II	I II	I II	I II
	0 0	0 0	0 0	0 0	0 0

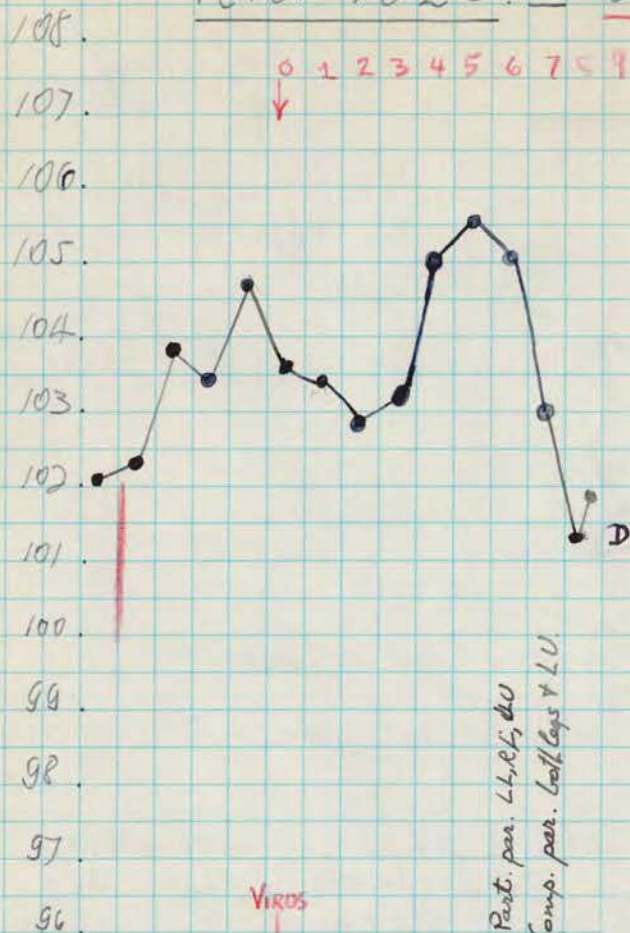
November 16 - C.N.S. pieces of spinal
cord, medulla, mid-brain, and
thalamus in F.A. See previous
not on the chart.

Isoplasmoid + Polio

11/3/18

Rh. 1020.

Singhase/Kuta, same findings as Rh. 1016.



Virus

Part. par. L.H.P. do
Comp. par. both legs & L.U.

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

NOVEMBER 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 1 2 3 4 5 6 7 DEC

November 6 - P.M. Left side of face and sub-maxillary region is swollen. Inside of mouth the mucosa appears ^{white} layer. Looks oidium albicans.

Nov. 7 - swelling less marked - there is a fissure left corner of mouth.
- 1cc virus 1:500

November 8 - same condition.

November 9 - Swelling less marked.

November 10 - Same condition.

November 11 - Swelling almost unnoticeable.

November 12 - 8 A.M. - O.K.
2 P.M. - O.K.
8 P.M. - O.K.

November 13 - 8 A.M. - O.K.
2 P.M. - Partial paralysis both lower and left upper.

Nov. 14

- Comp. paralysis both legs and left upper.
Cannot sit up - uses right upper extremity
Appears alert and eats.

Beginning 8 P.M. - put on 24mg of base/day.

5 P.M. - 8 mg/kilo

8 P.M. - 12 mg/kilo

Next day - 8 A.M. - 6 mg/kilo

2 P.M. - 6 " "

8 P.M. - 12 mg/kilo

} This is to see
the effect of
larger amounts of
the drug on the
course of the paralysis

Nov. 15 - 9 A.M. - condition same Temp. 101.3

Nov. 16 - 9:50 A.M. - dead - Autopsy in me -
artificially - Respiration:

1780 cc Saline

200 cc Formaldehyde.

200 cc A. And.

previously washed with 1.200 cc
saline. -

- Left lung atelectatic, proba-
bly because position, contin-
uously before dies. -

- No gross pathological changes.

C.N.S. - Pieces of spinal cord,
medulla, midbrain, thalamus and cerebral
cortex in L. & A.

November N- O. K.
 Nov. 16 - O. K.
 Nov. 17 - O. K.
 Nov. 18 - O. K. (diarrhea)
 Nov. 19 - O. K. Thin.
 Nov. 20 - O. K.
 Nov. 21 -

dead - Rigor mortis.
Autopsy - lungs - C.N.S. in L.A.
 No pathological changes.

Lungs: Possible pneumonia right
 lower lobe, posterior portion.
 Pulmonary edema.
 Atelectasis or pneumonia
 on left lower lobe.
 Partial atelectasis left
 upper lobe.

Nov. 13 - Can sit up.
tiss - Penicillin 200,000 U. intraperi-
toneally.
8 AM - 200,000 U. Penicillin - 2 PM - 200,000 U. Penic.

8 P.M. - condition same - can sit up by himself.
Weak but no evidence of paralysis.

200,000 U penicillin i.p.

Nov. 14 - 1:45 AM - condition same.

7:45 A.M. - Not in rigor; still warm
Put in refrigerator.

9:45 AM - Perfusion with saline + formal saline begun.
Fixation not good

1:30 PM - Tissues removed & put in formalin for short time.
Thin pieces cut and put into 2.A.

Gross pathology - Extensive pulmonary oedema and
lobular pneumonia in left lower lobe.

Microscopic pathology: No Polio.

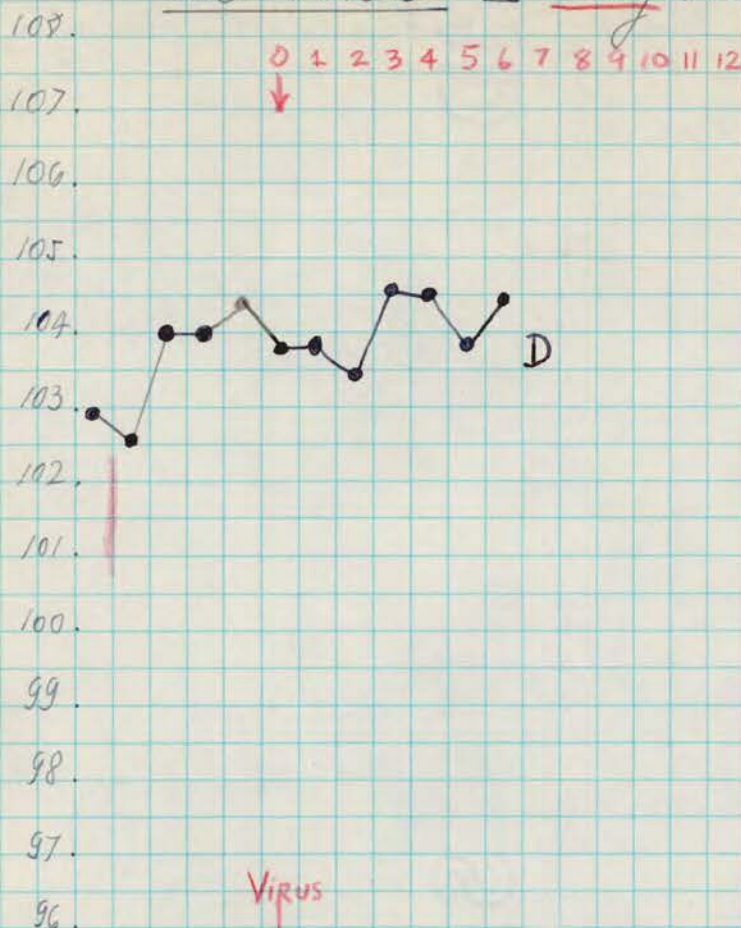
Isoplasma acid + Polio

Rh. 1023

4 mg. base K₂SO₄ daily

8 A.M.: 1 mg. Base/K₂SO₄
2 P.M.: 1 mg. Base/K₂SO₄
8 P.M.: 2 mg. Base/K₂SO₄

11/3/48



No Polio

Virus

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

NOVEMBER 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 1 2 3 4 5 6 7

November 6 - Diarrhea.

November 7 - Ice Virus 11:500

November 8 AM. Mild diarrhea

P.M. Diarrhea

November 9 - Diarrhea.

November 10 - 8 AM - O.K. Very thin. -

November 11 - O.K.

November 12 - O.K.

2 PM - O.K.

8 PM - O.K.

November 13 - O.K.

Nov. 14 - 1:45 AM. - appeared as usual; no paralysis

7:45 AM - found dead - rigor mortis

Put in refrigerator

9:30 AM. - Perfusion started.

Fixation - not good

Gross pathology - Extensive pulmonary edema and lobular pneumonia in all lobes.

Thin sections of many levels of spinal cord, medulla, midbrain, + thalamus - lung & liver put in Z.A.

Microscopic Pathology: No Polio.

November 13 - O.K.

November 14 - O.K.

November 15 - 8 AM - O.K.
3 PM - O.K.
8 PM - O.K.

Nov. 16 - O.K.

Nov. 17 - O.K.

Nov. 18 - O.K.

Nov. 19 - O.K.

Nov. 20 - 7 AM - Questionable weakness in both lowers.
10¹⁵ Partial paralysis both lowers.

Nov. 21 - Partial paralysis both lowers.
Weakness on both upper.
Can sit up.

Nov. 22 - Same condition.

Nov. 23 - Same condition - Can sit up.

Nov. 24 - Can sit up.

Nov. 25 - 12 AM. Can sit up.

Nov. 26 - 8³⁰ AM. Can sit up.

Nov. 27 - 8³⁰ AM. Cannot sit up. - Prostrate.
Partial - paralysis both lowers,
and back - Right upper also para-
lyzed. No neck - Partial paralysis
left upper. No facial.

Nov. 28 - Same condition. ~~on~~

Nov. 29 - Partial paralysis lower extremities,
back and neck.

Nov. 30 - Same condition.

Dec. 1 - " "

" 2 - " "

" 3 - " "

" 4 - " "

" 5 - " "

" 6 - " "

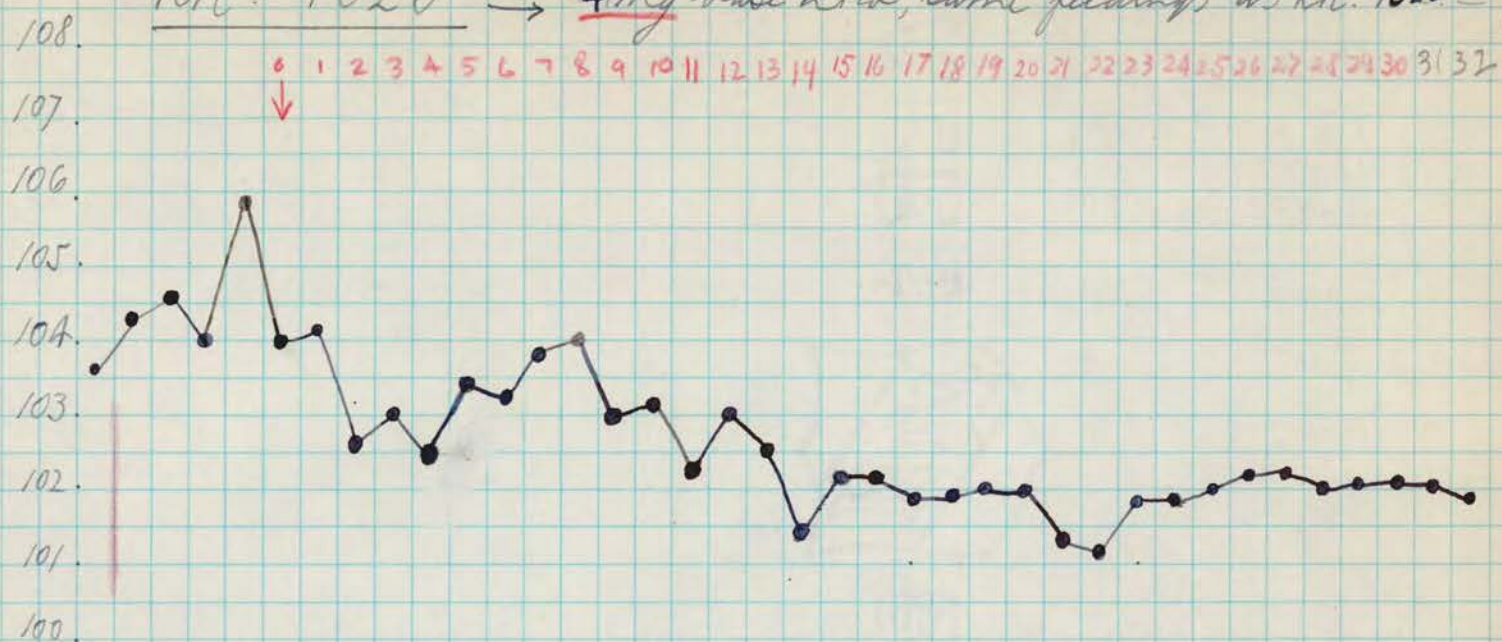
DISC. 12/2
Killed 12/20/48

Isoplasmonoid + Polio

$$\frac{11}{348}$$

Rh. 1025

Rh. 1025 → 4mg base Kilo, same feedings as Rh. 1023 3/48



Virus

5

AFTER 1

 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
 NOVEMBER: 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 1 2 3 4 5 6 7 8 A.C.

November 7 - Ice virus 1:500

Nov. 8 o.k

Nov. 9 - Thur

November 10 - Thur -

November 11 - Some lesions on his neck, under the chain.

November 12 - 8 A.M. - Same condition.
2 P.M. - Same condition. -
8 P.M. - Same condition. -

November 13 - O.K.

November 14. O.K.

November 15, O.K.

Nov. 16 - O.R.

Nov. 17 - O.K.

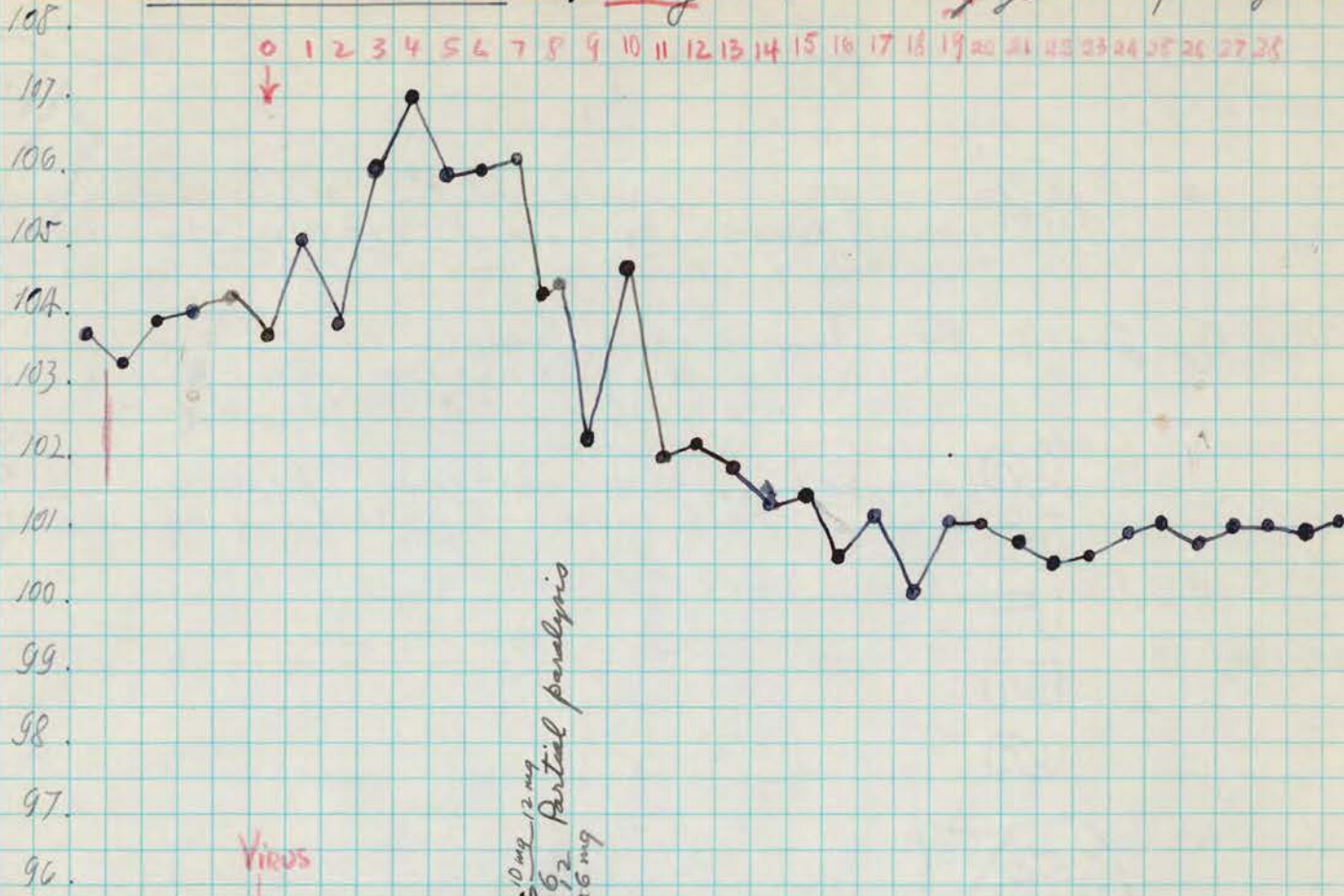
Nov	18	O.K.
Nov	19	O.K. (somewhat lipid)
Nov	20	O.K.
Nov	21	O.K.
Nov	22	O.K.
Nov	23	O.K.
Nov	24	O.K.
Nov	25	O.K.
Nov	26	O.K.
Nov	27	O.K.
Nov	28	O.K.
Nov	29	O.K.
Nov	30	O.K.
Sic	1	O.K.
Sic	2	O.K.
Sic	3	O.K.
Sic	4	O.K.
Sic	5	O.K.
Sic	6	O.K.
Sic	7	O.K.
Sic	8	O.K.
Sic	9	O.K.

1030 Hypervision - GOOD FIXATION (Form, Sul, AB 20000)
 Viscera: Normal
 CNS: pieces in L.A.

Toplasma acid + B10

Rh. 1026

→ 4 mg base to be daily, some feedings Rh. 1023. 11/3



DAYS AFTER INOCULATION: 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
 NOVEMBER 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 1 2 3 4 5 6 7

November 7 - 1cc virus 1:500

Nov. 8 - O.K.

November 9 - O.K.

November 10 - P.A.M. - O.K.

November 11 - 8 A.M. - O.K.

November 12 - 8 A.M. - O.K.
 2 P.M. - O.K.
 8 P.M. - O.K.

November 13 - O.K.

Nov. 14 - 8 A.M. - O.K.
 - 2 P.M. - Tremors, excited, questionable impairment in use of right arm - grasp is strong but difficult to test for deltoid.
 5 P.M. - start 24 mg/keto/day
 10 mg
 8 P.M. - 12 mg.

Nov. 15 - 9 AM - some tremors & excitement still present but no change in right arm - still cannot be certain of any paralysis. Very active

2:30 P.M. - weakness to part. paralysis of all extremities - can sit up

8 PM - Same condition -

Nov. 16 - 8 AM Cannot sit up. At 2 PM Back to anterior dorsal

Nov. 17 - 8 AM Partial paralysis all between toes. - Amplified
Prostrated - no neck - No partial

Nov. 18 - 8 AM - Complete paralysis both lower and upper. No partial
Back paralyzed. No neck paralysis

Nov. 19 - 8 AM - Same condition
Complete paralysis four extremities. Neck paralyzed.

Nov. 20 - 8 AM - Same condition.

Nov. 21 - " "

Nov. 22 - " "

Nov. 23 - " "

Nov. 24 - " "

Nov. 25 - " "

Nov. 26 - " "

Nov. 27 - " "

Nov. 28 - " "

Nov. 29 - " "

Nov. 30 - " "

Dec. 1 - " "

Dec. 2 - " "

Dec. 3 - " "

Dec. 4 - " "

Dec. 5 - " "

Dec. 6 - " "

Dec. 7 - " "

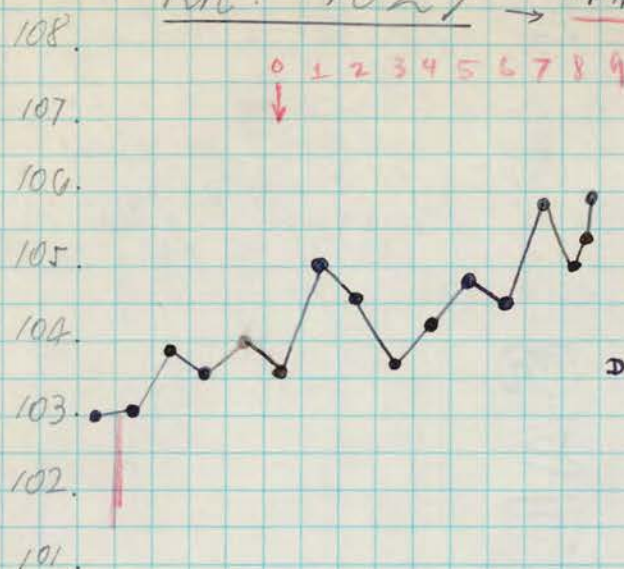
DEC. 19 - Dead - Rigor mortis.
No autopsy.

Dec: 12/7/48

Isoplasmoid + Polio

Rh. 1027

Rh. 1027 → Leoplasmod + Polio
4 mg^{avg}/kg b, daily, same feedings Rh. 1023. - 11/3



Hand-drawn graph on grid paper showing the number of virus particles over time. The y-axis is labeled "12 mg." and the x-axis is labeled "DAYS AFTER INOCULATION". The graph shows a series of vertical lines representing virus particles, with a peak around day 12. A red arrow labeled "VIRUS" points to the peak. The x-axis is labeled with dates from November 2 to December 7.

November 7 - 1cc Virus 1:500

Nov. 8. Same.

November 9 - O.K

November 10 - O.K.

November 11 - O.K.

November 12 ^{am} O.K.
2 PM O.K.
8 PM O.K.

November 12 - Cough.

Nov. 15 - 9 A.M. - Temp 105.0 - questionable weakness of left upper extremity.
However, climbs well using both arms.
8 P.M. - Weakness of left upper extremity
12 mg/Kilo = 3.4 c.c. Stock Solution +
16.6 c.c. Distilled water
was given. -

Nov. 16 - 7⁵⁰ A.M. - Dead - Rigor mortis.

AUTOPSY: 9¹⁰ (No perfusion)
Some atelectatic areas on left lung.
Lungs didn't collapse at the moment to open pleural cavities. Some cysts. (A pretty much, clean fluid, was found in peritoneum and pericardium.)

Small amount of clear, yellow fluid in peritoneum & pericardium.

Fixed in 2A.

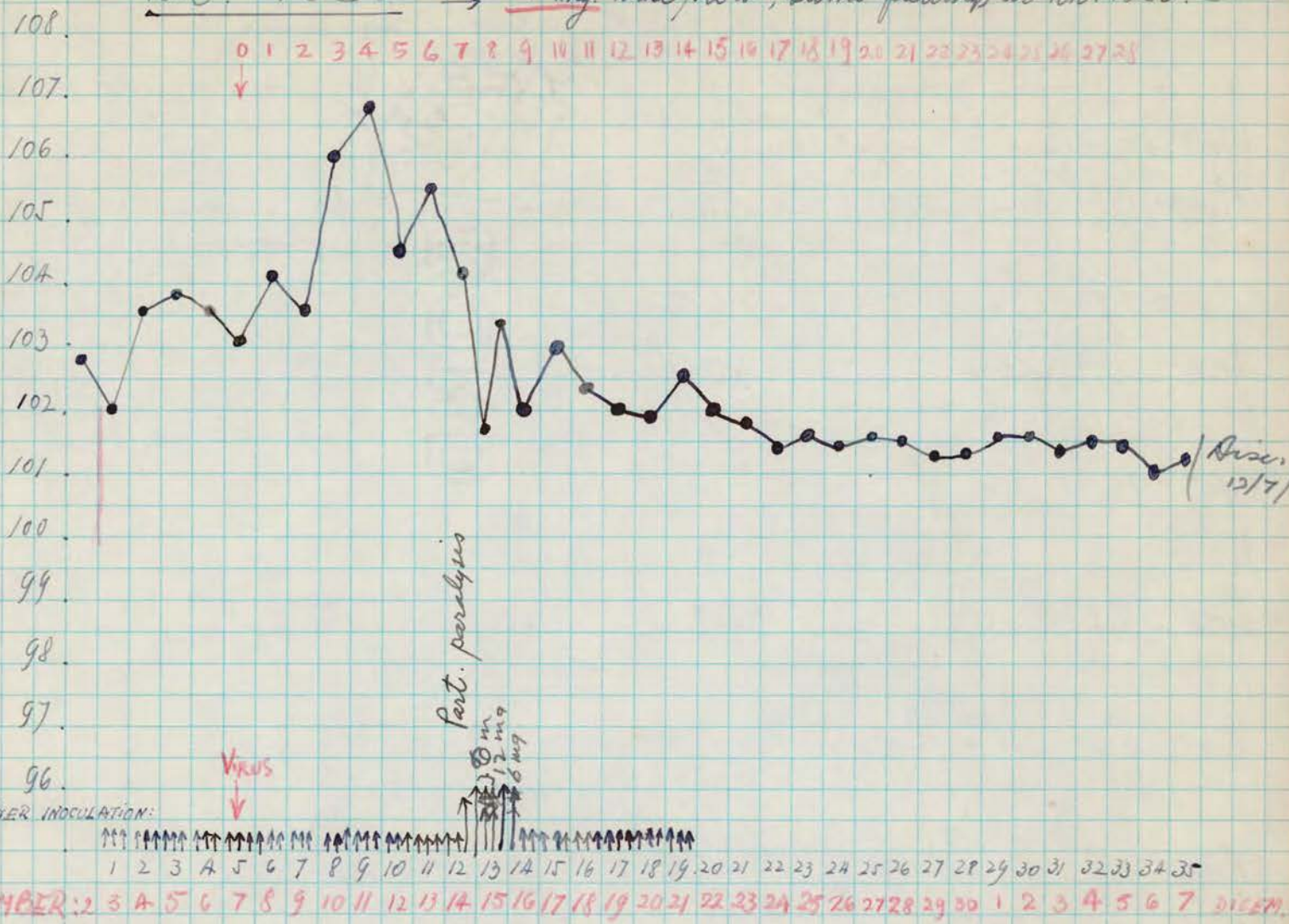
Notes

Isoplasmosis + Polio

11/3

Rh. 1028

→ 4 mg. base/kilo, same feedings as Rh. 1023.



November 7 Left side face somewhat swollen.

Ice Virus 1:500

Nov. 8. Same condition.

November 9. Swelling less marked.

November 10. Same condition.

November 11. O.K.

November 12. 8 AM. O.K.
2 PM. O.K.
8 PM. O.K.

November 13. O.K.

Nov. 14 - 8 AM - OK

2 PM - partial paralysis both lowers - otherwise strong fast
5 PM - start 2.4 mg/kilo/day - schedule
8 PM - 10 mg/kilo
12 mg/kilo

Nov. 14 - 8 PM - Cannot sit up but uses arms.

Nov. 15 - 9 AM - Temp 101.7° - no progression of paralysis
alert, active - uses arms but
does not sit up

Nov 16 ~~Same condition~~ - At 2 PM back to anterior dose (hangings)
~~Prostrate~~ - Mouse somewhat both upper.

Nov. 17 Same condition.

Nov 18 Prostrate - complete paralysis except for movement of head
& no cranial nerve involvement (X⁹?)

Nov. 19 - Same condition.

Nov. 20 - Same condition.

Nov. 21 " " "

Nov. 22 " " "

Nov. 23 " " "

Nov. 24 " " "

Nov. 25 " " "

Nov 26 " " "

Nov. 27 " " "

Nov. 28 " " "

Nov. 29 " " "

Nov. 30 " " "

Disc. 1 " " "

Disc. 2 " " "

Disc. 3 " " "

" 4 " " "

" 5 " " "

" 6 " " "

" 7 " " "

Disc. 12/7/48

Disc. 13 - Dead - No autopsy.

November 19 - O.K.

November 20 - O.K.

Nov. 21 - O.K.

Nov. 22 - O.K.

Nov. 23 - O.K.

Nov. 24 - O.K.

Nov. 25 - O.K.

Nov. 26 - 9⁴⁵ Sacrificed (after at the beginning of washing)
Washing: 1200 c.c. Saline - 15 minutes

Only gravity.

At the beginning 2 needles
on descending aorta. After
apparent fixation of both
loppers (no apparent fixation up
then) glass tube in left ventricle -
aorta: 900 cc S.F.A. Acid - descen-
dant aorta, ligature.

Perfusion: saline 1780 cc.
formaldehyde 200 cc. } 2.500 c.c.
A. Acid 20 cc }

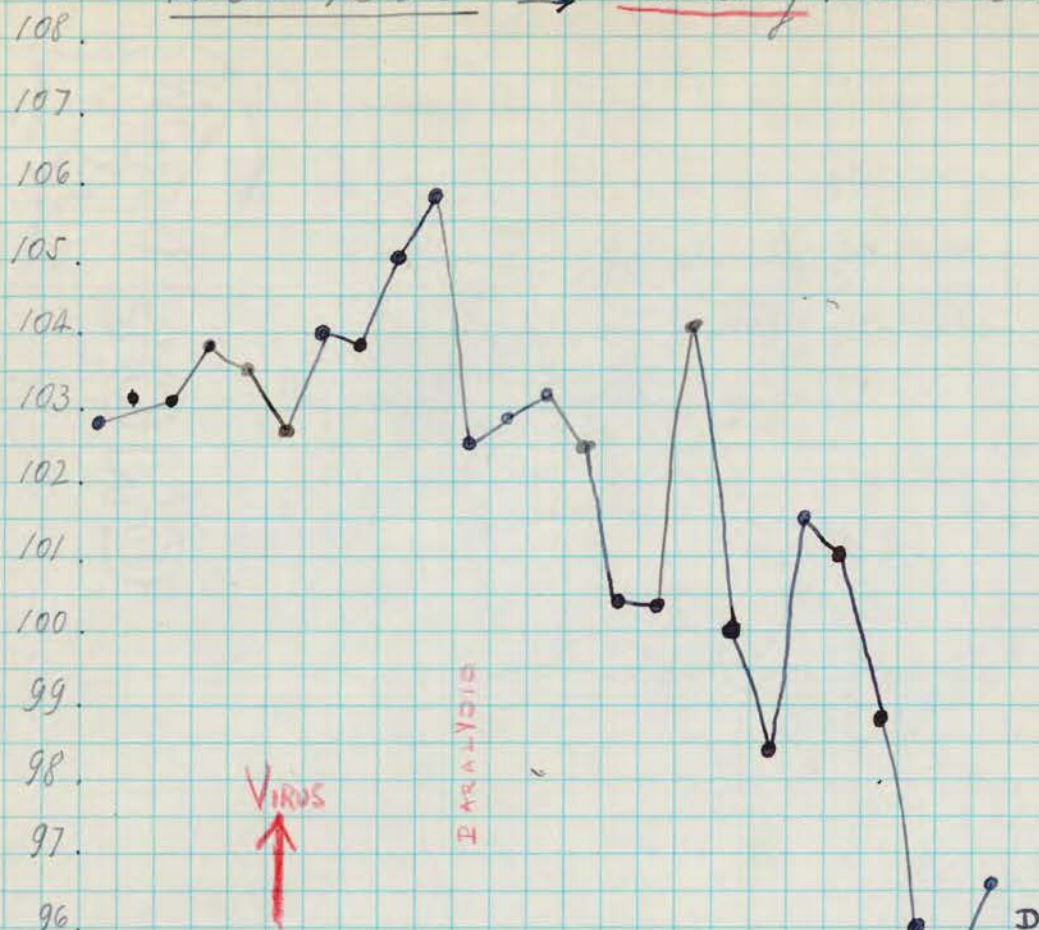
Not good fixation.

Viscera: { big spleen
liver, spleen, kidney - adrenals
on Z.A.

C.N.S. Pieces of spinal cord
medulla, mid-brain, cere-
bellum and cerebral cortex
in Z.A.

~~VIRUS ONLY~~ ~~EXPERIMENTAL~~ exp. in
Rh. 1030 → No drug: Control.

EXPT 11/3/48



DAYS AFTER INOCULAT. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
~~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~~
 NOVEMBER 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 1 2 3 4 5 6 7 DEC.

NOV 7 1948 Ice virus 1:500

Nov. 8 - O.K.

November 9 - O.K.

November 10 - O.K.

November 11 - O.K.

November 12 - 8 AM - O.K.

11 AM - Paralysis on right upper.

2 PM - Complete paralysis on right upper - partial paralysis on left upper and both lower. Partial paralysis on back. Tremor. Aphonia

8.40 PM - Complete paralysis both lower and upper. Back and neck also paralyzed. No facial.

November 13 - 1.30 AM - Paralysis of intercostals - Abdominal

→ (11/13/48 - 1:30 AM) respiration. No facial. -
2 P.M. - complete quadriplegia + back
and neck also paralysed -
abdominal respiration. -

Nov. 14 - Prostrate - complete paralysis of extremities, back and neck

Nov. 15 - Same condition.

Nov. 16 - Same condition.

Nov. 17 - Same condition.

Nov. 18 - Same condition (Very weak)

Nov. 19 - Same condition. -

Nov. 20 - Same condition.

Nov. 21 " "

Nov. 22 " "

Nov. 23 " "

Nov. 24 " "

Nov. 25 " "

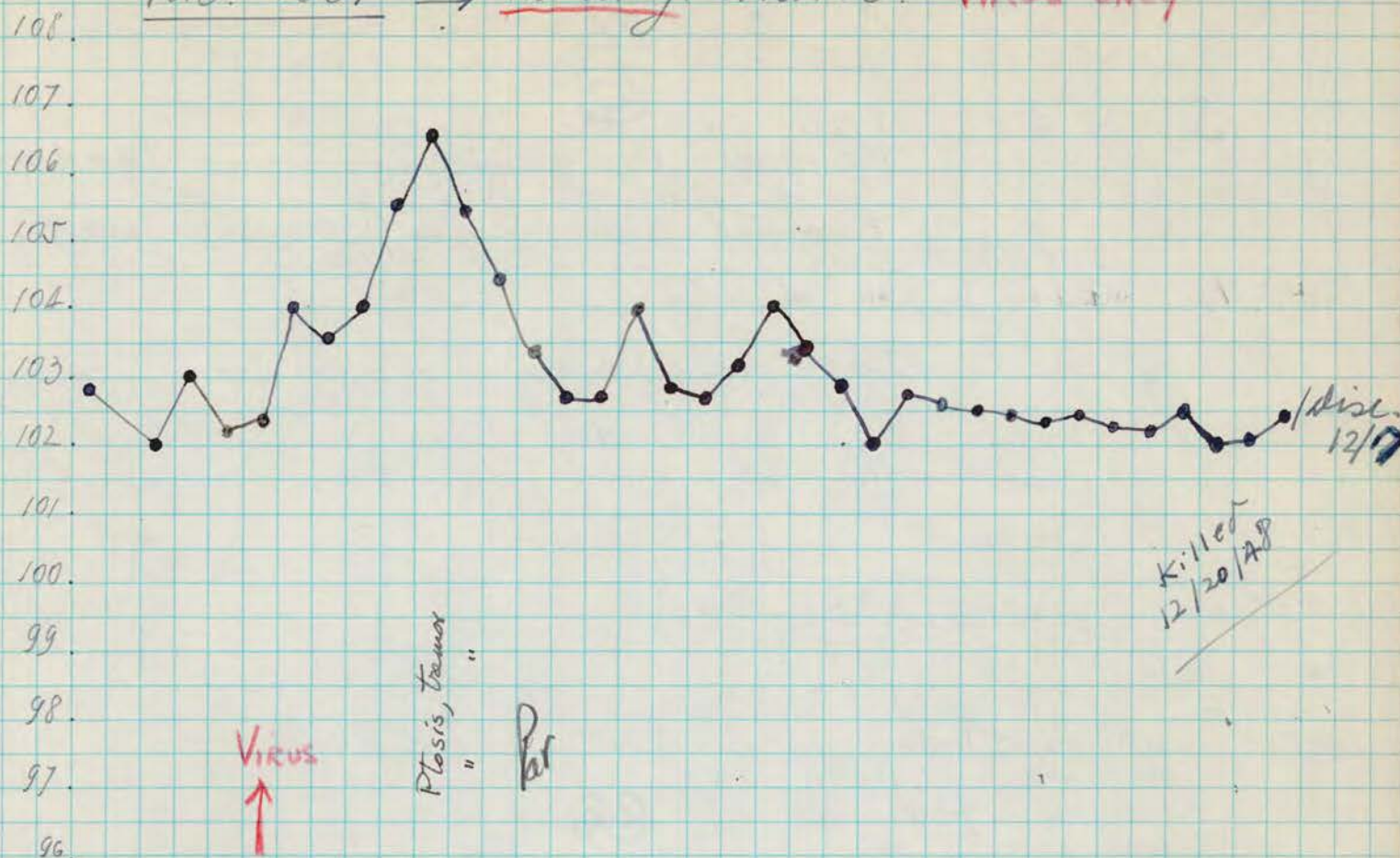
Nov. 26 " "

Nov. 27 - dead - No autopsy.

Rh. 1031

No drug: Control - VIRUS ONLY

Isotransmicio Exp 411/3/48



DAYS AFTER INOCULATION: 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
~~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~~
 NOVEMBER: 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 1 2 3 4 5 6 7, DIC.

NOV 7 1948 Ice virus 1:500

Nov. 8 - o.k.

November 9 - P.M. - o.k.

November 10 - P.M. - o.k.

November 11 - o.k.

November 12 - 8 AM - Excited.
 11 AM - Ptosis in eyelids - Very excited.
 2 P.M. - Easily exhausted - ~~disinclined to~~ ~~climb~~. Very excited - Tremor.
 8:30 - Partial paralysis both lowers.
 11:30 - ~~Weakness~~ ~~and back~~

November 13 - 1:30 AM - Marked bilateral ptosis.
 Tremendous excitation. Tremor of head.
 Paralysis more marked on right lower.
 Very peculiar behavior.

2 P.M. Same condition

Nov. 14 - Paralysis of eyelids remains most marked
Cannot climb to-day; partial head-drop present
All four extremities - some partial paralysis.

Nov. 15 - 8 A.M. Still excited -
Partial paralysis both lower
and back - Can sit up.
Partial paralysis both upper.

Nov. 16 - 8 P.M. Same condition.

Nov. 17 - Same condition.

Nov. 18 - Ptosis of eyelids less marked.
Otherwise same; can sit up

Nov. 19 - Same condition.

Nov. 20 - Same condition.

Nov. 21 - " "

Nov. 22 - Excited

Nov. 23 - Excited.

Nov. 24 - Same condition

Nov. 25 - Ptosis disappeared. No u.c. ferment.

Nov. 26 - " "

Nov. 27 - " "

Nov. 28 - " "

Nov. 29 - " "

Nov. 30 - " "

Dec. 1 - " "

Dec. 2 - " "

Dec. 3 - " "

Dec. 4 - " "

Dec. 5 - " "

Dec. 6 - " "

Dec. 7 - " "

Disc. 12/7/48

DEC. 20/48 - Killed.

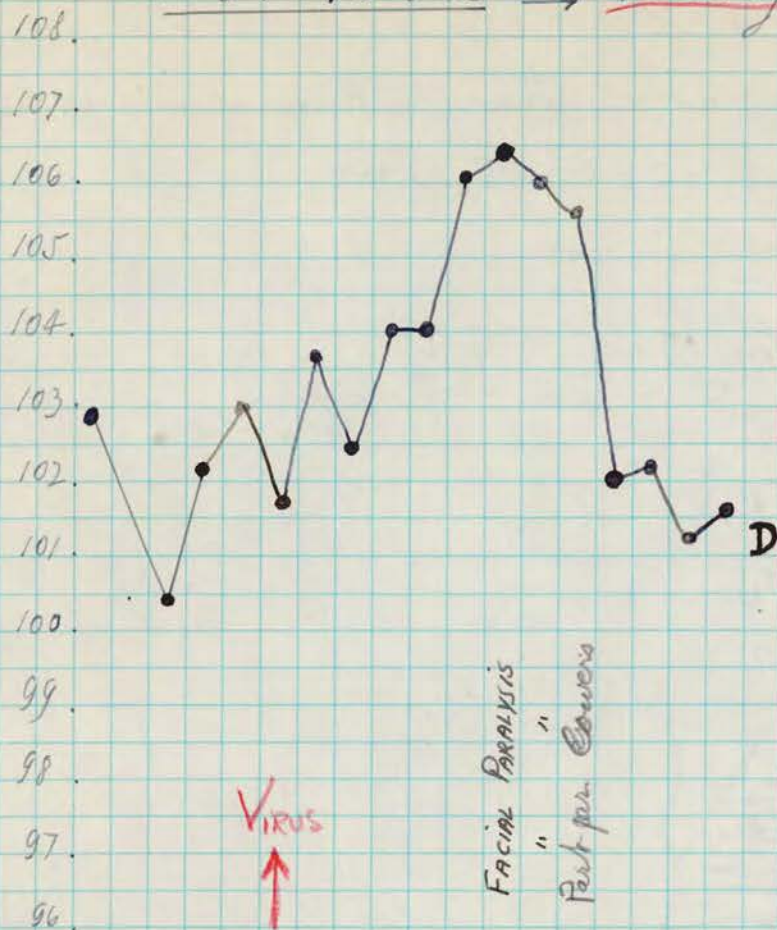
Rh. 1032

Thapsomach

1st inoculation Sept of 11/3/48

No drug: Control.

VIRUS ONLY



DAYS AFTER INOCULATION: 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~~

NOVEMBER: 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 1 2 3 4 5 6 7 DIB.

NOV 7 1948

Ice virus 1:500

Nov. 8 - AM. O.K.
2PM. Diarrhea.
8AM. Diarrhea.

November 9 - O.K.

November 10 - O.K.

November 11 - O.K.

November 12 - O.K.
2PM. O.K.
8PM. O.K.

November 13. 1:30 A.M. - O.K.
7:00 A.M. - Facial paralysis right side.
2 P.M. - Same condition.

November 14 - 2PM - only facial paralysis

November 15 8. AM - ~~facial~~ facial & marked tremor
9 AM - ~~facial~~ " "
11 AM - Partial paralysis both lower & back but can sit up.

November 15 - 3 PM ^{Complete Paralysis Extremities} Prostrate - No back
paralysed

November 16 - 8 PM. Back also paralysed No neck

November 17 - 8 AM. Same condition. Neck also paralysed.

November 18 - Same condition.

November 19 - Same condition.

November 20 - AM. Dead.

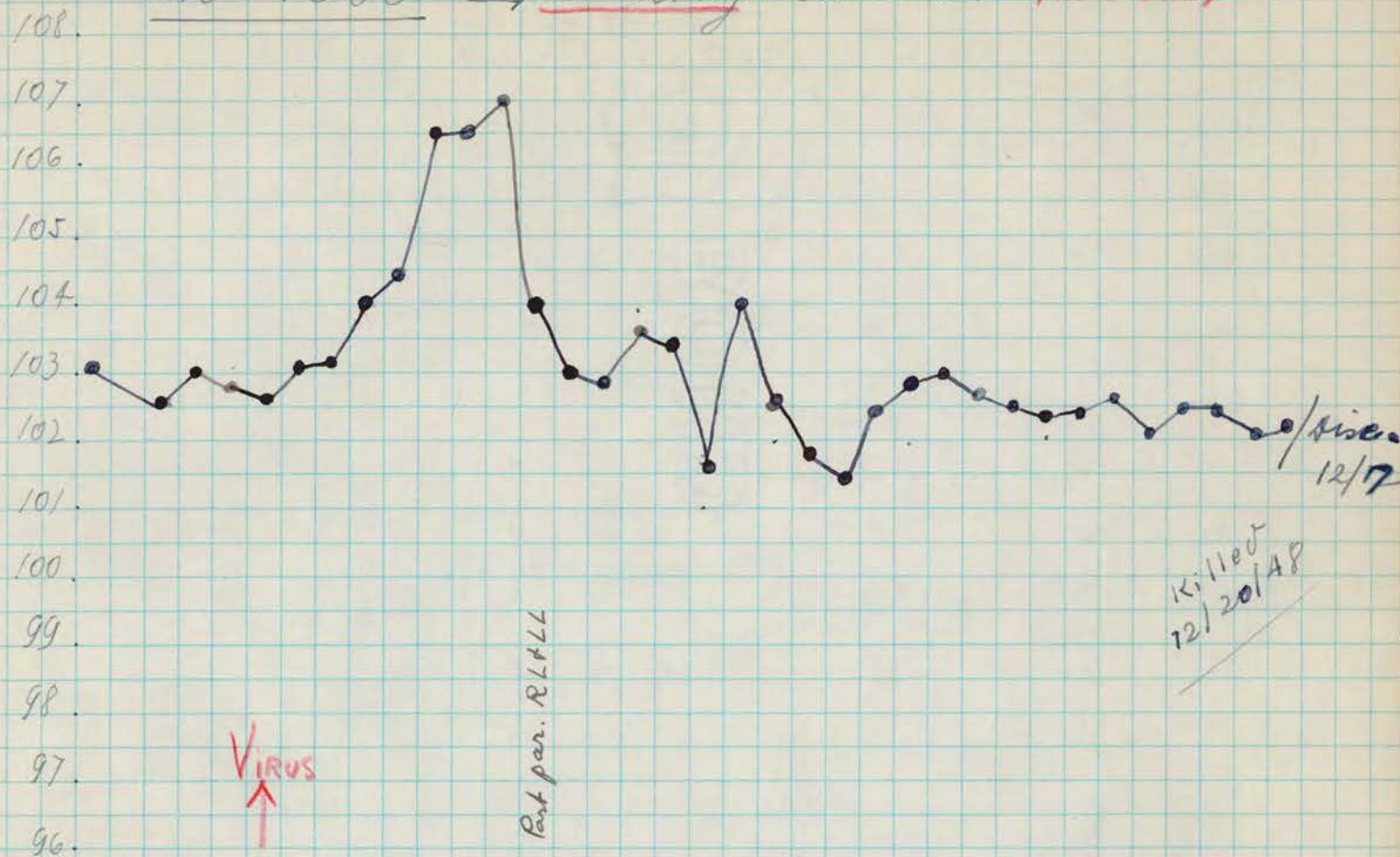
No autopsy.

Rh. 1033

Rh. 1033 $\rightarrow$ No drug: Control

150 PLASMOCID EXP of 11/3/48
VIRUS ONLY

VIRUS ONLY



DAYS AFTER INOCULATION: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

~~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~~
 NOVEMBER 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 2 3 4 5 6 7

NOVEMBER 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 2 3 4 5 6 7

NOV 7 1948 - diarrhea - 1cc of virus 1:500

Kor. 8. mit drücken

November 9 - Mild orianthen.

November 10 - Mild diarrhea.

November 11 - O.K.

November 12 - 8 AM O.K.
2 PM O.K.
8:30 P.M. O.K.

November 13. 1. 20 A.M. O.K.
2. AM O.K.
2. PM O.K.

Nov. 14 - 5 PM. - excited, sl. tremor - no paralysis

Nov. 15 - 8 AM - partial paralysis both legs
2:30 PM - " " " " ; can sit up

Nov. 16 - Prostrate - Can move somewhat
his both upper.
No neck paralysis.

Nov. 17 - Same condition. -

Nov. 18 -

"

"

Nov. 19 -

"

"

Very weak.

Nov. 20 -

"

"

Nov. 21

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"

Nov. 22 -

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Nov. 23 -

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Nov. 24 -

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Nov. 25

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Nov. 26

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Nov. 27

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Nov. 28 -

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Nov. 29 -

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Nov. 30 -

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Dec. 1 -

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Dec. 2

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Dec. 3

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Dec. 4

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DEC. 5

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DEC. 6

"

"

DEC. 7

"

"

4 mg

→ Dec. / 12/7/48

DEC. 20/48 - Killed. -

ISOPLOSMOCID AND PLOSMOCID + POLIO IN MONKEYS.

EXP. IV

PURPOSE:

- 1) Establish by repetition whether or not isoploasmocid in "larger" toxic doses will prevent development of poliomyelitis, even though the drug kills the animal.

VARIATION

- a) the drug will be started immediately after injection of virus and not before as was done in previous experiments
 - b) in addition to administration of drug by stomach tube another group of monkeys will receive the same doses ^{intramuscularly} ~~subcutaneously~~ ^{in mouse}
- 2) Establish by repetition whether or not plasmocid actually acts as a synergist for poliomyelitis infection in the monkey, i.e. kills the animal quickly frequently even before development of paralysis — but with extensive poliomyelitic lesions.

Variation

— the drug will be given after rather than before the virus

- 3) Determine whether "large" toxic doses of isoploasmocid, administered several days after the virus at the time of the first distinct rise in temperature can affect the subsequent course of the disease.

Outline of Experiment

- 1) 24 normal rhesus monkeys will be inoculated with the same dose of virus (i.e. 1 cc of 1:500 of same lot of Hagerkamp virus).

GROUP I	4 monkeys	— untreated controls
" II	4	— plasmocid 1mg/kg 3x a day
" III	5	— isoploasmocid by stomach tube
" IV	5	— " subcutaneously
" V	6	— " by stomach tube after first fever
" VI	4	— plasmocid only — no virus

Drug Schedule

PLASMOCID - GROUP II and GROUP VI

1mg. base/kilo 3 X a day - 9 AM, 3 PM, 9 PM

Duration - maximum 4 days
minimum 2 days depending on
condition of monkey.

ISOPASMOCID - GROUP III - stomach tube
" IV - subcutaneously

1st day - after virus - 12 mg base/kilo - 3 PM } 24 mg/day
12 " " " - 9 PM

2nd day - 9 AM - 4 } 16 mg/kilo/day
3 PM - 4
9 PM - 8

3rd, 4th, 5th, 6th, 7th - same

Total duration of drug - 7 days

GROUP V - stomach tube after first fever.

At first rise of temp - 24 mg/kilo/day - first 24 hours

then - 16 mg/kilo/day - as for Groups II + IV

Total duration of drug - 7 days or less if
extensive paralysis
before then.

Note - In an attempt to counteract the effects
of bacterial infection in the isoplasmodia
monkeys, the animals in groups III, IV, and V
were given 1 cc of procain penicillin (300,000 U)
once day ~~at~~ beginning with the first dose of
isoplasmodia and continuing as long as
the isoplasmodia was being administered.

Experiment IV

Group I — Virus ONLY

Rhesus No. 1177✓ — 2.038 K
1178✓ — 2.151 "
1179✓ — 2.151 "
~~1180~~ — ~~2.151~~ "
1163 — ~~2.378~~
2.604

Group II — Virus + PLASMOCID — 1mg base/kilo/tid

Rhesus No. ~~1164~~ 1159✓ — 2.491 K ^{12/3-2:30}
~~1165~~ 1160✓ — 2.831 " ^{OK}
~~1166~~ 1162✓ — 2.604 " ^{OK}
~~1167~~ ~~1163~~ — 2.604 " ^{OK}
~~1168~~ 1180 — 2.378 " ^{12/3 - Signs 9A.M.}

Group III — Virus FIRST — Followed by ISOPLASMOCID BY STOMACH TUBE

Rh. No. P 1164✓ — 2.831 K
P 1166✓ — 2.378 "
P 1167✓ — 2.265 "
P 1168✓ — 2.151 "
P 1169✓ — 2.265 "

Group IV — Virus — followed by ISOPLASMOCID INTRAMUSCULARLY

Rh. No. P 1170✓ — 2.265 K ^{D 12/4}
P 1171✓ — 2.151 "
P 1172✓ — 2.378 "
P 1173✓ — 2.151 "
P 1176✓ — 2.038 "

Group V — VIRUS — WAIT UNTIL 1ST FEBRILE REACTION — Then ISOPLASMOCID BY STOMACH TUBE

Rh. No. 1146✓ — 2.378 K
1147✓ — 3.058 "
1154✓ — 2.604 "
1155✓ — 2.604 "
1156✓ — 2.831 "
1157✓ — 2.831 "

Group VI — PLASMOCID ONLY — 1mg base/kilo/tid — No VIRUS

Rh. No. 1174 — 3.058 ^{12/3}
1165 — 2.038 ^{12/3}
992X — 2.038
993X — 2.378 ^{12/3}

TREATMENTORDER

Group IV — ISOPLASMOCID INTRAMUSCULARY IN LEGS
PENICILLIN — 1cc in back muscles in AM

. 1 1/2

1170 - 2.7cc
1171 - 2.6cc
1172 - 2.9cc
1173 - 2.6cc
1176 - 2.4cc

Group III — ISOPLASMOCID BY STOMACH TUBE
PENICILLIN — 1cc in BACK MUSCLES

1164
1166
1167
1168
1169

Group II — PLASMOCID BY STOMACH TUBE

1159
1160
1162
1180

Group VI

1165
1174
992X
993X

Dec. 1, 1948

11 PM

Preliminary Test on Effect of Iroplasmocid
Intramuscularly

Rhes. 1066 — $5\frac{1}{4}$ lbs = 2.378 Kilo

" 1069 — $6\frac{1}{4}$ " = 2.831 "

These monkeys had been used in polio neutralization test — 28 days before — and were in excellent condition.

Both received 12 mg base/kilo intramuscularly

Rh 1066 — $2.378 \times 12 = 28.536$ mg or 2.85 cc of stock solution

" 1069 — $2.831 \times 12 = 33.972$ mg or 3.4 cc of " "

They were not observed for more than a few minutes after inoculation — when they appeared well.

Dec. 2 — 9 AM — OK
2:30 PM — OK.

Summary of Experiment IV

12/19

TREATMENT	DAY OF PARALYSIS	DAY OF DEATH
NONE - VIRUS CONTROLS	7 7, 8, 8	(D ₂), 11,
PLASMOCID AFTER VIRUS (1mg base/kilo tid until PLASMOCID Signs DEVELOPED)	6, 6, 6, 7	7, 9, 12,
ISOPLASMOCID - RIGHT AFTER VIRUS (STOMACH) 16 16mg/kilo/day - 4, 4, 8 Procain penicillin - 300,000	6, 8, 9, 13	(D ₂), 7,
ISOPLASMOCID - ^{INTRAMUSCUL.} Right After VIRUS - 16mg/kilo/day - irregular Procain penicillin - 300,000	7 _±	1, 2, 2, 2, 9
ISOPLASMOCID - STOMACH 3 - 5 days after VIRUS Procain penicillin - 300,000	7, 8, 8, 9, 9	8, 11, 14, 17, 17
PLASMOCID ONLY 1mg base/kilo/ tid until advanced plasmocid signs. NO VIRUS		4